Redland
CITY COUNCIL

AGENDA

GENERAL MEETING

Wednesday, 10 December 2025
commencing at 9:30am

The Council Chambers
91 - 93 Bloomfield Street
CLEVELAND QLD

Order Of Business

1 Declaration of Opening 4

2 Record of Attendance and Leave of Absence 5

3 Devotional Segment 6

4 Recognition of Achievement 7

5 Receipt and Confirmation of Minutes 8

6 Public Participation 9

7 Petitions and Presentations 10

7.1 Petition - Councillor Paul Gollè - Request for Time Limited No-Stopping Zones on Trout Street, Trevally Court and Trochus Court Thornlands to Improve Traffic Safety During Peak Hours 10

8 Motion to Alter the Order of Business 11

9 Matters Outstanding from Previous Council Meetings 12

9.1 Draft Birkdale Community Precinct Local Government Infrastructure Designation Consultation Report 12

9.2 Birkdale Community Precinct 13

9.3 Cleveland Town Centre Revitalisation Project Update 14

9.4 Indoor Sports Facilities Planning 15

9.5 Notice of Motion - Clearing Watercourses of Flood Debris to Mitigate Flood Risks 16

9.6 Potential Property Disposals - Capalaba 17

10 Declaration of Prescribed Conflict of Interests and Declarable Conflict of Interests 18

11 Mayoral Minute 21

12 Reports from the Office of the CEO 22

12.1 Our Future Redland City: Corporate Plan 2026-2031 22

13 Reports from Organisational Services 87

13.1 November 2025 Monthly Financial Report 87

13.2 2025-2026 First Budget Review 104

13.3 Audit & Risk Management Committee 2 and 9 October 2025 115

13.4 Tropical Cyclone Alfred After Action Review Report 134

13.5 Local Government Association of Queensland Special Meeting 206

14 Reports from Community & Customer Services 215

14.1 MCU23/0085 Preliminary Approval for a Material Change of Use including a Variation Request to vary the effect of City Plan in accordance with the Inspire Technology and Innovation Centre Plan of Development 215

14.2 Community Facility Update - New Southern Moreton Bay Islands Youth and Community Centre 879

14.3 Adopted Infrastructure Charges Resolution (No.3.3) 2025 884
15 Reports from Infrastructure & Operations 1043
16 Notices of Intention to Repeal or Amend a Resolution 1044
17 Notices of Motion 1045
18 Urgent Business Without Notice 1046
19 Confidential Items 1047
19.1 Redland Investment Corporation Governance Review 1047
19.2 Redland Investment Corporation Director Fee Increases 1047
19.3 Redland Investment Corporation Audited Financial Statements 2024-2025 1047
19.4 Cleveland Town Centre Revitalisation Project Update 1047
19.5 Tree Clearing Prosecution 1048
19.6 Strategic Quarry Options 1048
20 Meeting Closure 1049

1 DECLARATION OF OPENING

On establishing there is a quorum, the Mayor will declare the meeting open.

Recognition of the Traditional Owners

Council acknowledges the Quandamooka people who are the traditional custodians of the land on which we meet. Council also pays respect to their elders, past and present, and extends that respect to other indigenous Australians who are present.

2 RECORD OF ATTENDANCE AND LEAVE OF ABSENCE

Motion is required to approve leave of absence for any Councillor absent from today's meeting.

3 DEVOTIONAL SEGMENT

Member of the Ministers' Fellowship will lead Council in a brief devotional segment.

4 RECOGNITION OF ACHIEVEMENT

Mayor to present any recognition of achievement items.

5 RECEIPT AND CONFIRMATION OF MINUTES

General Meeting - 12 November 2025.

6 PUBLIC PARTICIPATION

In accordance with s.6.8 Council Meeting Standing Orders:

1. In each meeting (other than special meetings), a period of 15 minutes may be made available by resolution to permit members of the public to address the local government on matters of public interest relating to the local government. This period may be extended by resolution.
2. Priority will be given to members of the public who make written application to the CEO no later than 4.30pm two days before the meeting. A request may also be made to the chairperson, when invited to do so, at the commencement of the public participation period of the meeting.
3. The time allocated to each speaker shall be a maximum of five minutes. The chairperson, at his/her discretion, has authority to withdraw the approval to address Council before the time period has elapsed.
4. The chairperson will consider each application on its merits and may consider any relevant matter in his/her decision to allow or disallow a person to address the local government, e.g.
    a) Whether the matter is of public interest;
    b) The number of people who wish to address the meeting about the same subject
    c) The number of times that a person, or anyone else, has addressed the local government previously about the matter;
    d) The person's behaviour at that or a previous meeting; and
    e) If the person has made a written application to address the meeting.
5. Any person invited to address the meeting must:
    a) State their name and suburb, or organisation they represent and the subject they wish to speak about;
    b) Stand (unless unable to do so);
    c) Act and speak with decorum;
    d) Be respectful and courteous; and
    e) Make no comments directed at any individual Council employee, Councillor or member of the public, ensuring that all comments relate to Council as a whole.

7 PETITIONS AND PRESENTATIONS

7.1 PETITION - COUNCILLOR PAUL GOLLÈ - REQUEST FOR TIME LIMITED NO-STOPPING ZONES ON TROUT STREET, TREVALLY COURT AND TROCHUS COURT THORNLANDS TO IMPROVE TRAFFIC SAFETY DURING PEAK HOURS

In accordance with s.6.9 of Council Meeting Standing Orders, Councillor Paul Gollè will present the petition and motion as follows:

That the petition is of an operational nature and be received and referred to the Chief Executive Officer for consideration.

8 MOTION TO ALTER THE ORDER OF BUSINESS

The order of business may be altered for a particular meeting where the Councillors at that meeting pass a motion to that effect. Any motion to alter the order of business may be moved without notice.

9 MATTERS OUTSTANDING FROM PREVIOUS COUNCIL MEETINGS

9.1 DRAFT BIRKDALE COMMUNITY PRECINCT LOCAL GOVERNMENT INFRASTRUCTURE DESIGNATION CONSULTATION REPORT

At the General Meeting 13 September 2023 (Item 14.1 refers), Council resolved as follows:

1. *To endorse the Birkdale Community Precinct Local Government Infrastructure Designation Consultation Summary Report, including responses to submissions.*
2. *To note that officers will continue to progress amendments to the Birkdale Community Precinct Local Government Infrastructure Designation based on the Consultation Report, and that a report seeking Council endorsement to make the designation will be brought to a future meeting of Council.*
3. *To thank the community for its participation in the consultation.*

A report will be brought to a future meeting of Council.

9.2 BIRKDALE COMMUNITY PRECINCT

At the General Meeting 16 April 2025 (Item 18.2 refers), Council resolved as follows:

1. *To acknowledge the Birkdale Community Precinct (BCP) is a site of special community interest containing recognised cultural, environmental and heritage values and note community interest in the planning, financial viability, and long-term stewardship of the site.*
2. *To request a report be brought to a future General Meeting, providing clarity and assurance on the following matters:*

   a. *Project Delivery:*

   Identify which elements of the Birkdale Community Precinct Master Plan are currently proposed for delivery in the lead-up to the Brisbane 2032 Olympic and Paralympic Games.

   b. *Financial Modelling and Legacy Planning:*

   Document the process, research, external expertise and methodology applied to the design, planning and future operations of the proposed Redland Whitewater Centre and Birkdale Swimming Lagoon.

   c. *Cultural, Environmental and Heritage Management:*

   Clarify how Council will ensure that site works will be undertaken consistent with best-practice land stewardship principles, including an update on the status of the Federal Conservation Agreement and Environment Protection and Biodiversity Conservation Act 1999 referral.

   d. *Consultation and Co-Design:*

   To realise the social value propositions that are possible for this intergenerational precinct, and to build on the work of the successful piloted community partnerships program, complete the Birkdale Community Precinct Activation Framework to encourage ongoing community stewardship and participation in master plan implementation.

A report will be brought to a future meeting of Council.

9.3 CLEVELAND TOWN CENTRE REVITALISATION PROJECT UPDATE

At the General Meeting 15 October 2025 (Item 20.4 refers), Council resolved as follows:

1. *To request further information about this report or associated attachment*
2. *To maintain the report and its attachment as confidential including maintaining the confidentiality of legally privileged, private and commercial in confidence*

A report addressing this matter, in part, is listed as Item 19.4 of this agenda.

9.4 INDOOR SPORTS FACILITIES PLANNING

At the General Meeting 17 September 2025 (Item 16.2 refers), Council resolved as follows:

1. *To endorse the Indoor Sports Facility Action Plan (Attachment 2).*
2. *To provide in-principle support for the preferred sites for a new indoor sports facility (Attachment 3).*
3. *To authorise officers to undertake the due diligence, master planning and business cases for the preferred sites over the next 12-18 months, including options for further co-location of Council and community facilities as part of a larger integrated precinct and project.*
4. *That a further report be brought to a future meeting of Council for consideration regarding the master planning process, business cases and next steps, which may include the potential refinement of preferred sites pending the results of future work as outlined at point 3.*
5. *To endorse the implementation of the following short-term actions to address current indoor court access constraints:*
    a. *Advocacy to state primary and secondary schools to secure increased community access to indoor facilities.*
    b. *Investigation into the feasibility of covering existing outdoor court facilities to expand all-weather use.*
    c. *Engagement with the Queensland Government to explore co-investment opportunities for enhanced community access to school-based indoor sports infrastructure.*
6. *That the attachments 2 and 3 remain confidential until such time as all key due diligence investigations are completed and Council determines to proceed with a preferred development option, subject to maintaining the confidentiality of legally privileged, private and commercial in confidence information.*

A report will be brought to a future meeting of Council.

9.5 NOTICE OF MOTION - CLEARING WATERCOURSES OF FLOOD DEBRIS TO MITIGATE FLOOD RISKS

At the General Meeting 12 November 2025 (Item 16.2 refers), Council resolved as follows:

1. *To request a schedule of works and timeframe for clearing of watercourses of flood debris to reduce the likelihood of flooding at:*
    a. *Weinam Creek at Cliftonville Place Park and Moores Road to the mouth of the creek.*
    b. *Serpentine Creek from 62-66 Serpentine Creek Road to mouth of the creek.*
    c. *Pitt Street Wetlands from Salisbury Road and Hamilton Street to mouth of the watercourse.*
2. *To bring a report to the General Meeting of Council scheduled 18 March 2026.*

A report will be brought to a future meeting of Council.

9.6 POTENTIAL PROPERTY DISPOSALS - CAPALABA

At the General Meeting 12 November 2025 (Item 20.4 refers), Council resolved as follows:

That Council resolves as follows:

1. *To affirm Council's resolution made under Item 20.1 of the General Meeting of 18 September 2024, confirming that Lot 1 is to be disposed of at market value in accordance with the requirements of the Local Government Act 2009 and Local Government Regulation 2012.*
2. *That Council requests a further confidential report outlining options for the disposal of Lot 3 and that no disposal of Lot 3 be progressed or finalised until Council has considered this report at a future meeting.*
3. *That this report and all attachments remain confidential until the property disposal process has concluded, subject to maintaining the confidentiality of legally privileged, private and commercial-in-confidence information.*

A report will be brought to a future meeting of Council.

10 DECLARATION OF PRESCRIBED CONFLICT OF INTERESTS AND DECLARABLE CONFLICT OF INTERESTS

Councillors are reminded of their responsibilities in relation to a Councillor's Prescribed Conflict of Interest and Declarable Conflict of Interest at a meeting. For full details see Chapter 5B of the *Local Government Act 2009*.

In summary:

Obligation of Councillor with Prescribed Conflict of Interest

Section 150EL of the *Local Government Act 2009* requires Councillors to declare a Prescribed Conflict of Interest in a matter as soon as they become aware of their interest in the matter, either:

(1) *at a local government meeting, or*

(2) *as soon as practicable, by giving the Chief Executive Officer written notice of the prescribed conflict of interest.*

(3) The declaration must include the following particulars:

(a) For a gift, loan or contract – the value of the gift, loan or contract;

(b) For an application for which a submission has been made – the matters the subject of the application and submission;

(c) The name of any entity, other than the Councillor, that has an interest in the matter;

(d) The nature of the Councillor's relationship with the entity mentioned in (c) above;

(e) Details of the Councillor's, and any other entity's, interest in the matter.

Dealing with Prescribed Conflict of Interest at a Meeting

Pursuant to Section 150EM of the *Local Government Act 2009*, if a Councillor declares a Prescribed Conflict of Interest in a matter, ***the Councillor must leave the place at which the meeting is being held, including any area set aside for the public, and stay away from the place while the matter is discussed and voted on*.**

Obligation of Councillor with Declarable Conflict of Interest

Section 150EQ of the *Local Government Act 2009* requires Councillors to declare a Declarable Conflict of Interest in a matter as soon as they become aware of their interest in the matter, either:

(1) *at a local government meeting, or*

(2) *as soon as practicable, by giving the Chief Executive Officer written notice of the declarable conflict of interest.*

(3) The declaration must include the following particulars:

(a) *The nature of the declarable conflict of interest;*

(b) *If the declarable conflict of interest arises because of the councillor's relationship with a related party:*

(i) The name of the related party; and
(ii) The nature of the relationship of the related party to the Councillor; and
(iii) The nature of the related party's interests in the matter;

(c) *If the* Councillor's *or related party's personal interests arise because of the receipt of a gift or loan from another person:*

(i) The name of the other person; and
(ii) The nature of the relationship of the other person to the Councillor or related party; and
(iii) The nature of the other person's interests in the matter; and
(iv) The value of the gift or loan, and the date the gift was given or loan was made.

Procedure if Councillor has Declarable Conflict of Interest

Pursuant to Section 150ES of the *Local Government Act 2009, eligible Councillors at the meeting must, by resolution, decide whether the Councillor who has declared the interest:*

May participate in a decision about the matter at the meeting, including by voting on the matter; or

Must leave the place at which the meeting is being held, including any area set aside for the public, and stay away from the place while the eligible Councillors discuss and vote on the matter.

Duty to report another Councillor's Prescribed Conflict of Interest or Declarable Conflict of Interest

Pursuant to section 150EW of the *Local Government Act 2009,* a Councillor who reasonably believes or reasonably suspects another Councillor has a Prescribed Conflict of Interest or a Declarable Conflict of Interest in a matter must:

Immediately inform the person who is presiding at the meeting about the belief or suspicion; or

As soon as practicable, inform the Chief Executive Officer of the belief of suspicion.

The Councillor must also inform the person presiding, or the Chief Executive Officer, of the facts and circumstances forming the basis of the belief or suspicion.

Record of Prescribed and Declarable Conflicts of Interest

Where a Councillor informs the meeting of a Prescribed or Declarable Conflict of Interest, section 150FA of the *Local Government Act 2009* requires the following information to be recorded in the minutes of the meeting:

The name of the Councillor who may have a prescribed or declarable conflict of interest in the matter;

The particulars of the prescribed or declarable conflict of interest;

If another Councillor informs the meeting of a belief of suspicion, about another Councillor's Conflict of Interest:

(a) The action the Councillor takes;

(b) Any decision by eligible Councillors; and

(c) The name of each eligible Councillor who voted in relation to whether the Councillor has a declarable conflict of Interest, and how each eligible Councillor voted.

Whether the Councillor participated in deciding the matter, or was present for deciding the matter;

For a matter to which the Prescribed or Declarable Conflict of Interest relates:

(a) The name of the Councillor who has declared the conflict of interest;

(b) The nature of the personal interest, as described by the Councillor;

(c) The decision made;

(d) Whether the Councillor participated in the meeting under an approval by the Minister;

(e) If the Councillor voted on the matter, how they voted; and

(f) *How the majority* of Councillors voted on the matter.

If the Councillor has a Declarable Conflict of Interest, in addition to the information above, the following information must be recorded in the minutes:

(a) The decision and reasons for the decision as to whether the Councillor with the Declarable Conflict of Interest may participate in the decision, or must not participate in the decision; and

(b) The name of each eligible Councillor who voted on the decision, and how the eligible Councillor voted.

11 MAYORAL MINUTE

In accordance with s.6.13 of Council Meeting Standing Orders, the Mayor may put to the meeting a written motion called a 'Mayoral Minute', on any matter. Such motion may be put to the meeting without being seconded, may be put at that stage in the meeting considered appropriate by the Mayor and once passed becomes a resolution of Council.

12 REPORTS FROM THE OFFICE OF THE CEO

12.1 OUR FUTURE REDLAND CITY: CORPORATE PLAN 2026-2031

Objective Reference: **A12319763**

Authorising Officer: **Louise Rusan, Chief Executive Officer**

Responsible Officer: **Angela Milne, Acting Executive Group Manager People, Culture and Organisational Performance**

Report Author: **Gemma Chisholm, Service Manager Strategy & Transformation**

Attachments:
1. **Our Future Redland City: Corporate Plan 2026-2031 Community Engagement Report 2025** ⇩
2. **Our Future Redland City: Corporate Plan 2026-2031** ⇩

PURPOSE

To adopt the *Our Future Redland City: Corporate Plan 2026-2031 (the Corporate Plan)*, to take effect from 1 July 2026. The Corporate Plan has been amended to reflect changes from feedback and submissions received during recent community consultation.

BACKGROUND

The Corporate Plan has been developed following extensive consultation and engagement with elected members, key internal stakeholders, and community members. The Corporate Plan considers community and stakeholder input and aims to address the issues and challenges raised and align with identified priorities. The new Corporate Plan, after adoption, will formally commence on 1 July 2026 following the expiration of the current Corporate Plan on 30 June 2026. This timing allows for the Corporate Plan's priorities to be scoped and funded for the 2026-2027 financial year, to support Year One implementation activities.

The Corporate Plan has been refined to strengthen its strategic intent and focus on outcomes over the next five years. The current Objectives have been reframed as Outcomes to articulate what Council aims to achieve for the community. Catalyst Projects and Key Initiatives have been removed to maintain the Corporate Plan's role as a high-level strategic document that sets out the overarching vision and direction for Council and the community.

Priorities are now broadly defined to enable the organisation to respond with agility to evolving community needs and aspirations. Specific projects, initiatives, and activities will be detailed through the annual Operational Plan, supporting strategies and plans, and Council's ongoing commitment to delivering valuable services within the Redlands community. These initiatives will be reviewed annually in line with available budget, funding opportunities, and community priorities, ensuring flexibility and alignment with legislative requirements.

Success measures within the Corporate Plan represent broad, long-term indicators of progress. Complementary Key Performance Indicators (KPIs) will be developed to assess progress towards these high-level outcomes. Benchmarking and data collection will enable Council to make data-driven decisions informed by community sentiment, satisfaction, and promoter scores supporting continual improvement in community trust and confidence in Council and its leadership.

To meet Council's regulatory requirements under the *Local Government Act 2009* (the Act), Council must adopt its five-year Corporate Plan with sufficient time to allow alignment with the budget and operational plan.

Over the past eight months, Council has been developing its new Corporate Plan. The process began with an analysis of community input gathered over the past decade through strategic planning and policy initiatives, along with macro and regional trend assessments, extensive community engagement and customer satisfaction surveys. The Corporate Plan has since evolved through ongoing consultation with Councillors, employees and community members. The draft Corporate Plan was endorsed by Council on 15 October 2025 to go out for community consultation for a further two-week period.

The consultation process for the Corporate Plan review and development captured feedback over two phases from 614 participants through the online Your Say survey (the primary channel for community consultation submissions), focus group sessions and pop-up events.

Phase One

The Redlands community was invited to share their priorities during a five-week engagement period between 17 May and 22 June 2025. This comprised of:

- An online and paper-based survey made available via Council's Your Say platform to ensure broad community access.
    - 342 responses were received.
    - The survey included 11 open-ended and multiple-choice questions, gathering insights on priorities, perspectives and improvement opportunities.
    - It received 2,593 unique Your Say platform visits.
- Eight focus groups and a whole-of-community and stakeholder workshop, involving 72 participants in total.
    - Participants were selected through an open expression of interest, through Council libraries, contact centres, the Redlands Performing Arts Centre, social media and targeted mail-outs.
    - Each session ran for two hours, enabling in-depth discussion on community values, priorities, challenges and opportunities.
- Six community pop-up sessions at local events and public spaces to engage people face to face.
    - Approximately 100 community members were engaged, with 75 participating in an interactive activity.
    - Pop-up locations included AdventureFest, Redlands Touch, Straddie Sharks Indigenous Recognition Match, John Fredericks Park, Bulldogs Football Club games, IndigiScapes Environment and Community Fair, and Bernie's Artisan Markets on Macleay Island.

Phase Two

During phase two, the community was invited to review and provide feedback on the Corporate Plan between 20 October and 2 November 2025. To ensure broad community participation, an online and paper-based survey was available on Council's Your Say platform.

- 100 responses were received.
- The survey included 12 open-ended and multiple-choice questions to gather insights and identify opportunities for improvement.
- It received 1,518 unique Your Say platform visits.

ISSUES

Community consultation analysis and response

Council reviewed and considered all survey responses to ensure that feedback and issues were properly captured and appropriately addressed. Community feedback received will guide how Council communicates throughout the life of the Corporate Plan. A detailed summary of this analysis is included in the Community Engagement Report 2025 (Attachment 1).

This analysis resulted in several amendments to the Corporate Plan, now being presented for adoption (Attachment 2).

Phase One

What the community told Council matters most:

- Sustainable, accessible environments – not just protection, but spaces the community can use and enjoy, with opportunities for recreation, eco-tourism and balanced, responsible growth.
- Strong, connected communities – especially for young people, who emphasised belonging, inclusion, opportunities to thrive, and involvement in arts and culture.
- Economic sustainability and support for local business – including revitalised centres, better parking and access, improved public spaces, and stronger preference for local suppliers through procurement.
- Trust and transparency – clearer communication, understanding government roles, value-for-money services, and stronger advocacy on behalf of the region.
- Lifestyle and liveability – quality sporting, recreation, arts and cultural facilities; access to local amenities; and support for health and wellbeing.
- Fit-for-purpose infrastructure – facilities and local centres that meet community's needs now and into the future.

How this translated into the Corporate Plan:

- The Natural Environment goal was reframed as Sustainable Environments to reflect community expectations for both protection and responsible, accessible use that supports eco-tourism, health, wellbeing and long-term regional sustainability.
- Stronger emphasis was placed on youth priorities, including belonging, connection, civic pride and opportunities to participate in arts, culture and community life.
- The Strong Communities goal now highlights inclusive initiatives, community infrastructure and shared responsibility between Council and community.
- The Corporate Plan elevates economic sustainability, including revitalisation of centres, improved access and parking, and support for local businesses through advocacy and procurement that prioritises local suppliers where possible.
- The Corporate Plan strengthens commitments to transparency, value for money and advocacy, directly responding to concerns about trust and clarity around the role of different levels of government.
- Priorities relating to sport, recreation, arts, cultural and community infrastructure were expanded to reflect strong community demand for quality, fit-for-purpose facilities across the city.

Phase Two

During phase two Council asked the community how the Corporate Plan could be improved, with the following refinements made:

- Several word changes throughout the Corporate Plan to provide greater clarity and information about the outcomes and priorities of Council and the community.
- Updates to the Our Community's role diagram to reflect feedback provided from the community.
- Updated 'Success Measures' to 'What success will look like' as suggested by the community.
- Removal of the word 'feels' from indicators of success to provide improved impact on community needs and aspirations.
- Additions to 'What can you do?' sections throughout the Corporate Plan.

STRATEGIC IMPLICATIONS

Legislative Requirements

The *Local Government Act 2009* requires Council to prepare a five-year corporate plan that outlines its strategic direction for each period of five financial years.

Section 165 of the *Local Government Regulation 2012* states that a local government must adopt its five-year corporate plan in sufficient time to allow a budget and annual operational plan, consistent with the corporate plan, to be adopted for the first financial year that is covered by the Corporate Plan.

Risk Management

Council has a system of risk management that incorporates registers of strategic, operational and activity risks. Achievement of the goals in the Corporate Plan will support the management and mitigation of those risks.

Timing of the adoption of the Corporate Plan is the most critical issue, as delays in adopting The Corporate Plan could result in non-compliance with the *Local Government Regulation 2012* and misalignment of the annual budget development process, potentially resulting in lack of or inadequate funding and/or resourcing of the Corporate Plan's deliverables.

Financial

The development of the Corporate Plan has been produced within approved existing budget and resources allocated for this project. The Corporate Plan sets the strategic direction for Council over the next five years, which will drive the development of Council's annual Operational Plan and budget. The process to develop those will include analysis and governance to ensure alignment to Council's strategic direction, Financial Strategy and financial sustainability.

People

Council employees were consulted in the development of the Corporate Plan including key strategic themes, outcomes and success measures through workshops and invited to share feedback on the Corporate Plan. Employees are required under the Act to perform their duties in a way that supports the achievement of the Corporate Plan.

Environmental

The Corporate Plan contains extensive environmental priorities to ensure the ongoing management, conservation and enhancement of the city's unique environmental assets.

Social

The Corporate Plan contains extensive social priorities to ensure community and social inclusion, opportunity and engagement across all demographic sectors of the Redlands.

Human Rights

The Corporate Plan has been developed with consideration of human rights and s58(5) of the *Human Rights Act 2019*.

Alignment with Council's Policy and Plans

The Corporate Plan is the strategic document of Council and overarches many Council policies and plans. This includes close alignment with key documents such as the City Plan and Council's other key strategies and plans.

CONSULTATION

Consulted	Consultation Date	Comments/Actions
Councillors and Executive Leadership Team	25 November 2025	Delivered phase 2 community consultation feedback on the Corporate Plan and highlighted changes made to the finalised Plan.
Community engagement (phase 2)	20 October 2025 to 2 November 2025	Sought feedback on the Our Future Redland City: Corporate Plan 2026-31. Feedback and suggestions were considered and, where appropriate, has been reflected in the Corporate Plan (Attachment 2).
Councillors	15 October 2025	General Meeting – Council resolved to: approve the draft Corporate Plan for the purpose of community consultation, commence with community consultation for a two-week period, and to consider all submissions made during this time.
Councillors and Executive Leadership Team	1 September 2025	Corporate Plan Workshop #4 – current Corporate Plan review, transition plan and new plan structure and approach.
Senior Leadership Team	6 August 2025	Unpacked engagement outcomes and aligned feedback and deliverables with the Corporate Plan's vision and goals.
Councillors and Executive Leadership Team	24 July 2025	Corporate Plan Workshop #3 – aligned phase 1 engagement with The Corporate Plan's vision and goals.
Community engagement (phase 1)	17 May 2025 to 22 June 2025	Sought feedback through a range of mediums on the current opportunities and challenges, and to better understand the future priorities.
Councillors and Executive Leadership Team	29 April 2025	Corporate Plan Workshop #2 – workshopped Council's vision and identity, understanding the Corporate Planning hierarchy and where the Corporate Plan fits and discussed the community engagement approach.
Councillors and Executive Leadership Team	25 March 2025	Corporate Plan Workshop #1 – presentations and discussions on the global, national and local macro trends and implications.
Senior Leadership Team	28 January 2025	Awareness of the Corporate Plan and discussion on how and when Senior Leadership Team will be consulted and engaged through the review.
Executive Leadership Team	28 January 2025	Discuss Corporate Plan review (including the community engagement) approach and resourcing.

Consulted	Consultation Date	Comments/Actions
Councillors and Executive Leadership Team	26 November 2024	Sought agreement from Councillors and Executive Leadership Team to commence the review of the Corporate Plan and sought guidance on the scope of the review.

OPTIONS

Option One

That Council resolves as follows:

1. To note the Corporate Plan Community Engagement Report (Attachment 1).
2. To adopt the *Our Future Redland City: Corporate Plan 2026-2031* (Attachment 2), to commence on 1 July 2026, noting it will be used to develop and guide future operational plans and budgets consistent with the Corporate Plan.

Option Two

That Council resolves as follows:

1. To note the Corporate Plan Community Engagement Report (Attachment 1).
2. To adopt the *Our Future Redland City: Corporate Plan 2026-2031* (Attachment 2), to commence on 1 July 2026 with changes, noting it will be used to develop and guide future operational plans and budgets consistent with the Corporate Plan.

Option Three

That Council resolves as follows:

1. To not adopt the *Our Future Redland City: Corporate Plan 2026-2031* (Attachment 2).
2. To request officers to undertake further work on the Corporate Plan and bring back to a future Council meeting early in 2026 for adoption, to support the budget development process timeframes.

OFFICERS RECOMMENDATION

That Council resolves as follows:

1. **To note the Corporate Plan Community Engagement Report (Attachment 1).**
2. **To adopt the *Our Future Redland City: Corporate Plan 2026-2031* (Attachment 2), to commence on 1 July 2026, noting it will be used to develop and guide future operational plans and budgets consistent with the Corporate Plan.**

Our Future Redland City: Corporate Plan 2026-2031

Community Engagement Report

2025

Contents

Introduction 3
Phase 2 - Draft Corporate Plan Online Survey 4
Overview 4
Data Analysis and reflection 4
Summary of Feedback and Corresponding Actions 7
Appendix One 8
Appendix Two 13
Appendix Three 44

Introduction

This Community Engagement Report provides a summary of the extensive two-phase engagement process that informed the development of the **Our Future Redland City: Corporate Plan 2026–2031**. The purpose of this introductory page is to give readers an at-a-glance understanding of how engagement was undertaken, what we heard, and how community and stakeholder insights shaped the draft Plan. Full phase analyses and findings are provided in the detailed report sections that follow.

Overview of Engagement Phases

Phase 1: Community Priorities and Visioning

17 May – 22 June 2025
Report Pages: 8–38

Phase 1 focused on understanding the community's values, aspirations and priorities for the future of Redland City. Engagement activities included:

- Online and paper-based survey
- Eight focus groups
- Community and stakeholder workshop
- Six community pop-up sessions
- Targeted communication and promotion to encourage community participation

These activities identified the key themes and issues that mattered most to the community. Insights from Phase 1 directly informed the goals, outcomes, and priorities in the drafting of the Corporate Plan.

Key Outcomes:

- Identification of major community priorities across environment, community connection, economic sustainability, trust and transparency, lifestyle, and infrastructure
- Reframing of strategic goals and outcomes to reflect community expectations
- Stronger emphasis on youth, inclusive communities, responsible growth, local business support and improved communication.

Phase 2: Review of the draft Corporate Plan

20 October – 2 November 2025
Report Pages: 4–6

Phase 2 invited the community to review and provide feedback on the draft Corporate Plan. Engagement activities included:

- Online and paper-based survey
- Targeted communication and promotion to encourage community participation
- 1 face-to-face information session for participants of phase 1 workshops

Feedback was carefully reviewed, with refinements made where appropriate to strengthen clarity, alignment and responsiveness to community input.

Key Outcomes:

- Improved clarity of language throughout the draft Plan
- Updates to diagrams and success indicators
- Expanded 'What can you do?' sections
- Removal of subjective wording to improve precision and alignment with community expectations

Together, these two phases engaged more than 600 participants across a range of channels and directly shaped the development of the Our Future Redland City: Corporate Plan 2026-2031. The following sections provide a detailed breakdown of engagement findings and analysis.

Phase 2 - Draft Corporate Plan Online Survey

From Monday 20 October to Sunday, 2 November 2025 Council invited community feedback on the draft Corporate Plan to ensure the draft reflected community priorities and to consider any additional amendments to the draft before submitting the document to Council for adoption in December 2025.

Overview

During the phase two engagement period, there has been:

- 1,850 views to the project page on Your Say - Corporate Plan - 2031 | Your Say Redlands Coast
- 1,518 unique views, visitors aware of the project.
- 972 informed visitors. These visitors performed one or more actions on the project page such as downloading the draft Corporate Plan or completing the feedback survey.
- 100 survey submissions.
- 790 visitors downloaded the draft Corporate Plan.
- 72 visitors visited the FAQs.

Data Analysis and reflection

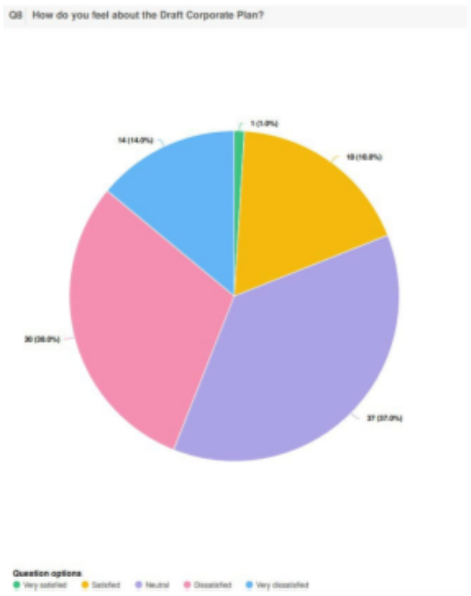
Participation and Awareness

The low number of engaged participants (100) does not reflect the project's reach and awareness. Only 6.6% of the project page visitors chose to participate in the feedback survey. This was the case even though there was no need to register to complete the survey. The only requirement was that participants provide a username and email address.

Furthermore, over half of the visitors (790) have downloaded the draft Corporate Plan. This strongly suggests the community was aware of the draft Plan and did not feel the need to provide further feedback.

When combined with the fact that respondents who participated on the feedback survey were:

- 70% not involved in any of the engagement activities from May to June (stage one)
- Mostly felt neutral about the draft Plan (37%), but negative perception accounted for almost half of respondents (30% dissatisfied) and (14% very dissatisfied), while only 18% were satisfied and 1% very satisfied.



- 3% of respondents admitted to not having read the draft Plan. They expressed both positive and negative views about it.
- 49% read the draft Plan briefly and 48% read it in detail. There were no significant changes in responses whether a respondent said it read the draft Plan briefly or in detail.

Data suggests people were more likely to have their say if they had a negative view of the draft Plan or of Council.

Unsupportive responses

Further analysis of the 44% that said they were either 'dissatisfied' with the draft Plan (30%) or 'very dissatisfied' with the draft Plan (14%) shows that:

- At least **13 comments** (30%) were requesting that the draft Corporate Plan be more specific – comments such 'too vague…', 'should include specific actions…'
- **6 comments** (14%) referred to 'avoiding waste' or 'having high rates' – which outlines financial dissatisfaction with Council, but not necessarily with the draft Plan.
- At least **5 comments** (11%) were more pertinent to the City Plan – e.g. 'keep the area as is', 'less people, more habitat', 'Redevelopment of key centres such as Cleveland, lots of apartments being built but the town centre is not vibrant', etc.
- At least **3 comments** (7%) mentioned 'heritage'. One of those comments outlined that the heritage outcomes under 'Strong communities' needed to be more specific.
- At least **3 comments** (7%) mentioned their disappointment with the White-Water Rafting facility.
- A further comment (2%) said they were unsure about how to improve the draft Plan.

These comments outline that **62%** of the negative feedback refers to matters outside of the scope of the Corporate Plan. A further **7%** of the negative perceptions are about a specific project briefly named on the draft Plan (White Water Rafting), but not the draft Plan itself. A further **2%** said they were unsure about how to improve the draft Plan. Therefore, at least 71% of the negative comments did not provide actionable feedback to improve the draft Plan.

This suggests that an education campaign about what a Corporate Plan is and does may help minimize the negative perception about the proposed document.

Other feedback

- At least three comments requested that the draft Plan was 'less woken', including in relation of First Nations people and migrants
- There were two comments about insufficient emphasis on recognition and support for First Nations;
- One respondent outlined that success measures should be easily measured so that Council can be held accountable.
- One respondent said success measures should match the priorities, which in their view, did not.
- At least one respondent would like to see more about how Council proposes to build that trust under Efficient and Effectiveness.

Summary of Feedback and Corresponding Actions

We heard this	We did this	How it will be / is reflected in the Plan
Success measures to be simple, clear, specific, and actionable	**Renamed to make the intent clearer**: What will success look like	Specific metrics will be used in Operational plannin and reporting
Shared generational opportunities and challenges? The title of this section doesn't seem to align with its content.	**Renamed title to**: Opportunities and challenges we share	
Community groups which focus on heritage need to be supported.		**Strong communities Goal Outcome:** Culture, arts, education and heritage experiences that cultivates civic pride and an inclusive, connected, creative community **Corresponding Priority:** Deliver and enable new initiatives and events that generate a strong sense of community connection, pride and inclusion
By making statements about equalising some of the goals across suburbs in Redlands.	The Plan is designed at a regional level to ensure broad, coordinated outcomes, rather than suburb-specific initiatives.	**Strong communities Goal Outcome:** Community infrastructure and facilities that strengthen social, lifestyle and wellbeing outcomes **Corresponding Priority:** Deliver and enable new initiatives and events that generate a strong sense of community connection, pride and inclusion
Suggested action under What can you do? is attend an event at RPAC, the art gallery or Indigiscapes	Suggestions have been included in the "What can you do?" Goal sections	
Improvement or sustainability of certain ecosystem health' this wording is not clear.	**Removed word:** Removed "certain" to enable better clarity	**Now reads:** Improvement or sustainability of ecosystem health
Some parts of the Redlands' conservation areas need to be protected for the benefit of the precious wildlife we still have, without being subjected to the intrusion of mountain bikes, park runs and suchlike.	Adjusted wording to "providing responsible access" and included "respected" to make clear the intent is to improve accessibility to existing tracks and trails, not create new.	**Now reads:** Our environment: We nurture and protect our flora, fauna, green space and waterways while providing responsible access to these assets for community health, wellbeing and recreation. Outcome: Our natural environments are accessible, respected, connected and enjoyed by everyone
There is a lot of talk about sustainability but not much about what it means and how it may be implemented.	The sustainability strategy is currently under development. Specific pieces of work will be highlighted in Operational planning and reporting	
Focus on roads in the area that need upgrading (Redland Bay, Russell Island)		**Liveable neighbourhoods priority:** Advocate for and deliver integrated and accessible transport solutions on the city's active transport, passenger and road, networks, to improve travel choice and access for the community
Redevelopment of key centres such as Cleveland, lots of apartments being built but the town centre is not vibrant.		Revitalisation projects listed in the Plan such as the Heinemann Road Precinct, Toondah Harbour redevelopment, Weinam Creek PDA redevelopment, Cleveland CBD revitalisation, Capalaba Town Centre revitalisation and Birkdale Community Precinct.
Actions proposed don't provide any indication of how the Council will undergo change to become more trustworthy. Transparency is mentioned		**Effective and efficient Council priority**: Build effective and meaningful stakeholder and community partnerships through continued dialogue, transparency and accountability.
Needs to be more community-centric and less corporate. I want to see more specific information and key initiatives. Would like to see a clear 5-year plan and expected outcomes for major projects, how these are selected and delivered.		Key initiatives and specific projects will be highlighted in Operational planning and reporting.
Advocacy for public transport, education, and roads		Advocacy priorities throughout the Plan

Appendix One

Engagement Partner Articulous – Phase two Community Information Session Report

OCTOBER 2025

Redland Corporate Plan

Community Information Session

Prepared by Articulous

articulous

Introduction

Redland City Council is drafting the Redland City Corporate Plan 2026-2031. Following previous community engagement (phase one), Council is now seeking further community input on a draft Corporate Plan (draft Plan). This process aims to identify what the community value, opportunities to improve or any other changes that may be required for the final Corporate Plan.

Attendees

There was an attendance of 15 people at the community information session held at IndigiScapes Centre on 21 October 2025. Articulous was engaged as an independent facilitator this information session.

Activity results

Council Staff presented insights gathered from previous engagement activities, which were used to inform the development of the draft Plan. The draft document was then presented to the group for review and discussion. The participants were asked to focus on identifying what they liked, what areas could be improved and any further feedback. The draft Plan was displayed on screen during the discussion and printed copies were distributed to the participants to focus the conversation on the document elements.

What do you like about the Draft Plan?

- Participants supported the 'well governed' statement in the Effective and Efficient Council Goal, noting that they believe it is the appropriate wording and reflects the right direction.
- There was a positive response to the inclusion of the shared responsibilities throughout the Plan.
- The document was perceived as being less inward looking or internally focused. It is becoming community focused which was liked by the group.
- Participants noted that community consultation was completed throughout the development of the draft and this was a good focus, but expressed their disappointment at the engagement figures and participation rates.
- Role delimitation to clarify the positions and responsibilities of the different levels of government was noted as a worthy inclusion, as this is often misunderstood
- Participants appreciated the inclusion of the goal indicators. However, participants expressed their desire for these to be clear, measurable to have meaning. Examples shared included wellbeing indicators, the happiness index or include KPIs that are more transparent and accountable.

How can the Draft Plan be Improved?

- Success measures and reporting needs to be transparent and accountable with discussion noting:
    - The success measures that related to how people 'feel' throughout each goal didn't resonate with the community, as it is unclear how Council would measure how the community truly feels
    - Transparency on how the Council plans to specifically measure the reporting and what is being used to establish a meaningful baseline figure
    - Participants want targets and benchmark clearly outlined
    - There is a trust gap between community and council and current measures will not help to understand if there is an increase in trust with the community, with better facts and figures needed to do this.
- Community trust can be built through delivering on items in the Operational Plan, transparency needs to be provided. It was seen as essential for the community to clearly understand the Corporate Plan, and see evidence of the Council's performance. They noted:
    - That the sport and recreation sector have been left out of the plan, with only minimal mentions throughout the liveable neighbourhood goal
    - There was a concern that arts and culture have been left out of previous planning, and will continue to be overlooked in future initiatives or funding opportunities

- The history of the Redlands needs to be clearly reflected throughout the Plan, heritage needs to be clearly articulated, both first nations and non-first nations heritage.

- Efficiency and effectiveness of Council:
  - The participants noted that there are relationship issues internally between elected representatives, stating there is a feeling that the group 'are broken' team
  - The community want better team building between elected leaders, something different to what has previously been done to bridge this gap, and ensure a unified leadership group who can work together
  - Unless the community sees positive change and greater cohesion amongst the elected representatives, the trust will continue to be lost and impact the wider community
  - There needs to be a 5-6 year plan to build back the trust, as there will be a local election during this time and potentially new local elected representation
  - The participants shared that the trust issues were with Council leadership making internal decision and then telling the community afterwards. Sometimes policies don't align with community expectations which creates further tension, Council should not be 'doing it to the community, but rather with the community'
  - Council needs to start to work as a cohesive team, with full participation from staff and all Councillors. Progress for the city will remain limited if the leaders are unable to agree or reach consensus, that includes the delivery of this Plan and its goals
  - The language 'well governed and future focused that leads and delivers' wasn't supported as participants felt it should have a 'community centered leadership focus'
  - Participants expressed that they view the Council as being part of the community, with a desire to work with Council to shape the city's future, not work against them
  - Negative perspective was expressed that some actions were being done to the community, rather than with them, and that the diagram in it's proposed form represented this. As an alternative, a new diagram was created by participants with community at the centre, rather than council:

Other comments

General comments:

- A participant shared the Banyule Plan as a strong example of a well-executed plan involving the local community throughout its development. They noted that this example Plan was created with the community, and has community focused. There was a suggestion that a similar approach should be adopted with by Council for future documents or planning.
- It was expressed that building trust with the community will take time, and gaining back trust was important due to the current disconnect between Council and community

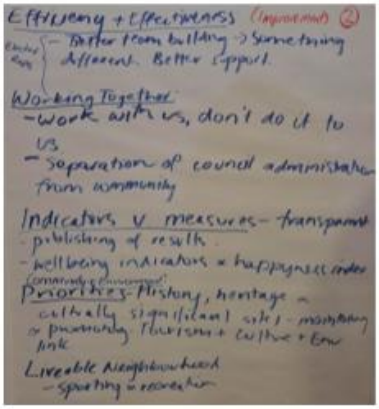
Our environment:

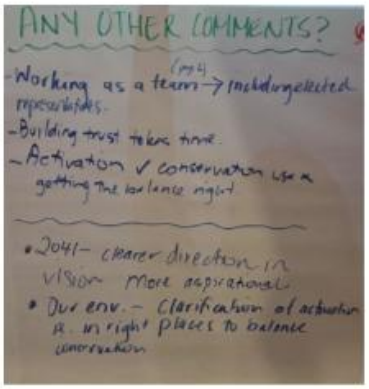
- Strong focus on activation was noted and questioned by participants.
- The difference between activation as opposed to conservation uses was highlighted. A desire to carefully consider what's appropriate to get the balance right. Clarification was required for activation in right places to balance conservation.

2041 Vision:

- Participants shared their observations that the vision should be more aspirational, indicating that there was little meaning or future direction in the current one.

Wall notes pictures





Appendix Two

Phase one community engagement report in partnership with Articulous

Redlands Corporate Plan 2026-31

Community engagement findings

July 2025

Table of Contents

Overview 4

Engagement process 4

Focus Groups and whole of Community and Stakeholder Workshop 4

Pop-up sessions 5

Online survey 5

Additional Community feedback 5

Survey demographics 5

Key themes identified 6

1. Strong community connection and local pride 6
2. Natural Environment is Redlands core identity 6
3. Facility and infrastructure gaps 7
4. Access and affordability challenges 7
5. Support for arts and local events 8
6. Equity and inclusion for all residents 8
7. Transport and connectivity limitations 9
8. Health and support service gaps 10
9. Business, tourism, and economic development opportunities 10
10. Need for smarter planning, transparency and communication by Council 11
11. First Nations and Cultural heritage 11
12. Island communities unique planning needs 11
13. Safety 12

Values 13

Priorities 18

Five Year Outlook 22

Council improvement 23

What's missing in the current Corporate Plan? 26

Communication 28

Next steps 28

Acknowledgment of Country

Redland City Council is committed to working with Traditional Custodians, supporting their role as custodians of their traditional lands and helping ensure the future prosperity and cultural enrichment across Redlands Coast. Council acknowledges the Goenpul, Ngugi and Noonuccal First Nations Peoples of the Quandamooka region and recognises that the Quandamooka People are the Traditional Custodians of much of Redlands Coast. Council also extends its acknowledgement of Traditional Custodians to the Danggan Balun (Five Rivers) claimant group who are currently in the process of Native Title determination for an area that crosses into southern Redlands Coast.

Overview

Redland City Council is preparing to draft the *Redlands Corporate Plan 2026-2031*. Council conducted early engagement between May and June 2025 to identify the community's current opportunities and challenges, and to better understand the future priorities that should be considered. The outcomes of this engagement will inform the draft Plan that will be available for further public consultation in late 2025.

Community insights were collected through various methods, including eight community focus group conversations, a community and stakeholder workshop, an online survey, internal key stakeholder meetings and briefings, and six community pop up sessions. This engagement approach aimed to acquire a holistic understanding of the community's values, current challenges and future opportunities, and priority areas through multiple perspectives ensuring the diverseness of the Redlands community was represented. The summary findings from this engagement will inform the draft *Redlands Corporate Plan 2026-2031*.

As part of these preliminary engagement activities, Council engaged independent facilitators from Articulous to lead the community and stakeholder workshop and facilitate the eight community focus group conversations. The purpose of providing a whole community workshop as well as a series of focus groups was to target key interests of community members who are considered "harder to reach". Articulous also supported Council to analyse survey data, and the insights collected across the engagement period. This report, which has been prepared by Articulous, presents the summary findings from the engagement conducted.

These findings should be read in conjunction with the following individual summary reports:

- Corporate Plan Pop-ups Summary Engagement Report prepared by Council
- Community and Stakeholder Workshop Outcomes Report
- Eight individual community focus group outcomes reports.
- First Nations engagement is ongoing and a summary of their feedback will be available at a later stage

Engagement process

Over the 5-week engagement period from 14 May to 22 June, a total of 414 interactions were recorded during the community engagement process. In addition to the engagement sessions facilitated by Articulous, Council completed six community pop-up sessions. Insights recorded from the pop-up sessions are included in a separate report and are not included in this report.

Council is actively working with Indigenous groups and organisations such as the Elders and Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC), to secure a meeting with representatives to capture their feedback and insights on the Corporate Plan.

Focus Groups and whole of Community and Stakeholder Workshop

A total of eight focus groups and a whole of community and stakeholder workshop were completed during the consultation process. In total, 72 people participated throughout the focus groups and workshop. Participants were selected from an open online expression of interest process, through Council libraries, contact centres, Redlands Performing Arts Centre, a social media campaign, and targeted mail outs through Redland City Council officers.

The focus groups and the community and stakeholder workshop were held over 2 hours, allowing robust conversations that targeted specific topics to gain valuable insight information on the community's values, priorities, challenges and opportunities.

Following the community and stakeholder workshop, the following focus group topics included:

1. Arts and culture
2. Sport and recreation
3. Youth and young people
4. Environment
5. Health and aging
6. Sole traders/ small business
7. People with disabilities
8. Islands residents

Pop-up sessions

Council Officers completed six community pop-up sessions to reach community members face to face at community events and other social outings they were already attending. Around 100 community members were engaged with, with approximately 80 postcards and 75 people participating in the interactive activity.

The pop-up locations included:

1. Redlands Coast Adventure Fest fun day
2. Redlands Touch (Redlands Showgrounds)
3. Straddie Sharks Indigenous recognition match
4. John Frederick Park, Bulldogs Football Club games
5. IndigiScapes Environment & Community Fair
6. Bernie's Artisan Markets, Macleay Island

Online survey

To ensure the broader community had an opportunity to have their say, an online and paper-based survey was available on the Redland City Council Your Say platform from 14 May – 22 June 2025. A total of 342 responses were received. The survey aimed to gather community insights, priorities, perspectives and opportunities for improvements through several open-ended and multiple-choice questions. There survey consisted of 11 questions.

Additional Community feedback

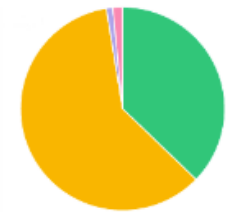
Throughout the engagement period, additional information was provided to Council Officers by members of the community and community groups. This feedback has been considered and included in the Corporate Plan 2026-2031 Review - Additional Community Input Report.

Survey demographics

The survey (online and paper based) received feedback responses from a broad cross-section of Redlands community members. Survey respondents represented the following gender and age groups:

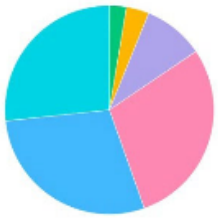
Gender:

- Female – 60.2%
- Male – 37.2%
- Non-binary – 1%
- Prefer not to say – 2.5%



Age groups:

- 19 or under – 2.6%
- 20-24 – 23.5%
- 25-34 – 9.4%
- 35-49 – 29.0%
- 50-64 – 28.7%
- 65+ – 26.7%



Half of all respondents (50.7%) shared that they live in a mainland costal area, followed by 24.3% who live on an island, 23.2% who live in an inland suburban area, and 1.8% who live in a rural area.

Key themes identified

Across the engagement period, the following **13** key themes were consistently identified.

Participant quotes have been highlighted in the blue boxes.

1. Strong community connection and local pride

There is a strong sense of pride within the Redlands community. A large number of engaged participants and survey responses highlighted the importance of feeling a sense of belonging in the Redlands, describing it as nurturing, inclusive and a supportive community. Proximity to the bay, coastal lifestyle and having a 'village feel 'were highlighted as major attractors for living in the Redlands.

Having a strong social and community connection was clearly very important to all participants that took part in the engagement opportunities. There was however, an evident disconnect between mainland and island communities. Island participants shared that the community feel is still strong within the islands however mainland areas reported the decline in neighbourly connections and a desire to rekindle the community cohesion through local events such as Mayor Christmas Carols and inclusive activities such as Halloween events at a community centre or non-competitive recreation events.

Interestingly, inland suburb areas ranked community connection as being the most valued while island residents and mainland coastal areas ranked it 4th most important. Community connection was found to be of less importance for rural community members.

"[In five years], local people would be more open to change, embracing new ideas while maintaining a strong sense of friendliness and community spirit. The lifestyle in Redlands, particularly in the CBD, would be more dynamic – featuring a greater variety of shops, restaurants, and community events that foster connection and cultural vibrancy."

"[In five years, Redlands would] be a relaxing place to live with an old-fashioned seaside village feel, with plenty of wildlife to see especially koalas, still lots of quiet bushland places to walk, our unique European heritage maintained and Quandamooka heritage and people respected."

2. Natural Environment is Redlands core identity

Participants consistently identified the Redland's natural environment and surroundings as one of the main reasons they love living in the Redlands. Examples included the uniqueness of the wildlife, bushlands, waterways, scenic coastline, being part of the marine park and the flora and fauna as defining and cherished features. Due to the natural environment being extremely valuable to the community, there was a clear sense of responsibility to protect the environment and local wildlife with a lot of support for stronger environment protections, including wildlife corridors and ecotourism development, community education materials, more targeted engagement with community, and honouring environmental plans. These suggestions were seen as possible ways to ensuring the future sustainability of the natural environment and improved cultural awareness.

Participants said the City's environment:

- Underpinned a range of economic activities including ecotourism
- Supported the City's amenity and outdoors lifestyle

- Was something they wanted other generations to experience

Comments identified enhanced environment corridor protection as being essential to maintaining the city's wildlife and plants.

"Environment corridors and connective corridors are being impacted by poor planning, it is something that we the community are passionate about protecting".

Survey data identified environmental protection as the number one priority by survey participants, further confirming the value in the Redlands natural environment and the desire from community members to protect the natural flora and fauna as much as possible.

One of the survey questions asked participants to describe the Redlands in three words. The words "natural environment" was ranked in the top three descriptor across all Redlands location types (islands, mainland coast area, in land suburb and rural area). Many responses also included descriptive words referencing the uniqueness of the location of the Redlands.

"[Council should facilitate] considerable strengthening of environmental protection laws to preserve our unique land and water environment."

"[In five years], Redlands' commitment to environmental protection would be evident everywhere. Its natural beauty, from the bay to the bushland, would be even more pristine and celebrated, attracting eco-conscious visitors and residents alike. The region would be recognised as a leader in sustainable practices, balancing development with conservation."

3. Facility and infrastructure gaps

While the Redlands was described as a desirable place to live and raise a family, there is growing concern about outdated and undermaintained community infrastructure, particularly sporting venues, pools, and arts facilities such as community halls. Participants called for the urgent investment in an indoor sporting facility, upgrades to the Cleveland Aquatic Centre, and the revitalisation of underused precincts such as the Cleveland CBD. Facilities for youth development, Olympic-level training, and casual recreation and school holiday activities were mentioned as venues that were specifically lacking.

"Infrastructure is a must. No point inviting people to the area to live without the infrastructure to cope with the influx and demand for access to roads, retail, health, education, utilities, affordable housing."

"[Council should] invest in providing better sport and recreation facilities especially for our younger generation."

Build a better Cleveland pool, Redlands swim club needs an improved pool and isn't as competitive as other clubs because the pool isn't meeting regulations, so the blocks are not allowed to be used.

4. Access and affordability challenges

Rising costs and affordability challenges was a topic that was of great concern from all participants engaged and evidently impacts participants from across the board, from sports clubs to local community groups, to business owners and local community services, concerns were raised around:

- Costs of venue hire
- Cost of venue maintenance for small groups
- Transportation for businesses and local business owners
- Operational costs for essential services.

The above issues are limiting community participation, particularly for low-income families, youth, people with disabilities,

and island residents. There is a clear need for financial support mechanisms such as grants and subsidies, and more affordable access to programs and spaces. This was particularly highlighted in regard to the arts, sport and recreational, and health services. From the individual focus group conversations, it was identified that often there are grants available for local community groups, however participants are either unaware of them or required assistance with applying for the grants. Improved education and awareness around available funding, local grants and knowing how to apply for these grants was evident.

"[Council should invest in] further land release to allow for more housing stock to improve housing affordability and opportunities for younger people in our community. Cost of living issues are one of the biggest issues facing residents at the moment."

"[In five years, Redlands will be] an enjoyable and affordable place to live where council focuses ratepayers' money on core services (waste management, parks maintenance) and infrastructure maintenance (sewer/water/stormwater, local roads, recreation areas)."

5. Support for arts and local events

There is a desire to nurture local artistic talent and provide clearer development pathways for young and emerging artists in the Redlands. Participants noted the loss of key festivals and events, which has diminished local opportunities for creative and cultural expression. There is a strong desire for family-friendly, inclusive, free or low-cost community events that encourage participation, connection and local pride.

Participants shared the rising costs of venue hire, venue maintenance, building expenses and funds required to put on a show are unstainable for small community groups and have created many barriers.

While 17% of survey participants ranked events as their top three values, the top improvement wanted in the next 5 years was around building community connection through events, activities and festivals. This statement further confirms the value of community connection and the desire for improved local opportunities that further enhance community connection and growth.

"Safety is a concern. There are lots of smaller facilities however, we had booked a larger space, Galley Hall, and the ceiling collapsed the day before our event. There wasn't another facility suitable and had to cram the people who had purchased tickets into another hall. The halls are being neglected, we want to keep them as destinations".

"People don't need to be good singer to join a choir, the focus is on having fun, I want everyone to be involved."

"[In five years, Redlands will be] a hub of vibrant culture. Festivals, art galleries, music, and culinary delights fill our streets, offering something for everyone."

6. Equity and inclusion for all residents

Throughout the focus groups, there was a clear demand for equal access to housing, education, recreation opportunities, transport, healthcare and employment. Conversations shared that Island residents, people living a with disability, underprivileged youth and elderly resident often feel overlooked or underserved. Participants advocated for planning and service models which recognise the unique needs of the different communities, particularly those living on the islands. Young people, who attended the youth specific focus group, expressed a desire for greater inclusion, access to services and leadership opportunities within the community such as

being involved with further youth engagement conversation with the Council.

Other barriers recorded by young people were that tertiary education is hard to access in the Redlands. Often young people are forced to either drive and pay for expensive parking, catch lengthy public transport journeys or they move out of the area to somewhere more convenient to higher education opportunities. This barrier to higher education is even bigger for island residents with island students often being unable to socialise or participate in after school activities due to the limitation in transport back to the islands.

Survey respondents 24 years old and under are particularly concerned with equity and inclusion, ranking 'Connected communities (sense of belonging, digital accessibility, mobility)' as their second priority for Redland City 58%, tied with 'Transport, education, health infrastructure - state/federal responsibilities (Advocacy)' and 'Public infrastructure (halls, parks, sports fields, etc.). Almost half of respondents in this age group (42%) named 'Celebrate diversity and inclusion (multicultural, all abilities, gender diversity) as a priority for Redland City, compared to 6% of 25-49-year-olds and 9% of 50+ year olds.

"We pride ourselves on being an inclusive community where diversity is celebrated, and everyone feels at home. Whether you're a long-time resident or a newcomer, you'll find a warm welcome and a sense of belonging."

"[In five years, Redlands will be] safer and more disability/accessibility aware than it is now."

"[Council should] facilitate and provide improved facilities and avenues for our young people, in particular teenagers. Positive and healthy solutions that foster community engagement and collaboration."

7. Transport and connectivity limitations

Transport was widely reported as a challenge for the Redlands, particularly for island residents, students, and rural residents. Inadequate public transport options including delays and lack of transport routes, long commutes in between services, and delays from roadworks are isolating communities and limiting access to education, employment, and social activities. Island residents raised several issues with connectivity to the mainland including:

- Travel to community events from the islands is a challenge with ferry delays and ferry schedule limitations
- Bus routes from the islands ferry terminals to the Cleveland showgrounds are not reliable or do not run often enough for people traveling from the islands
- No public transport options on the islands [excluding Stradbroke]
- Connected services such as buses scheduled to align with the ferry timetable, often depart early or fail to wait if the ferry is delayed - leaving passengers without public transport when they arrive.

These were listed as the major barriers for island residents in broader community connection to the Redlands community. Participants stressed the need for reliable, affordable, and integrated transport solutions across the entire Redlands region.

"[In five years], Redlands would be a more connected and accessible community. Integrated transport options would significantly reduce commute times and congestion, making daily life smoother for residents. Islanders would experience seamless

travel to the mainland, greatly improving access to essential services and employment."

"[In five years, Redlands will have] better public transport links with improved links to Brisbane city and the Gold Coast. More walking and cycling tracks. More affordable transport options to islands such as Stradbroke."

8. Health and support service gaps

While local health facilities such as the Redlands Hospital and the Redlands Satellite Health Centre are highly valued, gaps were reported by participants, particularly in mental health services, aged care facilities, and assistance and disability support. These issues are further exacerbated for island residents, who experience additional disadvantages such as:

- Limited access to support services due to only a small number of services willing to travel to the islands (one participant stressed that out of 50 services, only one might be willing to come to the islands, and they are often overserviced).
- Ferry travel time is currently seen as part of the allocated support service hours for Island residents. As a result, the actual time available for direct client support is reduced. There is no additional time allocated for carers to travel, and there are no local providers available to reduce this impact. As a result, these clients receive fewer hours of effective support.
- NDIS and Centrelink services were described as difficult to access, highlighting a need for more tailored, localised support or Council advocacy assistance to access make access to these services easier.

"[In five years there would be] increased specialist medical services in the local area including paediatric and allied health."

"[In five years there would be] hospitals and specialists catering more for children to help bring younger families to Redlands, rather than Brisbane to be close to medical aid."

"[In five years there would be] happy and grateful SMBI residents that could attend medical appointments, jobs, and have a better life by connecting to the mainland and be able to do grocery shopping without angst."

9. Business, tourism, and economic development opportunities

There was a desire from participants to see Redland's thrive economically, with more support for small businesses, creative industries, and tourism initiatives. There was a particularly strong call for revitalisation in Cleveland CBD, and to have it done quickly. Participants want better local dining, shopping, and coworking spaces to attract young professionals and businesspeople.

There were also calls for hotels, eco-tourism opportunities, tertiary education and large businesses to be attracted to the area to increase economic opportunities and make Redlands a destination. However, current red tape, parking issues, and lack of affordable commercial space and Council approvals were seen as barriers to activation.

"[In five years], there would be greater support for local businesses through active advocacy and lower rates, helping to attract and retain more businesses in the area."

"[Council should] advocate for large employers/organisations to set up office hubs across our city or close the gap between islands and mainland."

"[In five years, Redlands will] have a growing tourism industry, better social scene for those not retired. It would retain higher income earning residents that also spend their money locally instead of going into Brisbane or the GC. There would be more life around the City in the evenings and on weekends and appeal to more retail/hospitality/tourism business to move here."

10. Need for smarter planning, transparency and communication by Council

Lack of communication and transparency from Council was consistently raised as a challenge, particularly from the focus group attendees. Some attendees even stated that communication should sit as an overarching goal to the Corporate Plan's vision and individual goals. Participants called for easy to find communication and transparency through tools like live dashboards, inclusive consultation practices and improved search functions on the Council website. Improvements through these measures was said to improve trust with the community.

Community members also shared that coordinated planning and siloed decision-making across Council departments were further barriers. A holistic approach was desired so when you write to the Council, you get a coordinated response and don't have to individually speak with several different officers. There was similar desire for councillors to work together rather than just having "tunnel vision" for their own division.

Key projects, such as the Cleveland revitalisation and the Showgrounds Master Plan, need better integration and delivery.

"[Council should have] greater transparency in its operations, expenditure, budget planning."

"[In five years], Council would involve stakeholders more directly in the creation of a strong community plan, with clear goals and sound KPI's. There would be a maintained visual dashboard to keep the stakeholders informed and involved. Council meetings would be much more accessible to the residents, with fewer items being classified confidential."

11. First Nations and Cultural heritage

It's clear the Redlands community value the preservation and celebration of the local First Nations stories and cultural heritage. They called for cultural elements to be more visibly integrated with eco-tourism, community education, planning and through signage and better mapping on the islands. Participants also shared that they want environmental cultural heritage to be captured and protected, while also increasing awareness through storytelling, signage and education activities.

The survey results showed that reconciliation (fostering understanding between First Nations and non-ingenious community members) and arts, cultural and heritage were rated as a lower priority by participants compared to other community focus areas when asked for their top three priorities. While these areas are valued, they may not be front of mind of the broader community needs.

"Reconciliation would bring First nations and non-indigenous community members together with greater understanding, education, cooperation and consultation."

12. Island communities unique planning needs

Island residents expressed feeling disadvantaged by mainland-centric planning models and suggested the implementation of an 'islands lens' approach. This would assist by ensuring that planning is locally informed, appropriately tailored to islands needs and supported by suitable infrastructure and representation. Other key concerns for island

residents included the lack of essential services such as healthcare, aged care and disability support and transport.

This is supported by the survey findings for island residents, which saw 'Public infrastructure (halls, parks, sports fields, etc.)' ranked as the fourth most important priority for Redland City for this residential group (36%).

During the focus group with Island residents, participants identified their top three priorities to be:

1. Communication and information access: A stronger need for clear, transparent and easily accessible communication from Council.
2. Island specific planning, representation and advocacy: as outline above, residents called for planning to have an 'islands lens' to ensure the planning reflects the unique and specific needs of the islands along with stronger advocacy to state and Federal Government on projects such as improved public transport, grants and infrastructure
3. Local services and infrastructure: Council should engage local contractors and suppliers. They noted this would not only leverage local knowledge, but also boost the islands economy, support the use of local materials and labour, and create the opportunity to upskilling and employment opportunities for islands residents.

Susceptibility to natural disasters was also a recurring concern shared by island residents. When asked to suggest improvements to be made by Council for the betterment of community, 19% of survey respondents living on an island cited 'disaster management', compared to 0.2% of people living in a mainland coastal area, and 0% of residents living in a rural or inland suburban area.

13. Safety

While some community members still feel safe in the Redlands, some reported a decline in safety, especially noted in Victoria Point.

Safety emerged as a strong priority for rural participants, ranking it as their second most valued thing about the Redlands throughout the survey. In comparison only 3% of mainland residents and 1% of island residents identified it as their top 3 valued things. This highlights the positive value placed on safety throughout the Redlands rural community.

Concerns included poor lighting, outdated infrastructure, youth crime and growing intergeneration divides. Young people in the focus group shared that they generally feel safe, however they felt unfairly stereotyped as being part of the problem. Participants suggested advocacy for programs to build intergenerational trust such as school visits to aged care facilities along with faster Police response time. They also called for improvements to public spaces, more community events to build community cohesion and clearer communication from Council regarding major safety works and emergency preparedness.

"Having a 'liveable' neighbourhood is a low bar, neighbourhoods should be safe, secure, and desirable providing more than just attainment of a minimum liveability"

[Missing from the current Corporate Plan Goal] Council's part in supporting other government bodies to build and maintain a safer community

Youth engagement highlights

Throughout the engagement, insights from youth and young people were gathered throughout a targeted focus group, pop up sessions and the survey. Environment protection consistently emerged as a priority across all youth engagement activities. The focus group participants demonstrated a strong desire to be heard, to shape their future and be involved in decision making with a request for more opportunities to be involved in future Council planning activities.

Focus Groups

During the focus groups sessions, young people expressed a strong desire for great inclusion, better access to support services and stronger community connection. Key challenges raised included the need for a dedicated youth centre, better mental health services and opportunities to close the gap between youth and the older generations. Transport was reported as a major barrier, particularly for island and rural youth, who face limited access to education, employment and social activities due to ferry schedules and limited public transport. It was reported that these disconnect contributes to the feeling of isolation, impacting youth mental health and access to participation. Another transport barrier recorded by young people who were accessing tertiary education is that it is hard to access from the Redlands due to having to catch lengthy public transport journeys, forcing some to move out of the area to somewhere more convenient to the higher education opportunities. This barrier to higher education is even bigger for island residents who have extra transport logistic challenges.

Their top three priorities were

1. The natural relaxed lifestyle and environment needs to be retained and protected. The natural beauty was highly valued and there was a strong drive to protect and care for the environment through education, shared responsibility and cultural connections
2. The creation of a youth hub in Cleveland, including the youth centre which could be incorporated in the Cleveland revitalisation
3. Youth crime is contributing to the divide between generations, with older residents often perceiving all young people negatively. Strengthening intergenerational programs such as the Victoria Point State High School students visits to aged care facilities could reduce the stigma and improve community connection

Pop up session

The pop up sessions had a high representation of young people with 41.3% of respondents being 19 years or younger. Similar to the survey and focus groups, natural environment / natural protection was the main priority provided.

Survey

The survey identified that for young people under 24, environmental protection is the top priority, with 83% identifying it as most important. This age group is also significantly more likely to prioritise celebrating diversity and inclusion (42%), compared to older generations. Young people equally value connected communities, public infrastructure, and transport, education, and health infrastructure (58%) as their next key priorities.

Values

The survey opened by asking respondents to identify what they value about the Redland City area in three words, which provided a diverse range of answers. The word 'community' was mentioned most frequently, cited 43 times. Categorisation of all comments revealed the top three most referenced features of Redland City were:

- 'Environment (nature, flora and fauna)' – 18%,
- 'Waterway (oceans, bay access, costal)' – 17%
- 'Lifestyle (liveability, relaxed, friendly, outdoors)' – 16%.

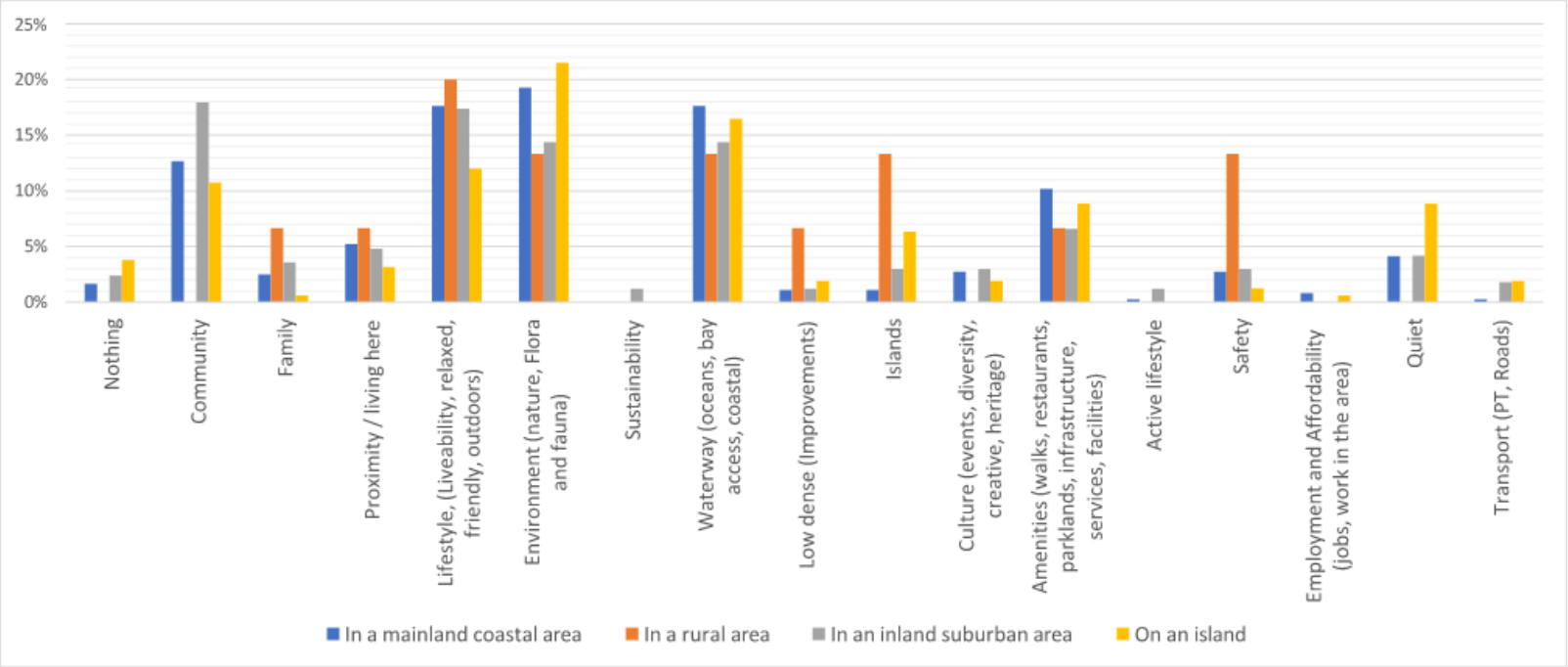
Survey – What Residents Value about the Redland City (Word Cloud)

'Environment (nature, flora and fauna)' was identified as the most beloved feature of Redland City by respondents living in a mainland costal area and on an island. This was the second and third most frequently referenced feature by respondents living in a rural area and in an inland suburban area respectively.

'Waterway (oceans, bay access, costal)' and 'Lifestyle (liveability, relaxed, friendly, outdoors)' both featured in the top three most frequently referenced features by respondents across all locations, demonstrating a high level of alignment across the mainland coast, islands and those living suburban and rural areas.

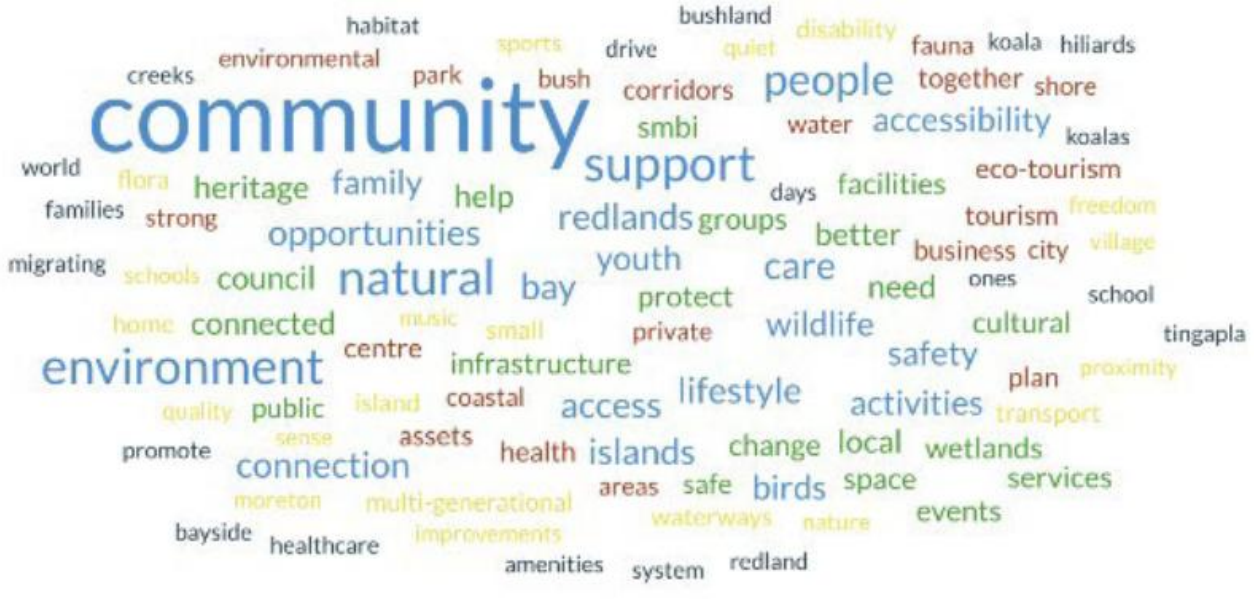
Interestingly, 13% of rural respondents referenced safety in their answer, compared to 3% of people living in a mainland costal area, and 1% of people living in an inland suburban area or on an island.

Survey – What Residents Value About the Redland City (by Residential Location, Frequency of Mention by %)



The values captured in the below word cloud reflect the diverse voices and shared priorities throughout the focus groups and community workshop. Similar to the survey values; community pride, support and connection was the most frequent value followed by the strong appreciation for the natural environment. These values highlight not only what residents love about living or working in the Redlands, but also their hope to continue to be able to enjoy the natural lifestyle and community connections in the future.

Focus Groups – What Residents Value about the Redland City (Word Cloud)



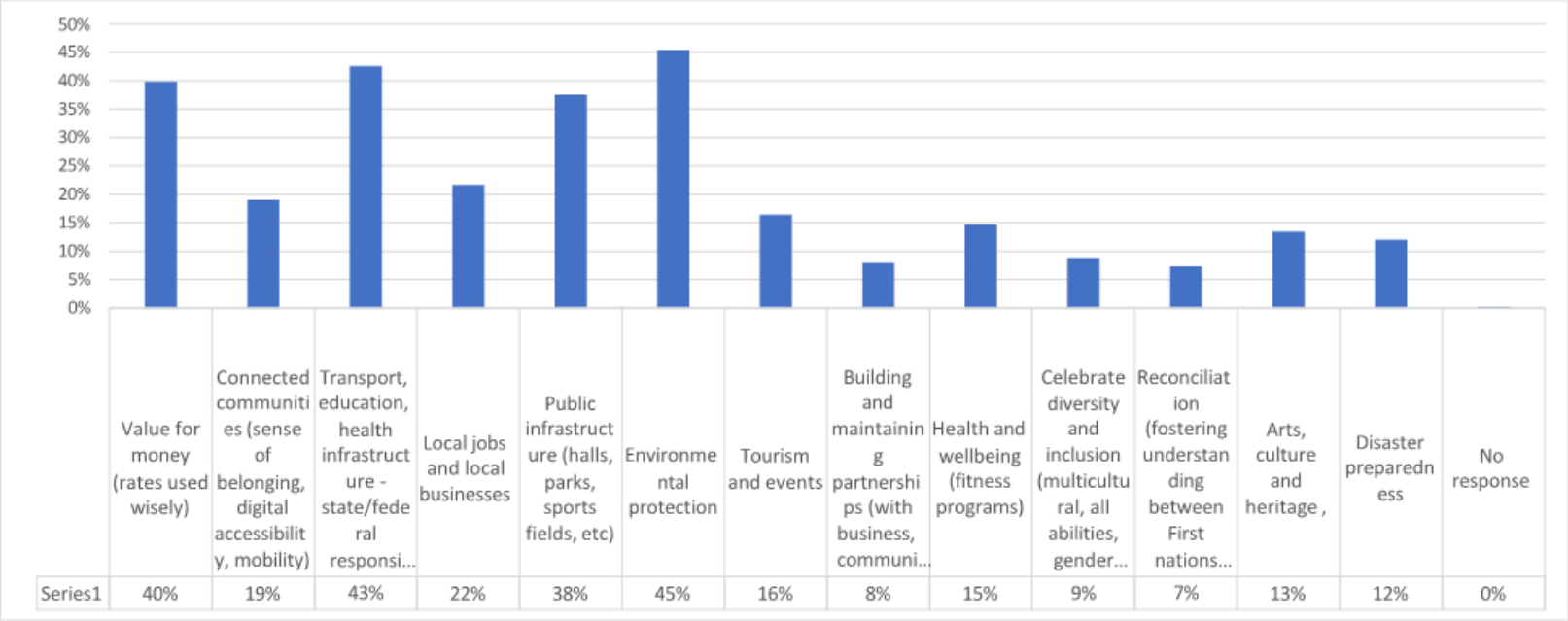
Priorities

The survey asked respondents to select three priorities for Redland City, from a list of possible options.

Participants identified the following top three collective priorities for Redland City:

1. Environment protection – 45%
2. Transport, education, health infrastructure – state/federal responsibilities (Advocacy)– 43%
3. Value for money – 40%

Survey - Redland City Priorities (All Respondents, %)

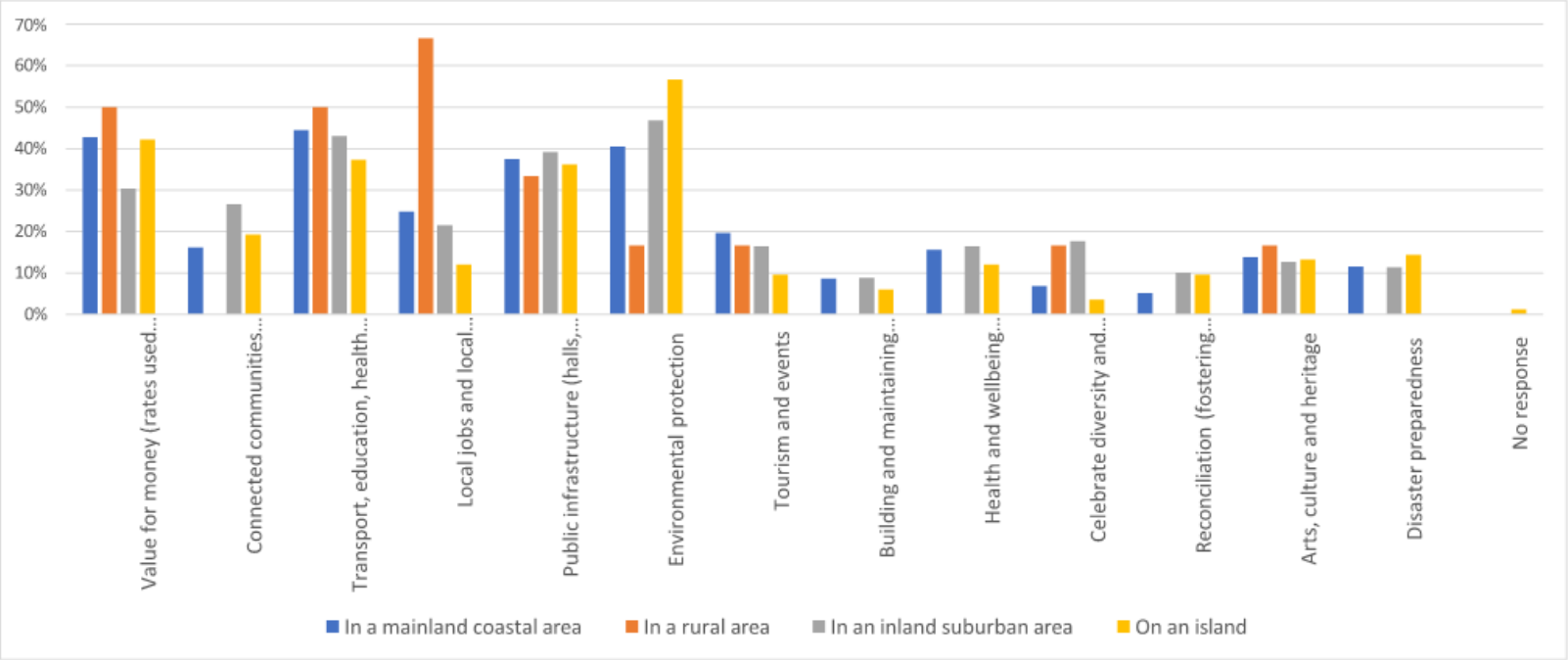


	Value for money (rates used wisely)	Connected communities (sense of belonging, digital accessibility, mobility)	Transport, education, health infrastructure - state/federal responsi...	Local jobs and local businesses	Public infrastructure (halls, parks, sports fields, etc)	Environmental protection	Tourism and events	Building and maintaining partnerships (with business, communi...	Health and wellbeing (fitness programs)	Celebrate diversity and inclusion (multicultural, all abilities, gender...	Reconciliation (fostering understanding between First nations...	Arts, culture and heritage ,	Disaster preparedness	No response
Series1	40%	19%	43%	22%	38%	45%	16%	8%	15%	9%	7%	13%	12%	0%

Interestingly, respondents living in a mainland costal area and on an island consistently identified 'Environmental protection', 'Transport, education and health infrastructure' and 'Value for money' as their top three priorities, though in a different order.

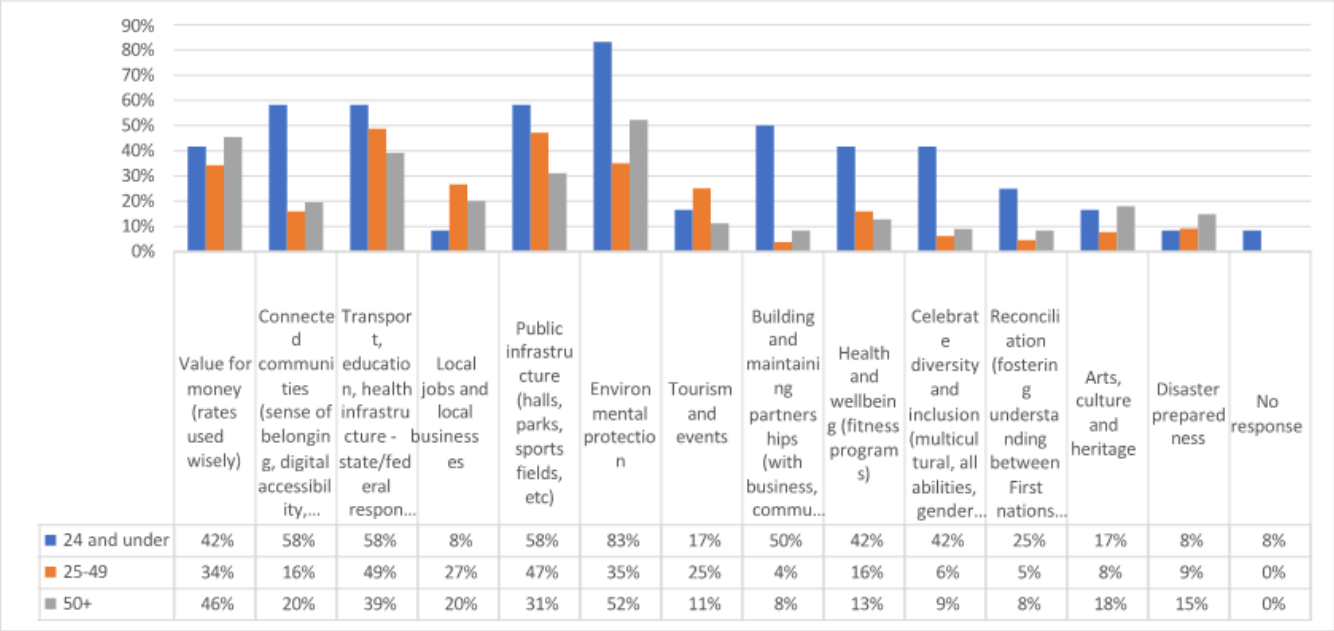
Rural communities most strongly prioritise 'Local Jobs and Businesses' (67%) and are the geographic group least concerned with 'Environmental protection' (17%), which features in the top three priorities for all other geographic groups. The largest proportion of respondents concerned with 'Environmental protection' came from residents living on an island (57%). For residents living in an island suburban area, their top priorities were 'Environmental protection (47%), Transport, education and health infrastructure' (43%), and 'Public infrastructure (halls, parks, sports fields, etc.)' (39%), in place of the fourth most popular priority, 'Value for money' (30%).

Survey - Redland City Priorities (by Residential Location, %)



Significant differences were noted in the priorities of people under 24 years of age. 'Environmental protection' was identified as the top priority for under 24-year-olds, selected by 83% of respondents compared to 35% and 52% for 25–49-year-olds and 50+ year olds respectively. Young people are also notably more likely to prioritise 'Celebrate diversity and inclusion (multicultural, all abilities, gender diversity)', with 42% of this age group selecting this priority, compared to 6% and 9% for 25–49-year-olds and 50+ year olds respectively. The same trend is noted for the priority of 'Reconciliation (fostering understanding between First nations and non-indigenous community members)' (under24 year olds – 25% vs. 25-49 years – 5%, and 50+ year olds – 8%). Regardless, the top three priorities noted above are largely consistent across age groups, though in different order. Under 24 equally prioritise 'Connected communities (sense of belonging, digital accessibility, mobility)' and 'Public infrastructure (halls, parks, sports fields, etc.)' with 'Transport, education and health infrastructure' (58%) as their second most popular priority, following their first priority 'Environmental protection' (83%). 25–49-year-olds preference 'Public infrastructure (halls, parks, sports fields, etc.)' as their second most popular priority (47%), while 'Value for money' falls into fourth spot (34%).

Survey - Redland City Priorities (by Age, %)



	Value for money (rates used wisely)	Connected communities (sense of belonging, digital accessibility,...	Transport, education, health infrastructure - state/federal respon...	Local jobs and local businesses	Public infrastructure (halls, parks, sports fields, etc)	Environmental protection	Tourism and events	Building and maintaining partnerships (with business, commu...	Health and wellbeing (fitness programs)	Celebrate diversity and inclusion (multicultural, all abilities, gender...	Reconciliation (fostering understanding between First nations...	Arts, culture and heritage	Disaster preparedness	No response
24 and under	42%	58%	58%	8%	58%	83%	17%	50%	42%	42%	25%	17%	8%	8%
25-49	34%	16%	49%	27%	47%	35%	25%	4%	16%	6%	5%	8%	9%	0%
50+	46%	20%	39%	20%	31%	52%	11%	8%	13%	9%	8%	18%	15%	0%

Focus Groups – What Residents Value about the Redland City (Word Cloud)

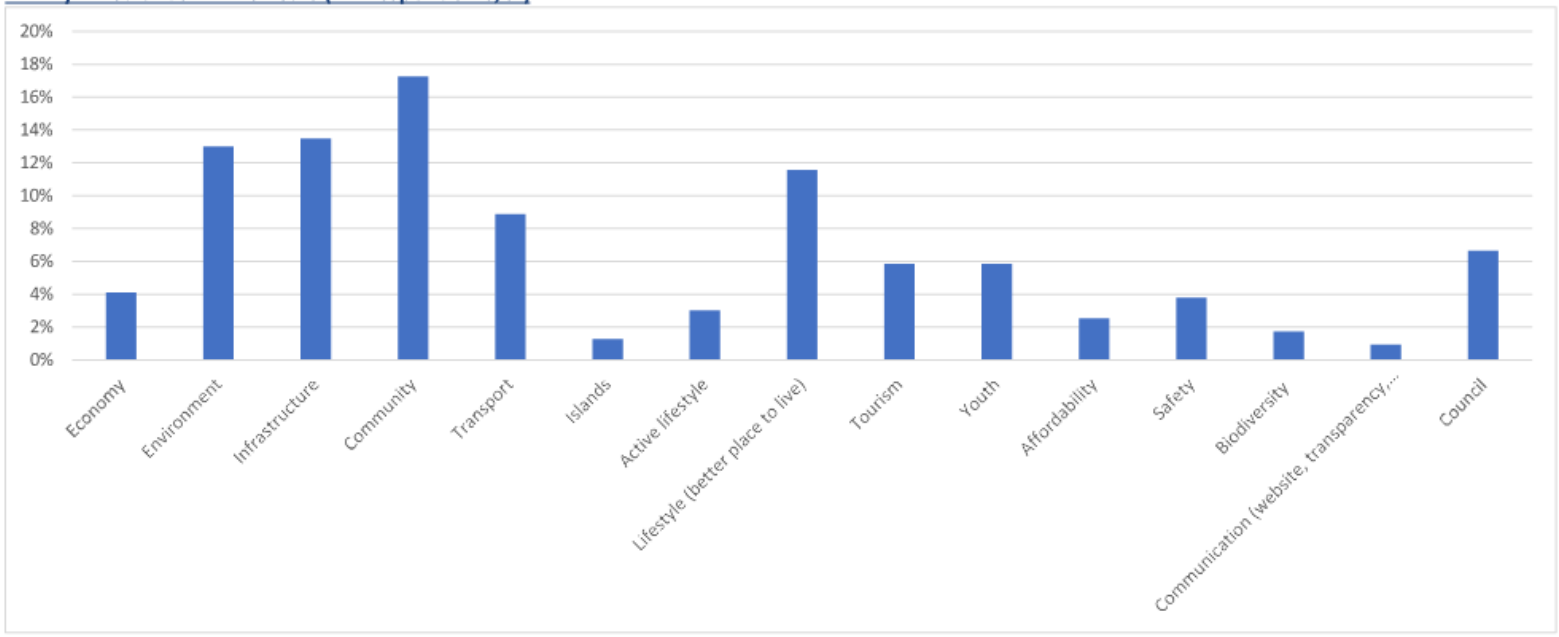
Five Year Outlook

The survey also asked what the Redlands would be like in five years if these priorities were achieved. Comments referenced the following key areas most frequently:

1. 'Community' – 17%
2. 'Lifestyle (better place to live)' – 12%
3. 'Infrastructure' – 13%

Comments least frequently pertained to the 'Islands' (1%) and 'Communication (website, transparency, report)' (1%).

Survey – Redlands in Five Years (All Respondents, %)



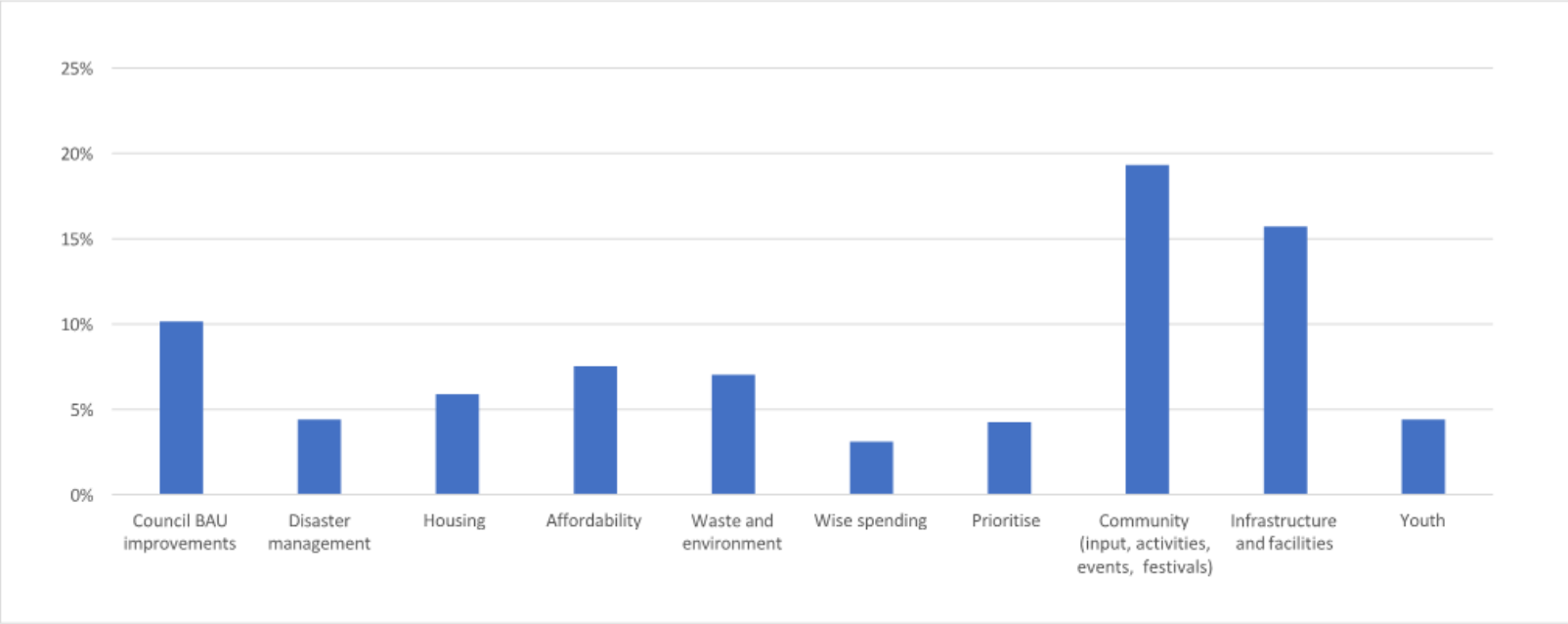
Council improvement

In an effort to identify where Redland City Council could improve, respondents were asked to suggest one thing Council could do different to improve the community. A consistent selection of responses emerged.

Categorisation of all comments revealed the top three most referenced improvements for Council included:

- 'Community (input, activities, events, festivals)' – 19%
- 'Infrastructure and facilities' – 16%
- 'Council BAU improvements' – 10%.

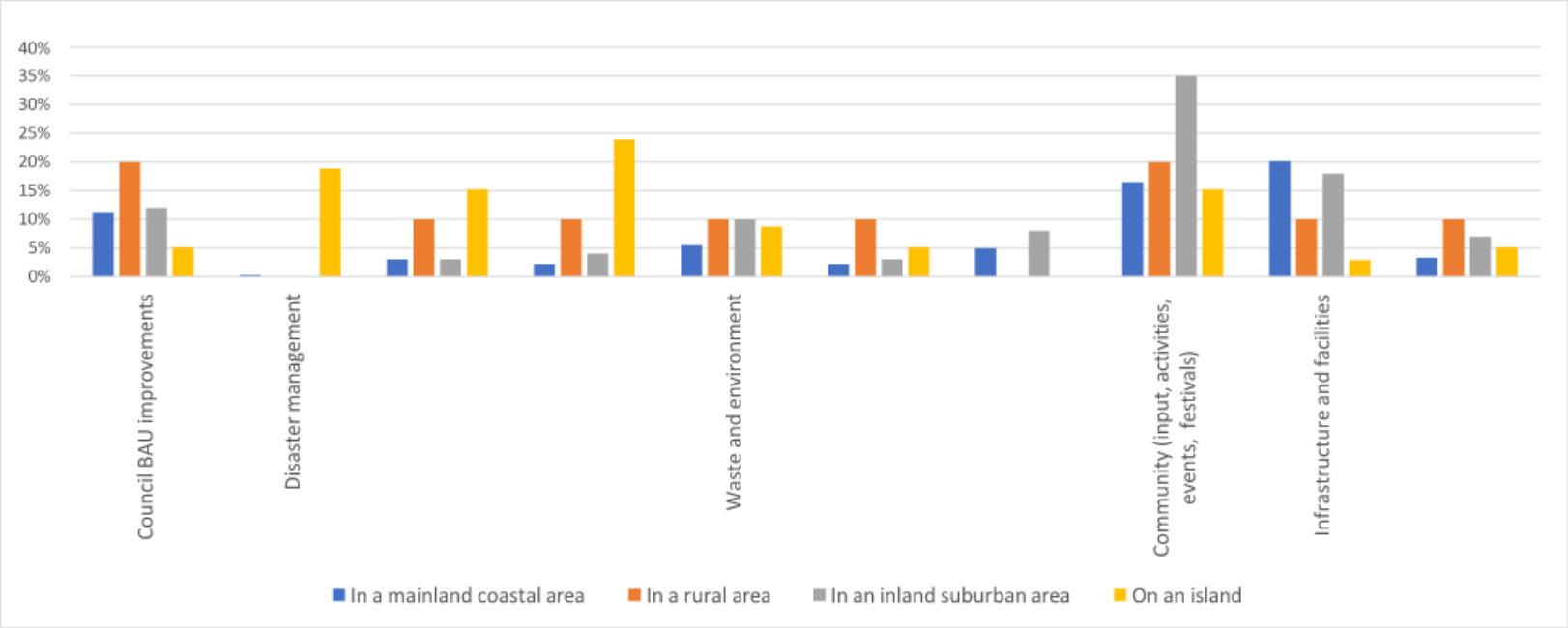
Survey – Council Improvement (All Respondents, %)



'Community (input, activities, events, festivals)', 'Infrastructure and facilities' and 'Council BAU improvements' were three most popular responses for residents living in a mainland coastal area, rural area or inland suburban area, though in different orders. 'Council BAU improvements' was the most frequently cited improvement for respondents living in a rural area, referenced in 12% of responses (third most frequent for those living in a mainland coastal area or inland suburban area).

For residents living on an island, 'Disaster management' was the second most frequently referenced improvement (19%), but did not feature once (0%) in responses for all three other geographic groups. This is a key distinction.

Survey – Council Improvement (by Residential Location, %)



Results indicate relatively consistent attitudes to this question across different age groups. 'Community (input, activities, events, festivals)' was identified as the top suggestion for improvement for under 24 year olds (38%) and 25-49 year olds (26%, tied with 'Infrastructure and facilities'). For 50+ year olds, 'Infrastructure and facilities' was cited most frequently (28%), closely followed by 'Community (input, activities, events, festivals)' (24%). 'Infrastructure and facilities' was the third

most frequently mentioned improvement for under 24 year olds (15%), however, it is worth noting that youth interest in 'Infrastructure and facilities' lessened compared to 25-49 year olds and 50+ year olds (26% and 28% respectively). Conversely, under 24-year-old referenced 'Community (input, activities, events, festivals)' at a higher frequency, and showed increased interest in 'Council BAU improvements' and 'Youth'.

Survey – Council Improvement (by Age, %)

	Council BAU improvements	Disaster management	Housing	Affordability	Waste and environment	Wise spending	Prioritise	Community (input, activities, events, festivals)	Infrastructure and facilities	Youth
24 and under	27%	0%	0%	0%	4%	0%	4%	38%	15%	12%
25-49	15%	1%	4%	5%	8%	4%	7%	26%	26%	5%
50+	19%	1%	4%	3%	10%	3%	6%	24%	28%	4%

What's missing in the current Corporate Plan?

Finally, the survey asked respondents to identify elements that are missing from the goals included in Council's current Corporate Plan. Respondents selected the following key areas most frequently:

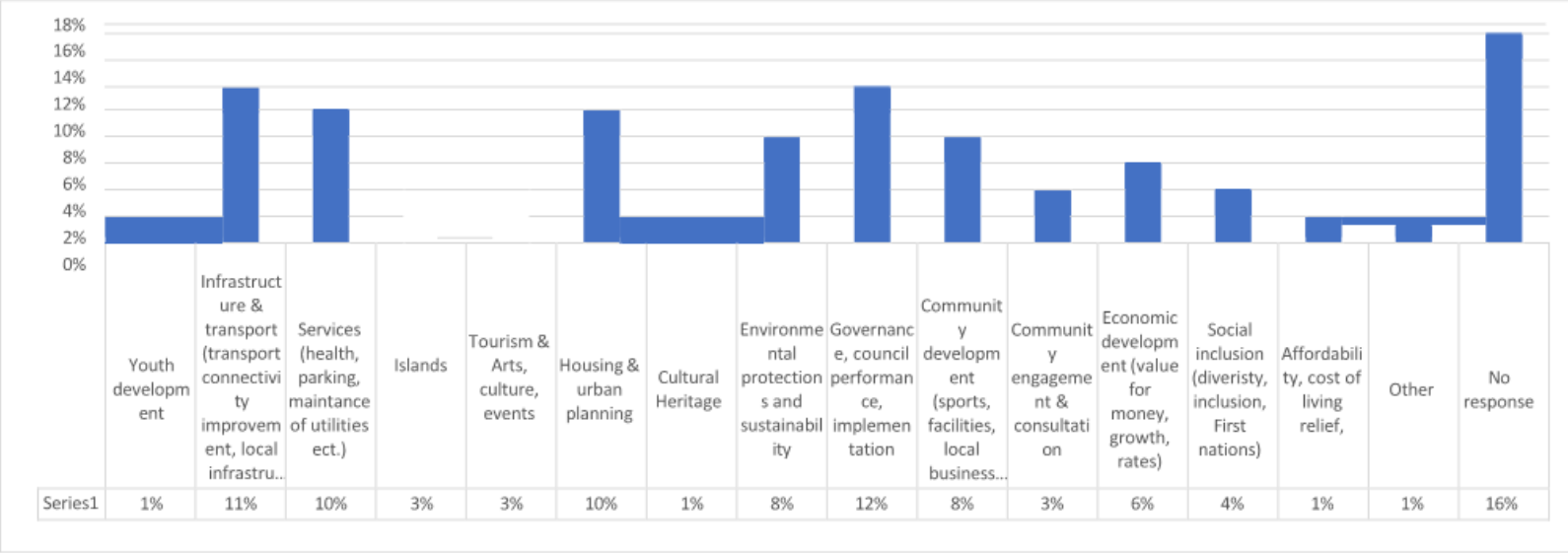
1. 'Governance, Council performance, implementation' – 12%
2. 'Services (health, parking, maintenance of utilities etc.)' – 10%

Respondents least frequently selected 'Cultural heritage' (1%) and 'Youth development' (1%).

Interestingly, the largest portion of responses (16%), were for 'No response' (not seen in graph below), indicating that a significant percent of those surveyed have minimal or unspecific feedback regarding goals missing from the Corporate Plan.

The community feedback highlighted that while people may feel that the current goals are broadly adequate or have no improvements to add, key areas such as Governance, how Council performs, infrastructure, transport and access to services and environmental protection are underrepresented. Participants also raised that clear implementation plans, measurable outcomes and genuine engagement could be incorporated to improve transparency and accountability.

Survey – Elements Missing from Corporate Plan Goals (All Respondents, %)



	Youth development	Infrastructure & transport (transport connectivity improvement, local infrastru..	Services (health, parking, maintance of utilities ect.)	Islands	Tourism & Arts, culture, events	Housing & urban planning	Cultural Heritage	Environmental protections and sustainability	Governance, council performance, implementation	Community development (sports, facilities, local business...	Community engagement & consultation	Economic development (value for money, growth, rates)	Social inclusion (diveristy, inclusion, First nations)	Affordability, cost of living relief,	Other	No response
Series1	1%	11%	10%	3%	3%	10%	1%	8%	12%	8%	3%	6%	4%	1%	1%	16%

Communication

The focus group participants were asked how they would like Council to communicate with community members on the Corporate Plan outcomes.

The majority of participants (80.4%) preferred to be updated via Council's website, while 73.9% of participants preferred Council's social media page and 72.9% preferred the existing newsletters. The results indicate a desire for easily accessible platforms that offer regular updates to improve communication between Council and the community.

Results:

- 80.4% Council website page
- 73.9% Council social media pages
- 72.9 % wanting updates through existing newsletters
- 58.7% Councillor/Elected representative social media page
- 47.8% Infographics

Next steps

This engagement process offered valuable insights into community priorities, preferences, future aspirations and areas for improvements. These findings will inform the development of the draft Corporate Plan which the community will have another opportunity to review in late 2025 - continuing their role in shaping the future of Redland City. The Redland Corporate Plan 2026-31 will be finalised following the second round of consultation and is scheduled for Council adoption in December 2025.

Summary Engagement Report

Corporate Plan pop-ups

Overview

Council planned and delivered 6 pop-up engagement opportunities as part of the first engagement phase of the Corporate Plan 2026 - 2031.These pop-ups were designed to reach community members at events and other social situations they were already attending.

Event	Location	Date
AdventureFest 2025 Fun Day	Raby Bay	17 May
Redlands Touch Football	Cleveland	30 May
Straddie Sharks indigenous recognition match	Dunwich	31 May
Bulldogs Football Club matches	Capalaba	7 June
IndigiScapes Environment & Community Fair	Capalaba	7 June
Bernie's Artisan Market	Macleay Island	22 June

Benefits include:

- Provide a face-to-face engagement opportunity enabling customers to contact Council officers directly.
- Improve project visibility, providing an alternative to online advertising and printed media.
- Minimise the need for people to travel to speak with Council officers about the Corporate Plan and share their ideas, priorities and concerns.
- Reach different demographic groups such as: first nations people, young people, parents of young children and island residents.

How did people provide feedback?

Customers attending the pop-ups were given the option to participate by:

- Completing the online survey (either on their personal devices or through Council iPads)
- Completing hardcopy postcard surveys. Approximately 80 postcard surveys were collected at pop-ups, or about a quarter of total responses (23.4%).
- Complete the interactive activity by selecting their main priority for Redlands Coast for the next five years, from the existing Corporate Plan goals, followed by outlining what Council is doing well and what could Council do better in that space. 75 people participated in the interactive activity.

Data analysis

The survey data collected at pop-ups was analysed as part of the survey responses in the Engagement Report by Articulous and the data from the interactive activity has been considered here.

All 75 community members were given the instruction of how to complete the two-step activity. Some preferred not to provide additional feedback of what Council is doing well or what could be done better. Others added various sticky notes to express their opinions, and at times their feedback did not match their chosen priority.

Redlands Coast priorities

Understanding how residents prioritise the current Corporate Plan goals provides an opportunity to reassess them and consider an alternative grouping structure. To help respondents in their prioritisation, officers provided a copy of the Current corporate Plan goals as outlined on page 19 of the Corporate Plan, and a corporate plan report, customers could look through. Council officers also helped making the language more accessible to respondents by outlining key themes contained on Goals key performance indicators such as engagement, partnerships and collaboration when referring to 'City leadership or 'value for money' when referring to 'Efficient and effective organisation'.

Goal	votes	%	19 and under	20-24	25-34	35-49	50-64	65+
City Leadership	0	0	0	0	0	0	0	0
Strong Communities	12	16	3	0	0	7	1	1
Quandamooka Country	5	6.7	4	0	0	0	1	0
Natural Environment	24	32	16	0	0	4	3	1
Liveable Neighbourhoods	28	37.3	4	0	3	8	3	10
Thriving Economy	4	5.3	3	0	0	0	0	1
Efficient and Effective Organisation	2	2.7	1	0	0	1	0	0
Total	**75**	**100**	**31**	**0**	**3**	**20**	**8**	**13**

'Liveable neighbourhoods' was the main priority outlined by 37.3% of respondents, followed by 'Natural environment' (32%). These were similar to the top two priorities outlined in the survey – 'Environmental Protection' and 'Transport, education and health infrastructure (advocacy)', except survey respondents had the environment as a top priority.
'Efficient and Effective Organisation' and 'City Leadership' had the least votes, suggesting Council-focused goals are more difficult for residents to connect with in their day to day lives. It also implies these are topics residents expect Council to address as part of its day-to-day operations. This finding differs significantly from survey respondents, which outlined 'Value for money' as one of their three main priorities.

Further insights from the data collected at the pop-ups are discussed below, including how it aligned or differed from survey findings.

Young people

There was a significant representation of young people's preferences captured by this activity. 41.3% of respondents were 19 years old or under. It contrasts with survey respondents, where only 2.6% were part of the same age group.

Similarly to the overall survey results, this group also outlined the natural environment/environmental protection as their main priority (51.6% of young respondents).

- When asked what we are doing well in the environment space, this group mentioned:
  - "Good at keeping playgrounds clean."
  - "Taking good care of the parks, treating them well."
  - "Being nice to our animals."
- Asked what we could do better:
  - More interaction with city Council and people at parks (games, other opinions, volunteers) / otherwise amazing
  - Keeping parks clean, upgrading walking tracks; and new playgrounds
- Environment was the second greatest priority outlined by interactive activities respondents (32%)

Liveable Neighbourhoods

This goal focuses on well-planned areas that support resident's lifestyle by connecting natural assets, communities and businesses. Most of the commentary related to this priority focused on infrastructure and transport, particularly related to ferries, roads and parking, which are topics closely related to the 'Advocacy' priority outlined in the survey. Some examples are outlined below.

"Working with transport has helped our economy in Macleay (never seen ferries so busy)". Comment provided by a 65+ respondent at Macleay Island when asked what Council is doing well.

"PARKING!! Shuttle bus from jetty to parking areas". Comment from 50 -64 years old respondent at Macleay Island regarding what can Council do better

"Community services and health infrastructure (Macleay). Trees, roads, guttering". Comment from 65+ respondent at Macleay Island on what can Council do better.

Other commentary relating to positive views of Liveable neighbourhoods mentions 'Events in the community' as something Council is doing well. This was outline by a 25–34-year-old respondent at the pop-up at the IndigiScapes Environment and Community Fair in Capalaba.

Quandamooka Country

This Corporate Plan goal reflects how the city embraces heritage. It was outlined as the priority of 6.7% pop-up respondents a slightly higher percentage than the 5.6% survey respondents that outlined 'Reconciliation (fostering understanding between First Nations and non-indigenous community members)' as one of their three priorities.

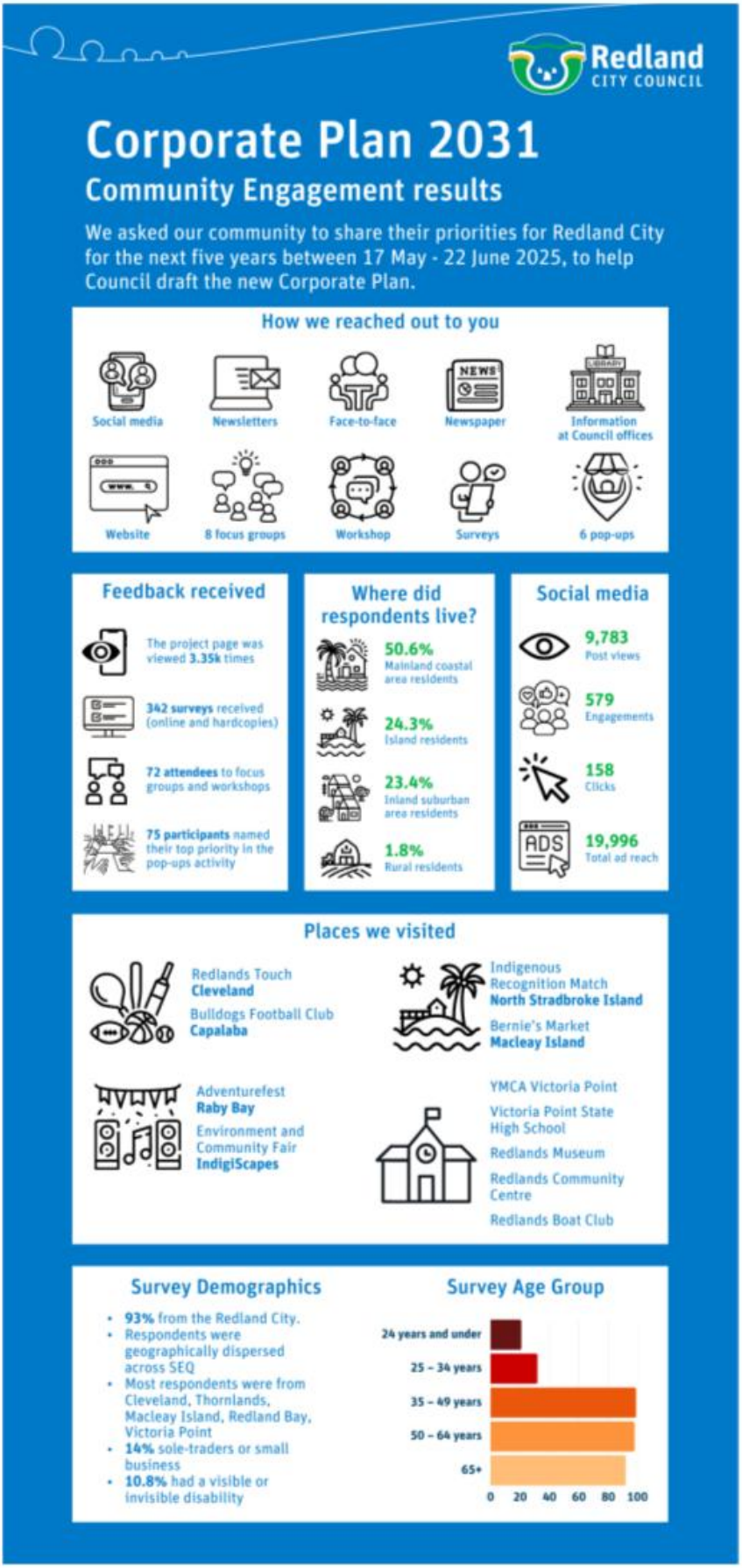
Final reflections

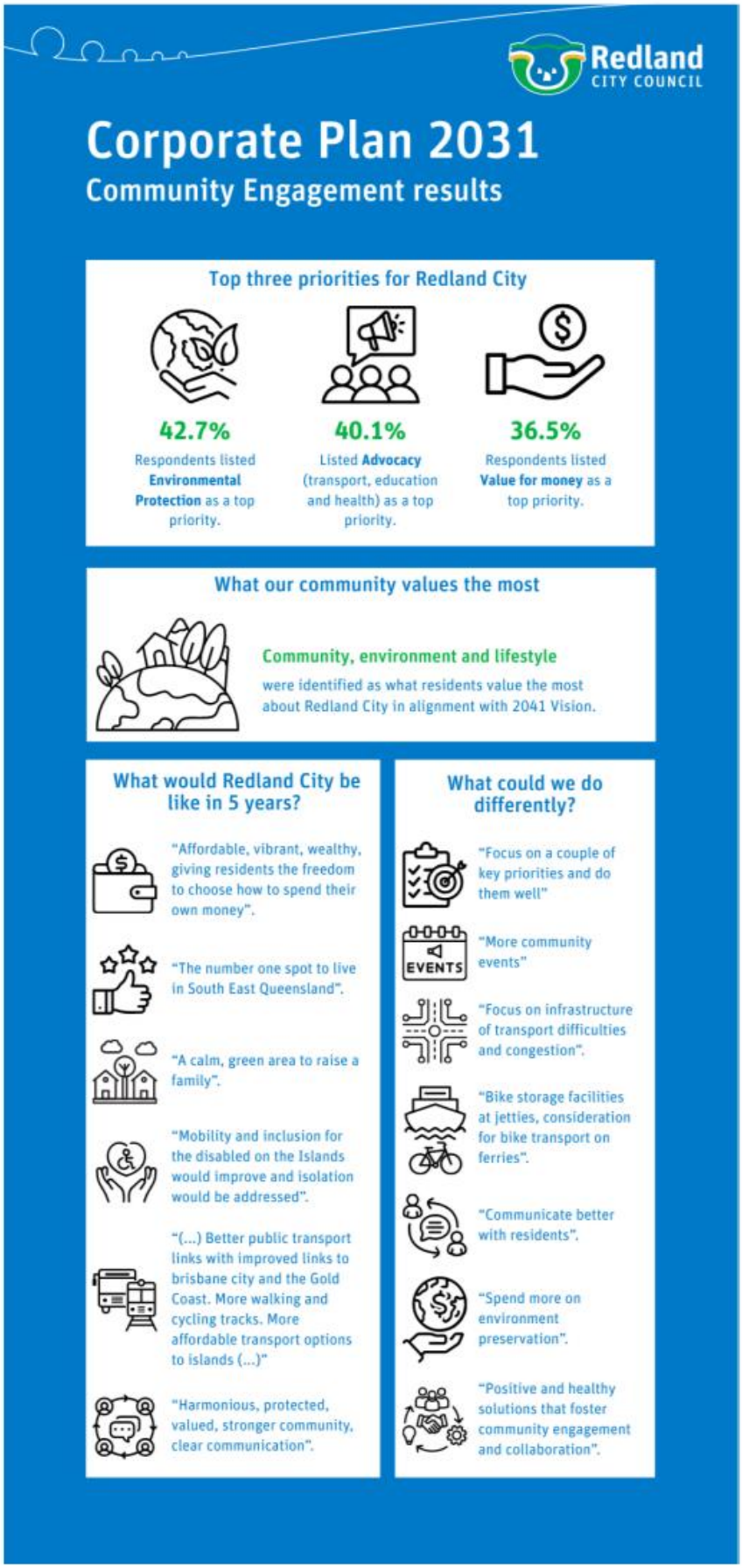
The Corporate Plan pop-ups helped gather additional feedback to help in the draft of Council's upcoming Corporate Plan. They were particularly valuable in reaching a different demographic than those captured by other engagement methods. The interactive activity was particularly popular among young respondents and postcard surveys collected at the islands contributed to higher numbers of Aboriginal and Torres Strait Islander respondents.

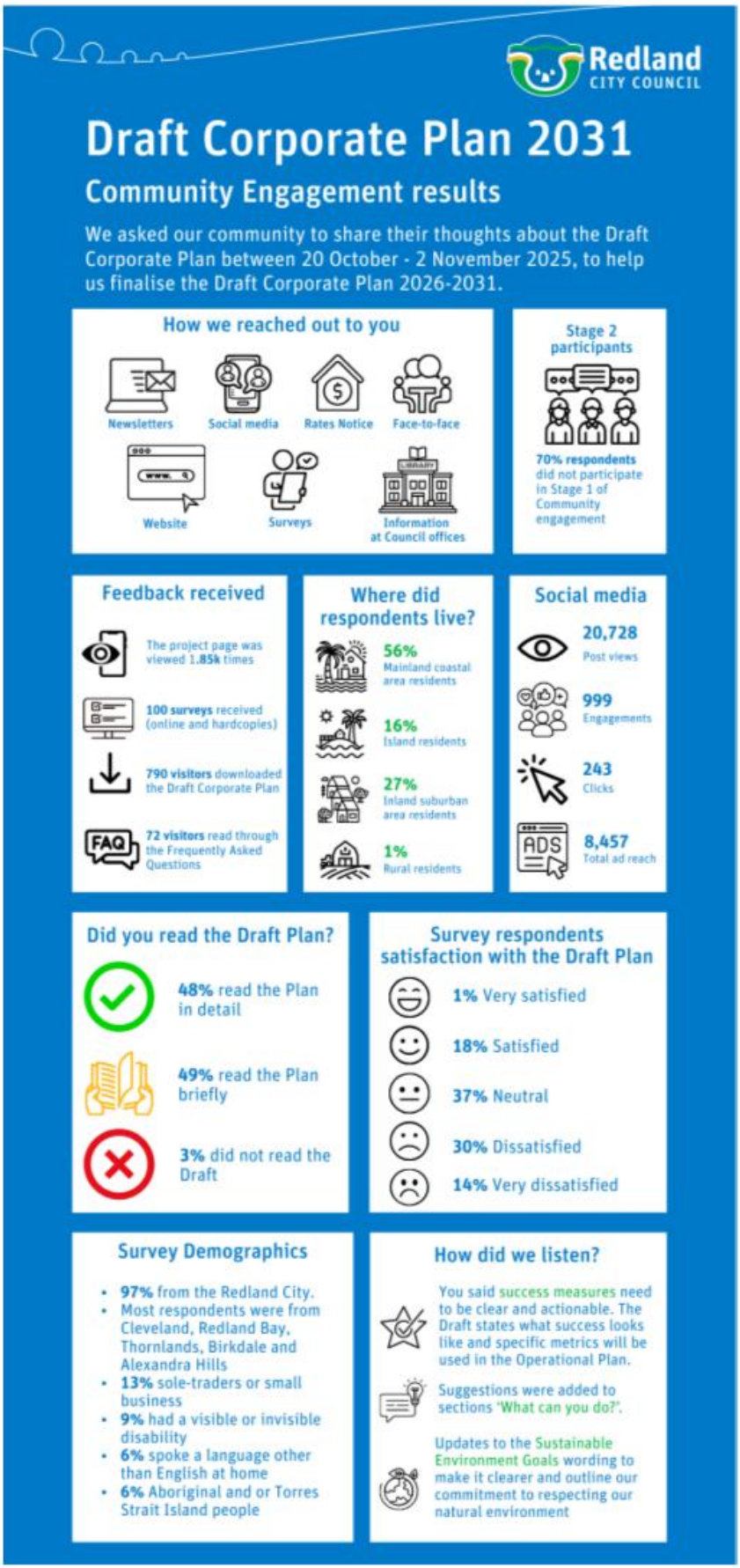
Unfortunately, the rainy weather has impacted the number of interactions and data collection from at least two pop-up events the Redlands Touch Football event, Redlands Showground – Cleveland and the Straddie Sharks indigenous recognition match. Nonetheless, the overall results are encouraging and in line with the main survey findings.

Appendix Three

Phase one and two community engagement infographics


Redland CITY COUNCIL
Corporate Plan 2031
Community Engagement results
We asked our community to share their priorities for Redland City for the next five years between 17 May - 22 June 2025, to help Council draft the new Corporate Plan.
How we reached out to you
Social media
Newsletters
Face-to-face
Newspaper
Information at Council offices
Website
8 focus groups
Workshop
Surveys
6 pop-ups
Feedback received
The project page was viewed 3.35k times
342 surveys received (online and hardcopies)
72 attendees to focus groups and workshops
75 participants named their top priority in the pop-ups activity
Where did respondents live?
50.6% Mainland coastal area residents
24.3% Island residents
23.4% Inland suburban area residents
1.8% Rural residents
Social media
9,783 Post views
579 Engagements
158 Clicks
19,996 Total ad reach
Places we visited
Redlands Touch Cleveland
Bulldogs Football Club Capalaba
Indigenous Recognition Match North Stradbroke Island
Bernie's Market Macleay Island
Adventurefest Raby Bay
Environment and Community Fair IndigiScapes
YMCA Victoria Point
Victoria Point State High School
Redlands Museum
Redlands Community Centre
Redlands Boat Club
Survey Demographics
93% from the Redland City.
Respondents were geographically dispersed across SEQ
Most respondents were from Cleveland, Thornlands, Macleay Island, Redland Bay, Victoria Point
14% sole-traders or small business
10.8% had a visible or invisible disability
Survey Age Group
24 years and under
25 – 34 years
35 – 49 years
50 – 64 years
65+
0 20 40 60 80 100


Redland CITY COUNCIL
Corporate Plan 2031
Community Engagement results
Top three priorities for Redland City
42.7%
Respondents listed Environmental Protection as a top priority.
40.1%
Listed Advocacy (transport, education and health) as a top priority.
36.5%
Respondents listed Value for money as a top priority.
What our community values the most
Community, environment and lifestyle
were identified as what residents value the most about Redland City in alignment with 2041 Vision.
What would Redland City be like in 5 years?
"Affordable, vibrant, wealthy, giving residents the freedom to choose how to spend their own money".
"The number one spot to live in South East Queensland".
"A calm, green area to raise a family".
"Mobility and inclusion for the disabled on the Islands would improve and isolation would be addressed".
"(...) Better public transport links with improved links to brisbane city and the Gold Coast. More walking and cycling tracks. More affordable transport options to islands (...)"
"Harmonious, protected, valued, stronger community, clear communication".
What could we do differently?
"Focus on a couple of key priorities and do them well"
EVENTS
"More community events"
"Focus on infrastructure of transport difficulties and congestion".
"Bike storage facilities at jetties, consideration for bike transport on ferries".
"Communicate better with residents".
"Spend more on environment preservation".
"Positive and healthy solutions that foster community engagement and collaboration".


Redland CITY COUNCIL
Draft Corporate Plan 2031
Community Engagement results
We asked our community to share their thoughts about the Draft Corporate Plan between 20 October - 2 November 2025, to help us finalise the Draft Corporate Plan 2026-2031.
How we reached out to you
Newsletters
Social media
Rates Notice
Face-to-face
Website
Surveys
Information at Council offices
Stage 2 participants
70% respondents did not participate in Stage 1 of Community engagement
Feedback received
The project page was viewed 1.85k times
100 surveys received (online and hardcopies)
790 visitors downloaded the Draft Corporate Plan
72 visitors read through the Frequently Asked Questions
Where did respondents live?
56% Mainland coastal area residents
16% Island residents
27% Inland suburban area residents
1% Rural residents
Social media
20,728 Post views
999 Engagements
243 Clicks
8,457 Total ad reach
Did you read the Draft Plan?
48% read the Plan in detail
49% read the Plan briefly
3% did not read the Draft
Survey respondents satisfaction with the Draft Plan
1% Very satisfied
18% Satisfied
37% Neutral
30% Dissatisfied
14% Very dissatisfied
Survey Demographics
97% from the Redland City.
Most respondents were from Cleveland, Redland Bay, Thornlands, Birkdale and Alexandra Hills
13% sole-traders or small business
9% had a visible or invisible disability
6% spoke a language other than English at home
6% Aboriginal and or Torres Strait Island people
How did we listen?
You said success measures need to be clear and actionable. The Draft states what success looks like and specific metrics will be used in the Operational Plan.
Suggestions were added to sections 'What can you do?'.
Updates to the Sustainable Environment Goals wording to make it clearer and outline our commitment to respecting our natural environment

Redland CITY COUNCIL

OUR FUTURE REDLAND CITY

CORPORATE PLAN 2026–2031

Brown Lake, North Stradbroke Island (Minjerribah)

Acknowledgement of Traditional Custodians and Country

Redland City Council respectfully acknowledges the Quandamooka People as the Traditional Custodians of much of Redlands Coast. Council also recognises the Danggan Balun (Five Rivers) People of the Southern Redland City Area.

Council is committed to working in partnership with Traditional Custodians and First Nations Community Groups in the Redland City area.

Working together to achieve our plan

Delivering lasting economic, social, environmental, and cultural benefits for Redland City requires strong collaboration between all levels of government, strategic industry partners, local businesses, and our community. This Corporate Plan has been shaped by listening to our residents and understanding their aspirations for the future. The outcomes and priorities set out in the plan reflect this shared vision – ensuring Redlands Coast continues to thrive as a regional city with a naturally wonderful lifestyle, connected communities, and an openness to new opportunities. To achieve this, Council will lead with vision, facilitate growth, partner with stakeholders, educate and empower the community, advocate on their behalf, and regulate where needed. Together, these roles will guide the delivery of the *Our Future Redland City: Corporate Plan 2026–2031*, creating a sustainable and prosperous future for generations to come.

Strategic planning landscape

Our Corporate Plan sits at the heart of Council's planning framework, connecting our long-term vision with the practical actions needed to deliver outcomes for our community.

In line with the *Local Government Act 2009 (Qld)*, Council prepares a five-year Corporate Plan that defines our strategic direction and how progress towards our vision will be measured. The Corporate Plan is informed by Council's *Financial Strategy 2020–2030*, *Strategic Asset Management Plan 2019–2029*, and a suite of long-term strategies. It provides clear direction for decision-making and ensures resources are directed to priorities that matter most. Actions from these strategies are translated into the Corporate Plan to guide the delivery of projects and services that align with Council's strategic direction and community expectations.

Planning and performance

The Corporate Plan provides the foundation for Council's annual operational planning and budget processes, setting clear parameters for how success is measured. Performance is tracked and reported transparently through Council's Annual Report and quarterly Operational Plan reporting. The Corporate Plan will be reviewed and updated as required to respond to evolving community needs and emerging priorities, ensuring it remains relevant and impactful.

Our community's role

Achieving the vision for Redland City is a shared responsibility between Council and the community.

Throughout this Plan, key opportunities are identified for community members to support the delivery of our goals.

Whether through local initiatives, partnerships, or everyday actions. Council encourages all residents to consider how they can contribute to shaping a thriving and sustainable future for Redland City.

Redland CITY COUNCIL

Role of Federal Government

The federal government delivers national services and programs that support the health, security, and economic wellbeing of the community:

- Medicare and national healthcare services
- Defence and national security
- Immigration and border protection
- Foreign policy and international relations
- Income taxation and social welfare programs
- Energy and telecommunications
- Major Infrastructure
- Environmental regulation and policy.

Role of State Government

The state government provides essential services and infrastructure that support community safety, mobility, and wellbeing:

- Major roads and transport networks
- Public transport services
- Housing and social support programs
- Police, public safety and emergency services
- Ambulance and health services
- Education
- Set strategy, policy and frameworks for land use, infrastructure and environmental planning
- Support local infrastructure
- Enable economic wellbeing.

Role of Local Council

Your local council delivers the essential services that keep our city running and our community thriving, supporting liveability, sustainability, and wellbeing:

- Waste collection and sustainable water supply
- Maintaining local roads and infrastructure
- Parks, recreation, cultural, sporting facilities, and libraries
- Town planning, development, and rates collection
- Local events and cultural activities
- Community development.

Role of our community

Our community plays an active role in shaping life on Redlands Coast, helping to enable Council decisions to reflect local needs and aspirations:

- Volunteering and civic participation (including voting)
- Using community halls and attending events
- Taking part in engagement and co-design activities and providing feedback
- Staying connected via Council's website and social media
- Reaching out to Council to strengthen community connection.

Our 2041 Vision

A naturally wonderful Lifestyle. Connecting Communities. Embracing Opportunities.

Our story – Redland City

Who we are

Redland City is a place of natural wonder, a city that embraces its bushland, beaches, and bay. Guided by values of a shared responsibility and stewardship for our community and environment, our identity is defined by our proximity to the Moreton Bay islands, our waterway network, our natural environment, our distinctive neighbourhoods and our proud, diverse community. We celebrate our heritage and identity through the arts, our stories, and our people. Redland City offers a naturally wonderful lifestyle, a place where people can live, work, and play in a safe, connected and welcoming community.

Our community

Our community is thriving, resilient and inclusive. We celebrate cultural diversity and value contributions across all ages and backgrounds. We are a city that promotes self-resilience while fostering connection and belonging. Together we embrace opportunities, support each other through challenges, and create a vibrant, energetic and active place that our residents are proud to call home.

Our environment

We are custodians of a remarkable natural environment. We nurture and protect our flora, fauna, green space and waterways while providing responsible access for community health, wellbeing and recreation. By balancing protection with sustainable development, we are ensuring that Redland City's natural environment remains a source of pride, identity and opportunity for future generations.

Our City

Redland City is evolving into a well-designed, well-planned city that meets the needs of today and tomorrow. We maintain high standards of safety, amenity and liveability, while planning for growth and investment. With fit-for-purpose infrastructure, major project delivery, and distinctive places that reflect our character, Redland City is becoming an active, connected, and leading regional destination of choice, easy to live, play, visit and do business.

Our Council

We are committed to being a leading and engaged council, one that makes sound decisions, delivers value-for-money services, fosters innovation, and listens to and partners with its community. Guided by one purpose, we are united across every team to work with integrity, transparency, and accountability. Through a culture of service, safety, collaboration, and ownership, we connect communities, embrace opportunities, and celebrate our natural and cultural identity – building a thriving Redlands Coast that is energised, inclusive, and ready for the future. The *Corporate Plan 2026–2031* delivers on the Our Future Redlands, 2041 Vision, for our people, place and prosperity.

Our opportunities and challenges

Defining Redland City together, this Corporate Plan sets a clear direction for responding to the opportunities and challenges that will define our community to 2041 and beyond. Council is committed to addressing the big issues that shape our economy, environment, and way of life — preparing for the 2032 Brisbane Olympic and Paralympic Games, investing in critical infrastructure, enhancing sport and recreational facilities, strengthening our growing and diverse community, embracing innovation, protecting our natural assets, and ensuring financial sustainability. By working together, Council and the community can build a thriving, connected, and sustainable city where future generations can live, work and prosper.

This includes partnering to deliver transformative infrastructure projects such as the Heinemann Road Precinct, Toondah Harbour redevelopment, Weinam Creek PDA redevelopment, Cleveland CBD revitalisation, Capalaba Town Centre revitalisation, Birkdale Community Precinct and our Olympics legacy. These once-in-a-generation investments will strengthen the local and regional economy, create vibrant destinations and enhance liveability for decades to come. Together, they represent not only the challenges we must address but the opportunities we can seize to shape a bold and lasting legacy for Redland City.

Our Corporate Plan 2026–2031 Goals

Strong communities

Proud, resilient and vibrant communities, where everyone belongs

Outcomes

- Community infrastructure and facilities that strengthen social, lifestyle and wellbeing outcomes
- Culture, arts, education and heritage experiences that cultivate civic pride and an inclusive, connected, creative community
- Quandamooka culture and heritage is respected, understood and celebrated

Priorities

- Deliver a prioritised maintenance program for community, cultural, recreational and sporting facilities to ensure they remain safe, accessible, and fit-for-purpose
- Deliver and enable new initiatives and events that generate a strong sense of community connection, pride and inclusion
- Support young people to thrive through inclusive initiatives that build connection, resilience and a sense of belonging
- Support and enable island and mainland communities through tailored programs that build resilience, strengthen capability and enhance disaster preparedness
- Deliver and support distinct cultural awareness initiatives, storytelling and events that celebrate and share Quandamooka heritage
- Strengthen and support reconciliation by maintaining and building respectful partnerships with Quandamooka leaders and community

Enabling strategies, plans and programs

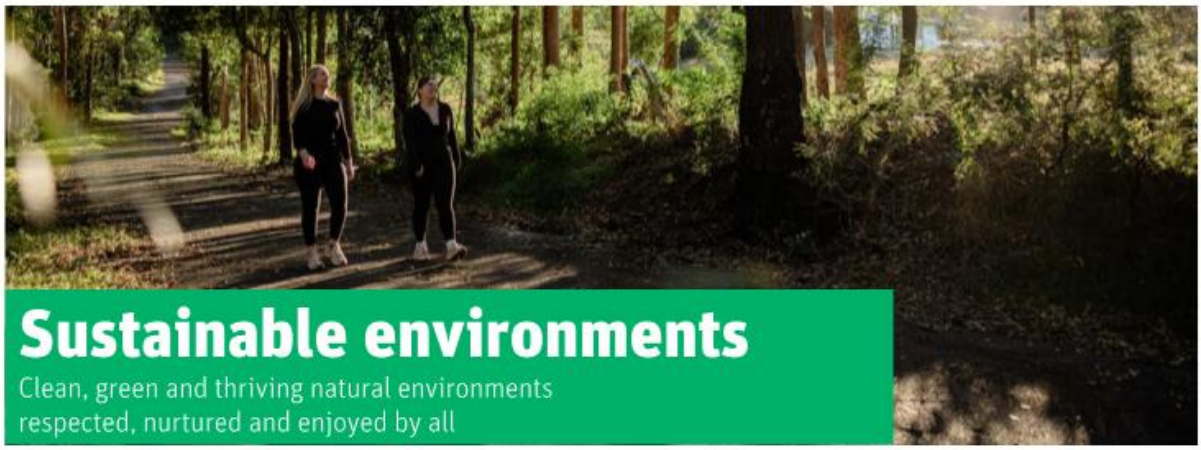
- *Redlands Coast Stronger Communities Strategy 2024–2027*
- *Redlands Coast Events Strategy 2024–2029*
- *Creative Arts Service Strategic Plan 2024–2029*
- *Redlands Coast Young People's Action Plan 2024–2027*
- *Redlands Coast Age-friendly Action Plan 2021–2026*
- *Redland City Local Disaster Management Plan*

What success will look like

- Our community enjoys and respects the culture and history of our city
- Increased participation in arts, cultural and recreational programs and activities
- Increased youth-led or youth-supported community projects
- Improved satisfaction among young people with Council services and opportunities
- Our city is more resilient

What can you do?

- Join a local sporting team, coach or sponsor one
- Take your dog for a walk
- Become a library member
- Visit your local community centre
- Get to know your neighbours
- Show mutual respect and acceptance of others
- Report illegal and anti-social behaviour to police
- Become a mentor to a young person
- Join a social group, e.g. men's shed, garden clubs
- Attend an event at RPAC
- Visit Redland Art Gallery and other local galleries



Sustainable environments

Clean, green and thriving natural environments respected, nurtured and enjoyed by all

Outcomes

- Ecological assets, flora, fauna, and habitats are nurtured and enhanced through conservation, sustainability and education
- Resilient and sustainable environments are supported by healthy ecosystems, improved resource recovery and reduced pollution, litter and waste
- Our natural environments are accessible, respected, connected and enjoyed by everyone

Priorities

- Foster community leadership to protect and enhance ecosystems, biodiversity, and waterways for long-term sustainability
- Prioritise programs to reduce pollution, litter, improve water quality and strengthen biosecurity to build resilient natural systems
- Support the transformation of resource recovery, recycling, and landfill diversion through waste collection services and improved infrastructure and strengthening regional partnerships to support sustainable waste management
- Improve tracks, trails, marine infrastructure, and coastline access to enable accessible, high-quality recreational and eco-tourism experiences

Enabling strategies, plans and programs

- *Redlands Coast Koala Conservation Plan 2022–2027*
- *Mosquito Management Plan and Action Plan 2017–2024*
- *Redlands Coast Biosecurity Plan 2025–2030*
- *Redlands Coast Bay and Creek Plan 2021–2031 and Action Plan 2021–2026*
- *Coastal Hazard Adaptation Strategy*
- *Conservation Land Management Strategy 2010*
- *Eastern Escarpment Conservation Area Plan: Connecting with Recreation*
- *Sovereign Waters Lake Management Plan*
- *Waste Reduction and Recycling Plan 2021–2030*
- *Wildlife Connections Plan 2018–2028*
- *Sustainability Strategy* (under development)

What success will look like

- Improvements or sustainability of ecosystem health
- Waste to landfill per capita is reduced
- Our city is resilient to climate disasters
- Our community has access to the natural environment

What can you do?

- Enjoy local parks and green spaces
- Buy green, grow food, and plant natives
- Install a water tank or solar system
- Join a local Bushcare, Trailcare or Parkcare group
- Recycle, compost, and reduce packaging waste
- Support wildlife by not feeding them
- Use bins, take rubbish home, and report dumping
- Dispose of waste safely
- Visit Redlands IndigiScapes Centre

Liveable neighbourhoods

Distinctive and well-designed places to live, work and play

Outcomes

- A well-planned city shaped by sustainable, innovative and future-focused planning to meet the evolving needs of our community
- Resilient, sustainable infrastructure that supports recovery, community wellbeing, growth and connection
- A safe, connected and accessible city

Priorities

- Facilitate evidence-based, inclusive city planning through structured community engagement, to inform City Plan and growth strategies
- Strengthen infrastructure resilience to natural disasters by embedding proactive risk management, sustainable planning, and hazard assessments to reduce exposure and minimise recovery costs and downtime
- Improve the health, safety and amenity of our community and our environment by promoting and enforcing local laws, regulations, policies and controls
- Upgrade and renew critical infrastructure to support growth, safeguard community and environmental health, improve safety and maintain reliable, sustainable services
- Advocate for and deliver integrated and accessible transport solutions on the city's active transport, passenger and road, networks, to improve travel choice and access for the community

Enabling strategies, plans and programs

- *Strategic Asset Management Plan 2019–2029*
- *Local Government Infrastructure Plan*
- *Redland Water NetServ Plan*
- *Redlands Social Infrastructure Strategy 2009*
- *Redland Open Space Strategy 2026*
- *Redlands Coast Regional Sport and Recreation Precinct Master Plan 2023*
- *Redlands Housing Strategy 2011–2031*
- *Local Housing Action Plan*
- *Redlands Coast Transport Strategy and Transport Plan*
- *Cleveland Centre Traffic and Transport Action Plan*
- *Redland City Plan* (under review and development)
- *Active Transport Strategy* (under review and development)
- *Cleveland Local Area Transport Plan* (under review and development)
- *Capalaba Local Area Transport Plan* (under review and development)

What success will look like

- Increased connections by pathways
- Increased journey to work ratios by cycling, walking and public transport
- Residents would recommend Redland City to others as a welcoming place to live
- Increased community satisfaction with cleanliness, safety and amenity of local areas
- Continued advocacy to state and federal government for fair funding to deliver critical community infrastructure

What can you do?

- Talk to Council before you build
- Comment on local planning issues and participate in public forums
- Keep our public spaces clean
- Ride a bike for transport, fun and health
- Travel off peak
- Use active and public transport options
- Try out the many local walking trails
- Carpool or car share

Prosperous economy

A flourishing and evolving economy attracting investment, innovation and opportunity

Outcomes

- A vibrant city that attracts investment, expenditure and tourism
- A thriving local economy that supports business growth, drives innovation, and strengthens strategic partnerships that support job growth and long-term sustainability
- Unique, sustainable visitor and resident experiences that drive economic, social and cultural benefits

Priorities

- Define Redland City's economic future through a long-term vision, strategic frameworks and resourcing that guide sustainable growth, infrastructure and liveability
- Lead, manage, promote and support city shaping projects
- Deliver an economic development strategy in partnership with stakeholders to attract investment, activate city centres, and support thriving local businesses and industries
- Leverage strategic partnerships and regional collaboration to strengthen advocacy priorities and unlock opportunities for Redland City
- Develop and promote sustainable and cultural tourism experiences that leverage Redland City's natural assets and deliver economic benefits

Enabling strategies, plans and programs (* refers to an internal document)

- *Redlands Coast Destination Management Plan 2023–2028*
- *SEQ City Deal**
- *Shaping SEQ2023 (Queensland Government)*
- *Destination 2045 (Queensland Government)*
- *Economic Development Framework and Strategy 2026–2030* (under development)

What success will look like

- Increased visitation
- Increased diversity of local employment opportunities/sectors
- Increased funding secured to place-based revitalisation
- Increased number of residents living and working in the city
- Increased local gross domestic product
- Increased total tourism-related expenditure in the local economy

What can you do?

- Access advice on starting your own business
- Make use of the city's employment services
- Help newcomers to be part of the city's economy
- Attend city events and festivals
- Support local, buy local
- Be friendly to visitors and tourists
- Employ locally
- Organise events in local areas
- Support our city shaping projects
- Connect with a Chamber of Commerce and/or business network
- Collaborate with local businesses

Effective and efficient Council

A well-governed and future-focused Council that leads, listens and delivers

Outcomes

- Partnerships with community, government, business and stakeholders to deliver community outcomes
- Transparent governance, innovation, and data-driven decision-making to deliver lasting social, cultural, environmental and economic benefits
- Council assets are sustainably managed to provide reliable, cost-effective services that meet community needs

Priorities

- Build effective and meaningful stakeholder and community partnerships through continued dialogue, transparency and accountability
- Inform, educate and collaborate with the community by delivering contemporary and cost-effective communication and engagement initiatives
- Implement a strategic planning and performance framework that defines services, aligns strategies and strengthens data and reporting
- Deliver long-term Asset and Service Management Plans, data-driven asset insights, and governance frameworks that balance service levels, risk and cost, enabling evidence-based investment decisions
- Strengthen digital capability to deliver seamless, customer-focused services
- Deliver best-practice, prioritised services through strong governance, efficient operations, sustainable practices and collaborative leadership

Enabling strategies, plans and programs

- *Community Engagement Framework 2025*
- *Digital Transformation Program*
- *Strategic Asset Management Plan 2019-2029*
- *People Strategy 2021–2026* (under review)
- *Financial Strategy 2025–2035* (under review and development)

What success will look like

- Increased trust in Council
- Improved community perception on our organisational performance
- Residents have greater confidence in community leaders
- Improved opportunities to participate and engage in decision making

What can you do?

- Volunteer
- Get involved – take an interest in civic affairs
- Exercise your right to vote
- Attend a Council General Meeting
- Attend or comment on public consultations
- Be respectful when interacting with our people
- Embrace our digital journey – use online services, go paperless and grow digital confidence

About our commercial business units

Redland City Council's commercial business units, City Waste and City Water, deliver essential services that support a liveable, sustainable and resilient Redland City.

City Waste

Objective

- Efficiently manage waste and recycling operations, including Council waste facilities and kerbside collection contracts.
- Drive resource recovery through infrastructure, diverse waste and recycling options, kerbside collections and community education, while ensuring environmental protection, regulatory compliance and community access to information.
- Develop strategic plans and frameworks to guide waste management and recycling initiatives, including planning for infrastructure renewal, procurement activities, community engagement and regional collaboration.

Significant activities

- Promote correct waste separation by encouraging proper use of kerbside bins.
- Manage kerbside collection of waste, recycling and green waste and transport materials to approved facilities.
- Operate and maintain facilities for sorting and disposing of domestic and commercial waste and recyclables.
- Further develop waste management strategies and plans to support long-term sustainability.
- Plan for renewal and upgrade of waste infrastructure to meet future community needs.
- Support the transition to a circular economy and participate in regional collaborations and partnerships to improve resource efficiency.
- Engage with the Redland City community to reduce landfill waste and increase recycling rates.

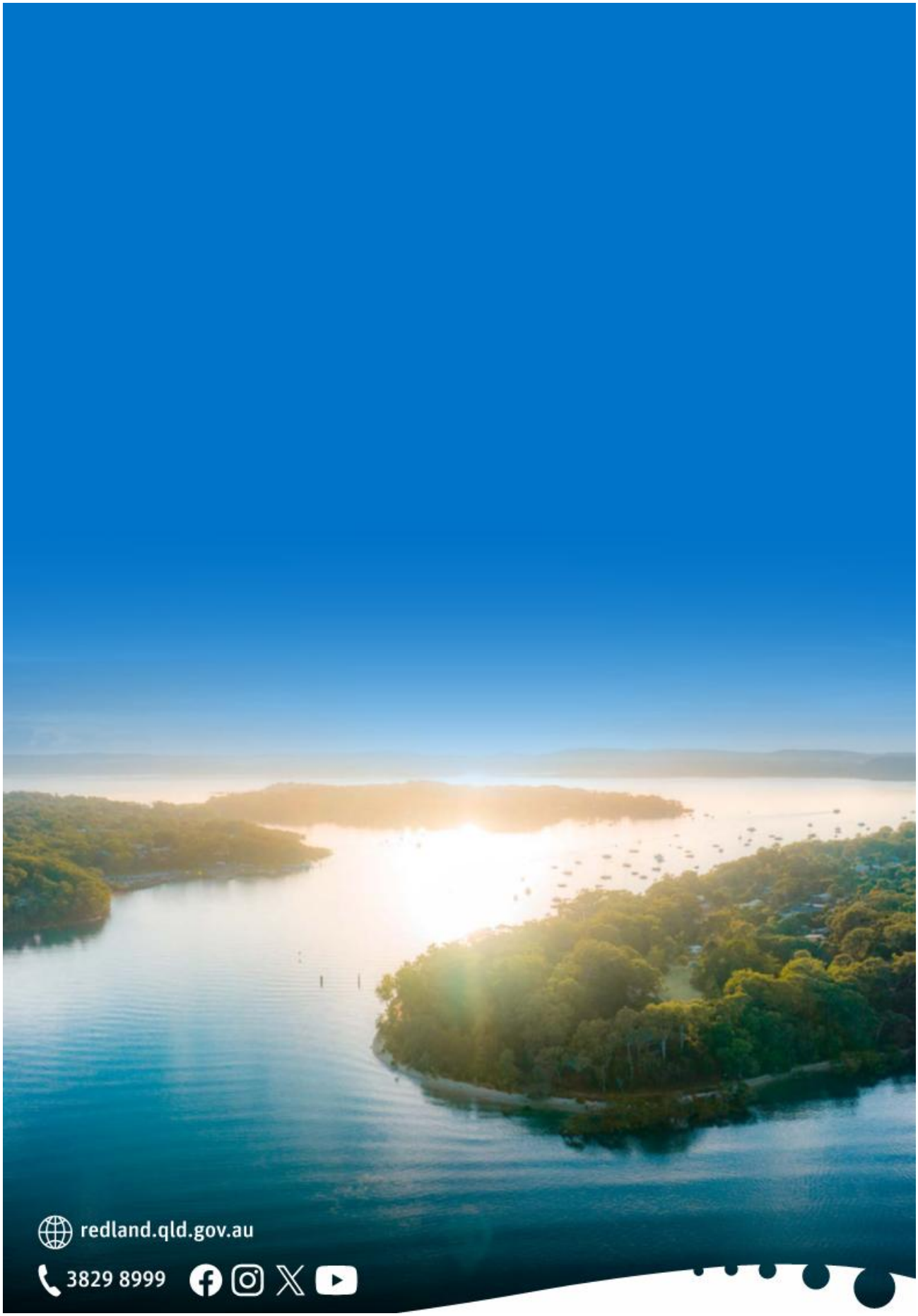
City Water

Objective

- Deliver safe, reliable, and sustainable drinking water and wastewater services in accordance with the *Australian Drinking Water Guidelines* (ADWG), the *Water Supply (Safety and Reliability) Act 2008*, the *Environmental Protection Act 1994* (EP Act) and subsequent environmental approvals.
- Ensure regulatory compliance and transparent reporting across all water and wastewater operations, including trade waste and recycled water management.
- Protect the health and safety of workers and the community, while promoting environmental stewardship and climate resilience.

Significant activities

- Strategically plan and manage water and wastewater assets to ensure long-term service sustainability and development compliance.
- Operate and maintain water and wastewater networks, including reservoirs, pipelines, wastewater treatment plants and recycled water systems.
- Deliver water and wastewater infrastructure through coordinated planning, construction, and maintenance.
- Manage regulatory reporting and compliance to meet environmental and public health standards.
- Manage trade waste and including billing services with fair, transparent charges for industrial and commercial customers.
- Engage with customers and the community through education initiatives that promote water conservation, responsible use, and awareness of how to protect sewerage infrastructure.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13 REPORTS FROM ORGANISATIONAL SERVICES

13.1 NOVEMBER 2025 MONTHLY FINANCIAL REPORT

Objective Reference: **A12675272**

Authorising Officer: **Melanie Reimann, Acting Executive Group Manager Financial Services & Chief Financial Officer**

Responsible Officer: **Louise Miller, Service Manager Corporate Finance**

Report Author: **Rose Lin, Acting Corporate Financial Reporting Manager**

Attachments: **1. November 2025 Monthly Financial Report ⇩**

PURPOSE

To note the year-to-date financial results as at 30 November 2025.

BACKGROUND

Council adopts an annual budget and then reports on performance against the budget on a monthly basis. This enables the organisation to periodically review its financial performance and position and respond to changes in community requirements, market forces or other outside influences.

ISSUES

There are no issues to report. The purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Management continues to monitor Council's operating result with a focus on delivering efficient and effective services to the community and being fiscally responsible with community assets and funds. Management has reviewed the 2025-2026 budget and will table an updated forecast of the full year operating result at the December 2025 General Meeting. The revised budget will be incorporated into future financial reports as used as the benchmark for performance monitoring moving forward.

STRATEGIC IMPLICATIONS

Council has either achieved or favourably exceeded the following key financial sustainability ratios as at the end of November 2025.

- Operating Surplus Ratio
- Operating Cash Ratio
- Unrestricted Cash Expense Cover Ratio
- Asset Consumption Ratio
- Leverage Ratio
- Net Financial Liabilities Ratio

The Asset Sustainability Ratio did not meet the target at the end of November 2025 and remains unfavourable YTD for Council with renewal spend of $14.14M and depreciation expense of $34.90M year to date on infrastructure assets.

This ratio is an indication of how Council currently maintains, replaces and renews its existing infrastructure assets as they reach the end of their useful lives and can fluctuate month to month depending on the timing of capital work.

Capital spend on non-renewal projects increases the asset base and therefore increases depreciation expense, resulting in a lower asset sustainability ratio.

The Council-Controlled Revenue, Population Growth, and Asset Renewal Funding Ratios are reported for contextual purposes only. Population Growth and Asset Renewal Funding Ratios will not materially change from month to month.

Legislative Requirements

The November 2025 financial report is presented in accordance with the legislative requirement of section 204(2) of the *Local Government Regulation 2012,* requiring the Chief Executive Officer to present the financial report to a monthly Council meeting.

Risk Management

The November 2025 financial report has been noted by the Executive Leadership Team and relevant officers who can provide further clarification and advice around actual to budget variances.

Financial

There is no direct financial impact to Council as a result of this report, however it provides an indication of financial outcomes at the end of November 2025.

People

Nil impact expected as the purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Environmental

Nil impact expected as the purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Social

Nil impact expected as the purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Human Rights

There are no human rights implications from this report as the purpose of the attached report is to provide financial information to Council based upon actual versus budgeted financial activity.

Alignment with Council's Policy and Plans

This report has a relationship with the following items of Council's *Our Future Redlands – A Corporate Plan to 2026 and Beyond*:

Efficient and effective organisation objectives

7.1 Improve the efficiency and effectiveness of Council's service delivery to decrease costs and enhance customer experience and community outcomes.

7.4 Demonstrate good governance through transparent, accountable processes and sustainable practices and asset management.

CONSULTATION

Consulted	Date	Comment
Council departmental officers	Year to date 30 November 2025	Consulted on financial results and outcomes.
Financial Services Group officers	Year to date 30 November 2025	Consulted on financial results and outcomes.
Executive Leadership Team and Senior Leadership Team	Year to date 30 November 2025	Recipients of variance analysis between actual and budget. Consulted as required.

OPTIONS

Option One

That Council resolves to note the financial position, results and ratios for November 2025 as presented in the attached Monthly Financial Report.

Option Two

That Council resolves to request additional information.

OFFICER'S RECOMMENDATION

That Council resolves to note the financial position, results and ratios for November 2025 as presented in the attached Monthly Financial Report.

Redland CITY COUNCIL

Monthly Financial Report

November 2025

CONTENTS

1.	Executive Summary	3
2.	Key Performance Indicators	3
3.	Statement of Comprehensive Income	4
4.	Capital Expenditure	6
5.	Statement of Financial Position	7
6.	Statement of Cash Flows	9
7.	Investment & Borrowings Report	10
8.	Constrained Cash Reserves	11
9.	City Water Statements	12
10.	City Waste Statements	12
11.	Appendix: Additional and Non-financial Information	13
12.	Glossary	14

1. EXECUTIVE SUMMARY

This monthly report illustrates the financial performance and position of Redland City Council compared to its adopted budget at an organisational level for the period ended 30 November 2025. The annual revised budgeted balances for 2025-2026 include the changes from the budget carryovers adopted by Council on 20 August 2025.

Key Financial Highlights and Overview

Key Financial Results ($000)	Annual Revised Budget	YTD Budget	YTD Actual	YTD Variance	YTD Variance %	Status Favourable ✓ Unfavourable ✗
Operating Surplus / (Deficit)	735	24,489	**25,340**	851	3%	✓
Recurrent Revenue	416,973	196,750	**198,175**	1,425	1%	✓
Recurrent Expenditure	416,238	172,261	**172,835**	574	0%	✗
Capital Works Expenditure	152,446	51,444	**31,891**	(19,553)	-38%	✓
Closing Cash & Cash Equivalents	209,253	260,981	**254,534**	(6,447)	-2%	✗
Short-Term Investment	50,000	50,000	**50,000**	-	0%	✓

Council reported a year to date operating surplus of $25.34M which is favourable to budget by $851K. The favourable variance is impacted by:
- Higher fee income primarily related to planning applications
- Lower water consumption that has resulted in levies and utility charges revenue as well as bulk water expenses being lower than budget
- Employee costs including the back payment of entitlements under the Enterprise Bargaining Agreement in November
- Material and services costs include unbudgetted costs related to ex-Tropical Cyclone Alfred clean up activities
- Lower depreciation expense which is expected to be a temporary timing difference.

Council's capital works expenditure is behind budget by $19.55M due to timing of works for a number of infrastructure projects.

Council's cash balance at 30 November 2025 of $254.53M is lower than budget mainly due to timing of cash flows, with higher than budgeted payments for suppliers, lower than budgeted receipts from customers, partially offset by lower payments for property, plant and equipment and higher than budgeted capital grants, subsidies and contributions. Constrained cash reserves represent 50% of the cash balance.

2. KEY PERFORMANCE INDICATORS

Local Government Regulation 2012 requires Council to calculate and publish nine financial sustainability measures as part of the annual statutory financial reporting process. Council applies the guidance set out in the *Financial Management (Sustainability) Guideline 2024* to calculate the ratios and determine the target measures. Ratios are monitored monthly.

Type	Financial Sustainability Measures	Target	Annual Revised Budget	YTD Actual	Status Achieved ✓ Not achieved ✗
Financial Capacity	Council-Controlled Revenue[1]	Contextual - No target specified	93.89%	93.11%	N/A
	Population Growth Ratio[1]	Contextual - No target specified	1.23%	1.23%	N/A
Operating Performance	Operating Surplus Ratio[3]	Greater than 0%	0.18%	12.65%	✓
	Operating Cash Ratio	Greater than 0%	23.31%	30.86%	✓
Liquidity	Unrestricted Cash Expense Cover Ratio	Greater than 2 months	5.81	6.22	✓
Asset Management	Asset Sustainability Ratio	Greater than 60%	89.38%	40.51%	✗
	Asset Consumption Ratio	Greater than 60%	60.14%	61.12%	✓
	Asset Renewal Funding Ratio[1]	Contextual - No target specified	100.00%	100.00%	N/A
Debt Servicing Capacity	Leverage Ratio	0 - 4 times	1.05	1.35	✓
Level of Debt	Net Financial Liabilities Ratio[2,3]	Less than 60% (on average over the long-term)	-25.06%	-71.92%	✓

[1] The Council-Controlled Revenue, Population Growth, and Asset Renewal Funding Ratio measures are reported for contextual purposes only. Population Growth and Asset Renewal Funding Ratios will not materially change from month to month.

[2] The Net Financial Liabilities Ratio is negative as current assets are greater than total liabilities. This measure is presented in addition to the nine financial sustainability measures required to provide more information to the community.

[3] The budget percentage for these ratios are calculated as at 30 June of each reporting year. The monthly ratio during the reporting year may not be representative of the end of year result.

3. STATEMENT OF COMPREHENSIVE INCOME

STATEMENT OF COMPREHENSIVE INCOME
For the period ending 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Recurrent revenue					
Rates charges	143,632	143,632	71,902	**71,613**	(289)
Levies and utility charges	227,034	227,034	106,477	**104,060**	(2,417)
Less: Pensioner remissions and rebates	(4,102)	(4,102)	(1,999)	**(1,969)**	30
Fees	24,952	24,952	10,107	**12,773**	2,666
Rental income	964	964	381	**484**	103
Interest received	10,477	10,477	4,659	**5,284**	625
Sales revenue	5,250	5,250	1,953	**2,764**	811
Other income	589	589	414	**930**	516
Grants, subsidies and contributions	7,908	8,178	2,856	**2,236**	(620)
Total recurrent revenue	416,703	416,973	196,750	**198,175**	1,425
Recurrent expenses					
Employee benefits	124,045	124,008	52,093	**53,806**	1,713
Materials and services	194,783	195,059	79,747	**82,144**	2,397
Finance costs	5,090	5,090	2,137	**1,961**	(176)
Depreciation and amortisation	92,607	92,607	38,586	**35,236**	(3,350)
Other expenditure	680	680	201	**273**	72
Net internal costs	(1,205)	(1,205)	(503)	**(585)**	(82)
Total recurrent expenses	415,999	416,238	172,261	**172,835**	574
OPERATING SURPLUS / (DEFICIT)	704	735	24,489	**25,340**	851
Capital revenue					
Grants, subsidies and contributions	55,432	60,993	12,794	**13,776**	982
Non-cash contributions	18,067	18,067	-	**-**	-
Total capital revenue	73,499	79,060	12,794	**13,776**	982
Capital expenses					
(Gain) / loss on disposal of non-current assets	289	289	120	**298**	178
Total capital expenses	289	289	120	**298**	178
TOTAL INCOME	**490,202**	**496,032**	**209,544**	**211,951**	**2,407**
TOTAL EXPENSES	**416,287**	**416,527**	**172,381**	**173,133**	**752**
NET RESULT	**73,915**	**79,505**	**37,163**	**38,818**	**1,655**
Other comprehensive income / (loss)					
Items that will not be reclassified to a net result					
Revaluation of property, plant and equipment	-	-	-	**-**	-
TOTAL COMPREHENSIVE INCOME	**73,915**	**79,505**	**37,163**	**38,818**	**1,655**

3. STATEMENT OF COMPREHENSIVE INCOME - CONTINUED

LEVIES AND UTILITY CHARGES ANALYSIS
For the period ending 30 November 2025

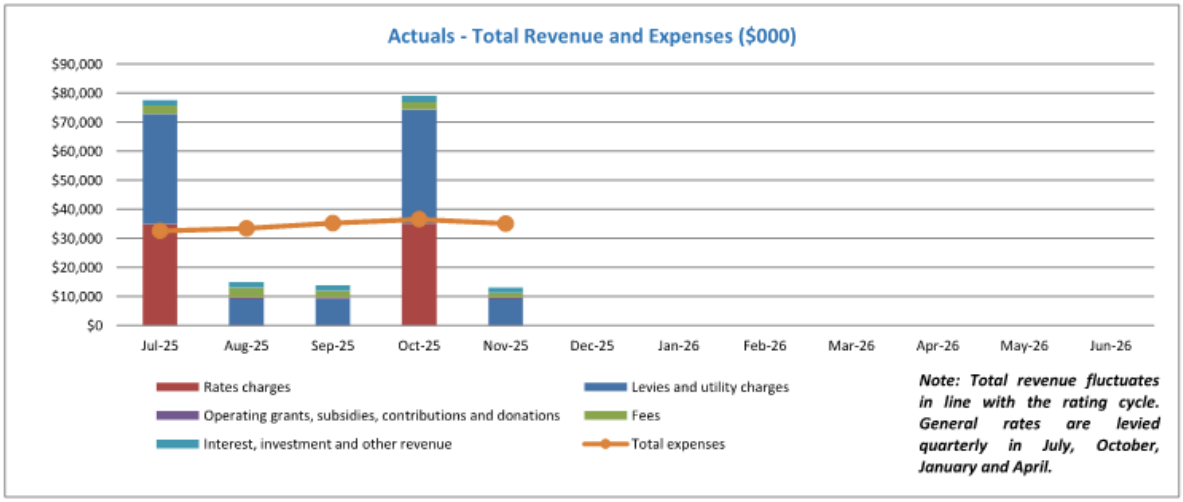
	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Levies and utility charges					
Refuse collection rate charge	44,987	44,987	18,656	**18,743**	87
SES separate charge	540	540	269	**270**	1
Environment & Coastal Management Separate Charge	19,206	19,206	9,573	**9,617**	44
Separate charge landfill remediation	5,793	5,793	2,891	**2,892**	1
Wastewater charges	65,902	65,902	32,733	**32,540**	(193)
Water access charges	28,458	28,458	14,182	**14,045**	(137)
Water consumption charges	62,147	62,147	28,173	**25,953**	(2,220)
Total levies and utility charges	**227,034**	**227,034**	**106,477**	**104,060**	**(2,417)**

MATERIALS AND SERVICES ANALYSIS
For the period ending 30 November 2025

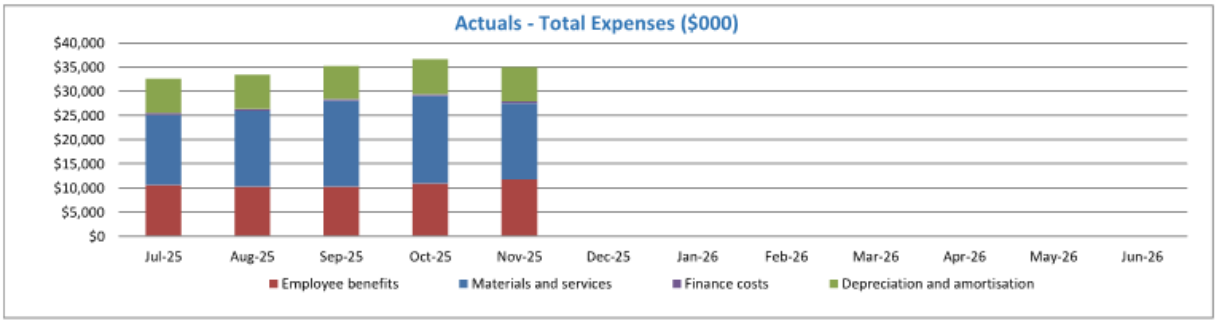
	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Materials and services					
Contractors	59,363	59,207	21,813	**24,565**	2,752
Consultants	6,248	6,546	2,902	**2,554**	(348)
Other Council outsourcing costs*	31,473	31,339	12,279	**12,841**	562
Purchase of materials	65,319	65,204	29,126	**26,735**	(2,391)
Office administration costs	6,223	6,481	2,858	**3,975**	1,117
Electricity charges	6,803	6,803	2,823	**3,138**	315
Plant operations	4,028	4,048	1,630	**1,780**	150
Information technology resources	9,004	9,088	3,781	**3,963**	182
General insurance	3,717	3,717	1,549	**1,430**	(119)
Community assistance**	1,898	1,919	677	**882**	205
Other material and service expenses	707	707	309	**281**	(28)
Total materials and services	**194,783**	**195,059**	**79,747**	**82,144**	**2,397**

** Other Council outsourcing costs are various outsourced costs including refuse collection and disposal, waste disposal, legal services, traffic control, external training, valuation fees, etc.*

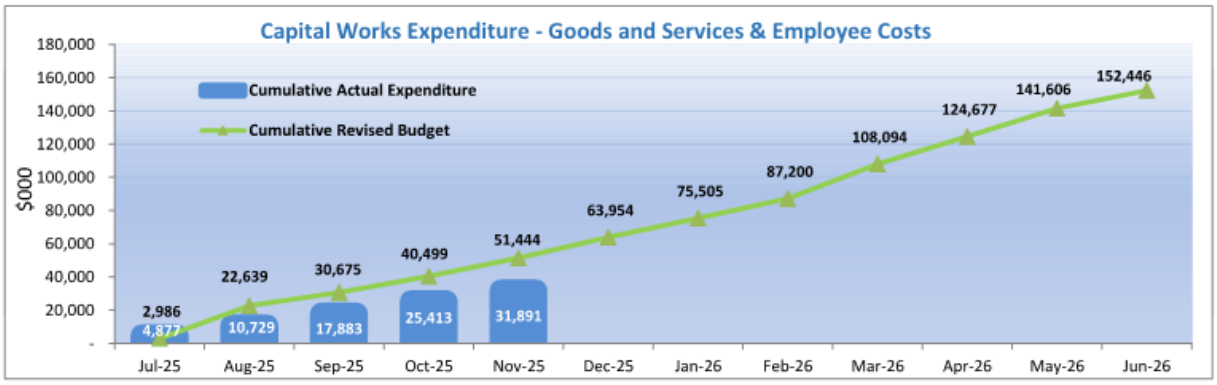
*** Community assistance costs represent community related costs including community grants, exhibitions and awards, donations and sponsorships.*



3. STATEMENT OF COMPREHENSIVE INCOME - CONTINUED



4. CAPITAL EXPENDITURE



	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Capitalised goods and services*	142,723	49,360	**28,268**	(21,092)
Capitalised employee costs	9,723	2,084	**3,623**	1,539
Total	**152,446**	**51,444**	**31,891**	**(19,553)**

** Excludes capital prepayments.*

Notable Projects

The table below lists Council's capital expenditure on major projects.

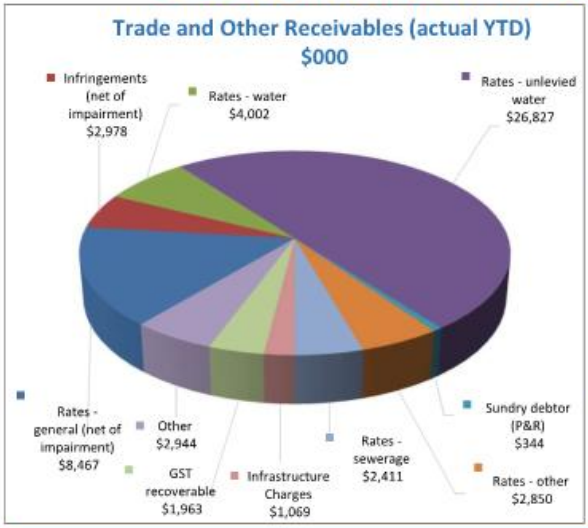
Capital Investment		YTD Actual $000
Kinross Road Sewerage Trunk	New sewerage pump station (Lorikeet Dr) and trunk sewer main to Cleveland waste water treatment plant	5,133
Judy Holt Park	Recreational area expansion	2,082
RPAC Forecourt Redevelopment	Staged redevelopment of Redlands Performing Arts Centre	1,003
Fleet replacement	Current fleet replacement	919
Chiller Replace	Replace Cleveland Library building chiller	629

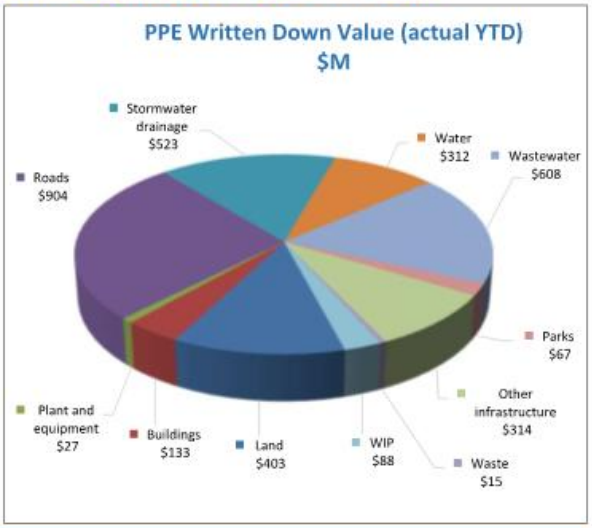
5. STATEMENT OF FINANCIAL POSITION

STATEMENT OF FINANCIAL POSITION
As at 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000
CURRENT ASSETS				
Cash and cash equivalents	162,341	209,253	260,981	**254,534**
Short-term investment - CBA	50,000	50,000	50,000	**50,000**
Trade and other receivables	57,676	63,514	53,522	**53,855**
Inventories	1,258	1,398	1,398	**1,314**
Non-current assets held for sale	-	2	2	**-**
Other current assets	3,980	3,420	3,418	**8,352**
Total current assets	**275,255**	**327,587**	**369,321**	**368,055**
NON-CURRENT ASSETS				
Investment property	1,474	3,379	3,379	**3,379**
Property, plant and equipment	3,524,262	3,474,662	3,410,106	**3,393,955**
Intangible assets	158	149	246	**222**
Right-of-use assets	1,747	9,717	10,179	**10,129**
Other financial assets	73	73	73	**73**
Investment in other entities	11,769	11,769	11,769	**11,769**
Equity investment	2,831	7,793	7,793	**7,793**
Total non-current assets	**3,542,314**	**3,507,542**	**3,443,545**	**3,427,320**
TOTAL ASSETS	**3,817,569**	**3,835,129**	**3,812,866**	**3,795,375**
CURRENT LIABILITIES				
Trade and other payables	41,118	54,429	68,309	**51,498**
Borrowings - current	6,391	8,278	8,278	**8,278**
Lease liability - current	237	600	900	**900**
Provisions - current	5,904	22,396	23,915	**22,643**
Other current liabilities	(267)	13,316	25,568	**21,670**
Total current liabilities	**53,383**	**99,019**	**126,970**	**104,989**
NON-CURRENT LIABILITIES				
Borrowings - non-current	94,658	92,759	75,295	**75,282**
Lease liability - non-current	1,595	9,615	9,921	**9,777**
Provisions - non-current	28,009	21,342	28,110	**29,302**
Other non-current liabilities	379	353	2,872	**4,671**
Total non-current liabilities	**124,641**	**124,069**	**116,198**	**119,032**
TOTAL LIABILITIES	**178,024**	**223,088**	**243,168**	**224,021**
NET COMMUNITY ASSETS	**3,639,546**	**3,612,041**	**3,569,698**	**3,571,354**
COMMUNITY EQUITY				
Asset revaluation surplus	1,612,203	1,710,032	1,710,032	**1,710,032**
Retained surplus	1,914,077	1,793,908	1,746,806	**1,732,963**
Constrained cash reserves	113,266	108,101	112,860	**128,359**
TOTAL COMMUNITY EQUITY	**3,639,546**	**3,612,041**	**3,569,698**	**3,571,354**

5. STATEMENT OF FINANCIAL POSITION - CONTINUED





RIGHT-OF-USE ASSETS
As at 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual Balance $000
Right-of-use asset				
Buildings	48	107	325	**307**
Land	1,537	9,448	9,668	**9,635**
Plant and equipment	162	162	186	**187**
Closing balance	**1,747**	**9,717**	**10,179**	**10,129**

PROPERTY, PLANT AND EQUIPMENT (PPE) MOVEMENT*
For the period ending 30 November 2025

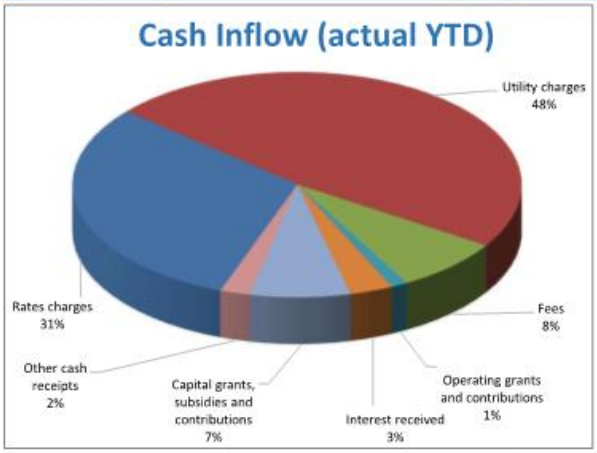
	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual Balance $000
PPE movement				
Opening balance (includes WIP from previous years)	3,447,968	3,397,600	3,397,600	**3,397,600**
Acquisitions and WIP in year movement	169,745	170,513	51,444	**31,891**
Depreciation in year	(91,648)	(91,648)	(38,187)	**(34,761)**
Disposals	(1,803)	(1,803)	(751)	**(775)**
Closing balance	**3,524,262**	**3,474,662**	**3,410,106**	**3,393,955**

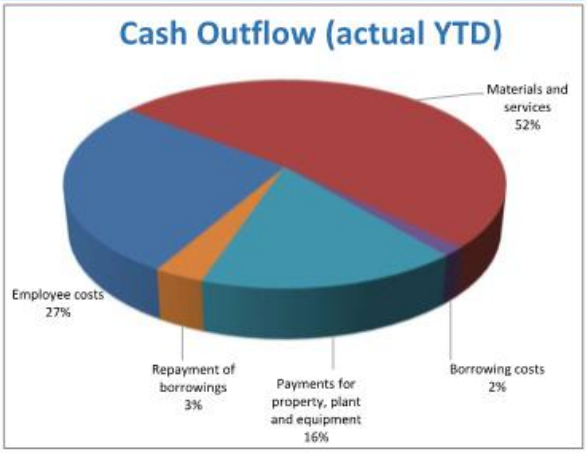
** This table includes movement relating to property, plant and equipment only and is exclusive of intangible assets.*

6. STATEMENT OF CASH FLOWS

STATEMENT OF CASH FLOWS
For the period ending 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000
CASH FLOWS FROM OPERATING ACTIVITIES				
Receipts from customers	382,776	382,776	195,868	**190,547**
Payments to suppliers and employees	(341,480)	(341,720)	(128,862)	**(153,827)**
	41,296	**41,056**	**67,006**	**36,720**
Interest received	10,477	10,477	4,659	**6,719**
Rental income	964	964	382	**485**
Non-capital grants and contributions	8,007	8,277	2,964	**2,590**
Borrowing costs	(2,714)	(2,714)	(2,714)	**(2,708)**
Right-of-use assets interest expense	(301)	(301)	(125)	**(143)**
Net cash inflow / (outflow) from operating activities	**57,728**	**57,758**	**72,172**	**43,663**
CASH FLOWS FROM INVESTING ACTIVITIES				
Payments for property, plant and equipment	(151,678)	(152,446)	(51,444)	**(31,891)**
Proceeds from sale of property, plant and equipment	1,514	1,514	631	**479**
Capital grants, subsidies and contributions	55,432	60,993	12,794	**15,608**
Net cash inflow / (outflow) from investing activities	**(94,731)**	**(89,939)**	**(38,019)**	**(15,804)**
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds of borrowings	15,211	15,211	-	**-**
Repayment of borrowings	(6,030)	(6,030)	(5,730)	**(5,738)**
Right-of-use lease payment	(525)	(525)	(218)	**(363)**
Net cash inflow / (outflow) from financing activities	**8,657**	**8,657**	**(5,948)**	**(6,101)**
Net increase / (decrease) in cash held	**(28,346)**	**(23,524)**	**28,205**	**21,758**
Cash and cash equivalents at the beginning of the year	190,687	232,776	232,776	**232,776**
Cash and cash equivalents at the end of the financial year / period	**162,341**	**209,253**	**260,981**	**254,534**





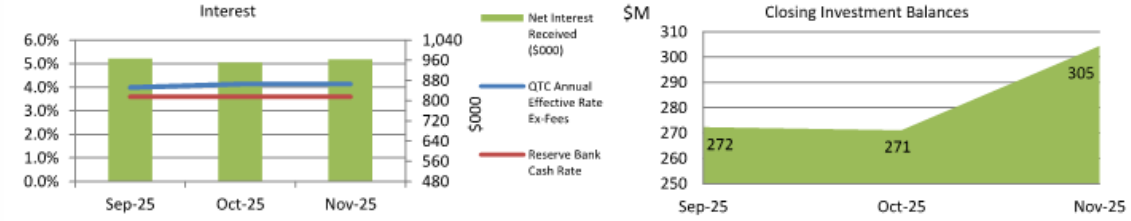
Total Cash Funding (Actual YTD)	**216,428**
Total Cash Funding (Annual Revised Budget)	480,212
% of Budget Achieved YTD	45%

Total Cash Expenditure (Actual YTD)	**194,670**
Total Cash Expenditure (Annual Revised Budget)	503,736
% of Budget Achieved YTD	39%

7. INVESTMENT & BORROWINGS REPORT

For the period ending 30 November 2025

INVESTMENT RETURNS



Total Investment at End of Month was $304.53M

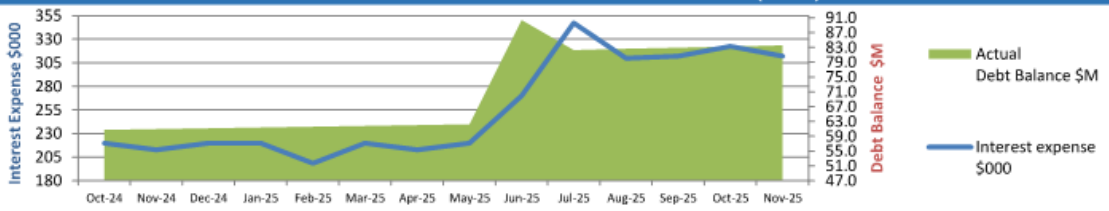
Council investments are currently held predominantly in interest earning at call facilities with Queensland Treasury Corporation (QTC) and a term deposit with Commonwealth Bank of Australia (CBA).

The movement in interest earned is indicative of both the interest rate and the surplus cash balances held with QTC, the latter of which is affected by business cash flow requirements on a monthly basis as well as the rating cycle.

Note: the Reserve Bank reduced the cash rate down to 3.60% during August 2025.

Council adopted its Investment Policy (FIN-001-P) in June 2025 for the 2025-2026 financial year

BORROWINGS AND BORROWING COSTS (QTC)



The debt balance increased in June 2025 due to new borrowings of $27.92M as part of Council's Capital Works Plan.

In July 2025 the debt balance decreased due to the $8.45M Annual Debt Service Payment (ADSP), being $5.74M principal and $2.71M interest. Interest will accrue monthly on a daily balance until next ADSP in July 2026 which is reflected in the increasing debt balance.

Total Borrowings at End of Month were $83.56M

Council adopted its Debt Policy (FIN-009-P) in June 2025 for the 2025-2026 financial year

BORROWINGS
For the period ending 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD **Actual Balance $000**
Borrowings				
Opening balance	(90,413)	(90,401)	(90,401)	**(90,401)**
Accrued interest on borrowings	(3,868)	(3,869)	(1,616)	**(1,605)**
Interest paid on borrowings	2,714	2,714	2,714	**2,708**
Principal repaid	5,730	5,730	5,730	**5,738**
Loan drawdown	(15,211)	(15,211)	-	**-**
Closing balance	**(101,049)**	**(101,037)**	**(83,573)**	**(83,560)**

8. CONSTRAINED CASH RESERVES

Reserves as at 30 November 2025	Purpose of reserve	Opening Balance $000	To Reserve $000	From Reserve $000	Closing Balance $000
Special Projects Reserve:					
Aquatic Paradise Revetment Wall Reserve	To fund Aquatic Paradise revetment wall works program	241	68	(2)	307
Weinam Creek Reserve	Maintenance and improvements associated with Weinam Creek projects	138	138	(2)	274
Waste Levy Reserve	To fund Waste Levy Program	-	2,092	(2,092)	-
Raby Bay Revetment Wall Reserve	To fund Raby Bay revetment wall works program	3,449	1,437	(142)	4,744
		3,828	**3,735**	**(2,238)**	**5,325**
Constrained Works Reserve:					
Public Parks Trunk Infrastructure Reserve	Capital projects for public parks trunk infrastructure	8,998	3,384	(128)	12,254
Marine Trunk Infrastructure Reserve	Provision of marine facilities south of Redland Bay	183	-	-	183
Land for Community Facilities Trunk Infrastructure Reserve	Land for community facilities trunk infrastructure	5,659	121	-	5,780
Water Supply Trunk Infrastructure Reserve	Upgrade, expansion or new projects for water supply trunk infrastructure	17,279	187	-	17,466
Sewerage Trunk Infrastructure Reserve	Upgrade, expansion or new projects for sewerage trunk infrastructure	14,568	2,116	(4,610)	12,074
Local Roads Trunk Infrastructure Reserve	Capital projects for local roads trunk infrastructure	30,003	5,328	(143)	35,188
Cycleways Trunk Infrastructure Reserve	Capital projects for cycleways trunk infrastructure	16,420	1,813	-	18,233
Stormwater Trunk Infrastructure Reserve	Capital projects for stormwater trunk infrastructure	12,348	524	-	12,872
Tree Planting Reserve	Acquisition and planting of trees on footpaths	465	32	-	497
Koala Tree off-set Planting Reserve	Acquisition and planting of trees for koala habitat	24	6	-	30
Special Property Reserve	Acquisition of property in line with the strategic property framework	4,980	494	-	5,474
		110,927	**14,005**	**(4,881)**	**120,051**
Separate Charge Reserve:					
Environment & Coastal Management Separate Charge Reserve	Ongoing conservation and maintenance operations	-	9,617	(6,665)	2,952
SES Separate Charge Reserve	On-going costs of maintaining the Redland SES	28	270	(267)	31
		28	**9,887**	**(6,932)**	**2,983**
TOTALS		**114,783**	**27,627**	**(14,051)**	**128,359**
		Closing cash and cash equivalents			**254,534**
		Reserves as percentage of cash balance			**50.43%**

9. CITY WATER STATEMENTS

CITY WATER SUMMARY OPERATING STATEMENT
For the period ending 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Total revenue	165,406	165,406	78,713	**77,183**	(1,530)
Total expenses	93,371	93,279	39,744	**39,358**	(386)
Earnings before interest, tax and depreciation (EBITD)	72,034	72,127	38,969	**37,825**	(1,144)
External interest expense	991	991	415	**438**	23
Internal interest expense	19,061	19,061	7,942	**7,942**	-
Depreciation	33,732	33,732	14,055	**13,401**	(654)
Operating surplus / (deficit)	**18,251**	**18,344**	**16,557**	**16,044**	**(513)**

CITY WATER CAPITAL FUNDING STATEMENT
For the period ending 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Capital contributions, donations, grants and subsidies	8,646	12,946	5,632	**2,304**	(3,328)
Net transfer (to) / from constrained capital reserves	3,684	6,116	5,311	**2,306**	(3,005)
Non-cash contributions	1,530	1,530	-	**-**	-
Funding from utility revenue	23,910	17,178	(937)	**6,577**	7,514
Total sources of capital funding	**37,770**	**37,770**	**10,006**	**11,187**	**1,181**
Contributed assets	1,530	1,530	-	**-**	-
Capitalised expenditure	35,993	35,993	9,346	**10,315**	969
Loan redemption	247	247	660	**872**	212
Total application of capital funds	**37,770**	**37,770**	**10,006**	**11,187**	**1,181**

10. CITY WASTE STATEMENTS

CITY WASTE OPERATING STATEMENT
For the period ending 30 November 2025

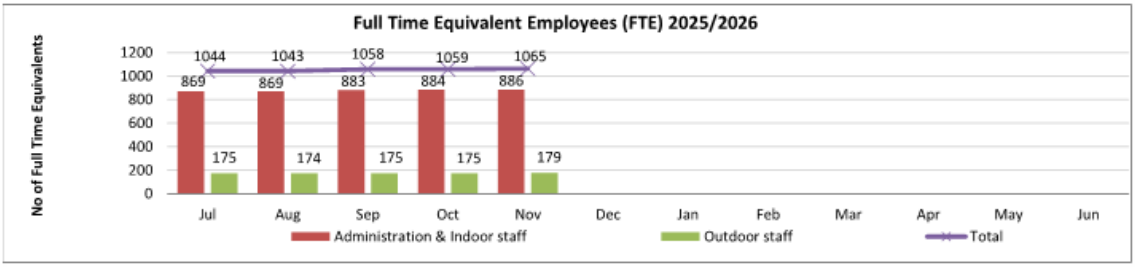
	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Total revenue	47,902	47,902	19,879	**20,119**	240
Total expenses	37,765	37,765	15,889	**16,151**	262
Earnings before interest, tax and depreciation (EBITD)	10,137	10,137	3,990	**3,968**	(22)
External interest expense	5	5	2	**2**	-
Depreciation	922	922	384	**195**	(189)
Operating surplus / (deficit)	**9,210**	**9,211**	**3,604**	**3,771**	**167**

CITY WASTE CAPITAL FUNDING STATEMENT
For the period ending 30 November 2025

	Annual Original Budget $000	Annual Revised Budget $000	YTD Budget $000	YTD Actual $000	YTD Variance $000
Funding from utility revenue	1,702	1,702	144	**166**	22
Total sources of capital funding	**1,702**	**1,702**	**144**	**166**	**22**
Capitalised expenditure	1,666	1,666	129	**167**	38
Loan redemption	37	37	15	**(1)**	(16)
Total application of capital funds	**1,702**	**1,702**	**144**	**166**	**22**

11. APPENDIX: ADDITIONAL AND NON-FINANCIAL INFORMATION

Workforce Reporting



November 2025: Headcount	Employee Type			
Department Level	Casual	Full Time	Part Time	Total
Office of CEO and People, Culture and Organisational Performance	4	47	10	61
Organisational Services	2	199	28	229
Community and Customer Services	67	326	77	470
Infrastructure and Operations	10	393	26	429
Total	83	965	141	1,189

Note: FTE employees includes all full time employees at a value of 1 and all other employees, at a value less than 1. The table above demonstrates the headcount by department. The table includes contract of service and temporary personnel. It includes casual staff in their non-substantive roles as at the end of the period where relevant.

Overdue Rates Debtors & Statistics

Comparison November 2025 to November 2024									
Days Overdue	Nov-25	% Overdue	Nov-24	% Overdue	$ Variance	% Variance	Rates & Charges Statistics	Nov-25	Nov-24
0 - 30	$10,320,037	5.1%	$7,435,527	4.0%	$2,884,510	1.1%	Levied (Billed) Rates & Charges since 1 July	**$191,293,350**	**$173,843,940**
31 - 60	$0	0.0%	$0	0.0%	$0	0.0%	Rate arrears b/fwd 1 July	$11,724,571	$9,598,398
61 - 90	$1,400	0.0%	$10,977	0.0%	-$9,577	0.0%	**Total**	**$203,017,921**	**$183,442,338**
91 - 180	$2,698,373	1.3%	$2,170,613	1.2%	$527,760	0.1%	Balance of overdue rates & charges	$17,695,786	$13,659,803
>180	$4,675,976	2.3%	$4,042,686	2.2%	$633,290	0.1%	**Percentage Overdue**	**8.7%**	**7.4%**
Total	**$17,695,786**	**8.7%**	**$13,659,803**	**7.4%**	**$4,035,983**	**1.3%**			

12. GLOSSARY

Key Terms

Written Down Value:
This is the value of an asset after accounting for depreciation or amortisation, and it is also called book value or net book value.

Work In Progress (WIP):
This represents an unfinished project that costs are still being added to. When a project is completed, the costs will be either capitalised (allocated to relevant asset class) or written off.

Current Replacement Cost:
The amount of money required to replace an existing asset with an equally valued or similar asset at the current market price.

Written Down Replacement Cost:
An asset's current replacement cost less accumulated depreciation.

Book Value of Debt:
The book value of Council's debt (QTC or other loans) as at the reporting date (i.e. 30 June).

Infrastructure Assets:
Those significant, long-life assets that provide ratepayers with access to social and economic facilities. Examples include water and sewerage treatment plants, roads, bridges, drainage, buildings, and other community assets (does not include right of use assets).

Definition of Ratios

Council Controlled Revenue Ratio: *This is an indicator of a Council's financial flexibility, ability to influence its operating income, and capacity to respond to unexpected financial shocks*	$\frac{\text{Net Rates, Levies and Charges add Fees and Charges}}{\text{Total Operating Revenue}}$
Population Growth: *This is a key driver of a Council's operating income, service needs, and infrastructure requirements into the future*	$\frac{\text{Prior year estimated population}}{\text{Previous year estimated population}} - 1$
Operating Surplus Ratio*: *This is an indicator of the extent to which revenues raised cover operational expenses only or are available for capital funding purposes*	$\frac{\text{Operating Result}}{\text{Total Operating Revenue}}$
Operating Cash Ratio: *This measures the ability to cover core operational expenses and generate a cash surplus excluding depreciation, amortisation, and finance costs*	$\frac{\text{Operating Result add Depreciation and Amortisation add Finance Costs*}}{\text{Total Operating Revenue}}$
Unrestricted Cash Expense Cover Ratio: *This is an indicator of the unconstrained liquidity available to meet ongoing and emergent financial demands. It represents the number of months Council can continue operating based on current monthly expenses*	$\frac{\text{(Total Cash and Cash Equivalents add Current Investments add Available Ongoing QTC Working Capital Facility Limit less Externally Restricted Cash)}}{\text{(Total Operating Expenditure less Depreciation and Amortisation less Finance Costs*)}} \times 12$
Asset Sustainability Ratio: *This ratio indicates whether Council is renewing or replacing existing non-financial assets at the same rate that its overall stock of assets is wearing out*	$\frac{\text{Capital Expenditure on Replacement of Infrastructure Assets (Renewals)}}{\text{Depreciation Expenditure on Infrastructure Assets}}$
Asset Consumption Ratio: *This measures the extent to which Council's infrastructure assets have been consumed to what it would cost to build a new asset with the same benefit to the community*	$\frac{\text{Written Down Replacement Cost of Depreciable Infrastructure Assets}}{\text{Current Replacement Cost of Depreciable Infrastructure Assets}}$
Asset Renewal Funding Ratio: *This ratio measures the ability of a Council to fund its projected asset renewal/replacements in the future*	$\frac{\text{Total of **Planned** Capital Expenditure on Asset Renewals over 10 years}}{\text{Total of **Required** Capital Expenditure on Asset Renewals over 10 years}}$
Leverage Ratio: *This is an indicator of a Council's ability to repay its existing debt. It measures the relative size of the Council's debt to its operating performance*	$\frac{\text{Book Value of Debt**}}{\text{Total Operating Revenue less Total Operating Expenditure add Depreciation and Amortisation and Finance Costs}}$
Net Financial Liabilities: *This is an indicator of the extent to which the net financial liabilities of Council can be serviced by operating revenues*	$\frac{\text{Total Liabilities - Current Assets}}{\text{Total Operating Revenue}}$

* Finance costs only include interest charged on Council's existing QTC debt balances and any other Council loans

** Book Value of Debt only includes the book value of the Council's debt (QTC or other loans) as at the reporting date

13.2 2025-2026 FIRST BUDGET REVIEW

Objective Reference: **A12476789**

Authorising Officer: **Melanie Reimann, Acting Executive Group Manager Financial Services & Chief Financial Officer**

Responsible Officer: **Melanie Reimann, Acting Executive Group Manager Financial Services & Chief Financial Officer**

Report Author: **Katharine Bremner, Budget & Systems Manager**

Attachments: **1. 2025-2026 First Budget Review ⇩**

PURPOSE

To present to Council for adoption, the first budget review for the 2025-2026 financial year in accordance with section 170 of the *Local Government Regulation 2012*.

BACKGROUND

Council continuously reviews its performance to budget on a monthly basis and the 2025-2026 first budget review is taking effect towards the middle of the financial year.

Council adopted its 2025-2026 budget at the Special Budget Meeting on 23 June 2025 and then amended the budget on 20 August 2025 during the General Meeting following a review of capital works that straddles multiple financial years. Council's Financial Services Group and business areas have analysed the monthly performance to budget comprising the following steps:

- Reviewing permanent variances at the end of the first four months of service delivery.
- Reprioritising capital works delivery in line with current practices.
- Reviewing budget phasing based on new information about the timing of revenues or expenditure.

ISSUES

The scope of the first budget review is to consider Council's financial performance following the first four months of operations. This has resulted in a budgeted operating deficit in the order of $8.167M, largely driven by the outcomes of the Enterprise Bargaining Agreements negotiations, additional goods and services requirements for post-TC Alfred maintenance and critical tree management operations, project management fees for Redland Investment Corporation (RIC) and commitments associated with delivering sustainable assets for critical services.

In addition, the capital portfolio continues to be reprioritised and delivered, with any changes being reflected within the first budget review.

STRATEGIC IMPLICATIONS

Legislative Requirements

The proposed first budget review is in alignment with the *Local Government Act 2009* and the *Local Government Regulation 2012*. Section 170 of the *Local Government Regulation 2012* permits a local government to amend the budget for a financial year at any time before the end of the financial year.

Risk Management

Council officers monitor the budget to actual expenditure on a regular basis and Council's financial performance and position is reported monthly. This budget review has also included additional fee revenue and operating grants.

The budget review projects a worsening of the operating result for Council, forecasting an operating deficit of $8.167M, noting there was $23M of savings, efficiencies and deferrals built into the 2025/26 budget. Council will continue to closely monitor the financial results, ongoing cost pressures and operational requirements to meet critical service needs and progress strategies to further mitigate financial pressures.

Financial

This recommendation requires a change to the current year's revised budget adopted at the 20 August 2025 General Meeting and the accompanying attachment outlines the major movements surrounding this review. The projected financial statements forecast to 30 June 2026 illustrate a budgeted operating deficit of $8.167M. The Executive Leadership Team (ELT) continues to prioritise the delivery of capital works. The progress against milestones is constantly analysed through such means as strategic planning groups, major project reviews and budget reviews. ELT believes that the existing funding envelope of $153M is sufficiently large enough to continue with the program of works with a focus on delivery. Budget will be managed under current approved governance arrangements. Future budget review/s will provide the opportunity for program and budget adjustments where required.

All financial sustainability measures continue to meet or exceed set targets, with the exception of the Operating Surplus Ratio which has now moved below the target range due to the operating budget deficit.

People

Specific impacts to people may result from the budget adjustments and will be worked through at a team, unit and group level in accordance with Council's policies and people strategy (when and if they arise). No known impacts have been identified at the time of this report.

Environmental

Specific impacts to the community may result from the budget adjustments and will be worked through at a team, unit and group level in accordance with Council's policies and environment strategy (when and if they arise). No known impacts have been identified at the time of this report.

Social

Specific impacts to the community may result from the budget adjustments and will be worked through at a team, unit and group level in accordance with Council's policies and guidelines (when and if they arise). No known impacts have been identified at the time of this report.

Human Rights

There are no human rights implications from this report as the purpose is to provide a revised budget to Council.

Alignment with Council's Policy and Plans

This report is aligned to Council's *Our Future Redlands – A Corporate Plan to 2026 and Beyond*, in particular, the report underpins objective 7.4 Demonstrate good governance through transparent, accountable processes and sustainable practices and asset management.

CONSULTATION

Consulted	Consultation Date	Comments/Actions
Councillors and Executive Leadership Team	26 November 2025	Workshop undertaken to review the first budget review submissions and financial statements.
Executive Leadership Team	17 November 2025	Review of the submission detail with the relevant business areas and the subsequent financial statements.
Business Partnering Unit and Financial Planning Unit	September – November 2025	Review of the submission detail with the relevant business areas.

OPTIONS

Option One

That Council resolves as follows:

1. To adopt the revised budget for 2025-2026 at Council level, which refers to the following (refer attachment for details):
    1) Redland City Council Statement of Comprehensive Income (page 1)
    2) Redland City Council Operating and Capital Funding Statement (page 2)
    3) Redland City Council Statement of Financial Position (page 3)
    4) Redland City Council Statement of Cash Flows (page 4)
2. To meet the requirements of the *Local Government Regulation 2012*, adopt the City Water and City Waste Operating and Capital Funding Statements (pages 5 and 6 respectively).

Option Two

That Council resolves to not adopt the revised budget as presented in the attachment and either:

1. Requests more information.
2. Amends the attachment prior to adoption.

OFFICER'S RECOMMENDATION

That Council resolves as follows:

1. To adopt the revised budget for 2025-2026 at Council level, which refers to the following (refer attachment for details):

a) Redland City Council Statement of Comprehensive Income (page 1)
b) Redland City Council Operating and Capital Funding Statement (page 2)
c) Redland City Council Statement of Financial Position (page 3)
d) Redland City Council Statement of Cash Flows (page 4)

2. To meet the requirements of the *Local Government Regulation 2012*, adopt the City Water and City Waste Operating and Capital Funding Statements (pages 5 and 6 respectively).

Redland CITY COUNCIL

2025-2026 First Budget Review

General Meeting 10 December 2025

REDLAND CITY COUNCIL

Statement of Comprehensive Income

Forecast for the year ending 30 June 2026

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review 2025-26 $000*	Proposed Revised Budget 2025-26 $000*
Recurrent revenue				
Rates charges	143,632	143,632	-	143,632
Levies and utility charges	227,034	227,034	-	227,034
Less: pensioner remissions and rebates	(4,102)	(4,102)	-	(4,102)
Fees	24,952	24,952	531	25,483
Rental income	964	964	154	1,118
Interest received	10,477	10,477	-	10,477
Sales revenue	5,250	5,250	143	5,393
Other income	589	589	60	649
Grants, subsidies and contributions	7,908	8,178	1,387	9,565
Total recurrent revenue	**416,703**	**416,973**	**2,276**	**419,248**
Capital revenue				
Grants, subsidies and contributions	55,432	60,993	(12,937)	48,056
Non-cash contributions	18,067	18,067	-	18,067
Total capital revenue	**73,499**	**79,060**	**(12,937)**	**66,123**
TOTAL INCOME	**490,202**	**496,032**	**(10,661)**	**485,371**
Recurrent expenses				
Employee benefits	124,045	124,008	3,768	127,776
Materials and services	194,783	195,059	7,440	202,498
Finance costs	5,090	5,090	-	5,090
Depreciation and amortisation	92,607	92,607	-	92,607
Other expenditure	680	680	-	680
Net internal costs	(1,205)	(1,205)	(30)	(1,236)
Total recurrent expenses	**415,999**	**416,238**	**11,177**	**427,415**
Capital expenses				
(Gain) / loss on disposal of non-current assets	289	289	-	289
Total capital expenses	**289**	**289**	**-**	**289**
TOTAL EXPENSES	**416,287**	**416,527**	**11,177**	**427,704**
NET RESULT	**73,915**	**79,505**	**(21,838)**	**57,667**
Other comprehensive income / (loss) **Items that will not be reclassified to a net result**				
TOTAL COMPREHENSIVE INCOME	**73,915**	**79,505**	**(21,838)**	**57,667**

* All amounts are rounded to the nearest thousand

Redland City Council

Operating Statement

Forecast for the year ending 30 June 2026

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Revenue				
Rates charges	143,632	143,632	-	143,632
Levies and utility charges	227,034	227,034	-	227,034
Less: Pensioner remissions and rebates	(4,102)	(4,102)	-	(4,102)
Fees	24,952	24,952	531	25,483
Operating grants and subsidies	6,997	7,266	1,013	8,279
Operating contributions and donations	912	912	374	1,286
Interest external	10,477	10,477	-	10,477
Other revenue	6,803	6,803	357	7,160
Total revenue	**416,703**	**416,973**	**2,276**	**419,248**
Expenses				
Employee benefits	124,045	124,008	3,768	127,776
Materials and services	194,783	195,059	7,440	202,498
Finance costs other	921	921	-	921
Other expenditure	680	680	-	680
Net internal costs	(1,205)	(1,205)	(30)	(1,236)
Total expenses	**319,223**	**319,462**	**11,177**	**330,639**
Earnings before interest, tax and depreciation	**97,480**	**97,510**	**(8,901)**	**88,609**
Interest expense - QTC	3,868	3,868	-	3,868
Interest expense - ROU	301	301	-	301
Interest expense - Internal	-	-	-	-
Depreciation and amortisation	92,607	92,607	-	92,607
OPERATING SURPLUS / (DEFICIT)	**704**	**734**	**(8,901)**	**(8,167)**

Capital Funding Statement

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Proposed sources of capital funding				
Capital contributions and donations	18,281	18,281	-	18,281
Capital grants and subsidies	37,151	42,712	(12,937)	29,775
Proceeds on disposal of non-current assets	1,514	1,514	-	1,514
Capital transfers (to) / from reserves	7,973	10,417	(22,700)	(12,282)
Non-cash contributions	18,067	18,067	-	18,067
New loans	15,211	15,211	-	15,211
Funding from general revenue	76,648	69,411	35,636	105,047
Total sources of capital funding	**174,845**	**175,613**	**-**	**175,613**
Proposed application of capital funds				
Contributed assets	18,067	18,067	-	18,067
Capitalised goods and services	141,952	142,723	-	142,723
Capitalised employee costs	9,725	9,723	-	9,723
Loan redemption	5,100	5,100	-	5,100
Total application of capital funds	**174,845**	**175,613**	**-**	**175,613**

Other Budgeted Items

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Other budgeted items				
Transfers to constrained operating reserves	(29,753)	(29,319)	(529)	(29,848)
Transfers from constrained operating reserves	25,584	25,584	212	25,795
Written down value (WDV) of assets disposed	1,803	1,803	-	1,803

* All amounts are rounded to the nearest thousand

REDLAND CITY COUNCIL

Statement of Financial Position

Forecast as at 30 June 2026

	Original Budget 2025-26 $000*	Opening Balance 2025-26 $000*	Budgeted Movement 2025-26 $000*	First Budget Review Proposed Movements $000*	Proposed Revised Budget 2025-26 $000*
CURRENT ASSETS					
Cash and cash equivalents	162,341	232,776	(23,524)	(21,838)	187,415
Short-term investment - CBA	50,000	50,000	-	-	50,000
Trade and other receivables	57,676	56,769	6,745	-	63,514
Inventories	1,258	1,398	-	-	1,398
Non-current assets held for sale	-	2	-	-	2
Other current assets	3,980	3,415	5	-	3,420
Total current assets	**275,255**	**344,361**	**(16,774)**	**(21,838)**	**305,749**
NON-CURRENT ASSETS					
Investment property	1,474	3,379	-	-	3,379
Property, plant and equipment	3,524,262	3,397,600	77,061	-	3,474,662
Intangible assets	158	316	(167)	-	149
Right-of-use lease assets	1,747	10,509	(792)	-	9,717
Other financial assets	73	73	-	-	73
Investment in other entities	11,769	11,769	-	-	11,769
Equity investment	2,831	7,793	-	-	7,793
Total non-current assets	**3,542,314**	**3,431,440**	**76,102**	**-**	**3,507,542**
TOTAL ASSETS	**3,817,569**	**3,775,800**	**59,329**	**(21,838)**	**3,813,291**
CURRENT LIABILITIES					
Trade and other payables	41,118	55,214	(785)	-	54,429
Borrowings - current	6,391	8,278	-	-	8,278
Right-of-use lease liability	237	900	(300)	-	600
Provisions	5,904	31,613	(9,217)	-	22,396
Other current liabilities	(267)	22,215	(8,899)	-	13,316
Total current liabilities	**53,383**	**118,221**	**(19,201)**	**-**	**99,020**
NON-CURRENT LIABILITIES					
Borrowings	94,658	82,123	10,636	-	92,759
Right-of-use lease liability	1,595	10,140	(525)	-	9,615
Provisions	28,009	28,110	(6,768)	-	21,342
Other non-current liabilities	379	4,671	(4,318)	-	353
Total non-current liabilities	**124,641**	**125,044**	**(975)**	**-**	**124,069**
TOTAL LIABILITIES	**178,024**	**243,265**	**(20,176)**	**-**	**223,088**
NET COMMUNITY ASSETS	**3,639,546**	**3,532,536**	**79,505**	**(21,838)**	**3,590,203**
COMMUNITY EQUITY					
Asset revaluation surplus	1,612,203	1,710,032	-	-	1,710,032
Retained surplus	1,914,077	1,707,721	86,187	(44,854)	1,749,054
Constrained cash reserves	113,266	114,783	(6,682)	23,017	131,118
TOTAL COMMUNITY EQUITY	**3,639,546**	**3,532,536**	**79,505**	**(21,838)**	**3,590,203**

* All amounts are rounded to the nearest thousand

REDLAND CITY COUNCIL

Statement of Cash Flows

Forecast for the year ending 30 June 2026

	Original Budgeted Cash Flow 2025-26 $000*	Revised Adjusted Cash Opening Balance 2025-26 $000*	Proposed Movement First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
CASH FLOWS FROM OPERATING ACTIVITIES				
Receipts from customers	382,776	382,776	734	383,510
Payments to suppliers and employees	(341,480)	(341,720)	(11,177)	(352,897)
	41,296	**41,056**	**(10,443)**	**30,613**
Interest received	10,477	10,477	-	10,477
Rental income	964	964	154	1,118
Non-capital grants and contributions	8,007	8,277	1,387	9,664
Borrowing costs	(2,714)	(2,714)	-	(2,714)
Right-of-use assets interest expense	(301)	(301)	-	(301)
Net cash inflow/(outflow) from operating activities	**57,728**	**57,758**	**(8,901)**	**48,857**
CASH FLOWS FROM INVESTING ACTIVITIES				
Payments for property, plant and equipment	(151,678)	(152,446)	-	(152,446)
Payments for intangible assets	-	-	-	-
Proceeds from sale of property, plant and equipment	1,514	1,514	-	1,514
Capital grants, subsidies and contributions	55,432	60,993	(12,937)	48,056
Other cash flows from investing activities	-	-	-	-
Net cash inflow/(outflow) from investing activities	**(94,731)**	**(89,939)**	**(12,937)**	**(102,875)**
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds from borrowings	15,211	15,211	-	15,211
Repayment of borrowings	(6,030)	(6,030)	-	(6,030)
Right-of-use lease payments	(525)	(525)	-	(525)
Net cash inflow/(outflow) from financing activities	**8,657**	**8,657**	**-**	**8,657**
Net increase/(decrease) in cash held	**(28,346)**	**(23,524)**	**(21,838)**	**(45,361)**
Cash and cash equivalents at beginning of the financial year	190,687	232,776		232,776
Cash and cash equivalents at end of the financial year	**162,341**	**209,253**	**(21,838)**	**187,415**

* All amounts are rounded to the nearest thousand

City Water

Operating Statement

Forecast for the year ending 30 June 2026

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Revenue				
Rates charges	-	-	-	-
Levies and utility charges	156,507	156,507	-	156,507
Less: Pensioner remissions and rebates	(635)	(635)	-	(635)
Fees	699	699	21	720
Operating grants and subsidies	-	-	-	-
Operating contributions and donations	-	-	-	-
Interest external	5,440	5,440	-	5,440
Other revenue	2,803	2,803	51	2,854
Total revenue	**164,814**	**164,814**	**72**	**164,886**
Expenses				
Employee benefits	12,479	12,479	398	12,877
Materials and services	73,810	73,717	2,592	76,309
Finance costs other	-	-	-	-
Other expenditure	2	2	-	2
Net internal costs	6,488	6,488	(18)	6,470
Total expenses	**92,779**	**92,686**	**2,972**	**95,658**
Earnings before interest, tax and depreciation	**72,034**	**72,128**	**(2,900)**	**69,227**
Interest expense - QTC	730	730	-	730
Interest expense - ROU	261	261	-	261
Interest expense - Internal	19,061	19,061	-	19,061
Depreciation and amortisation	33,732	33,732	-	33,732
OPERATING SURPLUS / (DEFICIT)	**18,251**	**18,344**	**(2,900)**	**15,444**

Capital Funding Statement

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Proposed sources of capital funding				
Capital contributions and donations	3,196	3,196	-	3,196
Capital grants and subsidies	5,450	9,750	-	9,750
Proceeds on disposal of non-current assets	-	-	-	-
Capital transfers (to) / from reserves	3,684	6,116	(8,000)	(1,884)
Non-cash contributions	1,530	1,530	-	1,530
New loans	-	-	-	-
Funding from general revenue	23,910	17,178	8,000	25,178
Total sources of capital funding	**37,770**	**37,770**	**-**	**37,770**
Proposed application of capital funds				
Contributed assets	1,530	1,530	-	1,530
Capitalised goods and services	34,369	34,369	-	34,369
Capitalised employee costs	1,625	1,625	-	1,625
Loan redemption	247	247	-	247
Total application of capital funds	**37,770**	**37,770**	**-**	**37,770**

Other Budgeted Items

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Other budgeted items				
Transfers to constrained operating reserves	-	-	-	-
Transfers from constrained operating reserves	-	-	-	-
Written down value (WDV) of assets disposed	-	-	-	-

* All amounts are rounded to the nearest thousand

City Waste

Operating Statement

Forecast for the year ending 30 June 2026

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Revenue				
Rates charges	-	-	-	-
Levies and utility charges	44,987	44,987	-	44,987
Less: Pensioner remissions and rebates	-	-	-	-
Fees	596	596	-	596
Operating grants and subsidies	248	248	42	290
Operating contributions and donations	-	-	-	-
Interest external	935	935	-	935
Other revenue	882	882	-	882
Total revenue	**47,650**	**47,650**	**42**	**47,692**
Expenses				
Employee benefits	1,525	1,525	38	1,563
Materials and services	32,563	32,562	(440)	32,121
Finance costs other	5	5	-	5
Other expenditure	-	-	-	-
Net internal costs	3,421	3,421	1	3,422
Total expenses	**37,513**	**37,512**	**(401)**	**37,111**
Earnings before interest, tax and depreciation	**10,137**	**10,137**	**443**	**10,580**
Interest expense - QTC	-	-	-	-
Interest expense - ROU	5	5	-	5
Interest expense - Internal	-	-	-	-
Depreciation and amortisation	922	922	-	922
OPERATING SURPLUS / (DEFICIT)	**9,210**	**9,211**	**443**	**9,654**

Capital Funding Statement

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Proposed sources of capital funding				
Capital contributions and donations	-	-	-	-
Capital grants and subsidies	-	-	-	-
Proceeds on disposal of non-current assets	-	-	-	-
Capital transfers (to) / from reserves	-	-	-	-
Non-cash contributions	-	-	-	-
New loans	-	-	-	-
Funding from general revenue	1,702	1,702	-	1,702
Total sources of capital funding	**1,702**	**1,702**	**-**	**1,702**
Proposed application of capital funds				
Contributed assets	-	-	-	-
Capitalised goods and services	1,565	1,565	-	1,565
Capitalised employee costs	101	101	-	101
Loan redemption	37	37	-	37
Total application of capital funds	**1,702**	**1,702**	**-**	**1,702**

Other Budgeted Items

	Original Budget 2025-26 $000*	Revised Budget 2025-26 $000*	Proposed Changes First Budget Review $000*	Proposed Revised Budget 2025-26 $000*
Other budgeted items				
Transfers to constrained operating reserves	(5,020)	(5,020)	-	(5,020)
Transfers from constrained operating reserves	5,020	5,020	-	5,020
Written down value (WDV) of assets disposed	-	-	-	-

* All amounts are rounded to the nearest thousand

REDLAND CITY COUNCIL

2025-26 Financial Sustainability Measures

	Original Budget 2025-26	Adopted as per Carry-over Budget Review 2025-26	Revised as per First Budget Review 2025-26
Council Controlled Revenue Ratio* Contextual purposes only	**93.96%**	**93.89%**	**92.41%**
Population Growth Ratio** Contextual purposes only	**1.23%**	**1.23%**	**1.23%**
Operating Surplus Ratio*** Target greater than 0% on five-year average	**0.17%**	**0.18%**	**-1.92%**
Operating Cash Ratio Target greater than 0% on five-year average	**23.13%**	**23.12%**	**20.63%**
Unrestricted Cash Expense Cover Ratio ^ Target greater than 2 months	**4.06 months**	**5.85 months**	**5.33 months**
Asset Sustainability Ratio Target greater than 60% on five-year average	**67.39%**	**89.38%**	**82.64%**
Asset Consumption Ratio Target greater than 60% on five-year average	**66.59%**	**58.66%**	**60.14%**
Asset Renewal Funding Ratio* Contextual purposes only	**100.00%**	**100.00%**	**100.00%**
Leverage Ratio**** Target between 0 and 4 times on five-year average	**1.05 times**	**1.05 times**	**1.15 times**
Net Financial Liabilities Ratio Less than 60% (on average over the long-term)	**-23.33%**	**-27.95%**	**-19.48%**

* The Council-Controlled Revenue, Population Growth, and Asset Renewal Funding Ratio measures are reported for contextual purposes only and are not audited by the Queensland Audit Office (QAO)
** Population growth forecasts are sourced from Queensland Government Statistician's Office (QGSO) and the latest available Census Data
*** Finance costs only include interest charged on a local government's existing Queensland Treasury Corporation's debt balance
**** Book Value of Debt in this calculation excludes Right-of-Use lease liabilities
^ Calculation adjusted for First Budget Review based on advice from QAO to include externally constrained grant funding

13.3 AUDIT & RISK MANAGEMENT COMMITTEE 2 AND 9 OCTOBER 2025

Objective Reference: **A12592288**

Authorising Officer: **Amanda Pafumi, General Manager Organisational Services**

Responsible Officer: **Amanda Pafumi, General Manager Organisational Services**

Report Author: **Kailesh Naidu, Principal Adviser Internal Audit**

Attachments:
1. **ARMC Minutes 2 October 2025** ⇩
2. **ARMC Minutes 9 October 2025** ⇩

PURPOSE

To present the minutes of the Audit & Risk Management Committee (ARMC) meetings held on 2 and 9 October 2025 to Council for adoption in accordance with section 211 of the *Local Government Regulation 2012*.

BACKGROUND

The primary objective of the ARMC is to support Council in fulfilling its corporate governance responsibilities and overseeing financial measurement and reporting obligations as required by the *Local Government Act 2009* and other relevant legislation. This requirement is based on the core principles of transparency, accountability and good governance.

To support Councillors in meeting their legal responsibilities and enhancing decision-making, a written report is submitted to Council as soon as practicable after each ARMC meeting. This report details the matters reviewed by the ARMC and provides its recommendations. By ensuring that these reports are promptly shared, Council reaffirms its commitment to operating transparently, making critical financial oversight activities visible to both elected officials and the community.

ISSUES

The ARMC meeting agendas are based on the approved ARMC Plan for 2025-2026, and include presentations on Council's risk management, financial performance, and internal and external audit reports.

At the meeting of 2 October 2025, the ARMC reviewed reports, including updates from the Acting CEO on strategic, operational and workforce matters, such as organisational realignment, the External Service and Efficiency Review, and the Southern Thornlands PDA. The Committee received updates on the Digital Transformation Program and Asset Data Audit recommendations. Risk and compliance matters were discussed, including the Cybersecurity Program, key legislative changes and the completion of Strategic and Operational Risk Register reviews. Internal audit updates covered the Judy Holt Northern Landfill Project, General Rates and Digital Transformation Program, with requests for additional reporting on project governance and overdue recommendations. Financial oversight included the August 2025 Monthly Financial Report, asset valuation updates and Asset Consumption Ratio analysis, while the draft 2024–2025 Consolidated Financial Statements and external audit reports were deferred to the 9 October special meeting. The Committee also noted the audited 2024–2025 Redland Investment Corporation (RIC) financial statements.

At the special meeting of 9 October 2025, the ARMC finalised its consideration of the 2024–2025 financial statements and related external audit reports. The Committee endorsed the final draft Consolidated Financial Statements for certification by the Mayor and Acting CEO, commending the Finance team for the high quality of their work. The Queensland Audit Office presented Council's Closing Report, confirming its intention to issue an unmodified audit opinion. The RIC Closing Report and Final Management Letter were also reviewed, with audit findings confirming compliance with financial reporting standards. The Committee noted both closing reports.

Refer to the attached minutes of the ARMC meetings for further details.

STRATEGIC IMPLICATIONS

Legislative Requirements

This report has been prepared in accordance with the *Local Government Act 2009* (the Act) and the *Local Government Regulation 2012*. Under section 105 of the Act, the ARMC is required to provide recommendations to Council on actions or improvements needed. Furthermore, section 211 of the Regulation mandates that the ARMC submit a written report to Council, outlining the matters reviewed during its meeting and the ARMC's recommendations, as soon as practicable after the meeting. This report fulfills these requirements, supporting oversight and public accountability, and reaffirming Council's commitment to effective governance and transparency.

Risk Management

The ARMC supports Council's risk management by providing independent oversight and guidance on identifying, assessing and mitigating risks. Through regular reviews of areas like program management, cybersecurity, financial controls and operational risks, the ARMC ensures potential threats are addressed proactively. By offering recommendations and fostering risk awareness, the ARMC strengthens Council's ability to manage uncertainties and promote long-term stability in decision-making.

Financial

The ARMC plays an important role in overseeing the financial health of Council, which is central to strengthening Council's overall financial governance. Through its charter, the ARMC ensures robust financial oversight by monitoring and reviewing financial processes, fostering transparency and accountability. However, while the ARMC's involvement reinforces sound financial practices, this report itself carries no direct financial implications. Its primary focus is on governance and oversight.

People

This report has no direct implications for personnel or workforce matters. The focus of the ARMC is primarily on governance, risk management and financial oversight, which do not directly impact staffing levels, roles or employee relations. However, the ARMC's recommendations may indirectly support a culture of ethical conduct and integrity within the organisation, fostering a positive work environment over time.

Environmental

There are no direct environmental implications arising from this report. Although the activities discussed in the ARMC meetings may involve considerations of environmental risks, they do not have any direct environmental impact. Any environmental initiatives undertaken by Council are addressed separately.

Social

This report does not present any social implications. The ARMC's oversight activities do not directly influence social issues or community engagement. While Council's broader initiatives may address social concerns, the matters reviewed by the ARMC are specifically related to internal governance processes.

Human Rights

There are no implications concerning human rights related to this report. The discussions and decisions made by the ARMC are centred on financial and operational matters, with no direct effects on human rights issues. Nonetheless, Council's commitment to ethical conduct and transparency, as emphasised in the ARMC meetings, supports a framework that upholds human rights principles within its operations.

Alignment with Council's Policy and Plans

GOV-010-P Internal Audit Policy
GOV-011-P Audit and Risk Management Committee Policy
Our Future Redlands - A Corporate Plan to 2026 and Beyond

CONSULTATION

Consulted	Consultation Date	Comments/Actions
Audit & Risk Management Committee members and relevant officers	October 2025	To review and approve the minutes prior to being finalised.

OPTIONS

Option One

That Council resolves to adopt the minutes of the Audit & Risk Management Committee meetings held on 2 and 9 October 2025, as attached to this report.

Option Two

That Council resolves to note this report and requests additional information.

OFFICER'S RECOMMENDATION

That Council resolves to adopt the minutes of the Audit & Risk Management Committee meetings held on 2 and 9 October 2025, as attached to this report.

Redland
CITY COUNCIL

MINUTES

AUDIT & RISK MANAGEMENT COMMITTEE MEETING

Thursday, 2 October 2025

The Council Chambers
91 - 93 Bloomfield Street
CLEVELAND QLD

Order of Business

1 Declaration of Opening 3

2 Record of Attendance and Apologies 3

3 Conflict of Interests 4

4 Receipt and Confirmation of Minutes 4

5 Business Arising From Previous Minutes 4

6 Chief Executive Officer Report 6

6.1 Chief Executive Officer Report 6

7 Strategic And Operational Risk Management 6

7.1 Digital Transformation Program 6

7.2 Asset Data Recommendations 7

8 Risk and Compliance Reports 7

8.1 Cybersecurity Report 7

8.2 Legal and Governance Report 8

8.3 Risk Management Report 8

9 Internal Auditor Reports 9

9.1 Internal Audit Report 9

10 Council Financial Reports 10

10.1 August 2025 Monthly Financial Report and Asset Valuation Update 10

10.2 Asset Consumption Ratio 10

10.3 Draft 2024-2025 Consolidated Financial Statements 10

11 External Auditor Reports 11

11.1 External Audit Report 11

12 Redland Investment Corporation Financial Reports 11

12.1 Redland Investment Corporation Pty Ltd signed 2024-2025 Consolidated Financial Statements 11

13 Audit and Risk Management Committee Meetings Plan 11

13.1 Audit and Risk Management Committee Meetings Plan 11

14 Meeting Closure 11

1 DECLARATION OF OPENING

The Chairperson declared the meeting open at 9:35 am.

2 RECORD OF ATTENDANCE AND APOLOGIES

Audit & Risk Management Committee Members
Mitchell Petrie (External Member and Chairperson)
Mary Goodwin (External Member)
Cr Jos Mitchell (Mayor)
Cr Wendy Boglary (Division 1 Councillor)

Secretary
Principal Adviser Internal Audit

Attendees
Chief Executive Officer (Acting)
General Manager Community and Customer Services
General Manager Infrastructure and Operations (Acting)
General Manager Organisational Services
General Manager Advocacy, Major Projects and Economic Development (Acting)
Executive Group Manager Financial Services and Chief Financial Officer
Executive Group Manager People, Culture and Organisational Performance
Executive Group Manager Risk and Legal Services
Group Manager Corporate Governance
Group Manager Corporate Services
Group Manager Financial Services
Group Manager Project Delivery
Chief Procurement Officer
Enterprise Change Manager
Principal Cyber Security Adviser
Service Manager Strategic Asset and Funding Management
Chief Executive Officer, Redland Investment Corporation
Financial Controller, Redland Investment Corporation
Director, Queensland Audit Office
Director, Queensland Audit Office
Managing Director, Scyne Advisory
Director, Scyne Advisory
Partner, BDO

Apologies
Chief Executive Officer
General Manager Infrastructure and Operations

Observers
Cr Jason Colley (Division 9 Councillor)
Procurement Governance Manager
Executive Officer Organisational Services
Risk Management Coordinator

Minutes
Group Support and Research Officer, Corporate Governance

3 CONFLICT OF INTERESTS

No conflicts of interest were declared.

4 RECEIPT AND CONFIRMATION OF MINUTES

Minutes of the Audit & Risk Management Committee meeting of 4 September 2025 were approved by all members and will be presented for adoption at the General Meeting of Council on 15 October 2025.

COMMITTEE RECOMMENDATION 2025/40

Moved by: **Cr Wendy Boglary**
Seconded by: **Mary Goodwin**

That the minutes of the Audit & Risk Management Committee meeting of 4 September 2025 be noted.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

5 BUSINESS ARISING FROM PREVIOUS MINUTES

To capture and address any business arising from the previous Audit & Risk Management Committee.

Item #	Action	Status
2024/06-002	**Supplier Business Continuity Plans -** For key or strategic suppliers of Council that periodically Council confirms that those suppliers have appropriate Business Continuity Plans and processes in place.	**In progress**
2025/03-001	**Track and Re-baseline Asset Data Audit Actions -** Track and re-baseline progress on agreed actions and recommendations, including identifying risks or impediments to achieving them.	**Completed**
2025/03-002	**Asset Management Maturity Assessment -** Assess maturity levels against ISO 55000, as appropriate, identifying gaps and improvements.	**In progress**
2025/05-001	**Recruitment Investigation Recommendations -** Action recommendations from recruitment investigations and present status to the ARMC.	**In progress**
2025/17-001	**RIC Cybersecurity Updates -** Provide an update on the cybersecurity initiatives related to Redland Investment Corporation, including risk assessments, implemented controls and alignment with Council's broader cybersecurity program.	**Completed**
2025/17-002	**Cybersecurity Forward Plan -** Present the cybersecurity forward plan outlining key initiatives, timelines, resourcing and strategic priorities to enhance Council's cyber resilience over the next financial year.	**Completed**
2025/18-001	**Digital Transformation Program Risks -** Provide an overview of program-level risks for the Digital Transformation Program, including key risk categories, current mitigation strategies and any emerging risks requiring ARMC's oversight.	**Completed**

Item #	Action	Status
2025/19-001	**Business Recovery Plan Review & Testing -** Present details of the most recent review, update and testing of Business Recovery Plans as part of Council's overarching Business Continuity Planning framework.	**In progress**
2025/21-001	**Overdue Recommendations Reporting Enhancements -** Enhance reporting on overdue recommendations by including interim actions taken by management and specifying the expected completion date for full implementation.	**Completed**
2025/26-001	**Asset Consumption Ratio Breakdown -** Present a breakdown of the Asset Consumption Ratio by asset class to provide further insight into asset condition and renewal priorities.	**Completed**
2025/31-001	**Chief Executive Officer Report** - Provide written reports to complement the verbal updates provided by the Chief Executive Officer.	**Completed**
2025/33-001	**Benchmark CCC Liaison Officer Placement** - Benchmark the organisational placement of the Crime and Corruption Commission liaison officer role across other councils.	**Completed**
2025/34-001	**Water and Wastewater Asset Management Risks** - Conduct a deep dive into risks associated with the management of water and wastewater assets.	**In progress**
2025/36-001	**Overdue Recommendations Reporting** - Include context on overdue recommendations in the main report and reorder attachments to prioritise these actions.	**Completed**
2025/36-002	**Fleet Management Follow-up Audit** - Add a follow-up audit on Fleet Management in the audit program to review the implementation of recommendations from the recent Fleet Management audit	**Completed**

Action Items

2025/05-001 Deferred Reports - Update the contents page of the Audit & Risk Management Committee agenda to include details of any reports that have been deferred or not presented in accordance with the Audit & Risk Management Committee Annual Plan.

2025/05-002 Ethics and Integrity Report – The cyclical Ethics and Integrity Report will be provided out-of-session via email to the Audit & Risk Management Committee prior to 31 October 2025.

6 CHIEF EXECUTIVE OFFICER REPORT

6.1 CHIEF EXECUTIVE OFFICER REPORT

The CEO's report provided an overview of key strategic, operational and workforce matters since the last meeting. Major updates included Council's resolution on 17 September 2025 to realign the organisational structure and commence formal consultation, alongside progress on the External Service and Efficiency Review, for which the Request for Proposal closed on 22 September and evaluations were underway. Operationally, the Acting CEO noted no local impact from the Optus Triple Zero outage and appointment of an independent director for Greenovate Pty Ltd. Strategic updates covered progress on the Southern Thornlands Priority Development Area, advancement of the new Corporate Plan (targeting December 2025 adoption) and approval of major planning scheme amendments. The report closed ARMC action item 2025/31-001.

COMMITTEE RECOMMENDATION 2025/41

Moved by: **Mitchell Petrie**
Seconded by: **Cr Wendy Boglary**

That the Audit & Risk Management Committee notes the Chief Executive Officer Report as presented.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

7 STRATEGIC AND OPERATIONAL RISK MANAGEMENT

7.1 DIGITAL TRANSFORMATION PROGRAM

The report updated the Audit & Risk Management Committee on Council's Digital Transformation Program, highlighting that the ERP Modernisation Program is progressing well with several successful go-live stages in 2024-2025. A recent internal audit rated the program "Effective with some improvements," noting strong leadership, robust governance with partners and well-integrated risk management, while identifying a small number of low-risk recommendations for improvement. Program-level risks are actively managed through structured registers and quarterly workshops, and the Benefits Management Framework is aligned with Council's Enterprise Risk Management. The report closed ARMC action item 2025/18-001.

COMMITTEE RECOMMENDATION 2025/42

Moved by: **Cr Wendy Boglary**
Seconded by: **Mary Goodwin**

That the Audit & Risk Management Committee notes the update on the Council's Digital Transformation Program.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

7.2 ASSET DATA AUDIT RECOMMENDATIONS

The report provided the Audit & Risk Management Committee with an update on progress against the 2021-01 Asset Data Audit recommendations, situating them within Council's broader asset management maturity journey. It highlighted how the Strategic Asset and Funding Management (SAFM) Unit is advancing Council's long-term roadmap, strengthening governance, improving asset data quality through the Data Improvement Program, embedding capability uplift, and leveraging the Asset Insights Service for evidence-based decision making. Outstanding items are proposed to either remain open with extended timelines or be closed and incorporated into other initiatives.

COMMITTEE RECOMMENDATION 2025/43

Moved by: **Mary Goodwin**
Seconded by: **Cr Wendy Boglary**

That the Audit & Risk Management Committee notes the update on recommendations from the 2021-01 Asset Data Audit Report as presented.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

Action Items

2025/43-001 Asset Data Audit Recommendations - Internal Audit will review the Asset Data Audit recommendations to verify the implementation status, revised completion dates and confirm that the proposed closures are appropriate. Internal Audit will also report on the percentage of recommendations completed as well as the percentage complete of recommendations in progress. Based on this review, the Audit & Risk Management Committee will then consider any extensions to the completion dates proposed.

2025/43-001 Asset Management Review - Once the consultant finalises its work on asset management, a briefing will be provided to the Audit & Risk Management Committee on the key findings, conclusions and any recommendations arising from the review.

8 RISK AND COMPLIANCE REPORTS

8.1 CYBERSECURITY REPORT

An annual update on Council's Cybersecurity Program was provided, outlining progress, risks and forward plans. Council continues to operate under its "Security First" principle with a low-risk appetite for cyber threats and alignment to the ASD Essential Eight framework, currently progressing toward Maturity Level 2. Council remains a state leader in Microsoft Secure Score, reflecting strong technical controls and governance maturity. Key updates included the uplift of Redland Investment Corporation's cyber environment through enhanced Microsoft licensing, training and governance alignment with Council's broader cybersecurity posture. The report also outlined the development of a refreshed Cyber Forward Plan, featuring initiatives such as AI platform risk management, data classification, data exfiltration controls and third-party cyber risk management. The report highlighted the evolving threat landscape and the need for ongoing investment to maintain resilience and alignment with Council's low-risk appetite. The report closed ARMC action items 2025/17-001 and 2025/17-002.

COMMITTEE RECOMMENDATION 2025/44

Moved by: **Cr Wendy Boglary**
Seconded by: **Mitchell Petrie**

That the Audit & Risk Management Committee notes the update on Council's Cybersecurity Program as presented.

CARRIED 3/0

Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

Cr Jos Mitchell was not present when the motion was put.

8.2 LEGAL AND GOVERNANCE REPORT

The report provided an update on key legislative, governance and legal matters since the last meeting. The report outlined several legislative changes impacting Council's risk environment, including new disaster management training requirements under the *Disaster Management Act 2003*, amendments to the blue card system under the *Penalties and Sentences (Sexual Offences) and Other Legislation Amendment Bill 2025*, and updates to public health laws through the *Health Legislation Amendment Bill (No. 2) 2025*. It also noted the Queensland Audit Office Report on Managing the Ethical Risks of Artificial Intelligence (Report 2: 2025–26), highlighting the need for ethical governance in AI use across the public sector. Court litigation matters remained stable, with ten ongoing Planning and Environment Court appeals and several key cases, including the Quandamooka Native Title Trial, childcare centre and shopping centre developments, and an LGAQ insurance dispute.

COMMITTEE RECOMMENDATION 2025/45

Moved by: **Cr Wendy Boglary**
Seconded by: **Mary Goodwin**

That the Audit & Risk Management Committee notes the update on the Legal and Governance Report.

CARRIED 3/0

Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

Cr Jos Mitchell was not present when the motion was put.

8.3 RISK MANAGEMENT REPORT

The report provided an update on key risk management activities and outcomes from the Operational Risk Management Committee meeting held on 19 September 2025. The report confirmed progress under the Enterprise Risk Management Framework, including completion of the annual reviews of both the Strategic and Operational Risk Registers. The Strategic Risk Register now includes eight risks, with two new additions covering workplace health and safety, and fraud and corruption control and one consolidated risk relating to staff attraction and retention. Operational risk themes highlighted include asset management challenges in water and wastewater services, the need for stronger coordination of cross-functional risks and improved tracking of future controls within operational plans. The report also noted that the Business Continuity Plan was last tested during Cyclone Alfred in March 2025, with another test planned for a telecommunications outage scenario and an internal audit scheduled before December 2025. Benchmarking on the Crime and Corruption Commission (CCC) Queensland Liaison Officer position was completed and presented, addressing and closing ARMC action item 2025/33-001.

COMMITTEE RECOMMENDATION 2025/46

Moved by: **Cr Wendy Boglary**
Seconded by: **Mitchell Petrie**

That the Audit & Risk Management Committee notes the Risk Management Report update, including the Annual Operational Risk Register Review Program and quarterly high-risk deep dive.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

9 INTERNAL AUDITOR REPORTS

9.1 INTERNAL AUDIT REPORT

The Internal Audit Report provided an update on audit activities, key findings and the status of recommendation implementation since the last ARMC meeting. Three audits were completed - Judy Holt Northern Landfill Project, General Rates and Digital Transformation Program. The Judy Holt Park review identified project governance and risk management gaps, while the General Rates and Digital Transformation audits contained positive assessments with only a small number of recommendations. Progress continues across all audits, with overdue items being actively managed. The report also confirmed that Scyne Advisory has maintained its independence and objectivity in line with audit standards. The report addressed ARMC action items 2025/21-001, 2025/36-001 and 2025/36-002.

COMMITTEE RECOMMENDATION 2025/47

Moved by: **Mary Goodwin**
Seconded by: **Cr Wendy Boglary**

That the Audit & Risk Management Committee notes the internal audit status update as presented.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

Action Items

2025/47-001 Project and Program Governance - Provide a report on the organisational response to projects and programs, including health checks and other assurance on their current status, incorporating learnings from the Judy Holt Northern Landfill Project review. The report should outline how processes, systems and governance arrangements have been updated to address and prevent recurrence of the weaknesses identified through the Judy Holt Northern Landfill Project.

2025/47-002 Recommendations Ageing - Enhance audit reporting to include the ageing of outstanding recommendations and outline management's approach to addressing risks associated with overdue actions.

10 COUNCIL FINANCIAL REPORTS

10.1 AUGUST 2025 MONTHLY FINANCIAL REPORT AND ASSET VALUATION UPDATE

The report provided an overview of Council's financial performance and asset valuation approach as at 31 August 2025. Council reported a year-to-date operating surplus of $26.3M, $0.5M above budget, primarily due to higher development and plumbing fees and lower depreciation costs. Capital expenditure was below budget due to project timing, while the cash balance of $248.7M was lower than forecast, reflecting the timing of supplier payments and customer receipts. Constrained reserves comprised 48% of total cash. Council's asset valuation program continues on a rolling five-year cycle, with indexation planned for all asset classes in 2025-2026. Most financial sustainability ratios were favourable, except for the Asset Sustainability Ratio.

COMMITTEE RECOMMENDATION 2025/48

Moved by: **Cr Wendy Boglary**
Seconded by: **Cr Jos Mitchell**

That the Audit & Risk Management Committee notes the financial position, results and financial sustainability measures for August 2025 as presented in the attached Monthly Financial Report and notes the asset valuation update.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

10.2 ASSET CONSUMPTION RATIO

The report addressed ARMC action item 2025/26-001 by presenting a breakdown of Council's Asset Consumption Ratio by asset class to provide greater insight into asset condition and renewal priorities. The ratio, a key financial sustainability measure audited by the Queensland Audit Office, assesses the extent to which Council's assets have been consumed relative to their replacement cost. While Council's overall ratio meets the recommended 60% target, variations exist across asset classes, with park, waste and water infrastructure below target levels. Council continues to monitor asset consumption under its Asset Management Framework.

COMMITTEE RECOMMENDATION 2025/49

Moved by: **Cr Wendy Boglary**
Seconded by: **Mitchell Petrie**

That the Audit & Risk Management Committee notes the asset consumption ratios by financial statement asset class and the processes in place to manage asset and financial sustainability metrics.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

10.3 DRAFT 2024-2025 CONSOLIDATED FINANCIAL STATEMENTS

This item was withdrawn and will be presented at the Special Meeting of the Audit & Risk Management Committee on 9 October 2025.

11 EXTERNAL AUDITOR REPORTS

11.1 EXTERNAL AUDIT REPORT

This item was deferred to the Special Meeting of the Audit & Risk Management Committee on 9 October 2025.

12 REDLAND INVESTMENT CORPORATION FINANCIAL REPORTS

12.1 REDLAND INVESTMENT CORPORATION PTY LTD SIGNED 2024-2025 CONSOLIDATED FINANCIAL STATEMENTS

The report presented the audited 2024-2025 Consolidated Financial Statements for Redland Investment Corporation Pty Ltd (RIC) and its subsidiaries, Cleveland Plaza Pty Ltd and RIC Toondah Pty Ltd. The RIC Board approved the financial statements at its meeting on 24 September 2025. Prepared in accordance with Australian Accounting Standards - Reduced Disclosure Requirements, the statements were reviewed with the Queensland Audit Office during both interim and final audit phases. Financial performance and risk are monitored through quarterly reporting to Council and bi-monthly reviews by the RIC Board against the Annual Business Plan.

COMMITTEE RECOMMENDATION 2025/50

Moved by: **Cr Wendy Boglary**
Seconded by: **Mitchell Petrie**

That the Audit & Risk Management Committee notes the June 2025 Audited Financial Statements for Redland Investment Corporation Pty Ltd.

CARRIED 4/0

Cr Jos Mitchell, Cr Wendy Boglary, Mitchell Petrie and Mary Goodwin voted FOR the motion.

13 AUDIT AND RISK MANAGEMENT COMMITTEE MEETINGS PLAN

13.1 AUDIT AND RISK MANAGEMENT COMMITTEE MEETINGS PLAN

This item was noted.

14 MEETING CLOSURE

The meeting closed at 1.19 pm.

Redland
CITY COUNCIL

MINUTES

AUDIT & RISK MANAGEMENT COMMITTEE MEETING

Thursday, 9 October 2025

The Council Chambers
91 - 93 Bloomfield Street
CLEVELAND QLD

Order of Business

1 Declaration of Opening 3

2 Record of Attendance and Apologies 3

3 Conflict of Interests 4

4 Council Financial Reports 4

4.1 Draft 2024-2025 Consolidated Financial Statements 4

5 External Auditor Reports 4

5.1 Redland City Council Closing Report 2024-2025 4

5.2 Redland Investment Corporation Closing Report and Final Management Letter 2024-2025 5

6 Meeting Closure 5

1 DECLARATION OF OPENING

The Chairperson declared the meeting open at 2:04 pm.

2 RECORD OF ATTENDANCE AND APOLOGIES

Audit & Risk Management Committee Members
Mitchell Petrie (External Member and Chairperson)
Cr Wendy Boglary (Division 1 Councillor)
Cr Jos Mitchell (Mayor) – attended via teleconference from 2:09 pm

Secretary
Principal Adviser Internal Audit

Attendees
Chief Executive Officer (Acting)
General Manager Community and Customer Services
General Manager Infrastructure and Operations
General Manager Advocacy, Major Projects and Economic Development (Acting)
Executive Group Manager Financial Services and Chief Financial Officer
Executive Group Manager People, Culture and Organisational Performance
Executive Group Manager Risk and Legal Services
Group Manager Corporate Governance
Group Manager Corporate Services
Group Manager Financial Services
Chief Procurement Officer
Service Manager Corporate Finance
Chief Executive Officer, Redland Investment Corporation
Financial Controller, Redland Investment Corporation
Director, Queensland Audit Office
Director, Queensland Audit Office
Manager, Queensland Audit Office

Apologies
Mary Goodwin (External Member)
Chief Executive Officer

Minutes
Executive Officer Organisational Services

3 CONFLICT OF INTERESTS

No conflicts of interest were declared.

4 COUNCIL FINANCIAL REPORTS

4.1 DRAFT 2024-2025 CONSOLIDATED FINANCIAL STATEMENTS

The Committee has discharged its oversight of the financial statement preparation process throughout the year with periodic updates provided on significant judgements and estimates reflected in the financial statements as well as having a recent out-of-session meeting with the Finance team to discuss draft financial statements and also an in-camera meeting with the Queensland Audit Office (QAO) to discuss the status of the audit and contents of their closing report. The Committee congratulated the CFO and her team on producing the financial statements and supporting papers to a high level of quality. The discussion was led by the ARMC Chair, who, in accordance with section 211(1)(b)(ii) of the *Local Government Regulation 2012*, possesses experience and skills in financial matters.

COMMITTEE RECOMMENDATION 2025/51

Moved by: **Mr Mitchell Petrie**
Seconded by: **Cr Wendy Boglary**

That the Audit & Risk Management Committee endorses the final draft Consolidated Financial Statements for the year ended 30 June 2025, prior to certification by the Mayor and Acting Chief Executive Officer.

CARRIED 3/0

Cr Wendy Boglary, Cr Jos Mitchell and Mitchell Petrie voted FOR the motion.

Mary Goodwin was absent from the meeting.

5 EXTERNAL AUDITOR REPORTS

5.1 REDLAND CITY COUNCIL CLOSING REPORT 2024-2025

The Queensland Audit Office (QAO) presented its closing report and provided a detailed update on all matters identified during Council's external audit. The QAO proposed to issue an unmodified audit opinion on the financial statements.

COMMITTEE RECOMMENDATION 2025/3

Moved by: **Cr Wendy Boglary**
Seconded by: **Mr Mitchell Petrie**

That the Audit & Risk Management Committee notes Council's Closing Report for 2024-2025.

CARRIED 3/0

Cr Wendy Boglary, Cr Jos Mitchell and Mitchell Petrie voted FOR the motion.

Mary Goodwin was absent from the meeting.

5.2 REDLAND INVESTMENT CORPORATION CLOSING REPORT AND FINAL MANAGEMENT LETTER 2024-2025

The Queensland Audit Office presented its final report on the Redland Investment Corporation (RIC), providing a comprehensive overview of all matters identified during the audit.

COMMITTEE RECOMMENDATION 2025/4

Moved by: **Cr Wendy Boglary**
Seconded by: **Mr Mitchell Petrie**

That the Audit & Risk Management Committee notes Redland Investment Corporation's Closing Report and Final Management Letter for 2024-2025.

CARRIED 3/0

Cr Wendy Boglary, Cr Jos Mitchell and Mitchell Petrie voted FOR the motion.

Mary Goodwin was absent from the meeting.

6 MEETING CLOSURE

The meeting closed at 2:44 pm.

13.4 TROPICAL CYCLONE ALFRED AFTER ACTION REVIEW REPORT

Objective Reference: **A12493611**

Authorising Officer: **Amanda Pafumi, General Manager Organisational Services**

Responsible Officer: **Andrew Ross, Executive Group Manager Governance & Legal Services**

Report Author: **Michael Tait, Service Manager Disaster Management**

Attachments: **1. After Action Review-Tropical Cyclone Alfred - Redland City Council ⇩**

PURPOSE

The purpose of this report is threefold: to formally endorse the Tropical Cyclone Alfred (TC Alfred) After-Action Review (the Review) prepared by the Yellow Company (Yellow); to acknowledge the progress made to date in implementing the 18 recommendations outlined in the Review; and to express appreciation to the various participants and stakeholders who contributed to the development of the Review.

BACKGROUND

Recognised by the Queensland Reconstruction Authority as one of the most significant weather events in Australia's recent history, TC Alfred impacted south east Queensland with destructive winds, intense rainfall, and widespread flash flooding over several days. The severity of the cyclone caused substantial psycho-social distress across affected communities. Within Redland City, residents and businesses experienced extensive power outages, disruptions to communication networks, and minor to moderate property damage. Council infrastructure, including public parks and community assets, also sustained damage.

In the aftermath of TC Alfred, Council engaged Yellow to undertake an independent After-Action Review, as attached to this report. The comprehensive review undertaken between March and May 2025 systematically assessed operational activities undertaken in the preparation for, responding to and recovering from the event – identifying key successes, documenting lessons learned, and providing actionable recommendations. These insights are intended to strengthen Council's future disaster resilience and ensure effective response and recovery actions following disaster events.

ISSUES

The Review process was underpinned by extensive stakeholder engagement and structured analysis. Yellow collaborated closely with Redland City Council's Disaster Management Unit (DMU) to facilitate five targeted debriefs, focusing on key operational themes: leadership, communication, interoperability, and information management.

These debriefs involved representatives from the Local Disaster Management Group, Local Disaster Coordination Centre team, Local Recovery Group, City Operations, and elected Councillors. In total, 212 stakeholders contributed to the Review, resulting in the collection of 537 individual observations.

The insights gathered through this process informed the development of 18 evidence-based recommendations designed to enhance Council's future disaster management capabilities and operational resilience.

Positive Insights

The Review identified several strengths in response and recovery operations during Tropical Cyclone Alfred:

- Proactive Preparedness: Strong preparatory measures were evident in the lead-up to TC Alfred's impact.
- Multi-Agency Collaboration: A total of 47 agencies contributed to the response, reflecting robust inter-agency relationships.
- Effective Alerting: The State Disaster Coordination Centre (SDCC) commended Council's timely approval and dissemination of emergency alerts.
- Community Engagement: The Community Champion program continued to serve as a vital conduit between Council and the community during the event.
- Operational Flexibility: Early adaptation of the sandbagging process enabled resources to meet high public demand.
- Inter-Council Support: Council-to-Council arrangements provided valuable operational support within the Local Disaster Coordination Centre (LDCC).
- Recordkeeping Practices: The early emphasis on documentation and photographic evidence supported accountability and recovery efforts.
- Data Utilisation: Real-time data availability through Guardian enhanced situational awareness and decision-making.
- Coordinated Governance: The sequencing of meetings across the Local Disaster Management Group (LDMG), District Disaster Management Group (DDMG), and Local Recovery Group facilitated effective coordination.
- Established Recovery Networks: Regular Human and Social Recovery meetings held during business-as-usual operations ensured a well-connected and responsive recovery network. Regular Economic Recovery meetings held with key industry stakeholder and relevant agencies provided timely insights and responses.
- Early Funding Engagement: Involving the Queensland Reconstruction Authority (QRA) from the outset enabled timely submission for funding support.
- Geospatial Intelligence: The provision of an App to support the Queensland Police Service doorknocking program in the lead-up to TC Alfred making landfall meant real-time visibility of communities being warning ahead of the event. Additionally, data captured via an interactive live map informed the development of targeted recovery packages and kerbside collection.

The Review identified 18 recommendations designed to strengthen Redland City Council's disaster management capability, improve operational efficiency, and enhance community resilience. Each theme reflects a critical component of Council's emergency management framework and was informed by stakeholder feedback, operational observations, and strategic analysis.

Recommendations

The below table outlines the 18 recommendations of the Review, the recommendations are colour coded as follows:

- Green for recommendations that have been completed.

- Orange for recommendations that are ongoing.
- Red for recommendations that have not yet commenced.

Number	Recommendations
1	Develop a succession plan, approved by Council's Executive Leadership Team, to ensure continuation of responsibilities and support staff fatigue.
2	Review the LDCC roles and responsibilities and develop a staff skills database cataloguing current disaster management and Council business-as-usual skills and qualifications.
3	Undertake training with Council's leadership team on the expectations of their staff during disaster operations.
4	Develop a SMEACS (situation, mission, execution, administration, logistics, command control, safety) board to provide situational awareness across all phases of an event.
5	Develop a recovery structure which highlights the continuation of the LDCC from response to recovery.
6	Undertake an audit of all disaster related facilities to ensure they are the most effective, safe, and sustainable location for the region; and advocate to the State and Federal governments for funding to improve facilities where required.
7	Conduct a review of the procedures for support centres to ensure efficient governance arrangements are in place.
8	Update current procedures and develop new procedures based on the findings from TC Alfred.
9	Embed a Councillor Liaison Cell (CLC) into the LDCC, develop procedures and conduct training to support.
10	Employ a disaster management officer to focus specifically on planning and support the recovery phase during events.
11	Develop communication procedures and templates based on the findings from TC Alfred and deliver a training program specific to the Communications Team.
12	Complete a review of Council's Community Champion Program with a particular focus on North Stradbroke Island.
13	Develop an island-based Business Skills and Services Matrix.
14	Continue delivery of Council's disaster preparedness program for community education. Consider a focus on resilient measures during power outages.
15	Complete a review of the procedures for City Operations and consider the development of an Emergency Response group to support future operations.
16	Review the governance arrangements for the Local Disaster Management Group, Local Recovery Group and Sub-Groups.
17	Mature the recovery reporting.
18	Develop procedures that ensure the ongoing sharing of information for recovery, with a particular focus on impact assessments.

In the months following TC Alfred, Council has taken action toward implementing these recommendations. The recommendations are at various stages of completion noting that there are dependencies on resourcing and funding related to the recommendations.

Recommendations 1, 2 and 3 relate to people management and succession planning. Since TC Alfred, Council has identified seven additional key staff that are being trained to undertake the critical roles of Local Disaster Coordinator and Deputy Local Disaster Coordinator. This will provide greater depth at the strategic decision-making level during disaster events. In addition, staff from across Council with specific skill sets have been identified to assist in the disaster coordination centre during an event.

To support staff that undertake disaster response and recovery activities, discussions have commenced with business-as-usual managers with regard to their expectations of staff when returning to substantive positions. This is to ensure that staff involved in disaster response and recovery have sufficient fatigue management processes in place and that their substantive position workloads are not excessive and have been managed whilst they have been offline supporting the disaster response and recover efforts.

Recommendations 6 and 7 relate to appropriateness of facilities. One of the central issues that arose from TC Alfred was the appropriateness of the Local Disaster Coordination Centre (LDCC) located at the South Street Depot. During TC Alfred, that facility was deemed unsafe and the LDCC team needed to quickly move into the 50 Middle Street facility. Following TC Alfred, the 50 Middle Street facility has become the primary LDCC and has undergone some minor upgrades such as additional workstations, network cabling, digital displays, monitors and information/white boards to ensure that it is a fully operational LDCC for future events.

In addition, to meet future operational requirements, work has commenced on the design of a stand-alone purpose-built LDCC. A purpose-built facility will require funding support from state and federal governments for both the detailed design and construction of such a facility. Council's Strategic Partnerships and Advocacy Team continue to advocate for funding to improve facilities.

To support disaster response operations at the 50 Middle Street LDCC facility, new Standard Operating Procedures have been developed and training for the LDCC team arranged for December 2025. Council has also applied to be part of the current round of the Strengthening Telecommunications Against Natural Disasters (STAND) program as provided by the Department of Customer Service, Open Data, and Small and Family Business. The STAND program seeks to provide satellite connectivity to key community hubs (evacuation centres) during disaster events. Council has put forward the following four primary evacuation centres for the current round of the program: Macleay Island Hall; Dunwich Public Hall; Thorneside Community Hall and Redland Bay Community Hall – noting that Point Lookout Hall and Russell Island Recreation Hall were successful in the first round of the STAND program.

Recommendations 4, 7, 8 and 11 relate to procedural improvements to support response and recovery processes. In line with those recommendations, reviews and updates of the following plan have been undertaken: Local Disaster Management Plan, Local Recovery Plan, Public Information and Warnings Sub-Plan, Evacuation Sub-Plan, Sandbag Procedure and the LDCC Standard Operation Procedures. Recommendation 4 specifically relates to developing a SMEAC board (provides strategic direction to activities undertaken within the LDCC), this has now been addressed with the installation of boards as part of the upgrade to the 50 Middle Street LDCC. Recommendation 11 relates to communication procedures, templates and training. Since TC Alfred, the Public Information and Warnings Sub-Plan has been reviewed and updated, the Communications, Engagement and Tourism Group (CET) maintain a file of templated messaging and training has been conducted with CET Officers at the State Disaster Coordination Centre (SDCC) with their counterparts in the SDCC Public Information team. The joint training has the additional benefits of building strong relationships between the state and local teams responsible for the provision of public information and warnings.

Recommendation 9 relates to the creation of a Councillor Liaison Cell (CLC) within the LDCC. Work has commenced to bring onboard the Executive Support Officers to staff the CLC when the LDCC is activated. The CLC will also manage the Councillor Hotline number, providing a critical 2-way conduit for information provision between the LDCC and the Councillors (and ultimately the community). In addition, there will also be an Integrated Customer Contact Centre (ICCC) Liaison and an Emergency Operations Team (EOT) Liaison within the LDCC to provide better internal communication between the LDCC and ICCC and City Operations teams.

Recommendation 15 relates to the creation of an Emergency Operations Team (EOT) to support Council's operational crews. This has been completed with the establishment of and training provided to the EOT. Operating Guidelines have also been created to support the EOT in undertaking their role and decision-making during a disaster activation.

Recommendations 10, 16, 17 and 18 relate to recovery processes. Through the Disaster Recovery Funding Arrangements (DRFA) – Category C funding as managed by the Department of Families, Seniors, Disability Services and Child Safety, Council has been funded to employ a full-time Community Recovery and Resilience Officer (CRRO) on contract until 31 March 2027. The engagement of the CRRO addresses Recommendation 10, and the work that the CRRO will undertake will address the key elements of recommendations 16, 17 and 18. In addition, Council has been funded to employ a Community Recovery Officer (CRO) for a six month period to work directly with impacted communities recovering from TC Alfred. The CRO position has already been recruited and commenced Monday 24/11/2025.

Council has also commenced a review of the governance arrangements and membership of the Local Disaster Management Group (LDMG) with the aim of refining membership and strengthening the reporting relationships. To further support recovery processes, the LDCC Standard Operating Procedure has been updated to specify that the LDCC will not move to a Stand Down activation level when the LDMG moves to Stand Down, but instead will remain at Stand Up to support the functions of the Local Recovery Group until the recovery operations can be absorbed into business as usual processes.

Recommendation 12, 13 and 14 relate to community engagement and review of existing programs. Council has reviewed the current membership of the Community Champions program (as referred to in recommendation 12) with the view of expanding membership on North Stradbroke Island. Council has also reached out to island businesses and Chambers of Commerce to assist businesses to engage with Council's procurement panels, it was recognised during TC Alfred that island businesses were critical in servicing island communities when water transport was not operational. Furthermore, Council has been actively engaging with island communities and businesses to discuss resilience measures when power outages of more than three days occur.

The 18 recommendations outlined above provide a strategic roadmap for improving Redland City Council's disaster management practices. By addressing key operational, governance, and community engagement areas, these initiatives aim to enhance resilience, responsiveness, and recovery actions. Progressing the implementation of these recommendations will support Council's commitment to continuous improvement and result in better outcomes for the Redland community during future disaster events.

STRATEGIC IMPLICATIONS

Legislative Requirements

In accordance with Sections 4A(d) and 4A(e) of the *Disaster Management Act 2003* (the Act), local governments are primarily responsible for managing disaster events within their respective local government areas. District Disaster Management Groups and the Queensland Disaster Management Committee are tasked with providing appropriate resources and support to assist local governments in executing disaster operations effectively.

Redland City Council has developed the Redland City Local Disaster Management Plan (the Plan), fulfilling the legislative requirement under Section 57(1) of the Act, which mandates that "a local government must prepare a plan (a local disaster management plan) for disaster management in the local government's area."

The Plan is authorised by the Chairperson of the Redland City Local Disaster Management Group, acting on behalf of Council, and is administered by the Disaster Management Unit (DMU). It encompasses the following key components:

- Administration and Governance
- Disaster Risk Assessment
- Local Capacity and Capability
- Prevention
- Preparedness
- Response
- Recovery

In alignment with Section 58 of the Act, the Plan adheres to the prescribed disaster management standards and guidelines, and complies with the following reference documents:

a) Disaster Management Act 2003
b) Queensland State Disaster Management Plan (2015)
c) Emergency Management Assurance Framework (2014)
d) Queensland Local Disaster Management Guidelines (2012)
e) Queensland Recovery Guidelines (2011)

Risk Management

Under the *Disaster Management Act 2003*, local governments hold primary responsibility for managing disaster events within their jurisdictions. Redland City Council demonstrates a committed and proactive approach to fulfilling this obligation through the implementation of its approved Local Disaster Management Plan and Local Recovery Sub-Plan. These plans provide a structured framework to guide preparedness, response, and recovery activities across the city.

Undertaking an After-Action Review (AAR) following TC Alfred reflects Council's dedication to continuous improvement in disaster management. The AAR process enables the systematic evaluation of planning, procedures, systems, and training, with a focus on enhancing interoperability, information sharing, public communication, and decision-making. This reflective practice is essential to strengthening operational readiness and resilience.

Failure to undertake an AAR and to capture and act upon the lessons learned from TC Alfred presents a significant risk. Without this critical feedback loop, Council and the Redland City Local Disaster Management Group may face limitations in their preparedness and capacity to respond and recover effectively from future severe weather events.

The AAR therefore serves as a vital mechanism for ensuring that past experiences inform future improvements in disaster management capability.

Financial

The work completed to implement the recommendations to this point has been undertaken within existing financial year budget allocations. The costs associated with the majority of recommendations will be absorbed into the current financial year budget. There will however be elements of the recommendations, such as the design and construction of a purpose-built disaster coordination centre that will be dependent on receiving grant funding and capital budget allocation to progress. A project of this nature will have budgetary implications beyond the current financial year and will require consideration during budget development as part of the annual budget submission process.

People

More than one-third of Council's workforce had been involved in preparedness, response and recovery for the TC Alfred event, with the recovery phase ongoing.

There are no ongoing dedicated Council resources for recovery and activities are undertaken by officers as part of their business-as-usual roles. It is a key learning from TC Alfred to consider ways to increase sustainability particularly for large scale future events.

Furthermore, there are no additional officers dedicated to the implementation of the 18 recommendations of the After-Action Review report. Officers are undertaking the implementation of the recommendations as part of their business-as-usual workloads.

Environmental

There are no environmental implications arising from the recommendations outlined in the Tropical Cyclone Alfred After-Action Review. The Review focuses on operational, procedural, and communication improvements, with no proposed actions that adversely affect natural ecosystems or environmental assets. Council remains committed to sustainable disaster management practices, and the implementation of the Review recommendations supports continuous improvement without adversely impacting the environment.

Social

Redland City Council's disaster management arrangements are designed to be flexible and scalable, enabling tailored responses that reflect the diverse needs of the community. By integrating social considerations—such as the lived experiences of residents—into planning and operations, Council ensures its approach remains inclusive, equitable, and responsive. The insights gained from the Review are critical to strengthening this framework. They provide valuable lessons that inform continuous improvement across systems, processes, and community engagement. Applying these learnings enhances Council's ability to support residents effectively and build resilience ahead of future disaster events.

Human Rights

There are no human rights implications associated with the contents of this report. Human rights principles are at the core of disaster management planning to ensure equitable access to appropriate support services for all residents, particularly during times of crisis.

Alignment with Council's Policy and Plans

This report aligns with Council's *Our Future Redlands: A Corporate Plan to 2026 and Beyond* Objective 2.3 – Build the community's capacity to adapt to changes in the physical, social and economic environment.

Redland City Council Local Disaster Management Plan.
Redland City Council Local Recovery Plan.

CONSULTATION

Consulted	Consultation Date	Comments/Actions
General Manager, Community and Customer Services	24 November 2025	Supported
Service Manager, Strengthening Communities	24 November 2025	Supported
Project Manager, Major Projects Delivery	24 November 2025	Supported
Group Manager, Economic Development and Partnerships	24 November 2025	Supported
Service Manager, Economic Strategy and Services	24 November 2025	Supported

Consulted	Consultation Date	Comments/Actions
Service Manager, Strategic Partnerships and Advocacy	24 November 2025	Supported
Group Manager, City Operations	24 November 2025	Supported
Governance Service Manager	24 November 2025	Supported
Service Manager – Business Partnering	24 November 2025	Supported
Redland LDMG member agencies	24 July 2025	Endorsed – After Action Review

OPTIONS

Option One

That Council resolves as follows:

1. To endorse the Tropical Cyclone Alfred After-Action Review, as attached to this report.
2. To note the progress made thus far toward the implementation of recommendations as outlined in the Tropical Cyclone Alfred After-Action Review.
3. To thank the participants that contributed to the development of the Tropical Cyclone Alfred After-Action Review.

Option Two

That Council resolves to request more information about the Tropical Cyclone Alfred After-Action Review.

OFFICER'S RECOMMENDATION

That Council resolves as follows:

1. **To endorse the Tropical Cyclone Alfred After-Action Review, as attached to this report.**
2. **To note the progress made thus far toward the implementation of recommendations as outlined in the Tropical Cyclone After-Action Review.**
3. **To thank the participants that contributed to the development of the Tropical Cyclone Alfred After-Action Review.**

yellow
projects for purpose

Tropical Cyclone Alfred After-Action Review

Redland City Council

June 2025

Redland
CITY COUNCIL

Version Control and Endorsement

#	Version	Updated by	Date	Endorsed by
0.1	Draft Report	Vicki Anderson	6 June 2025	Jo Killick
1.0	Final Report	Vicki Anderson	1 July 2025	Jo Killick

Acknowledgement of Country

Yellow respectfully acknowledges the First Nations peoples as the traditional custodians of the land on which we live and work. We recognise the enduring strength and resilience of the First Nations peoples in sustaining the world's oldest living cultures, and appreciate their continuing connection to lands, waters, and communities.

Disclaimer

Third Parties

The information contained in this Report has been prepared specifically for the Client named in the Report, based on a specific scope, conditions and limitations as agreed between The Yellow Company and the Client. Use of this Report is limited to the named Client only. The Yellow Company accepts no liability for loss to any third party who may use or rely upon this Report, in whole or in part, without first obtaining the written permission from The Yellow Company.

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Financial or Cost analysis

While The Yellow Company has made every attempt to ensure that the information contained in this Report is accurate, any financial or cost analysis is an estimate only, based on information provided by the Client. The Yellow Company does not guarantee or warrant the accuracy of the costs estimated in the Report.

Data accuracy

This report uses fluctuating data and provides a snapshot in time and actions taken as a result of recommendations in this report should allow for variances.

General

The information contained in this Report has been developed in consultation with the named Client. It is based on information provided from various sources including the Client, not only the knowledge and experience of The Yellow Company. The Yellow Company does not guarantee the accuracy of information which is included from these sources.

If there is any part of the Report that requires further explanation, or should you have any difficulty understanding anything contained in this Report, you must consult The Yellow Company immediately for clarification.

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Table of Contents

Acknowledgement of Country 2
Table of Contents **3**
Executive Summary **4**
Summary of recommendations, insights and lessons **5**
Background **7**
After-Action Review **8**
Review process 8
Data collection 9
Review insights **16**
Overview 16
People management 16
Facilities 18
Councillor Liaison Cell (CLC) 19
Procedures 19
Communications 20
Island communities 21
Community Resilience 21
Operations 21
Local Disaster Management Group 22
Recovery 23
Conclusion **24**
Appendices **25**
Appendix A – Observations register 25
Appendix B - MentiMeter results 26
Appendix C – Survey results 27
..... **28**

Executive Summary

Redland City Council (Council) engaged The Yellow Company (Yellow) to conduct an independent After-Action Review (the Review) for the response, relief and recovery operations that took place during Tropical Cyclone Alfred (TC Alfred).

TC Alfred has been recognised as one of the most significant weather events in Australia's recent history[1]. The event caused destructive winds, extreme rainfall and flash flooding to communities across Southeast Queensland for several days. The anticipated impacts of the cyclone caused significant psycho-social anxiety within the community. Redland residents and businesses experienced widespread power outages, communication interruptions, and minor to moderate damage to their properties. The event also caused damage to Council infrastructure and parks.

Yellow conducted the Review between March 2025 and May 2025. The Review captured 537 observations, informed by direct engagement with 212 stakeholders.

This report provides insights and recommendations developed through:

- a desktop review of relevant documentation, such as Situation Reports (SITREPs)
- observations captured through an online survey and operational debriefs
- supporting correspondence from stakeholders involved in the TC Alfred event.

The methodology for the Review aligns to the Australian Institute for Disaster Resilience (AIDR) Lessons Management Handbook[2]. This framework highlights the importance of the OILL process (observation, insight, lessons identified, lessons learned):

- Observation – a singular perspective or opinion in the context of a specific incident, exercise, project, or report.
- Insight – a deduction drawn from multiple occurrences of observations.
- Lessons identified – developed through analysis, research, and subject matter expert input.
- Lessons learned – a demonstrated change in behaviour.

The Review observed Council's capacity and capability to manage impacts from extreme weather and disasters. This report provides 18 recommendations for Council's consideration. Recommendations outlined in this report address the most consistent observations provided during the debriefs and online survey and intends to further enhance Council's disaster response, relief and recovery capability.

"The effort everyone put in considering what was happening in their own home was really well done and should be commended."

Review participant

[1] https://www.qra.qld.gov.au/recovery/tc-alfred
[2] aidr_handbookcollection_lessonsmanagement_2019.pdf

Summary of recommendations, insights and lessons

The table below provide a summary of recommendations, insights and lessons from the Review of TC Alfred.

Number	Recommendations	Insights *(further information provided throughout the report)*	Lessons identified *a requirement to:*
1	Develop a succession plan, approved by Council's Executive Team, to ensure continuation of responsibilities and support staff fatigue.	Backup support for key positions would reduce the workload for key staff and provide redundancy should the need arise.	Develop a succession plan that supports the appointment and training of staff to work in the disaster operations.
2	Review the LDCC roles and responsibilities and develop a staff skills database cataloguing current disaster management and Council business-as-usual skills and qualifications.	Identification of subject matter experts and skills such as languages within Council to strengthen the overall capacity and capability of the LDCC.	Develop a staff skills matrix to ensure subject matter experts align with specific roles within the LDCC to support response, relief and recovery.
3	Undertake training with Council's leadership team on the expectations of their staff during disaster operations.	Council's leadership team are not always aware of the roles their staff perform during disasters and the best methods to support their team on the return to business-as-usual (BAU) practices.	Conduct training for Council's leadership team to assist Managers in supporting their staff return from the LDCC to BAU.
4	Develop a SMEACS (situation, mission, execution, administration, logistics, command control, safety) board to provide situational awareness across all phases of an event.	LDMG and LDCC members require easy access to the current situation of the event including on-call details to assist fatigue management.	Develop a SMEACS board to provide overall situational awareness of the event.
5	Develop a recovery structure which highlights the continuation of the LDCC from response to recovery.	When the response phase was stood down many officers returned to BAU leaving minimal officers to support the recovery phase of the event.	Develop a recovery structure to ensure continuation from response into recovery.
6	Undertake an audit of all disaster related facilities to ensure they are the most effective, safe, and sustainable location for the region; and advocate to the State and Federal governments for funding to improve facilities where required.	Deficiency in suitable location that are safe during a cyclone including the LDCC, evacuation centres, refuge centres, day drop-in centres, and recovery centres.	Conduct an audit of locations to identify suitability. Subsequently, seeking support from the State and Federal governments for funding to deliver safe locations for the region.
7	Conduct a review of the procedures for support centres to ensure efficient governance arrangements are in place.	Current support centres require clearer governance to support future activations.	Review support centres to ensure they are fully functional during activations.
8	Update current procedures and develop new procedures based on the findings from TC Alfred.	It was identified a number of the disaster management procedures are either out of date or need to be developed.	Update current procedures and develop new procedures based on the findings from TC Alfred.
9	Embed a Councillor Liaison Cell (CLC) into the LDCC, develop procedures and conduct training to support.	During the response, Council's Integrated Customer Contact Centre managed the Councillor's inbox and calls. A CLC within the LDCC is required to support the information flow between the LDCC and the Councillors.	Develop a CLC supported by relevant procedures and training to ensure consistency of information.
10	Employ a disaster management officer to focus specifically on planning and support the recovery phase during events.	Council's disaster management workforce is understaffed to support the ongoing events in the region.	Employ a new disaster management officer to undertake the role of planning, update and develop new procedures as well as support recovery during activations.
11	Develop communication procedures and templates based on the findings from TC Alfred and deliver a training program specific to the Communications Team.	Council's Communication Team developed a range of documentation during the onset of TC Alfred.	Enhance the procedures specifically for Council's Communication Team and develop a training program to support the disaster management arrangements for this team.
12	Complete a review of Council's Community Champion Program with a particular focus on North Stradbroke Island.	Council's Community Champions Program has been ongoing for a period of nine years and is due for a review. A focus on North Stradbroke Island is required during this review to improve the information flow to and from the island.	Review Council's Community Champions program to ensure it continues to meet the needs of the community.
13	Develop an island-based Business Skills and Services Matrix.	Due to isolation the island communities lacked support from local services.	Develop an island-based Business Skills and Services Matrix to aid in expediting services to the community post event.
14	Continue delivery of Council's disaster preparedness program for community education. Consider a focus on resilient measures during power outages.	TC Alfred saw a strong reliance on the community seeking support from external agencies.	Use Council's Get Ready program to increase awareness and education about how to prepare for power outages.
15	Complete a review of the procedures for City Operations and consider the development of an Emergency Response Group to support future operations.	Council's City Operations would benefit from a review of the current documentation and the development of an Emergency Response Group to support future operations.	Review current procedures for City Operations based on the findings from TC Alfred and consider developing an Emergency Response Group to coordinate the operational response.
16	Review the governance arrangements for the Local Disaster Management	Council's disaster management groups have become overpopulated and lack	Review the governance arrangements for the LDMG, Local Recovery Group and Sub-Groups meetings to ensure efficacy with legislative requirements,

Number	Recommendations	Insights *(further information provided throughout the report)*	Lessons identified *a requirement to:*
	Group, Local Recovery Group and Recovery Sub-Groups.	business acumen resulting in the loss of a strategic focus.	specifically relating to the disaster management regulation that applies to the business of the groups.
17	Mature the recovery reporting.	This was the first time Council used Guardian for the recovery phase of an event and therefore highlighted some deficiencies.	Review the recovery reporting in Guardian to ensure the functions provided the detail required.
18	Develop procedures that ensure the ongoing sharing of information for recovery, with a particular focus on impact assessments.	Impact assessments were completed during the response/relief phase however, these were not shared during the recovery phase. The Sub-Groups identified the importance of this data to support the community.	Develop procedures focused on information sharing from response through to recovery.

Background

TC Alfred caused significant impacts across the Redlands region, particularly to the island communities.

The timeline below (Figure 1) provides key highlights from the tropical low-pressure system of TC Alfred through to the relief phase.

The Local Disaster Management Group (LDMG) and Local Disaster Coordination Centre (LDCC) were activated to support the response and relief operations. At the time that this report was developed. the Local Recovery Group (LRG) continued to coordinate recovery efforts across the region.

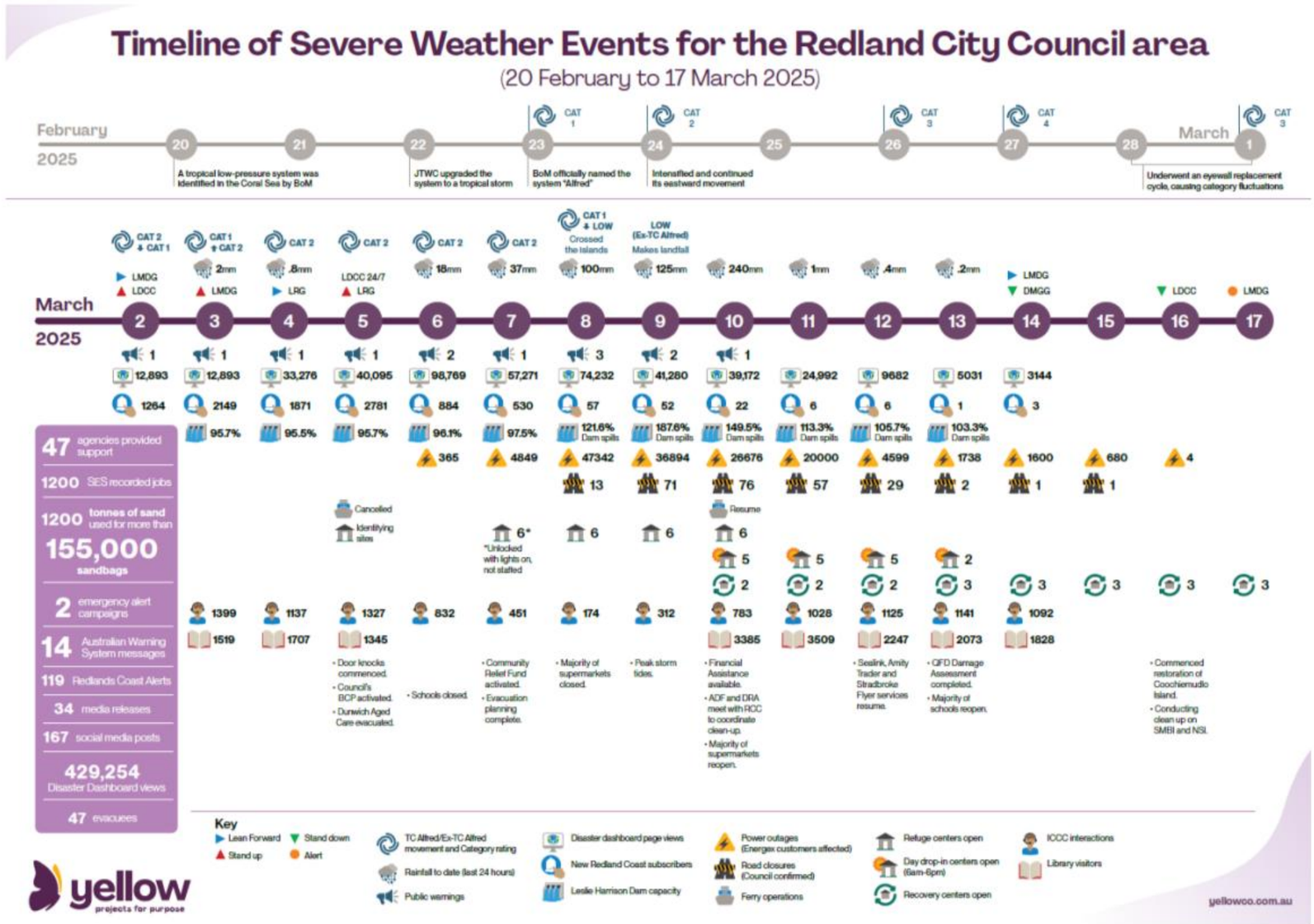


Figure 1 Overview of TC Alfred impacts

After-Action Review

On 12 March 2025, Council engaged Yellow to deliver an independent After-Action Review for its TC Alfred response and relief operation.

The Review consisted of facilitated debriefs with stakeholders from the LDMG, LDCC, Recovery and Council's Operations Group as well as a post-event survey with LDMG, Council, LDCC and external stakeholders.

The Review aimed to evaluate Council's response, relief and recovery operation for TC Alfred, capture learnings and provide recommendations for continuous improvement.

Review process

Methodology

The following flow chart reflects the project methodology and approach to identify and develop the recommendations.

Further information on data coding, analysis, insights, and recommendations is provided in the following sections of this report.

Engagement principles

This report has been developed using anecdotal evidence from internal and external officers involved in the response, relief and recovery operations for TC Alfred, and a review of event response, relief and recovery documentation. A 'no blame environment' was encouraged to allow participants to speak freely about their experiences.

Where possible, all Council employees involved in the event, as well as external agency representatives, were invited to participate in the debriefs. Debrief participants were also encouraged to complete a survey. It is noted that engagement with stakeholders is a central component of any review process. Therefore, the recommendations and insights contained in this report may evolve, subject to further engagement.

Stakeholder engagement

Yellow worked with the Disaster Management Unit (DMU) at Council to complete five debriefs. The debriefs focused on:

- leadership
- communication
- interoperability
- information management.

The following table provides the details from the debriefs including the date, number of participants and the engagement forum.

Team	Date	Forum	Number of participants
Local Disaster Management Group	26/03/25	Face-to-face and MS Teams	109
City Operations	17/04/25	Face-to-face and MS Teams	18
Local Disaster Coordination Centre	17/04/25	Face-to-face and MS Teams	35
Councillors	13/05/2025	Face-to-face and MS Teams	19
Recovery	16/05/2025	Face-to-face	31
Total *			212

** Total may include some central participants attending multiple team sessions.*

Data collection

The facilitated debrief sessions focused on:

- what worked
- what didn't work
- what could be improved.

In total, the Review identified 537 observations, including the debriefs, ad hoc emails and discussions with relevant stakeholders both in and out of session. The observations have been collated and categorised as *For Review* (improvements required) and *Sustain* (what worked well).

Each observation has been coded according to the AIDR *Lessons Management Handbook*.

Data coding

All observations were assigned PPOSTT categories and National Themes. A detailed Observations Register is included in **Appendix A**.

PPOSTT

The PPOSTT model (refer to Figure 2) recognises observations can be categorised by people, process, organisation, support, technology, and training.

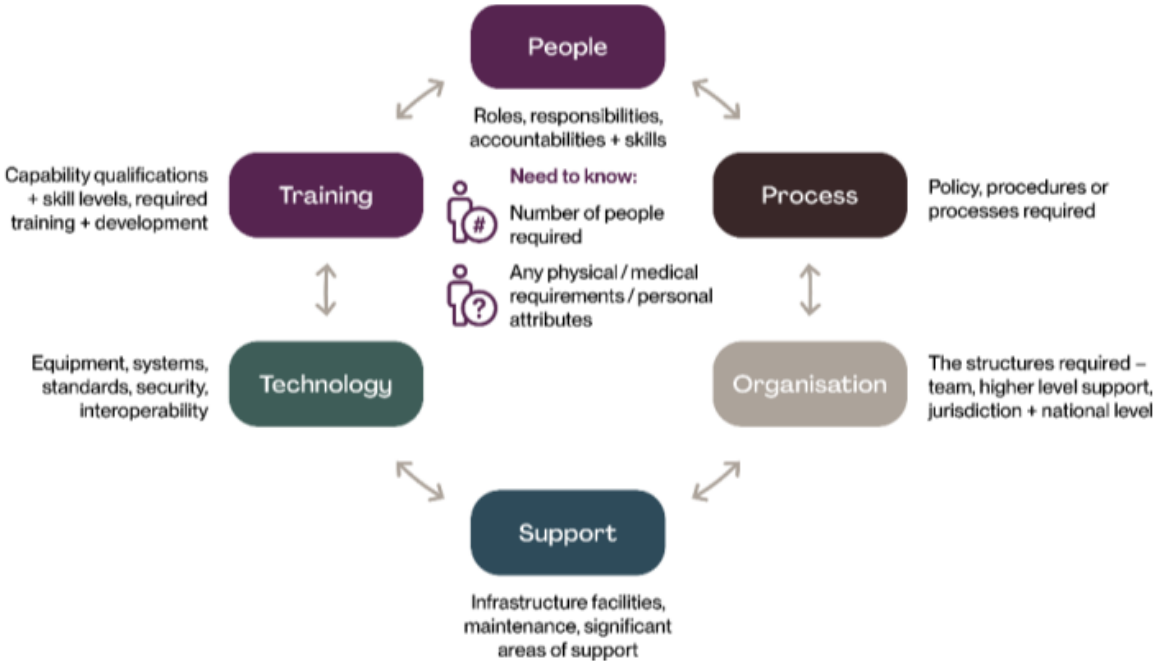


Figure 2 PPOSTT model. Source: AIDR Lessons Management Handbook[3].

[3] https://www.aidr.org.au/media/1760/aidr_handbookcollection_lessonsmanagement_2019.pdf

National Themes

The AIDR Lessons Management recognises two-levels of National Themes (refer to Figure 3).

- Level 1 describes themes of capability development, command control coordination, communication, governance, operations, people and resources.
- Level 2 expands on each of these themes.

Figure 3 AIDR National Themes[4].

[4] https://www.aidr.org.au/media/1760/aidr_handbookcollection_lessonsmanagement_2019.pdf

Data analysis

The following diagrams provide a snapshot of the data analysed in the Review from the 537 observations. During theming, observations related to activities or processes that are to be maintained were recognised, these are shown in the diagrams as 'Sustain'.

PPOSTT

A summary of observations by PPOSTT (refer to Figure 4) highlights most of the observations are focused on *Process*. A large portion of these observations relate to procedures for:

- Capability mapping including succession planning and skills matrix (Recommendations 1 and 2)
- Suitability of LDCC and Support Centres (Recommendation 6)
- Reviewing current procedures and developing new procedures where required (Recommendation 7, 8, 9, 15, 16 and 18)
- Communications procedures highlighting power outages particularly in support of the Island communities (Recommendation 11)

The 'People' category was another common theme which emphasised the importance of succession planning and an overview of the people in the room (Recommendations 1 and 3).

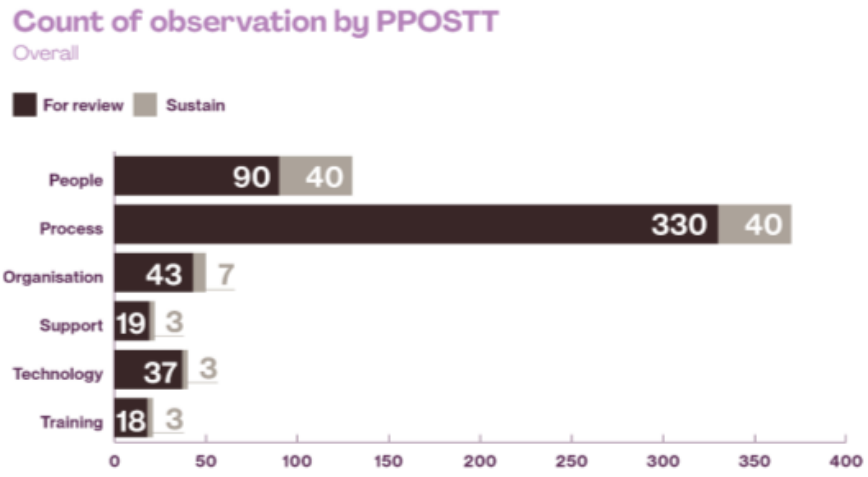


Figure 4 *Count of observation by PPOSTT captured during all debriefs.*

The recovery debrief also highlighted a need to develop documentation.

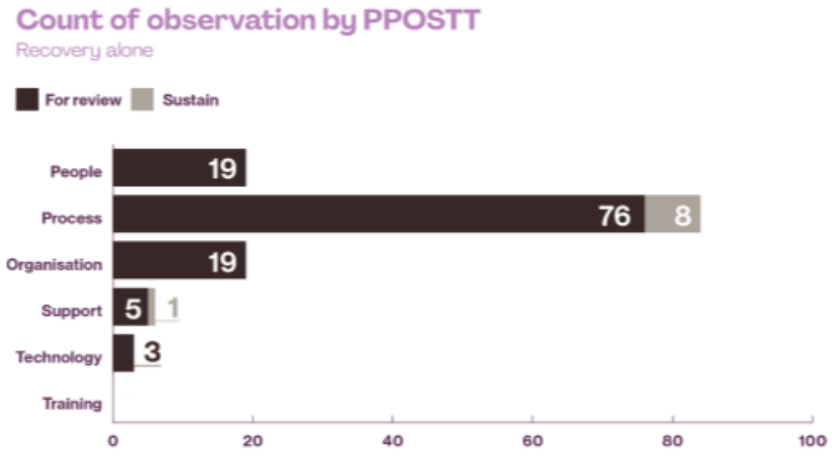


Figure 5 *Count of observation by PPOSTT captured during the recovery debrief.*

National Theme Level 1

A summary of observations by the National Theme Level 1 is also provided (Figure 5), noting that governance and resources were common themes.

Governance comments generally relate to developing and reviewing procedures (Recommendation 7, 8, 9, 11, 15, 16 and 18). Resources typically refers to suitability of sites and ensuring relevant resources are available (Recommendation 6).

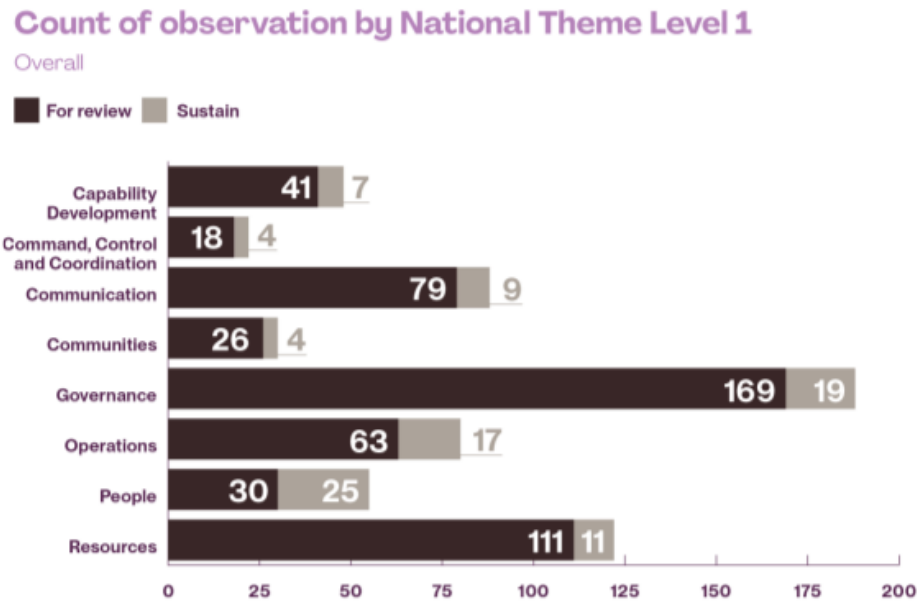


Figure 6 *Count of observations by National Theme, level 1, across all debriefs.*

The recovery debrief highlighted the requirement for more resources to support the ongoing needs of recovery.

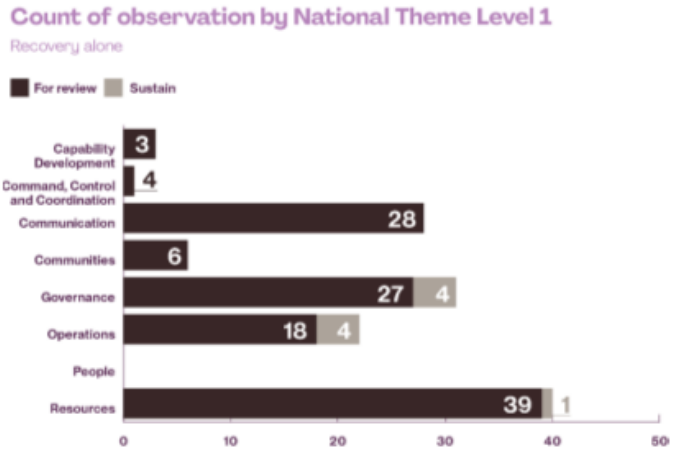


Figure 7 *Count of observations by National Theme, level 1, captured during the recovery debrief.*

MentiMeter

MentiMeter was used during the response and relief debriefs to capture participants responses to the following questions:

1. Enter one word that describes this event for you.
2. Were decisions made in a timely manner by the appropriate person?
3. Enter one word that describes the messaging for this event.
4. Did the community receive relevant and timely messages?
5. How effective was the interoperability for this event?
6. Enter a word that describes the interoperability for you.
7. Did you use procedures previously developed?
8. What were your key takeaways from this event?

A copy of the responses is available at Appendix B with varying results across each group. The following word cloud provides an overall analysis of the responses to the first question above (Figure 8).

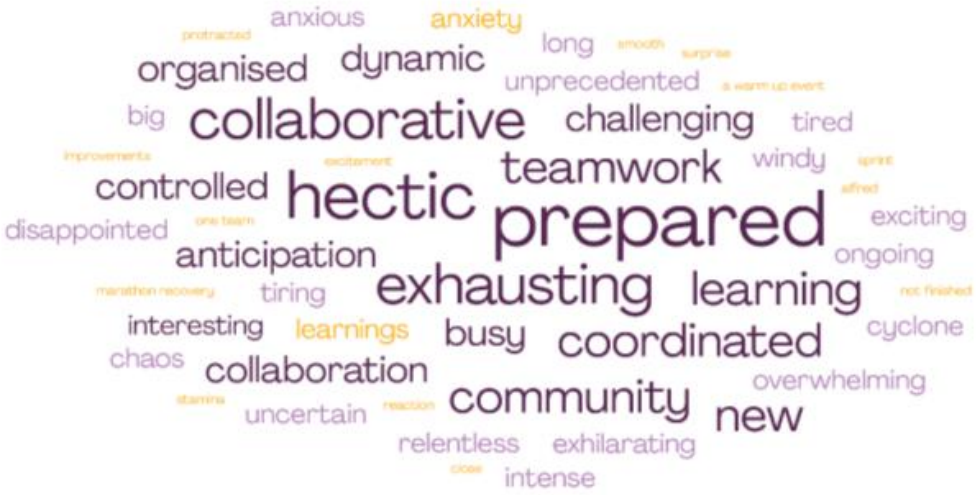


Figure 8 Debrief participant submissions of one word that described the TC Alfred event for them.

Survey analysis

A survey was provided to the debrief participants. Any learnings from the responses have been added to the Observations Register. In addition, the following results were identified (Figure 9).

Refer to **Appendix C** for a complete data set from the survey.

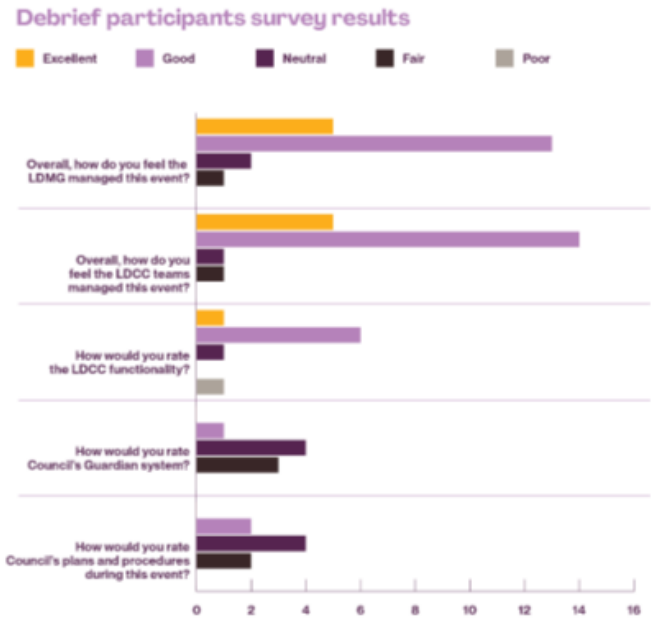


Figure 9 Debrief participant survey responses to five key questions.

"We can always learn and improve from previous activations as long as we implement the recommendations that come from surveys like this one."

Review participant

Review insights

Overview

Of the observations received, nearly 18% of these were positive comments. A summary of positive comments is provided below.

- ✓ Council was able to use the delay in the crossing of TC Alfred to be well prepared for the event impact.
- ✓ With the involvement of 47 agencies to support the Redlands response, it was clear the relationships previously developed played an important role in supporting the Redlands community for this event.
- ✓ Council received high praise from the officers within State Disaster Coordination Centre regarding Council's technique in approving and delivering their emergency alerts.
- ✓ Council's Community Champion program continues to be a valuable link to the needs of the community.
- ✓ An early pivot of sandbagging process allowed the production of enough resources to support the high demand.

"Over 160 non-operational RCC staff responded to a call for assistance to support operational activities over a 7-day period."

Review participant

- ✓ The Council-to-Council arrangements provided excellent support within the LDCC.
- ✓ It was highlighted early that recordkeeping and photographic evidence will be important for funding opportunities.
- ✓ Real time data available in Guardian was helpful.
- ✓ The sequencing of meetings from LDMG through to local Human and Social group worked well.
- ✓ Regular Human and Social recovery meetings in BAU ensured a strong membership base.
- ✓ The Queensland Reconstruction Authority were involved from beginning of event allowing an early submission for funding support.
- ✓ Data and evidence, collected in an interactive live map, helped inform the recovery packages.

"Communication to and from the State was very well done with information received in a timely manner."

Review participant

On review of all observations, ongoing improvements can be achieved in various areas. This report details the opportunities and provides recommendations for Council to consider with the goal of improving future activations.

People management

The debriefs highlighted a need to ensure the overall capacity and capability of the disaster arrangements are supported with a focus on a continuation of delivery through the recovery phases. It is recommended that the following products are developed to guarantee fatigue management is supported, the correct expertise is in the room and management are aware of the ongoing requirements of their officers:

Succession Plan

- A Succession Plan is required to identify alternate resources that can be called upon during an activation. This will support continuation of responsibilities and staff fatigue. The Succession Plan should include particular focus on the role of the Disaster Management Service Manager.
- It is worthwhile for Council to consider staff which are not heavily impacted during disaster events and can support the LDCC, particularly with the availability of a significant workforce to draw upon.
- It is important to ensure the Succession Plan is approved by Council's Senior Executive Team to guarantee an agreement across the organisation to release staff during response and through the phases of recovery.

Skills Matrix

- The development of a staff Skills Matrix will assist in recognising BAU expertise to strengthen the overall capacity and capability of the LDCC. This matrix should include the roles of recovery and the residential location of staff to support safety requirements when travelling to their disaster management place of work.
- A review of the LDCC roles and responsibilities following TC Alfred operations, will ensure the LDCC positions highlighted in the skills matrix are relevant.

BAU manager training

- To ensure BAU practices align with disaster management and support fatigue management, it is recommended Council's leadership team undertake a training session on the expectations of their staff during disaster operations.

#	Recommendations
1	Develop a Succession Plan, approved by Council's Senior Executive Team, to ensure continuation of responsibilities and support staff fatigue.
2	Review the LDCC roles and responsibilities and develop a staff skills database cataloguing current disaster management and Council BAU skills and qualifications.
3	Undertake training with Council's leadership team on the expectations of their staff during disaster operations.

"We need more people for recovery. Wearing three hats is not sustainable."

Deputy Mayor

Facilities

LDCC

Internal and external officers mentioned a requirement to know the staff on-shift within the LDCC and on-call contact details for easy reference. The recovery debrief also stressed the importance of ensuring the needs of recovery continue to be supported once the LDCC has finished supported response and relief.

- LDCC SMEACs Board
  - With the relocation of the LDCC, there is potential to develop a SMEACS (situation, mission, execution, administration, logistics, command control, safety) board to provide overall situational awareness of the event. The SMEACS board should include relevant on-call contact numbers to assist fatigue management. It is recommended that this board converts from a response focus to a recovery focus at the relevant time.
  - The SMEACs Board should also be available electronically for agencies who are working remotely.
- LDCC Recovery structure
  - To ensure the continuation from response to recovery and draw on the expertise already working within the LDCC, it is recommended a recovery structure be developed which aligns with the Succession Plan (Recommendation 1) and staff Skills Matrix (Recommendation 2). Considerations include the requirement for ongoing roles within the Coordination Centre e.g. communications, planning, operations (for tasking) and logistics.

#	Recommendations
4	Develop a SMEACS (situation, mission, execution, administration, logistics, command control, safety) board to provide situational awareness during all phases of an event.
5	Develop a recovery structure which highlights the continuation of the LDCC from response to recovery.

Support facilities

TC Alfred highlighted the lack of suitable locations across Southeast Queensland that are safe during a cyclone including the LDCC, evacuation centres, refuge centres, day drop-in centres, and recovery centres. This provides an opportunity for Council to review their current facilities to ensure they are the most effective, safe, and sustainable location for the region as well as ensuring the correct procedures are in place.

An audit is required of all disaster related facilities to determine the suitability in relation to a range of hazards including cyclonic winds. To assist the funding for the delivery of these centres, it is recommended that Council advocate to the State and Federal governments for support.

Suggested improvements these centres include the following actions for Council's consideration:

- Conduct a risk analysis to ensure the site selection:
  - is in an appropriate location
  - is not in immediate danger of the hazards faced in the region
  - has available facilities (e.g., accessibility, power, ablutions, security).
- Support Centres also require appropriate spaces that can be used to separate groups within the centres and provide support to elderly or those with a disability if required
- governance arrangements are in place for Support Centres including:
  - updated procedures and arrangements to confirm building layouts and access protocols
  - support agencies, including Community Champions, understand the role they are required to undertake within the centres
  - Centre personnel are receiving regular updates
  - Centre supplies are:
    - appropriate for the needs of the centre, including centre kits and signage
    - stored appropriately to avoid damage
    - easily accessible
    - regularly audited.
  - relevant equipment is available, and appropriate training in operation of equipment like generators is

conducted
- relevant and regular training is provided
- a staff Skills Matrix is available to support rostering during an event.

#	Recommendations
6	Undertake an audit of all disaster related facilities to ensure they are the most effective, safe, and sustainable location for the region; and advocate to the State and Federal governments for funding to improve facilities where required.
7	Conduct a review of the procedures for Support Centres to ensure efficient governance arrangements are in place.

Councillor Liaison Cell (CLC)

During the response to TC Alfred, the ICCC managed the Councillor inbox and calls.

To ensure the ongoing delivery of the role the elected members perform in delivering relevant information from the LDCC to their community, it is recommended a CLC is embedded in the LDCC to manage the flow of information and deliver operational tasks to City Operations. This would enable the ICCC to continue with their role of delivering customer service for the Redlands community.

Consideration should be given to staffing the CLC with officers who typically have a high level of interaction with Councillors to ensure a level of confidence.

Roles and responsibilities would need to be developed to support this function as well as relevant procedures and the delivery of disaster management training including Guardian.

#	Recommendations
8	Embed a CLC into the LDCC, develop procedures and conduct training to support.

Procedures

The TC Alfred Observations Register identifies numerous procedures which require either a review or development of new documentation, including:

- briefing packs for incoming council-to-council teams
- shift handover templates
- roles and responsibilities templates
- timesheet authorisation
- internal processes for power outages
- Guardian factsheets
- Data base of local businesses to support ongoing recovery.

Consideration may also be given to working with Council's ICCC to develop the procedures within an electronic Knowledge Management System for ease of use.

Disaster management resourcing

The Australian Bureau of Statistics identified the estimated resident population for the Redlands region at 166,809 in 2023. The Redland City Council Corporate Plan to 2026 and Beyond[5] states

by 2041, the population of Redlands Coast is expected to be approximately 192,000.

Council's Disaster Management Unit is functioning beyond capacity at an exceptionally high level to support the expected growth of the region. The maturity of Council's response and recovery, and frequency of activations, demands a

[5] Our Future Redlands – A Corporate Plan to 2026 and Beyond

dedicated specialist position focusing on the role of planning, updating old and developing new procedures as highlighted in Recommendation 8 to *embed a CLC into the LDCC, develop procedures and conduct training to support.*

The recovery debrief also recognised a lack of resourcing for the Local Recovery Group. During an event it is recommended this officer becomes the lead support for the LRG until the LRG is stood down. It will then become the responsibility of this officer to update recovery documentation based on the findings of the event and align with the Local Disaster Management Plan.

This Officer will need to work closely with the DMU training coordinator to ensure that the efficacy of plans is continually exercised against all recognised hazards.

#	Recommendations
9	Update current procedures and develop new procedures based on the findings from TC Alfred and consider developing these procedures within a Knowledge Management System.
10	Employ a disaster management officer to focus specifically on planning and support the recovery phase during events.

Communications

The following word cloud (Figure 10) was developed during the response debriefs and provides an analysis of the community messaging for this event identifying an overall positive response during a challenging time considering the lack of connectivity across the region.

Figure 10 Debrief participant description of community messaging during TC Alfred.

The region experienced a loss of power to nearly 50,000 residents. This, along with the challenges of a sporadic (off again, on again) event, caused difficulties with the community messaging with some observers finding the communication with the community to be passive when a more urgent approach was needed. Many North Stradbroke Island residents felt forgotten with no connectivity for an extended period. Other residents were frustrated by the constant messaging instructing them to "seek latest updates on the Disaster Hub" when power outages were preventing them from accessing the Disaster Hub.

It is recommended that Council considers alternative communication channels during power outages. For example, signage in local stores, radio announcements, word of mouth with trusted sources, and templated messaging.

Updating current and developing new procedures and templates based on the findings from TC Alfred is required.

A targeted training program for the Communication Team should be developed to complement the newly developed procedures.

#	Recommendations
11	Develop communication procedures and templates based on the findings from TC Alfred and deliver a training program specific to the Communications Team.

Island communities

TC Alfred caused particular challenges for North Stradbroke Island (NSI) and Southern Moreton Bay Islands (SMBI) communities due to the isolation caused when the Harbour Master directed the closure of vessels on Moreton Bay stopping all emergency services and transportation.

As highlighted in the 'Communications' section above, NSI communities felt forgotten by the mainland.

Whilst Council's Community Champion program continues to be a valuable link to the needs of this community, further work is required to ensure ongoing support, including:

- work with Telco's to identify ways to ensure reliable power and prioritisation for accessing the service. Ideally Starlink would be located permanently on the islands
- develop a community and local business skills matrix to identify available resources on the island e.g. professional services (doctor, builder), generators, etc.
- whilst working with Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC) provided a successful model for transferring information to the Quandamooka community, a maturity of the Community Champion program is required to support the larger NSI community and ensure a two-way flow of information to and from the LDCC
- consider support from local church groups and community service providers to further support the vulnerable community.

During the recovery debrief, it was identified that local businesses on North Stradbroke Island may be available to support communication and resources. A database of available business resources is developed to support this concept.

#	Recommendations
12	Complete a review of Council's Community Champion Program with a particular focus on North Stradbroke Island.
13	Develop an island-based Business Skills and Services Matrix.

Community Resilience

The Personal Hardship Assistance Scheme (PHAS) has provided nearly $13 million to Redlands residents who experienced hardship due to the impacts of TC Alfred.

A number of observations from the Review related to a perception of community reliance on government to solve a range of issues including assistance to power and connectivity.

Whilst it is understood Council has an ongoing preparedness program, it is recommended Council continues to deliver Get Ready Queensland and other preparedness initiatives with a significant focus on resilient measures during power outages.

#	Recommendations
14	Continue delivery of Council's disaster preparedness program for community education. Consider a focus on resilient measures during power outages.

Operations

A targeted debrief with City Operations identified that the team requires more planning to further support the activation of operations.

Consideration may be given to develop an 'Emergency Response Group' – this group may be stood up to coordinate the operational response, work directly with the LDCC and redirect the BAU activities where needed. This function may also stand up for smaller events when the LDMG is not activated.

It is recommended that the current procedures are reviewed to ensure:

- the inclusion of triggers and actions
- roles and responsibilities are relevant, particularly for the leadership roles
- activation during the preparedness phase, to have synergy with the LDCC

- develop a risk profile identifying Council assets, the function they perform, and priority of use during a disaster
- further work with Energex to restore power in parallel with Council clearing the roads
- review the process for the Disaster Recovery Funding Arrangements (DRFA) to:
    - ensure consistency across systems
    - update procedures and develop a tip sheet considering the findings from TC Alfred
    - ensure the metadata is up to date with before and after photos
    - ensure an ongoing training program is in place.
- relevant procedures are in place for the deployment of VMS signage during the preparedness phase.

#	Recommendations
15	Complete a review of the procedures for City Operations and consider the development of an Emergency Response Group to support future operations.

The following word cloud was developed with City Operations, in relation to Council's operational services.

Figure 9 Words used by debrief participants to describe Council's operational services during TC Alfred.

Local Disaster Management Group

Queensland's disaster management legislation specifies the functions of the LDMG as well as the conduct of business and meetings.

The Review highlighted that the LDMG meetings were overly time-consuming for all involved. It is recommended Council reviews the governance of these meetings including:

- a reduction of LDMG membership to a core group of agencies relevant to the event
- identify a single resource (position) to complete meeting agendas and minutes ensuring a consistency of documentation
- ensure agencies provide updates prior to the meeting to be included in the meeting minutes and verbal updates are delivered by exception only.

"Attendance needs to be tightened. Some people were asking questions that should not have been addressed at that time."

Review participant

It is also recommended that a review of the recovery group membership is also completed ensuring a local representative is identified as the Sub-Group Chair and a State representative as the Sub-Group Deputy-Chair. This model will support the expectations across agencies.

Sub-Group Chair and Deputies are then encouraged to continue developing the relationships through quarterly or six-monthly meetings/training and exercising during peace time.

#	Recommendations
16	Review the governance arrangements for the Local Disaster Management Group, Local Recovery Group and Recovery Sub-Groups.

The below results were captured during the LDMG presentation

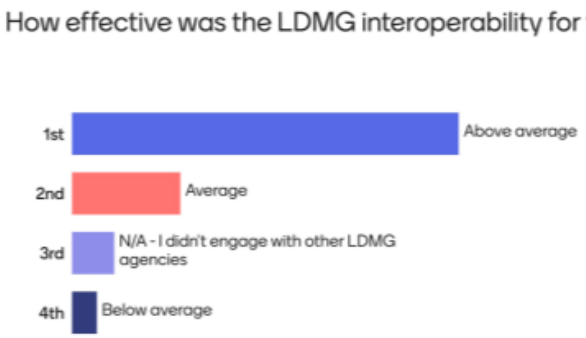


Figure 10 Effectiveness of LDMG interoperability for TC Alfred.

"The LDCC is there to operationalise LDMG decisions, yes it is comprised of council workers - but it is not there just for council - it is there for the community, to manage the impact and coordinate the disaster response and recovery, council is one of the LDMG agencies and it's needs/requests should not impact the ability for the LDMG/LDCC to respond to the disaster as a whole."

Review participant

Recovery

Whilst recovery continues during this debrief for the response phase, it was identified that further work is required to ensure continuation of resources to support recovery including staffing (Recommendation 1 and 2) and development of procedures (Recommendation 8).

A maturity of the recovery reports and ensuring ongoing sharing of information is also required once the LDCC has moved from response. In particular, the Impact Assessments are required to allow the Recovery Sub-Groups to understand the needs of the community and identify ways to support these needs.

#	Recommendations
17	Mature recovery reporting.
18	Develop procedures that ensure the ongoing sharing of information for recovery, with a particular focus on impact assessments.

Conclusion

While TC Alfred presented a range of challenges for the Redlands region, Council was able to respond to this event with an understanding of potential impacts from a cyclone and mechanisms required to support their community. This may be attributed to Exercise Milberran, delivered by Council prior to TC Alfred. The exercise was found to have provided a foundation to build on the relationships required to support response to the TC Alfred event.

TC Alfred presented many new opportunities and highlights for Council including, but not limited to:

- ✓ pivoting to a new location for the LDCC to ensure safety
- ✓ pivoting to a different format for sandbags
- ✓ being well supported by the Council to Council (C2C) agreement
- ✓ recognition from the State government in regard to Council's response
- ✓ special mention for the recovery phase of this event. With an early standup of the functions of recovery the preparation ensured the Local Recovery Group was in a good place to support the community through immediate, medium and long-term recovery.

Council is to be commended on their response to TC Alfred. As outlined in this report, there are opportunities for further improvements by Council to embed the learnings to support the Redlands community in future events, particularly from loss of power and isolation.

Additional work is also required to guarantee greater support for recovery when response has ceased operation. It is noted that Council's current Recovery Plan is due for a review. Consideration to the learnings from TC Alfred provided in this report should be included in this review.

Yellow congratulates Council on embracing this debrief process, demonstrating a culture of continuous improvement. This report considers the ideas and active participation of all involved. It is recommended that the lessons identified and recommendations in this report are integrated into the DMU's lessons management framework and tracked with other report recommendations. The Implementation Plan should:

- monitor and track the progress of the recommendations
- identify roles and responsibilities of key stakeholders for implementation
- ensure timelines are being met within budget
- record actions for future disasters including the training or testing of the recommendation via an exercise.

Appendices

Appendix A – Observations register

Redland City Council - Observations

#	Group	Topic	Observation	Sustain	Theme 1	Theme 2	Theme 3
1	Email	Councillor	Installation of Solar and batteries on RCC assets like Rec Club - Hall - Surf Club(RCC asset?) - Golf Club.		Process	Resources	Resources - Equipment
2	Email	Councillor	Community Starlink systems for disaster deployment. Setup Wifi hubs with in above locations.		Technology	Resources	Resources - Technology
3	Email	Councillor	Disaster coordination between existing community groups/associations, Bus - Shopping service - Men's Shed - Coast Care - Rec Club - Op shop.		Process	Operations	Operations - Interoperability
4	Email	Councillor	Community Care Team with a link to a future health hub.		Process	Operations	Operations - Interoperability
5	Email	Councillor	Coochiemudlo SES		Support	Operations	Operations - Agency specific issues
6	Email	Councillor	Community two way radios for vulnerable people to stay in contact with Community Care Team and Disaster management/coordinator.		Technology	Resources	Resources - Technology
7	Email	Councillor	Proper cyclone rated Community Building with capacity to accommodate people - Commerical kitchen - Proper ablution block (Shower - toilet- disability provisions). That could serve as the health hub location and SES facilities.		Process	Resources	Resources - Facilities
8	Email	Emergency Management Coordinator	We need to clone [redacted] This was a common expression during the event, and has truth behind the humour. [redacted] is the fountain of knowledge and a great decision maker during disasters. The downside is that [redacted] is human, and needs to sleep occasionally. I recommend looking at training / enabling a couple of other staff to operate in a similar way to [redacted] to build redundancy.		People	Resources	Resources - People
9	Email	Emergency Management Coordinator	Fatigue management and staffing. A few cell leaders mentioned they had little / no experience and felt a bit out of their depth. Wider LDCC recruitment, training and exercising should strengthen the staffing pool.		Training	Capability Development	Capability Dev - Training & development
10	Email	Emergency Management Coordinator	It was great to see the council to council support, in addition to relieving local staff our colleague from up north brough great experience and ideas. Consider making this a norm when funding allows.	✓	People	Resources	Resources - People
11	Email	Emergency Management Coordinator	Consider having a briefing pack for incoming C2C teams. A 1-2 page document that gives the basics of Redland LGA, the unique local challenges and an overview of how the RCC, LDMG, and LDCC are staffed and operate.		Process	Governance	Governance - Process
12	Email	Emergency Management Coordinator	Whiteboards. The LDCC needs more, and they need to be used. I observed one (intel) and it hadn't been updated in a while. The information was out of date to the degree that it risked confusing the current situation (though fortunately people weren't consulting it, preventing the confusion this time around). Adding "accurate at" to the board may assist with this.		Process	Resources	Resources - Equipment
13	Email	Emergency Management Coordinator	Consider a process for getting approvals done rapidly, especially with key roles being in meetings. Even something as simple as a clearly visible "Approvals in" tray could be enough.		Process	Governance	Governance - Process
14	Email	Emergency Management Coordinator	Meetings. There were a lot of meetings, and they were long. As a positive there was great coordination between all of the agencies and I didn't see any duplicated / wasted effort. That said, tightening meetings could free up a lot of time. Consider having team / agencies updates dropped into the Teams chat rather than giving 5-10 mins for each, this allows for faster assessment and more time on coordinating the next steps.		Process	Governance	Governance - Process
15	Email	Emergency Management Coordinator	Australian Warning System. Redland LDCC received praise from the SDCC for their work in this space. That was due to [redacted] and the enthusiasm of the comms team. I recommend we arrange AWS training for the comms team to build confidence ahead of future events. (I am happy to arrange this, the state Public Information and Warnings Unit are happy to come out to deliver the training).	✓	Training	Capability Development	Capability Dev - Training & development
16	Email	Emergency Management Coordinator	Shift handovers - consider implementing handover templates for Room Manager and each Functional Group Leader, ensuring all key tasks and issues are covered. Not only will this reduce the risk of key information being lost, it can be saved into Guardian for reference.		Process	Governance	Governance - Process
17	Email	Emergency Management Coordinator	Consider templated Shift Briefings. The handovers were great from a morale perspective, with staff feeling valued and welcomed, but they didn't consistently include key tasks for each functional group or ongoing priorities.		Process	Governance	Governance - Process
18	Email	Emergency Management Coordinator	Lets get a large wall map of the LGA. Being able to point to an area helps gives context, especially for those unfamiliar with the area. They also look cool (morale and photo op benefits).		Process	Resources	Resources - Equipment

19	Email	City Assets Civil & Traffic Infrastructure	Lack of road closure signage, ideas: -Permanent metal signs are bulky, costly, and difficult to store in large numbers, -Corflute do not have a long life and breakdown, and therefore unsuitable, -Council could ask suppliers if they could supply "road closed" signs on a stabilised plastic sheet, -For a similar event we are probably looking for a minimum of another 200 signs.		Process	Resources	Resources - Equipment
20	LDMG	Leadership	The district mirrored our level of activation which could be pushed through State	✓	Process	Governance	Governance - Process
21	LDMG	Leadership	Looking across a lot of the districts it did seem like the Districts stood up earlier. More connectedness between state and local. The arrangements were working	✓	Process	Governance	Governance - Process
22	LDMG	Leadership	Two way street, what's coming out of the LDCC needs to be clear so the next layer can do their direction and tasking		Process	Operations	Operations - Situational awareness
23	LDMG	Leadership	With regard to the council organisational responses there was a bit of disconnect from LDMG and the organisation understanding where the DM fits in BAU		Training	Capability Development	Capability Dev - Training & development
24	LDMG	Leadership	Very challenging at start, certain people were POC e.g [redacted] becomes single point of failure. Need a proxy, 2 shifts 12 hours		People	Resources	Resources - People
25	LDMG	Leadership	Org structure - Need to know the leads at each cell to know who to contact		Process	Governance	Governance - Process
26	LDMG	Leadership	RCC communicated rosters through a team group which didn't go to agencies. That would be helpful		Process	Governance	Governance - Process
27	LDMG	Leadership	Disconnection with LDMG - knowing how to link in. I have a team who can do that. We did split shift 6am to 7am. I would provide update to [redacted] Need to get roster in early and trained in AIMS (QDMA). City Water does practice throughout the year		Training	Capability Development	Capability Dev - Training & development
28	LDMG	Leadership	SeaLink - the complexity of the islands needs to be considered. We just can't get there, it's a layer that needs to be considered in planning		Process	Operations	Operations - Interoperability
29	LDMG	Leadership	Fatigue management very difficult - people on the ground and not having comms to the island. Very difficult to manage the fatigue aspects		People	People	People - Human factors
30	LDMG	Communication	When the Emergency Alert campaign goes to state and gets released from state, its not an automatic process. NSW were about to send messages as well about flooding. Qld and Northern NSW messages at the same time. In the SDCC they called and advised the message was ready to go at 4pm. If you wait you will caught up in the NSW and may not get the message out until tomorrow morning or we can send at 3pm and get the message out quickly which was approved and happened. Big thank you to SDCC for awareness of what was going on in another State.	✓	Process	Communication	Communication - Public information
31	LDMG	Communication	Community Champion - as soon as the power went out IGA got hit. A few went to the IGA, I had a box of radios. Switched everything off and concentrated on the radio. ABC is all they could get. ABC did a fantastic job.	✓	Process	Communication	Communication - Public information
32	LDMG	Communication	Community Champion - have bad connectivity at the best of time. We had one extension cord in the back of the RFB. The power went out 3 days before cyclone. Even people with generators ran out of fuel. The message kept changing as to when the power would come back on. Karragarra did an excellent job with a letter box drop of services - info of who to contact where. We will do this next time. We had no idea of who was in charge of what, nor do we care. But if we sent a message at 3am, [redacted] replies. We had connection through Council workers. Didn't know who, but did feel connected no matter what.	✓	Process	Communication	Communication - Internal communication
33	LDMG	Communication	Community Champion - we don't have anything on Karra, we do have RFS. [redacted] was amazing, opened fire station, turned on generator. Optus went out, some Telstra went out. RFS was amazing, did food. Comms was on point	✓	Process	Communication	Communication - Public information
34	LDMG	Communication	QPS online - deployed to Brisbane to assist on night shift. Appreciation to [redacted] - professional to work with. The messaging was complex and wide spread	✓	People	People	People - Culture
35	LDMG	Communication	QAS - over course of Friday and Saturday - trouble getting up to date info on road closures up to 24 hours after a road was closed. Big issue with the major road being closed to Redland Bay which wasn't updated for some time.		Process	Operations	Operations - Interoperability
36	LDMG	Communication	Infra ops - had to move to GWN network ASAP. Bit old school, back to old system. Then post event - power and comms were out for some. Only parts of city getting the messaging not the whole of the city. Had to share messages with people who didn't have connectivity - needed to be prepared, good relationships with suppliers with VMS boards etc. Be flexible.		Process	Communication	Communication - Internal communication

37	LDMG	Communication	Periods of time where 000 will go out for extended periods of time. Complex mix of providers. One of the key things, advocating for a long time - island, ineligible for black spot funding. We know this is a single point sensitivity. Often talk to people in the command centre - they wouldn't realise the fix was needed on the island and couldn't get there. We've got fuel, you've got the tower - how can we get this fixed. Can't always have a telco close by. We need government and telco's to invest in connectivity on the islands. Can we do anything from an LDMG point of few?		Process	Communication	Communication - Public information
38	LDMG	Communication	KAYAK - Quandamooka community - thank you everyone for your efforts for us. The info we got was great which we could communicate through our channels. The LDMG process and info provided was the foundation for our communication. I would like to formalise a bit more, for us collectively, I would like to see what we did and what it cost. White Water Rafting - opportunity to look at these events and how we train our community and services. We want to advocate to have infrastructure on the islands. We need data on what it costs to have generators on the islands and train people on the island. Opportunity to look at us as a community collectively. If we going to be a resilient community - schools etc. Once a year simulate an event.		Organisation	Governance	Governance - Organisational
39	LDMG	Communication	Internally had issues with radios and comms. We have teams with generators and extra staff with SEQwater, we experienced similar our batteries went out early, need to go to 76 hours. We have people who will work around the island. We could help out. This was an unknown gap - we can possibly fix this.		Process	Governance	Governance - Process
40	LDMG	Communication	Council Contact Centre - while we were having 600 phone calls we also had 400 people checking in on people with a message. Never want the call centre to say I don't know. We could have more rapid in flow of info from LDCC to contact centre. Contact Centre LO sitting in the LDCC full time. The outbound comms is not enough for the contact centre.		People	Resources	Resources - People
41	LDMG	Communication	Comms Team - AWS - [redacted] talked us through the process weeks before and updated templates. Shout out for helping with advice to start with and agency LOs who were outstanding in crafting messaging - sound robust advice	✓	Process	Operations	Operations - Interoperability
42	LDMG	Communication	AWS was very well picked up. Redlands asked for advice which put them ahead of everyone else.	✓	Process	Communication	Communication - Public information
43	LDMG	Communication	When the AWS went out we got a lot of calls asking what the advice means. Heads up beforehand what the messages mean.		Process	Communities	Communities - Preparedness
44	LDMG	Communication	Stradbroke community understand impacts and needs [redacted] had to do own SITREP. Mail out to 10K businesses leading out. Mobile connectivity - generators - fuel. [redacted] was sending updates to [redacted] as he has Starlink who would then share with his community. Who was sharing what with who. Roles and responsibilities from a geographic approach to the islands and everyone has a pack - knows generator, Starlink account, where to get fuel		Process	Governance	Governance - Process
45	LDMG	Communication	Community Champion - attending the LDMG meetings - I'd take notes and email to everyone or stick on a noticeboard. Gave us specific info e.g. sewerage didn't affect us but info on the ferries or on the hubs was really important. I had good connectivity at my place but without this no info would go out. Russell Island - couldn't find out what they were going to do with the generators when they arrived. As it was on the news from the Premier our families then asked why we didn't have power.		Process	Communication	Communication - Public information
46	LDMG	Communication	Political influence - QAS Bay Islands - we received a directive to place paramedics on each on the island but don't have anywhere to house these officers. Trouble trying to find accommodation. Housing on RFS shed on Lamb in the shed on stretchers with ration packs. Karra - Real Estate offered accommodation which was empty. Agreed we needed people there but the logistics was difficult.		Process	Operations	Operations - Agency specific issues
47	LDMG	Interoperability	Heard from [redacted] that there was water outages affecting some homes Saturday night. Trying to get bottled water to watermains. Within 30 minutes we had a palate of water and could drop off to homes.	✓	Process	Resources	Resources - Equipment
48	LDMG	Interoperability	QPS - there was lack of times of LOs in the room. One of the biggest challenge was that we didn't know who the LO was so the synergy of having the right person in the room at the right time. Critical times when we didn't have people.		Training	Capability Development	Capability Dev - Training & development
49	LDMG	Interoperability	We don't have fit for purpose infra for cyclone event and also on the island for PoR which were opened out of political and necessity. This event highlighted big decision on infrastructure moving forward. The initial location didn't have capability of generators etc. All worked remotely from an early time, at various times people came back into the room		Organisation	Resources	Resources - Facilities
50	LDMG	Interoperability	We used a second LDCC after the event there is a large room available but some agencies didn't come back.		Organisation	Resources	Resources - Facilities

51	LDMG	Interoperability	QAS wondered if we should have had a rep in the room, 3 attended the meetings were operational. Over the week, tagged in and out, fatigue was a big problem. Need to push it up as an organisation.		Organisation	Operations	Operations - Agency specific issues
52	LDMG	Interoperability	LDCC LO's was a challenge in Redlands and Brisbane - didn't know the lead contact. Critical to have info, reflex on LO's and engagements from agencies. From District we had agencies feeding into the district. Very heavily reliant on info from the local level which meant we weren't getting a lot of questions from the State. We need a contact board with LO on'call mobile numbers. Has to be bespoke to the event.		Process	Operations	Operations - Situational awareness
53	LDMG	Interoperability	Critical for us we need to stay out of way while response is happening but critical for us to get the information and know what is going on to inform community on our recovery websites. We were able to position ourselves from the info from the LDCC plan A and Plan B quickly. The support sector was supportive and responsive because the responsiveness of council.		Process	Operations	Operations - Situational awareness
54	LDMG	Interoperability	Safety RCC - support from QPS preparing Refuge Centres. Needs to be action around suitability of these centres. The ROC Christian Centre had a fantastic centre that could have been a good resource as a refuse centre.		Process	Resources	Resources - Facilities
55	LDMG	Interoperability	Energex - in terms of LO's they need to look in to data intensive applications. It works much better to be in one of our centres. Also interagency prioritisation - where we need to restore supply ASAP - very difficult to get good comms out quickly particularly for critical loads e.g. pump station. Personally - pre-emptive doorknocking was well received by my son.		Process	Governance	Governance - Process
56	LDMG	Interoperability	Community Champion - we know a lot about our communities that you don't know e.g. who is a retired nurse or who has a generator. Need a specific profile from each agency what they need e.g. power shed we can use but have no generators. Need to understand the demographics of the islands and the needs for that islands. Each agency wants to write what you need from us, we can fill it out on the islands. Island asset profiles with yearly updates		Process	Governance	Governance - Process
57	LDMG	Interoperability	Thank you to people who organised the recovery hubs - everybody on our island appreciated it as they have never had something like this on our island.	✓	Support	Communities	Communities - Engagement
58	LDMG	Interoperability	Interagency Energex and City very connected with SEQ water and WTP. What we lacked there was a gap about asset criticality lists, confusion during what the criticality were and our ability to keep services running vs not.		Process	Governance	Governance - Process
59	LDMG	Interoperability	First time in my living memory to have a cyclone in SEQ - burst the bubble. Allowed real conversations to be ready for cyclones. Including appropriate safe PoR and LDCC. This was a real concern for us to provide accommodation for people who needed it - but struggled with putting them in an unsafe location. All research shows cyclones are moving further south. Important we take the lessons and get ready for the next event.	✓	Process	Resources	Resources - Facilities
60	LDMG	Key takeaways	Connectivity was small or no connection for many so quite a lot of information was lost		Technology	Resources	Resources - Technology
61	LDMG	Key takeaways	Close contact through LDMG was vital for the SES. Suggest an Org chart for the LDMG to be shared to all other agencies LDMG - Need to run 24/7		Process	Operations	Operations - Interoperability
62	LDMG	Key takeaways	The QDMA needs to be followed to ensure an effective locally led approach		Training	Capability Development	Capability Dev - Training & development
63	LDMG	Key takeaways	Supporting island evac centres in the initial phase from the mainland need further consideration - access, keeping food safe, personnel based where (accom). What happens if mainland is also trashed.		Process	Governance	Governance - Process
64	LDMG	Key takeaways	Success came from strong leadership, high morale, support from councils in the north and that Redlands had extensively exercised cyclones.	✓	People	People	People - Culture
65	LDMG	Key takeaways	Connectivity is key. Clear AIIMS structure, unity of command is also key.		People	Command, Control and Coord	Command Control Coord - Leadership
66	LDMG	Key takeaways	Defining items. Diversions and detours vs alternate routes. Diversions and detours are preplanned and capable of handling diverted traffic. Alternate routes are the roads used as is."		Process	Governance	Governance - Process
67	LDMG	Key takeaways	Communications are critical. RCC would benefit from a new LDCC. Cyclone rating should be done for all coastal Qld buildings. Fed funding needs to be able to back-dated to allow early reconstruction.		Organisation	Governance	Governance - Organisational
68	LDMG	Key takeaways	Communication is key and standing up early was the correct decision.		Process	Communication	Communication - Internal communication
69	LDMG	Key takeaways	More LDMG-LDCC organisation at the top level so that LDMG agency partners know who is on shift to contact in the room, who is who and when, and similarly so LDCC staff know what agencies are available		Process	Operations	Operations - Interoperability
70	LDMG	Key takeaways	Great collaboration	✓	People	People	People - Culture

71	LDMG	Key takeaways	Keep practicing		Training	Capability Development	Capability Dev - Training & development
72	LDMG	Key takeaways	List of key partners. Inter operative collaboration. Understanding decisions made and what information needed to be shared.		Process	Operations	Operations - Interoperability
73	LDMG	Key takeaways	Engaging in person in the LDCC	✓	Process	Operations	Operations - Situational awareness
74	LDMG	Key takeaways	Well managed, complex, small opportunities for improvement 8/10	✓	People	Command, Control and Coord	Command Control Coord - Leadership
75	LDMG	Key takeaways	Need to reduce RCC non LDCC tasks from the LDCC (such as Mayors briefings or speaking notes), managing councillor enquires or similar that can be handled by the Customer Contact Centre.		Process	Governance	Governance - Process
76	LDMG	Key takeaways	Roster to ensure fatigue is managed in the ldmg space by our agency.		Process	Governance	Governance - Process
77	LDMG	Key takeaways	For a rare event, the planning, response and recovery was impressive. There is always learnings, but community safety was always paramount.	✓	Process	Governance	Governance - Process
78	LDMG	Key takeaways	Our islands need special considerations due to isolation.		Process	Governance	Governance - Process
79	LDMG	Key takeaways	The need to stay calm and strategic		People	Command, Control and Coord	Command Control Coord - Leadership
80	LDMG	Key takeaways	Amazing connection with recovery - started early and same stakeholders well involved in response so great understanding to move quickly to recovery activities	✓	Process	Governance	Governance - Process
81	LDMG	Key takeaways	Operational issues during times of limited electronic communications		Technology	Resources	Resources - Technology
82	LDMG	Key takeaways	Time and resources required now to implement all the good learnings from this event.		Process	Resources	Resources - People
83	LDMG	Key takeaways	Shadow roles for critical LDCC and LDMG roles. LOs available, informed and fit for the period of the response. Highlight Human Rights factor across response and recovery		People	Resources	Resources - People
84	LDMG	Key takeaways	The Islands need specific plans on champions, disaster packs and knowledge of essential services		Process	Governance	Governance - Process
85	LDMG	Key takeaways	Existing relationships were key and following existing plans and procedures	✓	Process	Operations	Operations - Interoperability
86	LDMG	Key takeaways	The value of C2C arrangements and support	✓	Support	Resources	Resources - People
87	LDMG	Key takeaways	Operational issues caused by wide scale limited electronic comms		Process	Communication	Communication - Internal communication
88	LDMG	Key takeaways	Preparation is key. Not just the week leading up too but regular and routine scenario testing.		Training	Capability Development	Capability Dev - Exercising
89	LDMG	Key takeaways	More preparation is needed to be resilient for cyclone specific events. Balance between island and mainland focus.		Training	Capability Development	Capability Dev - Exercising
90	LDMG	Key takeaways	The key contacts of the LDCC and areas needs to be more widely shared - or a single email address		Process	Operations	Operations - Interoperability
91	LDMG	Key takeaways	Communications are key. Backup comms plans is essential		Process	Governance	Governance - Process
92	LDMG	Key takeaways	High willingness of agencies to work together - and work better together	✓	People	Operations	Operations - Interoperability
93	LDMG	Key takeaways	Clearer training and understanding of the roles and interactions of recovery group, within disaster phase and organisational structure and resourcing.		Training	Capability Development	Capability Dev - Training & development
94	LDMG	Key takeaways	Asset managers in the room is key value. City Ops, City Water, Seqwater, Energex, recovery centre managers, etc.		Process	Operations	Operations - Interoperability
95	LDMG	Key takeaways	Pride in the teams, the staff and agency partners.	✓	People	People	People - Culture
96	LDMG	Key takeaways	Concern for single Point of failure - LDCC facility review - more efficient process for sandbagging to meet the new demand- communications on the islands - need starlink		People	Resources	Resources - People
97			LDCC facility review		Support	Resources	Resources - Facilities
98			More efficient process for sandbagging to meet the new demand		Process	Governance	Governance - Process
99			Communications on the islands - need starlink		Process	Communication	Communication - Internal communication
100	LDMG	Key takeaways	Send non perishable food prior		Process	Governance	Governance - Process
101	LDMG	Key takeaways	A central control room can provide a huge operational liason abilty. Dont forget this as new disaster facilities are built.		Support	Resources	Resources - Facilities
102	Email - Ops		Significant focus on asset readiness before event - drains cleared, potential high risk trees removed, waste transfer station stockpiles reduced, building roof and gutter prep etc	✓	Process	Governance	Governance - Process
103	Email - Ops		Demand for the equivalent of 155k sandbags prior to the event resourced by the same staff who responded immediately post event		People	Resources	Resources - People
104	Email - Ops		Initial priority post event was to focus operational resources on clearing roadways and pathways for access		Process	Governance	Governance - Process

105	Email - Ops		Offers of assistance from ADF, DRA, Rapid Relief Team and other agencies embraced and deployed as integrated part of team effort	✓	Organisation	Operations	Operations - Interoperability
106	Email - Ops		Structure within ops was flattened post event to be agile (reduce approval chain where appropriate eg ops comms liaising direct with corporate comms to get messages out promptly	✓	Organisation	Governance	Governance - Structure
107	Email - Ops		RRT and local coffee shop provided at cost high quality food and beverages to depot which sustained energy levels and morale to teams from all agencies	✓	Support	Resources	Resources - Equipment
108	Email - Ops		Strong prior relationships with suppliers and contractors led to excellent support for in field teams. Examples included JJ Richards, tree contractors, plant and equipment providers, traffic control, barge operators	✓	Support	Operations	Operations - Interoperability
109	Email - Ops		Strong theme of community supporting community - residents helping other residents	✓	Support	Communities	Communities - Resilience
110	Email - Ops		Planning post event framed as a marathon not sprint - and resourcing sustainably where possible - over 160 non ops RCC staff responded to a call for assistance to support operational activities over a 7 day period.	✓	People	Resources	Resources - People
111	Email - Ops		Operational RCC managers shared roles with non operational RCC managers to spread the load	✓	People	Resources	Resources - People
112	Email - Ops		Lack of digital comms meant deploying 'old school' analogue index card job tracking system		Process	Communication	Communication - Public information
113	Email - Ops		LGA divided into 6 different zones for operational response purposes. Teams in each zone communicating via GWN radios to a central coordinator.		Process	Communication	Communication - Public information
114	Email - Ops		Monday post cyclone river and creek rapid increase meant standing staff down to ensure they could reach home before flood levels rose.		Process	Governance	Governance - Safety
115	Email - Ops		Acknowledgment that local staff affected by same issues as local community		People	Governance	Governance - Safety
116	Email - Ops		Police liaison provided key role including organising rapid road closures for RCC and other agencies to manage hazards		Organisation	Operations	Operations - Agency specific issues
117	Email - Ops		Island challenges well documented - no comms. Remote staff operating autonomously. Strong community response		Process	Communication	Communication - Internal communication
118	Email - Ops		Good acknowledgment from day one that record keeping and photo records were key.	✓	Process	Governance	Governance - Process
119	Email - Ops		Admin staff provided vital support to in field teams and assisted with job logging and information requests.	✓	People	Resources	Resources - People
120	Operations	Leadership	Pre-event [redacted] area stands up before the event. We need to do this operationally as well, this will also have more synergy with [redacted] team as well with resources and decision making. Need to consider what triggers operations from BAU to alert, lean forward, etc. [redacted] area puts BAU on hold. When DM started seeing the event coming they rushed the budget prep to be free for the event. DM grew more into the event and less into BAU. Everything in BAU stops. We also let our stakeholders know where our BAU is at.		Process	Governance	Governance - Process
121	Operations	Leadership	[redacted] praised the speedy pivot for sandbagging to produce enough sandbags by dumping sand and bags.	✓	Process	Governance	Governance - Process
122	Operations	Leadership	You do a transition but that structure isn't set up within the organisation so I got stuck between BAU and DM priorities. Organisationally need a restructure so people can be moved into DM roles and part of BAU can shutdown. Reach out to management to get comms out to the organisation that we will be focused on the disaster (1/3 of the organisation focused on the disaster). People can still be effective if given roles in the DM space which will provide a better strategy for the organisation for fatigue management. Need an agreement across the organisation of what the trigger is.		Organisation	Governance	Governance - Structure
123	Operations	Leadership	We launched into recovery earlier. Recovery Group had started quickly and decisions were being made that decision makers weren't aware of. Either decisions were being made too early or the plans for recovery weren't strong enough. There is a disconnect of what should be allowed from a political point of view. We have to understand before we can start recovery and understand what we need to do to solve it.		Process	Command, Control and Coord	Command Control Coord - Decision making
124	Operations	Leadership	For some people the DM space is new - need further training on how the QDMA works.		Training	Capability Development	Capability Dev - Training & development
125	Operations	Leadership	The Premier is always first shown because they legally have a role to play. Need to engage wider on who is involved in the recovery decision making.		Process	Command, Control and Coord	Command Control Coord - Decision making
126	Operations	Leadership	Recovery - in reality we are still in recovery but we also started BAU two weeks ago. Been no communication at all advising what will be put on hold for the community because we are still in recovery.		Process	Communication	Communication - Public information

127	Operations	Leadership	Clear communication of what council is doing and doing in a coordination fashion. In response everyone started to respond but not in a coordinated manner. e.g. when is it safe for the crews to go out and who goes out. Needs to be a clear trigger with other organisations e.g. SES and Energex.		Process	Operations	Operations - Interoperability
128	Operations	Leadership	In the window between the cyclone ending and recovery ramping up, the rain was stopping but the water was rising. The message was 'respond', but someone made a call to bring the teams in early because they couldn't get home. Need a clear trigger on the response actions.		Process	Governance	Governance - Process
129	Operations	Leadership	Pre-event - how much do we lock down prior to these events rather than deciding on the way e.g. kerbside pickups. We need more set on what we do and when. We can develop this now e.g. waste team can be mapped out where they have their sites so we can easily open these sites when needed in response.		Process	Governance	Governance - Process
130	Operations	Leadership	Green waste wasn't a risk, we had already mobilised the skip bins but had to mobilise in a different way when the green bins were required. Need a plan on what the expectation is and what the highest priority is.		Process	Governance	Governance - Process
131	Operations	Leadership	There was no backfill in the standup group which created a lag. Confused the processes.		Process	Governance	Governance - Process
132	Operations	Leadership	We created an unsafe environment for our residents, invited to public to pick up sandbags at night. It was strange that we asked people to drive on roads a day after the event. We need to look at those activities and good comms to prepare yourself early as we won't be providing these services until it is safe to do so.		Process	Communities	Communities - Preparedness
133	Operations	Leadership	It would have been amazing to have a team of people who are looking after the staff who are out there doing the doing. We eventually got towels for people to have a shower at work but it would have been good to already have this set up. Showers, regular food. [redacted] are embedded in the response team, rather than pull us out of this have resources to look after the staff.		People	Resources	Resources - People
134	Operations	Leadership	[redacted]		Process	Governance	Governance - Organisational
135	Operations	Leadership	There was an element on unrealistic expectations particularly for contractors. People are dealing with their own issues, there were people who weren't contactable. We have an unrealistic expectations on our own staff and particularly contractor staff. We need to be more mindful - we need to understand who can and who can't. We knew some staff members had to ride out the event. Other people lived in close proximity that could safely get in.		People	People	People - Human factors
136	Operations	Leadership	Plant hire we build into the contracts so they have an after hour service.		Process	Governance	Governance - Process
137	Operations	Leadership	All hazards needs to be considered, not super prepared for the big wind events e.g. cyclone shelters. With a bushfire all affects things differently.		Process	Governance	Governance - Process
138	Operations	Leadership	Islands felt isolated, opportunities to have some contingencies in place. Anecdotally there was staff that we couldn't involve, some people put their hand up. Skills matrix - where do you live and what skill set do you have?		People	People	Resources - People
139	Operations	Leadership	Sandbags - people were overloading their cars. Possibility of people getting injured. Need signage and education		Process	Communities	Communities - Preparedness
140	Operations	Leadership	Need temporary green waste sites and traffic management plans. Minimum shelter requirements, resources for staff.		Process	Governance	Governance - Process
141	Operations	Leadership	Sandbag - a lot of resources went to sandbagging. Other areas in Council could have helped this.		People	Resources	People - Culture
142	Operations	Leadership	Deploying - there was some done by people with prior knowledge. Wasn't coordinated it was done by local knowledge.		Process	Governance	Governance - Process
143	Operations	Leadership	Admin - because the admin staff underpin what's going on in the office, we could clearly direct our staff to the DM role. We need to stand that up sooner. Also involves LDCC, we knew the connection was there but we didn't know what they were doing. We were connecting to individual people rather than a role. It shouldn't matter who is coming on and going off shift. We used teams to communicate with the LDCC.		Process	Governance	Governance - Process
144	Operations	Leadership	[redacted] was the operations coordinator in the LDCC. She wasn't there 24/7 so there was a gap. We didn't have consistency, should have come from one channel and it wasn't		Process	Communication	Communication - Internal communication
145	Operations	Communication	Big issues with communicating with each other. It worked well on the mainland but had problems on the Islands when the battery ran out. Don't have generators on SMBI and needed more radios that are charged and ready to go. Need a contingency. We relied heavily on the phones. We had to switch to dual SIMS as Optus doesn't have coverage in some locations. We are discussing getting dual sims for critical roles and looking at getting generators for the Islands.		Process	Communication	Communication - Internal communication

146	Operations	Communication	We didn't tap into the local community e.g. signs on the front door of the supermarkets. They were sending social media but that was redundant.	Process	Communication	Communication - Public information
147	Operations	Communication	Waste sites VMS boards - need these ready to go.	Process	Communication	Communication - Public information
148	Operations	Communication	Impact on power had an impact on our systems	Technology	Resources	Resources - Technology
149	Operations	Communication	Also need more support for internal comms team as they were getting info from multiple channels. We had too many levels of approval.	People	Command, Control and Coord	Command Control Coord - Decision making
150	Operations	Communication	Some of the Councillors shared information which complicated communications. Each day we did a Councillor briefing at the end of the day and it was picked up there was incorrect info being shared. We learned that subsequently - visibility of the Councillor meetings would have helped to explain peaks of urgency and how this syncs with the SITREPs required from the islands. Moving forward we will set timeframes.	Process	Communication	Communication - Internal communication
151	Operations	Interoperability	Understanding the other agencies requirements would have been good e.g. SES [redacted] The ADF did a fabulous job but we kept on chasing a list so we need to circumvent and understand what the ADF needed [redacted] Their role was brilliant in the end. It was top down, not a DACC request. When the ADF went to the Islands, they weren't allowed to go offroad. ADF and DRA very good resources but when I was providing them with work, we didn't maximise the resources. We only used 40% to 50% of their capacity in tasking. We didn't know what to do with them.	Process	Operations	Operations - Interoperability
152	Operations	Interoperability	We also needed to feed agencies but we weren't prepared for that and where to get the food (this could have been done by the LDCC). This was all on the fly, very time and labour intensive. We need a plan in place.	Process	Governance	Governance - Process
153	Operations	Communication	Terminology - people were lost with all the acronyms, need a video in induction process.	Training	Capability Development	Capability Dev - Training & development
154	Operations	Communication	Information flow is critical, the info that comes out of the LDMG needs to be cascading to all the teams. Key downward flow to see what all the agencies are doing.	Process	Operations	Operations - Interoperability
155	Operations	Interoperability	TMR couldn't fix the traffic lights because the trees were down. Coordination needed more work. Needed better communication with some of the external agencies. [redacted] We need to be proactive in this space e.g. Energex advise which trees to move and we do this in conjuction with opening the roads	Process	Operations	Operations - Interoperability
156	Operations	Interoperability	Energex made a decision to not pre-deploy staff, they hadn't counted on the boats not working for a couple of days so we had 12 generators but no one to connect them.	Process	Operations	Operations - Agency specific issues
157	Operations	Interoperability	The harbourmaster [redacted] closed the entire Moreton Bay area which meant none of the emergency services could go to the Islands as well. We didn't know that, it would have been good to know that info. Need to filter this info down.	Process	Communication	Communication - Internal communication
158	Operations	Interoperability	It was hard for us to get through e.g. getting DRA over to the islands. The LDCC was snowed under so we had no control. Trying to get the right info ready to go	Process	Communication	Communication - Internal communication
159	Operations	Interoperability	We did a good job of clearing the roads in general, great effort. Power should have been the primary. We could have worked with Energex to put teams with Energex in a perfect world to get power back quicker and clear the roads at the same time. Need a priority list e.g. sandbagging, electrical, water/waste - how we resource. We tend to look after our own patches but aren't aligning our resources with the priorities. On a risk profile.	Process	Governance	Governance - Process
160	Operations	Interoperability	Good decision to send people home early, gave me the opportunity to follow the instructions required to close. We didn't open up as well. There wasn't an ability to come back in a structured way to do a proper inspection. People were making their own decisions.	Process	Governance	Governance - Process
161	Operations	Interoperability	Expectation to have centres open straight away was immense. The contract had to be satisfied, comms went out that the centres would be open but contractors made the decision they wouldn't send anyone. The expectation was that the community wanted to get back. Everything has to be integrated and staged. People respect, when it is safe to do so message. Priority on what to do and what is safe to do for everyone. The Premier made the message early causing mixed messages. People will accept "we will open the tips, when it is safe to do so". However, we need to make sure we have people on site. Shouldn't put the message out until we can confirm with these people the sites we will have open and when. If we want a level of control, we need to build into the system.	Process	Communication	Communication - Public information

162	Operations	Interoperability	Can not have an ongoing expectation, that when we put a contract in place, we insist they have to show up - they have obligations, which can get lost - there is people involved. There was more risk in opening the centres.		Process	Governance	Governance - Safety
163	Operations	Interoperability	We didn't have a good mechanism for sharing between Operations and WasteWater.		Process	Communication	Communication - Internal communication
164	Operations	Interoperability	Need a LO from the LDCC embedded in the Ops Centre.		People	Resources	Resources - People
165	Operations	Interoperability	Moving to 50 Middle St is not a bad idea as you take a lot of people movement away, away from the large vehicles etc that is at the depot. Need to include radio comms at 50 Middle Street.		Support	Resources	Resources - Facilities
166	Operations	Info Management	Cost record keeping to be able to access DRFA - we did this quite well, now working through the photos. The system was inconsistent. Purchase orders and who raised etc, could do that a bit better. Lots of phone calls being made but no record. Learnings to be had. Some of the before photos are 10 years old. Would be good to do some pre-event planning to get photos when we know there is an event coming. The metadata is important with the before and after photo - need some clarity - need a tip sheet or some training in this space. When we had people on site, we didn't keep log in and log out sheets - need to do this better.		Process	Governance	Governance - Process
167	Operations	Info Management	Recovery was too fast for safety considerations, process wasn't bad just the timing. Need to make sure we have the right people on the right teams in recovery.		People	Resources	Resources - People
168	Operations	Info Management	Green waste - resources were being shared. Need to prioritise messaging to community		Process	Communication	Communication - Public information
169	Operations	Key takeaways	Recovery was too fast, and decisions were made at the wrong level with no clear prioritisation.		Process	Command, Control and Coord	Command Control Coord - Decision making
170	Operations	Key takeaways	Less Facebook reactive and more structured decision making.		Process	Command, Control and Coord	Command Control Coord - Decision making
171	Operations	Key takeaways	We need a better structure for the next event		Process	Governance	Governance - Structure
172	Operations	Key takeaways	Lack of clear roles for response		Process	Governance	Governance - Process
173	Operations	Key takeaways	Preplanning for work in the community needs a higher focus, ideally with another group delivering/managing sandbags etc for frontline staff fatigue.		Process	Communities	Communities - Preparedness
174	Operations	Key takeaways	A corporate to priority recovery plan and mitigate silos		Process	Operations	Operations - Interoperability
175	Operations	Key takeaways	Once again, the proactive planning, review, and testing of processes, tools and connections across the organisation is pivotal to underpinning the response.		Process	Governance	Governance - Process
176	Operations	Key takeaways	The Business needs to lock in preplanned processes, sites that can be utilised safely (sandbagging, waste, refuge centres), agree on protocols (only working in daylight, kerbside pickup required?)		Organisation	Governance	Governance - Organisational
177	Operations	Key takeaways	We were fortunate that Alfred was downgraded providing a live training, learning and capacity platform.		Training	Capability Development	Capability Dev - Training & development
178	Operations	Key takeaways	We need to spend time and resource the planning for operations before, during and after a disaster with detailed roles, priorities, comms, etc.		Process	Governance	Governance - Process
179	Operations	Key takeaways	The organisation stood up and responded professionally under the circumstances. Risk mitigation is not aligned across groups and needs instruction/policy.		Organisation	Governance	Governance - Organisational
180	Operations	Key takeaways	Set priorities for services stand-up, sandbags, waste (green v's food), power v road/tree clearing, political decision v's safe operational decisions"		Organisation	Governance	Governance - Organisational
181	Operations	Key takeaways	More work to be done in large events		Process	Governance	Governance - Process
182	Operations	Key takeaways	We need a better plan. We need non-operational staff to step up and support operational staff		People	Resources	Resources - People
183	Operations	Key takeaways	Ops were too focussed on sandbagging to effectively prepare ourselves		Process	Governance	Governance - Process
184	Operations	Key takeaways	More detailed planning		Process	Governance	Governance - Process
185	Operations	Key takeaways	Managing expectations		Organisation	Governance	Governance - Organisational
186	Operations	Key takeaways	Lots of learnings to take away from the event which need to be progressed. However, all involved in the response and now moving into recovery should be proud of their commitment and dedication shown.	✓	People	People	People - Culture
187	Operations	Key takeaways	Responses and expectation were not based on real needs or with due consideration to risk		Process	Governance	Governance - Process
188	LDCC	Leadership	Bit challenging going between 50 Middle St and South St		Process	Resources	Resources - Facilities
189	LDCC	Leadership	Would have liked an organisational plan, to know who to talk to		Process	Governance	Governance - Process

190	LDCC	Leadership	QFES started from the Monday which was very useful. Nothing is ever perfect but the prep from past exercises, should be proud.	✓	Training	Capability Development	Capability Dev - Exercising
191	LDCC	Leadership	The challenge for us, everyone always looks for Mike and that is a single point of failure. No use of command and control. Wasn't quite clear who was doing the decisions in the absence of someone else. We have a clear command structure, for us walking into the LDCC, we had no knowledge of who was experienced and who was in charge.		People	Resources	Resources - People
192	LDCC	Leadership	Fatigue management - people felt comfortable to say they can't do the shift.	✓	People	People	People - Culture
193	LDCC	Leadership	My fatigue came afterwards, going back to work on Monday. There wasn't the training for my manager to hand over stuff (it was like I was on holidays for 2 weeks). Next 1.5 weeks was the emotional come down including my personal issues with damage to my home.		Training	Capability Development	Capability Dev - Training & development
194	LDCC	Leadership	We have disaster relief in our EB and no one knew that. You could take some time out but didn't know.		Training	Capability Development	Capability Dev - Training & development
195	LDCC	Leadership	My experience was the same - my work was backed up. Distinction of who were involved and who weren't. Learning was to be clear to say I'm working on LDCC so you need to work BAU around me.		Training	Capability Development	Capability Dev - Training & development
196	LDCC	Leadership	Needs to be messaging and understanding of the expectations. Needs to be some acknowledgement of that.		Process	Governance	Governance - Process
197	LDCC	Leadership	We were also dealing with things at home which was very impactful for myself so there was a lot of time I was so exhausted from home and being without power that was very impactful. Don't know how to get around that but need to be mindful. I was really grateful of a hot meal in the LDCC because I wasn't getting it at home. There was also some care bags dropped into the bathrooms to use the showers which was really helpful.		People	People	People - Human factors
198	LDCC	Leadership	W were briefly at LDCC but the BAU kept happening with very little acknowledgement. Could have been far more comms at ELG and PLG level to appreciate their was still deadlines but what can we pause. We ended up in a weird transition where there was a lot of backlog. A lot of people are not going to ask for time off. People only taking a break many weeks later. As part of recovery we can do better there.		Process	Communication	Communication - Internal communication
199	LDCC	Leadership	I found my line manager on her recommendation I was asked to have a week off. I was very lucky to have a proactive manager. It was patchy across the organisation.	✓	People	Command, Control and Coord	Command Control Coord - Leadership
200	LDCC	Leadership	The logistics cell looked over the roster, it was very supportive that if people needed a day off they weren't given any judgement. It was a good testament especially in a period when we didn't know how long the event was going to go for.	✓	People	People	People - Culture
201	LDCC	Leadership	I reached out to HR as I asked people about my timesheet then I sent an email to all of the LDCC. It would have been better if that came from People & Culture as there wasn't any real direction from the top. The information was going to Service Managers only. Everyone needs access to the right information and feel supported.		Process	Command, Control and Coord	Command Control Coord - Decision making
202	LDCC	Leadership	My boss said I'm happy to sign off my timesheet but I can't confirm what you have done. The way our payroll is setup managers don't have oversite if you are working in the LDCC so they can't justify the timesheet. No visibility of the number of hours you have done in the LDCC. We have a sign on at the door but it doesn't go to the managers. HR need to look at how timesheets are completed.		Process	Governance	Governance - Process
203	LDCC	Leadership	I found payroll really useful, they had people at the depot that were supporting people who had weird timesheets.	✓	Support	People	People - Culture
204	LDCC	Leadership	Did you find you could get the decision made quickly in the room? It would have been good if at the beginning of each shift send a list of who's who (an org chart) showing who was the lead for each shift. I didn't want to bother people if they were off shift would have helped on who to go for decisions. QFES - a planning officer would pull together this information in the night shift. We need to share the information in the Cells better.		Process	Governance	Governance - Process
205	LDCC	Leadership	Whe [redacted] came in he had a neat approach where he would approach the team leaders asking if there was any complex problems that needed his assistance. Good to have a proactive check-in. He made it really clear what his role was.	✓	People	Command, Control and Coord	Command Control Coord - Leadership
206	LDCC	Leadership	QPS - in a time of crisis, visible leadership is critical. We were away from the centre for too long. When the right people are in the room, decisions can be made quickly. If the right people aren't in the room that falls down. This was lacking in certain aspects of the LDCC. Consistency is the key		People	Command, Control and Coord	Command Control Coord - Decision making
207	LDCC	Leadership	I can't think of any decisions that weren't made but they could have been made faster.		People	Command, Control and Coord	Command Control Coord - Decision making

208	LDCC	Communication	I thought the communication was fantastic, this was backed up by the SDCC. So many of the comms team were doing it for the first time. We can do more training in this space but the outcome was excellent.	✓	Process	Communication	Communication - Public information
209	LDCC	Communication	I was receiving my info from Facebook but older generation relies on the Councillors and Mayor and most of these were video when they had very little bandwidth. Need to consider a breadth of platform		Process	Communication	Communication - Public information
210	LDCC	Communication	My phone didn't work for a week so I wasn't getting any information. Need to consider old school engagements e.g. physical face to face engagements.		Process	Communication	Communication - Public information
211	LDCC	Communication	As part of the comms team, less than half of our team had been trained. We also had a comms debrief, there are things we have definitely taken on board. Moving forward we are all going to be trained. In a time we needed to get info out quickly, we did rely on things that needed power. Happy to consider other options e.g. Councillors, VMS boards, posters,		Training	Capability Development	Capability Dev - Training & development
212	LDCC	Communication	What went out was great and what was on the dashboard was great but needed power. During the fires - every day comms would do a bulletin of what was happening every day, we could have done more of this on the islands and got someone to put the info on the noticeboards. The community are used to this. We need to make sure our libraries/depots have access to power so they can print this info.		Process	Communication	Communication - Public information
213	LDCC	Communication	As much as we say we need to do all these things, we need to be careful we don't try and accommodate so much. [redacted] Going to tip over the edge of wasting resources.		Support	Communities	Communities - Preparedness
214	LDCC	Communication	[redacted] The message said, take shelter now, which freaked me out, we didn't end up sending anything because we didn't want to panic people.		Process	Communication	Communication - Public information
215	LDCC	Communication	Internal comms - I was in a unique situation as I was away when the prep was happening. I found was difficult I probably should have built some situational awareness for myself and then 5 hours later I wondered what was going on. We needed the old school SMEAC board which was regularly updated.		Process	Communication	Communication - Internal communication
216	LDCC	Communication	There is too many channels - 5 channels I had to flick through - Guardian, Teams, Text messages, phone calls, emails. Needed a single point of truth. I had energy but it was a difficult situation as I didn't have the situational awareness.		Process	Communication	Communication - Internal communication
217	LDCC	Communication	A lot of people didn't use Guardian. The last SITREP was my single point of truth.		Technology	Resources	Resources - Technology
218	LDCC	Communication	Having multiple devices was handy to have everything open.		Technology	Resources	Resources - Technology
219	LDCC	Communication	ICCC - I am from Customer Service, once we worked through it we took it to our Service Manager, I created a Teams channel for anything TC Alfred related but we weren't monitoring it. Processes in LDCC was different so it didn't come to us. Our priority was what was happening in that space not the LDCC. Someone then monitored the channel from people in the LDCC asking questions. It was frustrating having those channels. The normal BAU in the LDCC continued, no stop and start. We are looking at doing a knowledge officer from the ICCC embedded in the LDCC in the future to assist. This person can feed info back to the ICCC e.g. feeding FAQs back to the LDCC. I was able to download a request procedure, conducted a mini training session, that worked really well.		Process	Governance	Governance - Process
220	LDCC	Communication	Need to have a CLO to get information flowing in and out. That would have been much easier for Comms as we weren't giving them the information they needed. We had the daily briefs, so they got info. Need to train the Councillors annually not just at the start of their employment. As an islander we were getting most info from the SMBI councillor, not our own councillor. That might be because they didn't know what they need to do. Even if we could equip them with a small fact sheet to start their day.		People	Resources	Resources - People
221	LDCC	Communication	A lot of this commentary is actually a reflection of the size of this event. Testament to everyone across Council of how well we did do, now need to take that onboard and learn from that.	✓	People	People	People - Culture
222	LDCC	Interoperability	QPS - the PoR were a problem as they weren't fit for purpose. No one really looked after them. If it had have been a proper place we would have had our services in there. They created more problems, they didn't serve any purpose other than a political decision. Exception work considering but we still need to look at infrastructure.		Support	Resources	Resources - Facilities
223	LDCC	Interoperability	There were a number of challenges pushed onto other agencies to tell someone else to do it e.g. asking police to setup a generator. Every decision has a consequence for others. We were under prepared for cyclones. We need to be mindful that council led, supported by agency, does not demolish you of your responsibilities. Lack of preparation and lack of insight.		Organisation	Operations	Operations - Agency specific issues

224	LDCC	Interoperability	I had to ring all the community champions, I had to ask them to go out to open and close which was a hard conversation when we were telling people to stay safe.		Process	Governance	Governance - Safety
225	LDCC	Interoperability	Need more representation from Telstra and Energex in the LDCC. The person that makes the decision. The biggest challenge is to understand the interoperability, in times we were quite blunt but some didn't quite grasp the challenges. Difficult place to be when you spend a lot of time trying to find someone who can make a decision. A number of agencies believe they only need to have LO's at the district level even though the decisions are made at the local level. We have a workshop with Council Executive and Energex to discuss the challenges in the event. The LO's in the room were fantastic but there are a few learnings in that space.		Organisation	Operations	Operations - Agency specific issues
226	LDCC	Interoperability	Interagency coordination and interaction - there were some tasks that came through that I felt a weight for the publics personal safety and not something we had capacity to assist with. My interactions with police and water police, I felt very supportive.		People	Command, Control and Coord	Command Control Coord - Decision making
227	LDCC	Interoperability	Within the centre, even having a name tag would be good and a print out or email of the contacts on shift. It would be good to have faces on the contact list as well.		Process	Governance	Governance - Process
228	LDCC	Interoperability	Redland Bay/Victoria Point felt they were forgotten about because of the focus on the islands. The Islands thought they were the only ones without power. CLO could help this. It did go to the media that North Stradbroke was forgotten. Coochie - were disgusted that the first person they saw was the bin man because there was no comms.		Process	Communities	Communities - Expectations
229	LDCC	Interoperability	Meetings with communities on mainland and on the islands - everyone has blinkers in relation their own area. There was a lot of political pressure from the Premier and on the Mayor for the Islands.		Process	Communities	Communities - Expectations
230	LDCC	Interoperability	Can't have a tower that doesn't support the size of the community. That needs political support.		Process	Governance	Governance - Organisational
231	LDCC	Info Management	The SOPs we have are 8 years old and I wouldn't pick them up. We need some simple procedures. People are feeling anxious and need something easy to refer to.		Process	Governance	Governance - Process
232	LDCC	Info Management	Comms - didn't have any plans, we were creating as we went ahead. This is my role now to fix this for the next stage. Learning across the board on developing templates. We need to build the artworks for kerbside pickup etc. for easy access. Some was dramatic to go through cycles of approvals. Really important info on trails and parks. Approval process was too bogged down. There are some things that could have been ticked off, shouldn't have had to go all the way up the chain.		Process	Governance	Governance - Process
233	LDCC	Info Management	Confusion which cells looked after which tasks. An online module with scenarios would be good as a refresher to show where tasks fit. is looking at doing monthly training for one hour. This will give you regular interaction with Guardian.		Training	Capability Development	Capability Dev - Training & development
234	LDCC	Info Management	The level of need of info for the daily meetings - this could be included in the training. Huge appetite and thirst for information.		Training	Capability Development	Capability Dev - Training & development
235	LDCC	Info Management	LDMG minutes - at one point tasked to do the minutes which was time-consuming. Need someone to just do this. The LDMG is too big because you have too many people in there. Should be slick, neat and tidy, report by exception only. The LDCC got on the invite and everyone in the LDCC was on the LDMG meeting which wasn't right. Review the membership list and look at meeting attendance and meeting behaviour. Would it be sufficient to use AI to take a transcript rather than minute taking for LDMG meeting - this didn't work because of the acronyms and island communities.		Process	Governance	Governance - Process
236	LDCC	Info Management	SITREPs were first class!	✓	People	Governance	Governance - Process
237	LDCC	Info Management	The effort everyone put in considering what was happening in their own home was really well done and should be commended.	✓	People	People	People - Culture
238	LDCC	Key takeaways	The LDCC learnt a lot from a never before experienced event. Looking forward to the next one.	✓	Training	Capability Development	Capability Dev - Lessons management
239	LDCC	Key takeaways	We responded in a timely, sufficient way, beyond our capability in such an unprecedented time	✓	People	People	People - Culture
240	LDCC	Key takeaways	Fantastic team work and a get it done attitude.	✓	People	People	People - Culture
241	LDCC	Key takeaways	We will be better for this event but it was hard knowing who did what etc		Process	Operations	Operations - Interoperability
242	LDCC	Key takeaways	A very driven and motivated council team that are passionate about helping their community.	✓	People	People	People - Culture
243	LDCC	Key takeaways	Improvement in communications and business processes are needed to mitigate risk		Process	Governance	Governance - Process
244	LDCC	Key takeaways	Learning experience		Training	Capability Development	Capability Dev - Lessons management

245	LDCC	Key takeaways	Moving to 24 hr early is crucial.	✓	Process	Governance	Governance - Process
246			Consistent teams if possible works well.		Process	Resources	Resources - People
247			Councillor liaison officer will be beneficial (not necessarily from LDCC)		People	Resources	Resources - People
248	LDCC	Key takeaways	Ensure LDCC Staff are doing LDCC work & aren't drawn into doing tasks for RCC/Councillors/Mayor or LDMG that isn't a function of the LDCC, bring in other staff so LDCC trained staff can do their roles		People	Resources	Resources - People
249	LDCC	Key takeaways	Supportive environment despite the hectic nature of it all. Great teamwork ensured great work on the ground.	✓	People	People	People - Culture
250	LDCC	Key takeaways	How much our communications are dependant on electricity. Information during periods of mass outage could be provided on radio (Bay FM)		Process	Communication	Communication - Public information
251	LDCC	Key takeaways	Everyone did an amazing job flying by the seat of their pants. But if we put time and energy in now to plan for the next big event then next time will hopefully be so much easier.	✓	Process	Capability Development	Capability Dev - Knowledge managment
252	LDCC	Key takeaways	Supportive team. Everyone was there for one thing - to help people. I appreciated the unfiltered blunt responses from different agencies. It was direct and to the point.	✓	People	People	People - Culture
253	Survey	What worked well	Commitment of staff to the work. Reactivity and caoacto adapt	✓	People	People	People - Culture
254	Survey	What worked well	Meeting frequency (daily). Brisbane and Redland LDMG meetings overlapped which was problematic due to dual memberships.		Process	Communication	Communication - Internal communication
255	Survey	What worked well	Community working together	✓	People	Communities	Communities - Resilience
256	Survey	What worked well	Collaboration across RCC teams and with organisations in the HSR teams	✓	People	Operations	Operations - Interoperability
257	Survey	What worked well	Team work and supportive environment	✓	People	People	People - Culture
258	Survey	What worked well	Response, clean up and preparation	✓	Process	Governance	Governance - Process
259	Survey	What worked well	Collaboration between agencies, ability to pivot between remote and in person LDCC	✓	People	Operations	Operations - Interoperability
260	Survey	What worked well	The commradrie amongst staff and the clear direction from centre staff	✓	People	People	People - Culture
261	Survey	What worked well	LDMG group work well across agency.	✓	People	Operations	Operations - Interoperability
262	Survey	What worked well	Operations during the event at the LDMG level worked well.	✓	People	Operations	Operations - Interoperability
263	Survey	Improvements required	We are set up for day to day operations but gave no processes and clear expectations for weather events preparedness and response. That leads to ongoing scope creep on what's expected, poor record keeping, time list, safety issues, etc		Process	Governance	Governance - Process
264	Survey	Improvements required	Sit Reps received from individual email accounts and not LDCC generic account. Advice early re a central contact details for LDCC would have been helpful. Publication of rosters. Agency updates provided at LDMG meeting , however no clarity on whether a written sit rep required submission as well.		Process	Governance	Governance - Process
265	Survey	Improvements required	Communication needed, mobile service; generator to allow people to recharge phones, etc		Support	Resources	Resources - Equipment
266	Survey	Improvements required	I wonder if the places of refuge could have been activated earlier		Process	Governance	Governance - Process
267	Survey	Improvements required	BAU managers not understanding how to re allocate work to support those in their team who volunteered		Training	Command, Control and Coord	Command Control Coord - Leadership
268	Survey	Improvements required	More resources required		Support	Resources	Resources - Equipment
269	Survey	Improvements required	Providing additional assistance/ a 2IC to help LDCC room controller review and issue approvals		People	Resources	Resources - People
270	Survey	Improvements required	More equipment on islands and more prep from islanders		Support	Resources	Resources - Equipment
271	Survey	Improvements required	The Cleveland Redland Bay Road Energex Powerlines over road closure working with Energex and QPS could have been coordinated better.Suggest that a better alignment as Emergency Agencies and critical infrastructure groups require the road to be opened first so they can actually perform and keep the road connectivity for essential services.		Process	Operations	Operations - Interoperability
272	Survey	Improvements required	Access for clearance, repairs or improvements needs roads to be opened. Historically, roads have not been high on agendas. They need to be considered in conjunction with the areas of special need ie hospitals etc. It's hard to fix it if you cant get to it.		Process	Operations	Operations - Interoperability
273	Survey	Immediate actions required	Resources to develop detailed operational plans (relevant to city Operations) and processes for weather events including an agreement on roles and responsibilities, systems ready to be used.		Process	Governance	Governance - Process
274	Survey	Immediate actions required	More regular circulation of LDMG contact listing for updating and perhaps be circulated at the activation of any event.		Process	Governance	Governance - Process

275	Survey	Immediate actions required	We need a generator in place to help residents recharge phones so they can contact family and friends, for a hot meal, to keep medication cold; Starlink to give residents the ability to communicate and send and receive important information.		Support	Resources	Resources - Equipment
276	Survey	Immediate actions required	Maybe additional support to teams left lacking in resources so volunteers could be engaged without feeling like they've abandoned their team		Support	Resources	Resources - People
277	Survey	Immediate actions required	Create a core critical asset and infrastructure group within the LDMG to coordinate essential road openings.		Support	Resources	Resources - People
278	Survey	Immediate actions required	Better alignment to ensure access will reduce time taken in response and recovery.		Process	Governance	Governance - Process
279	Survey	Key takeaways	Disaster Management is about the collaborative approach with external agencies but really need to include the council internal operational response to the disaster.		Process	Operations	Operations - Interoperability
280	Survey	Key takeaways	Ways to improve communication in early activation stages will prevent confusion in the peak of the event eg send out contact lists, how LDMG wanted sit reps, whether a liaison was required to attend LDCC - setting clear expectations.		Process	Communication	Communication - Internal communication
281	Survey	Key takeaways	Our Community has a lot of new residents who were not sure what 'being prepared' meant - we are having another Disaster Preparedness Meeting on Lamb Island on 24 May to assist with this. We need to know who needs Welfare Checks and hot food, we are in touch with Community Services to see how we can do this.		Process	Communities	Communities - Preparedness
282	Survey	Key takeaways	Great teams working diligently with expertise ....impressive sharing of detailed information and speedy responses to community and residents	✓	Process	Communication	Communication - Public information
283	Survey	Key takeaways	Training of managers for BAU needs to be improved		Training	Capability Development	Capability Dev - Training & development
284	Survey	Key takeaways	More resources required, need communication plan for when phone, internet and gwn radios fail		Process	Governance	Governance - Process
285	Survey	Key takeaways	Collaboration, and quick but well-considered and informed decisions, were key. Island challenges require 'out of the box' solutions and extra support.	✓	Process	Command, Control and Coord	Command Control Coord - Decision making
286	Survey	Key takeaways	Better assistance from council to LDCC staff		Organisation	Governance	Governance - Organisational
287	Survey	Key takeaways	Redland LDMG and LDCC are well rehearsed in disaster management	✓	Process	Capability Development	Capability Dev - Knowledge managment
288	Survey	Key takeaways	Provide the media with the questions and answers and do not let them provide input.		Process	Communication	Communication - Media
289	Survey	Additonal comments	First responders safety such as when to go out to start clearing beeds to ge discussed and agreed upon at ldmg level so it's consistent across all.		Process	Operations	Operations - Interoperability
290	Survey	Additonal comments	The morning LDMG BRIEFINGS were very informative and showed the knowledge, need and professionalism of the Group. It was good to be able to keep residents informed, however, due to insufficient connectivity - communication and power - it was difficult to inform most of Lamb Island and other Islands.	✓	Process	Communication	Communication - Internal communication
291	Survey	Additonal comments	Mayors updates shouldn't be video. We didn't have internet or had very sporadic reception so trying to watch updates from her was too hard.		Process	Communication	Communication - Public information
292	Survey	Additonal comments	Assistance and resources for the areas affected the worst requires prioritisation. Outdoor workers had to keep working while office staff told to stay home. No communication regarding outdoor workers having to attend work, only global emails telling staff to stay home. RCC needs to develop a safety plan like Energex have with criteria such as do not go outside working if winds are greater than 80km/hour example. We were asked to go outside to work when there were still falling trees and power lines due to this. RCC staff took disaster leave when they didn't fit into the criteria to do so, which is not fair for Staff who continued to come to work.		Process	Governance	Governance - Safety
293	Survey	Additonal comments	Would like to discuss further with [redacted] from Redland Water to share some thoughts with agencies working together more responsive effort.		Process	Operations	Operations - Interoperability
294	Survey	Additonal comments	Defining terms for other SMEs. Roads and detours otherwise the media will dictate by default through ignorance.		Training	Capability Development	Capability Dev - Training & development
295	Email		All Officers involved to make sure their mobile numbers are in the Corp Directory		Process	Governance	Governance - Process
296	Email		Sand, Bags and Zip ties to be arranged all at the same time to sites		Process	Resources	Resources - Equipment
297	Email		We had access issues with access to the Dunwich depot by the water people -can you please log as an issue in the lessons learnt log - water people were not able to access		Process	Governance	Governance - Process
298	Email		Food Suppliers - unable to contact businesses to see if they are open - Create list of numbers etc to precall and secure/ check arrangements. Tap into Rapid Resonse Team - [redacted]		Process	Governance	Governance - Process

299	Email		Cleaning schedule variation for safety and extra cleans during events		Process	Governance	Governance - Process
300	Email		Contact point for LDCC logistics. Tried to contact individuals but took time to get back to us and did not know who was on shift - Need to formalise a contact team rather than individual officers		Process	Governance	Governance - Process
301	Email		Standing up the admin support with the response teams. and utilising the offers of support from others (e.g. [redacted]		Process	Governance	Governance - Process
302	Email		Get the right people access to the Teams docs from the beginning. Screening people as we went, people not using the documents as originally intended		Process	Governance	Governance - Process
303	Email		Liaison with LDCC was delayed in responses due to communicationg with individuals rather than a team and we didnt know who was on shift - Have group teams set up, an understanding on the priority for resposnding back and a central on duty roster that is filled in with who is on duty for what shift time and who is coming on next or what the arrangements are if no covergae.		Process	Governance	Governance - Process
304	Email		borrowing cars - Admin need a dedicated vehicle for running errands		Support	Resources	Resources - Equipment
305	Email		Bottle neck with catering/accomodation/Transport - Need a dedicated resource for each of these so all arrnagements go through them. Mnaging vouchers, receipts, POs, phone numbers etc		Support	Resources	Resources - People
306	Email		Evac Centre management on NSI - received a call from [redacted] from the LDCC wondering who to contact to open the Dunwhich Hall as a Place of Refuge. I had to explain that [redacted] and RCC's Emergency Management Team are in charge of this, and she would need to contact them and wouldn't they be in LDCC with her? I did find and provide her the objective file number containing the instructions/procedures given by RCC's Emerency Management Team to open the Hall as an evacuation facility. Concering that LDCC are not aware of Emergency Management Team procedures regarding opening and operating Emergency Evacuation Centres or where to find them.		Training	Capability Development	Capability Dev - Training & development
307	Email		Landline connectivity - Also [redacted] had a good point of all the land line telephones being removed from NSI – only the internet went down during storm and the land lines did not so they could have had telephones if the phones were left in the office instead of taken away once teams came in.		Technology	Resources	Resources - Technology
308	Email	What worked well	Teamwork – everyone pitching in and helping out	✓	People	People	People - Culture
309	Email	What worked well	After the first day, we eventually found a single source of truth	✓	Process	Governance	Communities - Preparedness
310	Email	What worked well	CET were really supportive and helpful within the restrictions they were working in	✓	People	People	People - Culture
311	Email	What could be done differently	Having a pre-plan / communications framework to work from		Process	Governance	Governance - Process
312	Email	What could be done differently	Have a pre-plan for 'what if' scenarios. E.g what if VISY shuts, what if BMI close		Process	Governance	Governance - Process
313	Email	What could be done differently	Have a pre-plan of 'do we' scenarios e.g do we collect kerbside, do we collect general waste. There is a clear need / push from the community that if a bin is missed that we go back out and collect it.		Process	Governance	Governance - Process
314	Email	What could be done differently	If a city wide missed bin has occurred, have a clear communication q&a explanation / ICCC script in place: Why we can't go back and collect and clarity on what to do with waste; or If we do go back and collect a clear reason as to when / what to do		Process	Governance	Governance - Process
315	Email	What could be done differently	Have a pre-plan for managing disposal of food waste if electricity is lost Set locations to set up bulk bins Signage / comms plan to support this		Process	Governance	Governance - Process
316	Email	What could be done differently	For me / someone in city ops to have training from a communications / disaster management perspective. I am currently booked in for LDCC training module 1 at the end of April.		Training	Capability Development	Capability Dev - Training & development
317	Email	What could be done differently	A clear communications and sign-off protocol and process. This includes both at a city ops level and then through to LDCC. Who from City ops need to sign off and at what decision points? A single point of communications with LDCC so that at any particular day / hour I knew who my contact was in LDCC. I eventually got access to the LDCC roster and had to work out who was on call, but even then it wasn't clear who needed to be included from a communications / media / sign-off perspective		Process	Governance	Governance - Process
318	Email	What could be done differently	A single source of truth for all communications to feed into from a residents perspective. Eventually we agreed on one web page that needed to be updated and all other RCC pages directed to that single source of truth, but it took us a day or so to get there.		Process	Governance	Governance - Process

319	Email	What could be done differently	A clear process for when city wide communications go down. Some suggestions are: Early deployment of VMS signs at pre-planned locations Pre-printed corflute signage to be deployed across the city		Process	Governance	Governance - Process
320	Email	What could be done differently	Clear guidelines on how to deploy and update VMS signs so that anyone can use them Logins Locations How to update How to track changes How to word them clearly		Process	Governance	Governance - Process
321	Email	What could be done differently	The opportunity to activate a city-wide text messaging service would have been helpful (for those still receiving communications)		Process	Communication	Communication - Public information
322	Email	What could be done differently	Internal emails are not the most effective way to communicate for sign-offs. A comms board / channel / sign-off process or another alternative way for communications to be reviewed and sent up the chain		Process	Communication	Communication - Internal communication
323	Email	What could be done differently	Clear lines of communication to ICCC. Who is briefing them on what? Ensure that they receive communication updates prior to the public receiving them		Process	Communication	Communication - Internal communication
324	Email	What could be done differently	Timeliness in issuing communications. The LDCC sign-off process took time as multiple people needed to sign-off.		Process	Governance	Governance - Process
325	Email	What could be done differently	We had issues with communications being issued that weren't run by the waste operations team / ICCC e.g Call council if a food waste bin is full to report it. It had been arranged to have the bins collected twice daily so this was an unnecessary piece of communication		Process	Governance	Governance - Process
326	Email	What could be done differently	ICCC to be briefed prior to comms being issued. E.g green waste kerbside collection ... it was announced on social media with a video of the mayor, however no one in ICCC knew it was happening / waste didn't know it was happening and therefore couldn't answer questions		Process	Governance	Governance - Process
327	Email	What could be done differently	Consider with food waste bin locations / volume of bins to align with areas that had experience power outages		Process	Governance	Governance - Process
328	Email	What could be done differently	From CET's perspective, here are some learnings / feedback for us to consider: When decisions / communications from an operational perspective changed this has an impact on the ability to develop the comms and get them signed off In one instance, we had to undo messaging / revert comms. E.g RaWC's being open on the Monday then not being opened. Only kerbside waste was being collected then we reversed it saying that it wasn't There is a need to bring comms from one are together wherever possible due to the volume of communications that needed to be issued. This can delay some comms being issued on one topic when decision points are needed in another area		Process	Governance	Governance - Process
329	Survey		I have had several conversation with officers working in other councils over the last few weeks. It appears that other councils tend to have an 'Emergency Response Group' that is stands up to coordinate the operational responses and works directly with the LDMG. It also stands up for smaller events where the LDMG actually doesn't stand up (i.e. similar to 2024 Christmas storms). In Townsville, I understand that the I&O GM leads it. I believe Logan activated a similar system for the first time during the cyclone. I am sure as experts in disaster coordination and management you are across these models but I am happy to gather further details should you need them. Having a more formalised system with clear roles and responsibilities to coordinate the disaster operational response would be extremely valuable.		Process	Governance	Governance - Process
330	Survey		Fix- I felt the narrative around council staff being permitted to return to the office was disorganised. Council needs to inspect buildings in first 24hrs and let staff back ASAP. This would especially benefit those without comms or power at home . In the end I just made the call for my team and we returned to the office		Process	Governance	Governance - Organisational
331	Survey		Improve - Lots of duplication on the way we recorded damage to assets – there is probably a better way of doing this which needs further discussion		Process	Governance	Governance - Process
332	Survey		Sustain – Payment of flex hours meant that overtime could be effectively managed although this probably needed to be for a bit longer		Process	Governance	Governance - Process
333	Survey		Improve – Having a published list of POCs – Emails and phone numbers would improve communication		Process	Governance	Governance - Process

334	Survey		Improve – Opening up ferry services and barges needs to be co-ordinated and driven by the LDMC- this needs closer liaison with the harbour master before and after any natural disaster.		Support	Operations	Operations - Interoperability
335	Survey	What worked well	More training in Guardian with easy to follow instructions.		Training	Capability Development	Capability Dev - Training & development
336	Survey	What worked well	Some people were very stretched in their roles. Finance and HR issues were hard to navigate. More support from officers outside of the LDCC. Clear roles and responsibilities for everyone in the LDCC.		People	Resources	Resources - People
337	Survey	What worked well	We tried a new process with a LDMG Councillor inbox & phone, however this felt like we added an extra layer to the process & created an expectation that the LDCC could assist the Councillor faster than the normal process (we can't remove trees, close roads, assist on private land etc.). In Operations we sent the majority of their emails onto the ICCC to action, as they were operating & the existing processes, to submit a request to City Ops to remove a tree or close a road - for example, worked very well. In future I believe this can be improved by having this managed by the ICCC who were also working extended hours and weekends, also this way the information is captured into the right system (i.e. Assetic or CiA) which allows for accurate works and cost capture relating to that job and can easily be managed by the applicable councillor support officer.		Process	Governance	Governance - Process
338	Survey	What worked well	Centre Manger & Support - ensure person isn't doing 2 roles and if all are in meetings, make sure 1 person is available to room.		Process	Governance	Governance - Process
339	Survey	What worked well	Access to documentation and processes in an easier and more accessible space. Difficult to find information.		Technology	Resources	Resources - Technology
340	Survey	What worked well	I think some people defaulted to working in their BAU roles and didn't necessarily pass jobs over to the appropriate teams. Instead they used their own contacts with colleagues throughout the business to get intel or information, which meant when the Intel team contacted people, we were met with comments like, "someone always called us." I don't feel like it's fair for people though out the council to be receiving multiple calls in an already stressful event.		Training	Capability Development	Capability Dev - Training & development
341	Survey	Immediate actions required	More training		Training	Capability Development	Capability Dev - Training & development
342	Survey	Immediate actions required	Clear written roles and responsibilities		Process	Governance	Governance - Process
343	Survey	Immediate actions required	No Councillor requests in LDCC		Process	Governance	Governance - Process
344	Survey	Immediate actions required	Ensure in future events Centre Manager and Centre Support role is always available to the LDCC Room and it's clear who is in these roles as sometimes it was unclear if someone was the Room Manager or helping as LDC, made it difficult to know who to talk to as the LDCC Centre Manager. Also ensure only the LDCC Team Leaders attend the LDMG Meeting - if required - as at times most of the LDCC slowed while all were listening into the meeting. LDC should advise Centre Manager of the LDMG decisions and actions that they want the LDCC to operationalise/action.		Process	Governance	Governance - Process
345	Survey	Immediate actions required	Could a process or info be put in place when a large number of ppl are offline or isolated where they maybe have things ie battery packs, in order to still assist remotely?		Support	Resources	Resources - Equipment
346	Survey	Key takeaways	We can always learn and improve from previous activations as long as we implement the recommendations that come from surveys like this one.		Process	Governance	Governance - Process
347	Survey	Key takeaways	Support is a big thing, make sure the LDCC Teams have support, know who the leads are and who to ask if they need help. Don't let RCC processes, needs/wants and BAU inform LDCC decisions (i.e. LDMG Councillor phone/email) - the LDCC is there to operationalise LDMG decisions, yes it is comprised of council workers - but it is not there just for council - it is there for the community, to manage the impact and coordinate the disaster response and recovery, council is one of the LDMG agencies and it's needs/requests should not impact the ability for the LDMG/LDCC to respond to the disaster as a whole (finding it difficult to word as this event was different to any others before).		Process	Command, Control and Coord	Command Control Coord - Decision making
348	Survey	Key takeaways	There is still a lot to learn and would be good if there were smaller modules of o line training or instructional videos that could be accessed throughout the year instead of 1 full day of training. It is too easy to forget unless you use it regularly		Training	Capability Development	Capability Dev - Training & development
349	Survey	Key takeaways	I was able to wfh but due to extended power outages and flooding over roads, I couldn't. If I had any options to assist though, I would have absolutely been available.		Process	Communication	Communication - Internal communication
350	Survey	Additonal comments	I think the wonderful group of people that came together in the LDCC during TC Alfred were amazing. I am very proud of be apart of this team.	✓	People	People	People - Culture

351	Survey	Additonal comments	Using Teams worked really well - LDCC did very well to adapt very quickly to work remotely and work together.	✓	Process	Communication	Communication - Internal communication
352	Survey	Additonal comments	Overnight team weren't able to do LDCC work as they were dedicated to making the Mayor's Briefings - would be better if Mayors Support People/Comm's People reused the sitrep to make these briefings - or LDC should work with LDMG Chair to make SDMC briefing info from sitrep, took trained experienced LDCC staff away from being able to work in other teams.		Process	Governance	Governance - Process
353	Survey	Additonal comments	More Centre Support people to ensure they can 100% support the LDCC Teams, these roles were supporting the LDC, Deputy LDC or LDMG at the same time as the LDCC and it didn't work very well. Have other people support the LDC/Deputy so the LDCC has Centre Manager / Support in the room, it worked great once arrived from Townsville as there was enough management support for the LDCC.		People	Resources	Resources - People
354	Survey	Additonal comments	A clearer understanding of what each cell is responsible for. It is difficult to remember, especially if you are new		Training	Capability Development	Capability Dev - Training & development
355	Survey	Additonal comments	Please train the managers of those who volunteer that they need to reallocate work loads and not just leave it all for when the volunteer returns.		Training	Capability Development	Capability Dev - Training & development
356	Email		Going Remote – It's fantastic to see the team adapt quickly and get on with their tasks.	✓	People	People	People - Culture
357	Email		A big thank you for the laptops and getting us mobile. Some officers still don't have laptops, so I hope they were all returned 😉.	✓	Technology	Resources	Resources - Technology
358	Email		Teams – The platform worked well overall. Some officers had limited experience with Teams, but they adapted wonderfully despite everything else going on.	✓	People	People	People - Culture
359	Email		Guardian – I've noticed some struggles with Guardian. We really need cheat sheets on how to log and forward tasks, etc. I know we have training, but it tends to be forgotten at the start.		Process	Governance	Governance - Process
360	Email		Cells – We need to redefine roles within the cells. There was a lot of overlap, which caused stress.		Process	Governance	Governance - Process
361	Email		Task Logging – How do we log a closed road, and more importantly, who should do it? Should it be the LDCC or the depot with photos? Also, who should reopen it?		Process	Governance	Governance - Process
362	Email		LDCC Work – When entering the LDCC, work at the desk should stay there. Managers need to be reminded of this. I felt were being pulled back into the ICCC world.		Process	Governance	Governance - Organisational
363	Email		Overnight Work – Working overnight was effective, but the briefing note needs to be sorted as it was turning into a SITREP report. It helped reset the team for the next day by providing updates and making everyone aware of ongoing activities.		Process	Governance	Governance - Process
364	Email		Communication with RCC – We need better communication with RCC, which should lead all briefing notes for the Mayor. We missed this in the first couple of days but eventually sorted it out.		Process	Governance	Governance - Process
365	Email		On-Call Roster – Can we get a list of who is on the on-call roster and who we should request information from, e.g., I'm not sure who else would provide written responses and I wanted to set up a template so they know what we need.		Process	Governance	Governance - Process
366	Email		LDMG Meetings – Attendance needs to be tightened. Some people were asking questions that should not have been addressed at that time. These should go through the Room Assistant/Manager. For internal forwarding, requests should go via the Room Assistant, who will add and remove people as appropriate.		Process	Governance	Governance - Process
367	Email		Email List – This needs to be reviewed.		Process	Governance	Governance - Process
368	Email		LDMG Meeting Updates – The room should not stop once the meeting is complete. Either the Room Assistant or Room Manager should provide an update on what to focus on.		Process	Governance	Governance - Process
369	Email		Handover Timing – If your shift starts at 2 pm, don't come earlier than 1:30 pm. Sometimes there were too many people in the room.		Process	Governance	Governance - Process
370	Email		IM Building – If we keep the IM building, consider grabbing your lunch and heading downstairs if it's safe.		Process	Governance	Governance - Process
371	Email		Roles and Responsibilities – It's clear I don't know who does what 😉. I'm happy to pop down for a chat if we can find some time.		Training	Capability Development	Capability Dev - Training & development
372	Councillors		Councillor Hotline; well received	✓	Process	Governance	Governance - Process
373	Councillors		Recommendation of a Councillor Liaison Cell well received	✓	Process	Governance	Governance - Structure
374	Councillors		Phones being down, problematic		Technology	Resources	Resources - Technology
375	Councillors		Concerned about Facebook in the lead up; crazy chatter and incorrect information		Process	Communication	Communication - Public information
376	Councillors		Major problem in terms of getting homeless people of the Islands		Process	Governance	Governance - Process

377	Councillors		Issues opening halls, major challenge because the Halls aren't cyclone rated; Council didn't open them as a PoR -QPS/SES/CC didn't want anything to do with it, but then the ferries stopped and we were concerned that people had nowhere to go		Process	Resources	Resources - Facilities
378	Councillors		Russell open the day before, Macleay opened the next day-political conspiracy because of the differing time		Process	Resources	Resources - Facilities
379	Councillors		Council's messaging was too passive, Council could have been more proactive in Social media to dissipate the community sentiment		Process	Communication	Communication - Public information
380	Councillors		Strategic placement of generators worked well	✓	Support	Resources	Resources - Equipment
381	Councillors		Starlink and NBN great assets once they arrived; wanting Starlink permanently for Islands		Technology	Resources	Resources - Technology
382	Councillors		Evac Centres; two broad functions: shelter in place and recovery hubs. From a Council perspective, recovery process fell down because it was uncoordinated (unpack further); What worked well on Macleay was the Bowls Club fed people, had mobile reception -Russell Island, IGA delivered a similar service		Process	Resources	Resources - Facilities
383	Councillors		Think beyond local or state -the local businesses should be managing the recovery process.		Process	Resources	Resources - People
384	Councillors		Review other assets as cyclone rated buildings (Schools, RFS, halls) -think laterally		Process	Resources	Resources - Facilities
385	Councillors		Huge credit for an incredible response	✓	People	People	People - Culture
386	Councillors		Mainland experience: 'pretty wet', lost power, heaven compared to Stradbroke as there was support, services, help, people nearby, you could access medical support, power and comms 'somewhere' if you lost it,	✓	Process	Governance	Governance - Process
387	Councillors		Stradbroke quickly became a nightmare; deaf and blind-assumptions and inform into the LDGM was inaccurate, a lot of conflicting info		Process	Communication	Communication - Public information
388	Councillors		Stradbroke is so large with three separate townships + two Indigenous communities; Dunwich came online first (Elder), and another in Chamber of Commerce, two days later Point Lookout, then Amity the day after.		Process	Communication	Communication - Public information
389	Councillors		An individual from Dunwich drove around the island to assess situation and feed information back to the Cr. Hugely valuable for Cr and LDGM.	✓	Process	Operations	Operations - Situational awareness
390	Councillors		Power stability, network, and pre-deployment is challenging		Support	Resources	Resources - Technology
391	Councillors		Local store at Amity became an unofficial hub -a resident offered their personal Starlink	✓	Process	Communities	Communities - Resilience
392	Councillors		Consideration needed on Straddie with predeployment. Challenging because there isn't a critical mass of people; tradies, experienced responders, etc.		People	Resources	Resources - People
393	Councillors		Clear leads of LDMG didn't quite work -unique challenges, so need to reach out to existing functional community networks		Process	Operations	Operations - Situational awareness
394	Councillors		If telco/power stability cannot be achieved, we need to review how we communicate		Technology	Resources	Resources - Technology
395	Councillors		Council was amazing, masterstroke of Recovery exercise	✓	People	People	People - Culture
396	Councillors		Comms from LDCC to Cr was on point and important in command-control		Process	Communication	Communication - Internal communication
397	Councillors		The benefit of the long lead up, 'boy who cried wolf', residents well received door knocking and map sharing,		Process	Communication	Communication - Public information
398	Councillors		Importance of meaningful network of trust established by [redacted] team needs recognition.	✓	People	Operations	Operations - Interoperability
399	Councillors		Islands had to do things on their own, we need to build sovereignty and lean forward into local place-based solutions and tie them into the command-control, CEO daily updates hugely valuable		Process	Communities	Communities - Resilience
400	Councillors		Watching the LDCC was impressive to see all of the departments working so well together	✓	People	Operations	Operations - Interoperability
401	Councillors		Reinforced the necessity of the scale of DM	✓	Organisation	Capability Development	Capability Dev - Lessons management
402	Email		No trees or vegetation near power lines. There should be a policy of annual inspection and clearing of possible hazards Trees on private property adjacent to housing or buildings be annually pruned to roof level.		Process	Governance	Governance - Process
403	Email		This should be a council directive. This was a council requirement in Karratha in the Pilbara whereby landowners pruned their trees to roof level and council removed the debris at no cost to the landowner. Many trees in W A are shallow rooted due to their dry climate and hence a potential hazard. Many uprooted trees in the Redlands also appear to be shallow rooted.		Process	Governance	Governance - Process

404	Email		Accumulation of leaves and foliage in street gutters and at storm water drains. No incentive for landowner's to remove this debris - mainly awaiting council action. Someone else's problem. It is not good for this material to enter our drains and potentially restrict flows.		Process	Communities	Communities - Preparedness
405	Email		Construction site crane booms suspended over public spaces - roads and buildings. Design alterations should be completed to include a safe anchor point. The booms of heavy machinery in the Pilbara, such as stackers and reclaimers, have a safe anchor point - secured to a concrete anchor. Conveyor belts are also tied down to prevent flapping in the wind.		Process	Governance	Governance - Policy
406	Email		Many older residents in the Redlands may be unable to manage their preparations and a Helpline could be useful. I have found most contractors to be fully or over committed and unable to assist.		Process	Communities	Communities - Preparedness
407	Survey	Key takeaways	Lots of investment and planning required for residential islands in emergency preparedness		Process	Governance	Governance - Process
408	Survey	Key takeaways	As my first disaster it was a huge learning curve both internal to my organisation and at the LDMG and recovery perspective. Thank you for the support and learnings	✓	Support	Capability Development	Capability Dev - Lessons management
409	Survey	Key takeaways	Really cohesive group however there are always lessons to be learned.		Training	Capability Development	Capability Dev - Lessons management
410	Survey	Key takeaways	Community has desire for info but don't necessarily act on it such as preparedness		Process	Communities	Communities - Preparedness
411	Survey	Key takeaways			Process	Communities	Communities - Expectations
412	Survey	Key takeaways	Time is a luxury. Power is essential. Communications are critical. Remember the wisdom of people on the street is a valuable resource if we can tap in and encourage positive engagement.		Process	Communities	Communities - Resilience
413	Survey	Other comments	Looking forward to continuing to work with the group		People	People	People - Culture
414	Survey	Other comments	Our Church community have large kitchens, halls and volunteers, they could have been included a lot more if needed post event.		Process	Communities	Communities - Resilience
415	Survey	Other comments	Community Development (How we enable communities to enable & respond themselves) and Community Engagement (how we communicate messages to community) are very important. Wherever we can deepen, widen and broaden feedback loops from community members across diverse areas and regions, and help to engage and coordinate them, the better as they help both top down information inputs and assist bottom-up - on the ground responses.		Process	Communities	Communities - Resilience
			RECOVERY				
416	Email		DDMG membership confirmed beforehand was good.	✓	Process	Governance	Governance - Process
417	Email		Resources of all stakeholders were spread thin, and fatigue management is critical with concurrent events.		People	Resources	Resources - People
418	Email		Need to build resilience in local communities.		Process	Communities	Communities - Resilience
419	Email		Localities were impacted at different times in different ways (wind, storm inundation, flood inundation).		Support	Capability Development	Capability Dev - Lessons management
420	Email		Reliance on mobile network is key. Communication and messaging needs to be accurate and early.		Process	Communication	Communication - Public information
421	Email		CRF was set up early, but guidelines and other exceptional packages noted as being slow to roll out.		Process	Communities	Communities - Expectations
422	Email		RFAs may need a better way of tracking – an online workflow system was suggested.		Technology	Resources	Resources - Technology
423	Email - Economic	Immediate/short-term Internal Business Continuity	EDP Events calendar invitations to created in EDP Calendar for ease of cancelling during significant events ie cyclone in case staff are not available to cancel		Process	Governance	Governance - Process
424	Email - Economic	Immediate/short-term Internal Business Continuity	give access / permission to event in Eventbrite to ESS Team members and myself so anyone can monitor and action if needed		Process	Governance	Governance - Process

425	Email - Economic	Immediate/short-term Internal Business Continuity	Joint file to be established for ED and Tourism and events team for Disaster Management so everyone can access easily		Process	Governance	Governance - Process
426	Email - Economic	Immediate/short-term Internal Business Continuity	A directive for stand up in BAU roles after so many days – i.e. immediate stand up of someone to Service Manager T & E to continue BAU and manage team so I could continue with recovery work instead of straddling both. Particularly with events – the deadlines don't change so BAU can' stop completely. Same for Group Manager roles – it seemed to be happening at GM level.		People	Resources	Resources - People
427	Email - Economic	Immediate/short-term Internal Business Continuity	Templates for all Recovery groups should be provided to each lead to support consistency		Process	Governance	Governance - Process
428	Email - Economic	Immediate/short-term Internal Business Continuity	There should be a communications process map that outlines when meetings are happening so all stakeholders have oversight to how things are moving and recovery group can establish meetings		Process	Operations	Operations - Situational awareness
429	Email - Economic	Immediate/short-term Internal Business Continuity	For LDCC to track essential services there should be a simple table for locations (Fuel, Comms, Energy)		Process	Governance	Governance - Process
430	Email - Economic	Immediate/short-term Internal Business Continuity	A simple table that is shared with key stakeholder of the set up LDCC of the units and who is working (single email address in?) this was not communicated		Process	Operations	Operations - Situational awareness
431	Email - Economic	Immediate/short-term Internal Business Continuity	Pre developed communications for CET to update and roll out		Process	Communication	Communication - Public information
432	Email - Economic	Immediate/short-term Internal Business Continuity	Utilise Food safety reach outs to talk about other business support.		Support	Operations	Operations - Interoperability
433	Email - Economic	Mainland Assistance: Evac/POR & other	Communication channels (options for when most of community are offline)		Process	Communication	Communication - Public information
434	Email - Economic	Mainland Assistance: Evac/POR & other	Solutions for those vulnerable due to many reports about checking in on people		Process	Governance	Governance - Process
435	Email - Economic	Mainland Assistance: Evac/POR & other	Providing residents with bright yellow stickers for letterboxes if they need a check in. Makes it clear for emergency service people or neighbours to door knock		Process	Governance	Governance - Process
436	Email - Economic	Mainland Assistance: Evac/POR & other	Solutions from a stakeholder in mount cotton as we all still having issues with mobile phone towers		Technology	Resources	Resources - Technology
437	Email - Economic	Mainland Assistance: Evac/POR & other	Can we get flyer to put at stores this is where people are physically heading I'm happy to go see stores to get information out to them eg mobile, power, other info they'd be missout out on		Process	Communication	Communication - Public information
438	Email - Economic	Mainland Assistance: Evac/POR & other	Drop of flyers to stores to get information ie. Mobile, power and other information due to power / internet being down – Posters also suggested by NSI		Process	Communication	Communication - Public information
439	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Have agency / commercial operational staff earlier on islands for generators to be provided and operational		People	Resources	Resources - People

440	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Battery pack and UHF radios with Island Champions	Support	Resources	Resources - Equipment
441	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Work with business community to identify places of refuge – centre needed for each township – not just one for straddie	Support	Resources	Resources - Facilities
442	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Solutions for those vulnerable due to many reports about checking in on people on Islands	Process	Governance	Governance - Process
443	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Providing residents with bright yellow stickers for letterboxes if they need a check in. Makes it clear for emergency service people or neighbours to door knock	Process	Governance	Governance - Process
444	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Drop of flyers to stores to get information ie. Mobile, power and other information due to power / internet being down – Posters also suggested by NSI	Process	Command, Control and Coord	Communication - Public information
445	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Townships on all Islands should have a pack that has UHV Radios, Startlink, battery packs) that residents with a Lead 'Community Champion '	Support	Resources	Resources - Equipment
446	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	There should be improved connection between 'Community Champion' taking key information from the LDMG meetings and communicating relevant island community – this is not recovery service – this operational element of LDCC	Process	Operations	Operations - Interoperability
447	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Co-ordinated comms for the Islands	Process	Operations	Operations - Interoperability
448	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Chamber of commerce representation in disaster meetings. Clarity around the members and role of LDMG – QYAC and Min Camping included but it appears NSI champions were not passing on information	Process	Operations	Operations - Interoperability
449	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	No single point of communications channel for business and residents – therefore relying on community chatter – not helpful	Process	Operations	Operations - Interoperability
450	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Islands to be treated different as residents can't get off – feel very isolated	Process	Governance	Governance - Process
451	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Food and fuel - this was on a individual business decision. for instance, Amity Trader had starlink, a generator and lots of fuel. They made those decision, it was not mandated or co-ordinated. Roadhouse Pt Lookout had no generator and ran out of fuel. Dunwich fuel not open since Tuesday last week due to owners residing on mainland. There was no supermarkets open in Dunwich from Wednesday last week. Bobs Shop at the Point stayed open until Thursday I believe but that meant people driving on roads that were at times hazardous	Support	Resources	Resources - Equipment
452	Email - Economic	SMBI & NSI Assistance: Evac/POR & other		Process	Communication	Communication - Public information
453	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Media were constantly contacting business owners for interviews, with those owners having no formal briefing. For instance, I did 3mins on ABC News Saturday morning - if I'd known there was a centralised Disaster Management Team meeting daily at RCC, I could have asked if there was any messages needed to get across	Process	Communication	Communication - Public information
454	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	There was no essential workers - like in covid - to keep the food & supplies available. this was mainly due to having no power. should essential businesses be given money to have generators? absolutely.	Process	Resources	Resources - Equipment
455	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Spar & Foodworks in Dunwich had no generators. Massive stock lost	Support	Resources	Resources - Equipment
456	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Butcher in Dunwich has a generator but was closed since Tuesday because boats stopped and they reside on mainland.	Support	Resources	Resources - Equipment

457	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Energex comms - i appreciate the complexity of the situation but as island businesses and residents, we had NO clear understanding of what the plan was (and still don't) we were not told when the Energex generator was connected (Sunday 12:20pm) only a phone call from the resident who lives next door to brewery to let me know we had power!		Process	Communication	Communication - Public information
458	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Townships should be viewed as silos. Ensure there is food, fuel and emergency power/shelter in each township to prevent people having to travel.		Support	Resources	Resources - Equipment
459	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Generators in each township with fuel reserve.		Support	Resources	Resources - Equipment
460	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Extra sandbags for businesses to protect property		Support	Resources	Resources - Equipment
461	Email - Economic	SMBI & NSI Assistance: Evac/POR & other	Allow volunteers to assist with filling sandbags if they want to		Support	Resources	Resources - People
462	Email - Economic	Community warnings & Information	Communication channels (options for when most of community are offline)		Process	Communication	Communication - Public information
463	Email - Economic	Community warnings & Information	Communication to backpackers pre - event		Process	Communication	Communication - Public information
464	Email - Economic	Community warnings & Information	Business e-newsletters distribution. Consider reliance during power outage and telecommunications are down		Process	Communication	Communication - Public information
465	Email - Economic	Volunteers	Allow volunteers to assist with filling sandbags if they want to		Support	Resources	Resources - People
466	Email - Economic	Volunteers	Clarity on role of community champions		Process	Governance	Governance - Process
467	Email - Economic	Funding / cash flow	Importance of Cash during event when no electricity for eftpos		Process	Communities	Communities - Recovery
468	Email - Economic	Funding / cash flow	Advocate for cash flow support for business		Process	Communities	Communities - Recovery
469	Email - Economic	Insurance	Businesses need to understand their rights (difference between tenants and landlords)		Process	Communities	Communities - Recovery
470	Email - Economic	Primary Producers	Establish database of local businesses for better comms in times of disaster		Process	Governance	Governance - Process
471	Email - Economic	Surveys	Request local survey data from relevant Agencies eg. DPI, State Gov Small Business & BEDA		Support	Operations	Operations - Agency specific issues
472	Email - Economic	Medium/Long Term EDP / Tourism Recovery Team	Predeveloped communications for CET to update and roll out		Process	Communication	Communication - Public information
473	Email - Economic	Medium/Long Term EDP / Tourism Recovery Team	Better tourism databases (already noted for full review prior to this crisis!)		Technology	Resources	Resources - Technology
474	Email - Economic	Medium/Long Term EDP / Tourism Recovery Team	Priority Business List – to be established and reviewed on a regular basis so this can be prioritised and ready to go		Process	Governance	Governance - Process
475	Email - Economic	Medium/Long Term EDP / Tourism Recovery Team	A central point for issues to be escalated to LDMG that we could use and also ask our stakeholders to log issues rather than being the central point. We were relying on using our team members working in the LDMG to escalate issues initially		Support	Operations	Operations - Interoperability
476	Email - Economic	Medium/Long Term EDP / Tourism Recovery Team	Tourism to have 2 members in recovery group to split workload – one to liaise directly with stakeholders and other to work on recovery		People	Resources	Resources - People
477	Email - Economic	Community Resilience	Build onsight capability – have agency /commercial operational staff earlier located on islands for generators to be started		People	Resources	Resources - People
478	Email - Economic	Community Resilience	Work with business community to identify places of refuge – centre needed for each township – not just one for straddie		Support	Resources	Resources - Facilities

479	Email - Economic	Community / business education & awareness	Communication to backpackers post - event	Process	Communication	Communication - Public information
480	Email - Economic	Community / business education & awareness	Educate business about Fairwork, tenants/Landlords	Training	Communities	Communities - Resilience
481	Email - Economic	Island community champions program	Battery pack and UHF radios with Island Champions	Support	Resources	Resources - Equipment
482	Email - Economic	Island community champions program	Increase local Island reps on LDMG – NSI – 3 townships – Amity, Dunwich and Point Lookout)	Process	Communication	Communication - Internal communication
483	Email - Economic	Island community champions program	Review of community champions at LDMG for a clear understanding of their role This should be reviewed on a regular basis and communicated to Chambers and greater economic recovery team.	Process	Governance	Governance - Process
484	Recovery debrief		Environment - recommendation to ensure membership includes Public Health and Natural environment as well as someone from Infrastructure. Roles and responsibilities of individual groups in Council affected the decisions that were being made within the Environmental Group.	Process	Governance	Governance - Process
485	Recovery debrief		Sharing of information particular impacts assessments	Process	Communication	Communication - Internal communication
486	Recovery debrief		Exercising with individual groups	Training	Capability Development	Capability Dev - Exercising
487	Recovery debrief	Leadership	Places of refuge - challenging helping the homeless as we didn't know where to refer them. If we had the PoF identified / decided earlier, we could have got more people to safety.	Process	Resources	Resources - Facilities
488	Recovery debrief	Leadership	Stretched resourcing in recovery Redlands have not had to scale recovery as much as we did from this event. We need to look at making recovery more sustainable, so that we can better resource it.	People	Resources	Resources - People
489	Recovery debrief	Leadership	LDCC do handover very well (shift work). Does not happen in recovery, which means 'you're it' all the time if you sit in that role. Need better structure for resourcing recovery - suggestion to learn from the LDCC structure.	People	Resources	Resources - People
490	Recovery debrief	Leadership	Infrastructure - everyone stepping up to do things - did not have admin support. Admin support would make a huge difference.	People	Resources	Resources - People
491	Recovery debrief	Leadership	Handover from LDCC to LRC.	Process	Governance	Governance - Process
492	Recovery debrief	Leadership	Economic Chair - Limited visibility of what was happening in LDCC. required.	People	Resources	People - Culture
493	Recovery debrief	Leadership	SMEAC board change to recovery.	Process	Operations	Operations - Situational awareness
494	Recovery debrief	Leadership	Local Recovery Liaison role(s) (recovery cell embedded) needed in LDCC to pass on to LRC.	People	Resources	People - Culture
495	Recovery debrief	Leadership	Using a centre for that was not a designed for LDCC - (signed off for new LDCC) - having boards in the LDCC moving forward to be able to capture key themes etc. - both for response and recovery. Been able to move tasking from response to recovery (transition)	Support	Resources	Resources - Facilities
496	Recovery debrief	Leadership	Make resource planning more proactive (LDCC to LRCC?)	Process	Governance	Governance - Process
497	Recovery debrief	Leadership	Ops space - Infrastructure - multiple hats on (infrastructure lead) - wearing multiple hats - unable to conduct	People	Resources	Resources - People
498	Recovery debrief	Leadership	No official hand over from response to recovery - blurred lines between what was considered response vs what was considered recovery	Process	Governance	Governance - Process
499	Recovery debrief	Leadership	Pull out of our BAU without back up resourcing	People	Resources	Resources - People
500	Recovery debrief	Leadership	General email group so that intel isn't missed. Sharing role within groups.	Process	Governance	Governance - Process
501	Recovery debrief	Leadership	Had an economic sub-group meeting daily - if meeting was missed, members would still get an email daily - if Eco Chair lost power, we were still able to access the daily report/up to date intel.	Process	Communication	Communication - Internal communication
502	Recovery debrief	Communication	Comms resourcing was challenging - Paula pulled into recovery - had a rolling shift in response, which we were struggling to fill.	Process	Communication	Communication - Public information

503	Recovery debrief	Communication	Ongoing comms - social media continued to go out. If you didn't have power, wouldn't get messaging. Radio referencing going to councils website. Need to go back to 'old school messaging' VMS boards, flyers up in supermarkets / community gathering areas.		Process	Communication	Communication - Public information
504	Recovery debrief	Communication	Learning from bushfire event - putting physical messaging on notice boards daily worked well / proven to be used frequently by community.		Process	Communication	Communication - Public information
505	Recovery debrief	Communication	Sharing of other government agency information rather than recreating ourselves - that worked well, and reduced inconsistency in messaging.		Process	Operations	Operations - Interoperability
506	Recovery debrief	Communication	Ongoing recovery - having more people in recovery space from comms to support, in particular during response. People often underestimate the need for community comms in the recovery phase.		People	Resources	Resources - People
507	Recovery debrief	Communication	Having comms available and ready for opening of recovery hubs, such as printed maps to document when power would be coming back on. Flyers well received by community.		Process	Governance	Governance - Process
508	Recovery debrief	Communication	Nil boats to island and well as no power was a challenge when sending messaging to island communities. Radio network to islands how have been handy. Need to consider even hand written messaging on key notice boards / areas of the community so that messaging is available.		Process	Communication	Communication - Public information
509	Recovery debrief	Communication	Phone calls (outreach) to vulnerable community members (identified through SES damage assessments), economic group called all local businesses - to confirm if support is required.		Process	Operations	Operations - Interoperability
510	Recovery debrief	Communication	Group would be keen to explore feedback from the community on what messaging worked. ARC have some data coming in that will soon be shared.		Process	Communication	Communication - Public information
511	Recovery debrief	Communication	Islands felt very isolated as communications were not reaching them due to no power or transport.		Process	Communication	Communication - Public information
512	Recovery debrief	Communication	RFS have radio services based on the island that could be utilised to provide community information - should leverage off that group.		Process	Operations	Operations - Interoperability
513	Recovery debrief	Communication	Providing whiteboards, charger services in preparation for the event, so that it can be used post impact while comms is unavailable.		Support	Resources	Resources - Equipment
514	Recovery debrief	Communication	Deputy Mayor - "we need more people for recovery. Wearing 3 hats is not sustainable."		People	Resources	Resources - People
515	Recovery debrief	Communication	A lot of confusion having response and recovery stood up at the same time and people allocated to both response and recovery roles. Staff unsure of what meetings they needed to prioritise.		People	Resources	Resources - People
516	Recovery debrief	Communication	Preparedness comms was considered successful. People felt reassured that they had messaging to support that once power went out. They knew what to do because of the early messaging / knew what to expect.		Process	Communication	Communication - Public information
517	Recovery debrief	Communication	LRC/LRG Chair - sit on LDMG meetings - would receive intel. LRG meetings would be held in afternoons where intel would be passed on to members.		People	Communication	Communication - Internal communication
518	Recovery debrief	Communication	Guardian Recovery Module - H&S meetings - having real time data available on Guardian was helpful.	✓	Technology	Resources	Resources - Technology
519	Recovery debrief	Communication	Need admin support in guardian - someone available to update reports, rather than relying on sub-group Chairs.		People	Resources	Resources - People
520	Recovery debrief	Communication	Could create our own comms and translate that		Process	Communication	Communication - Public information
521	Recovery debrief	Communication	Meetings on Teams are incredibly helpful when linking in to sub-groups and latest information.		Technology	Communication	Communication - Internal communication
522	Recovery debrief	Communication	Information flow - proximity helps. Felt disjointed when not in the room. Chairs of different sub-groups need to come together in person, rather than dialling in. Location helps - used in LDCC. "Proximity helps to clear white noise"		Process	Operations	Operations - Interoperability
523	Recovery debrief	Communication	Importance of resourcing roles would allow for proximity.		People	Resources	Resources - People
524	Recovery debrief	Communication	Worked well - sequencing of meetings - from LDMG through to local H&S group.	✓	Process	Governance	Governance - Process
525	Recovery debrief	Interoperability	H&S group - met before TC Alfred - have regular membership meetings. Feel membership is strong.	✓	Process	Governance	Governance - Process
526	Recovery debrief	Interoperability	Environment did not have support through membership - should have state support. Was not aware of what enviro membership should look like - heard that other sub-groups were having regular meetings. We did not know that was required (no clear recovery governance structure / roles and responsibility in recovery).		Process	Governance	Governance - Process
527	Recovery debrief	Interoperability	No formalised capacity for recovery in environment - Chair was leveraging from pre-formed relationship in BAU roles.		People	Resources	Resources - People
528	Recovery debrief	Interoperability	Early engagement - GIVIT unable to attend all meetings - having contact details available of membership, so that there are still able to be contacted when required is essential.		Process	Governance	Governance - Process
529	Recovery debrief	Information Management	Formal communication arrangements are not in place - MOU with ARC and DRA - arrangements need to be updated and formalised for next time.		Process	Governance	Governance - Process

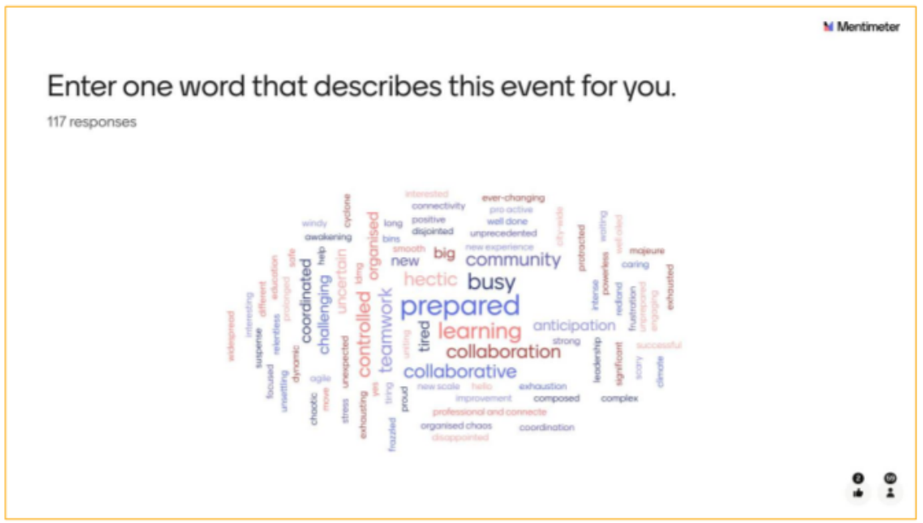
530	Recovery debrief	Information Management	D/Mayor - communication from state was very well done. Felt that information was been received as Premier was receiving it [redacted] were also in those meetings and therefore, felt comfortable that information was continuing to be received in a timely matter.	✓	Process	Operations	Operations - Interoperability
531	Recovery debrief	Information Management	Kept our state and federal members informed at local level. At state/federal level, members do not receive any DM training. They appreciated been informed with latest info so that they could share that through their channels.	✓	Process	Operations	Operations - Interoperability
532	Recovery debrief	Information Management	Only 3 ag businesses submitted surveys to DPI - gap in comms? Need comms from LRG to understand what support is required from DPI.		Process	Communication	Communication - Public information
533	Recovery debrief	Information Management	Damage assessment information needs to be shared better.		Process	Communication	Communication - Internal communication
534	Recovery debrief	Information Management	Worked well - QRA been involved from beginning of event. Was able to capture information ready to submit to QRA for funding support early, which saved council wearing some of the cost.	✓	Process	Operations	Operations - Agency specific issues
535	Recovery debrief	Information Management	Easy access to QRA - QRA very active and available during the event. Feedback that they were very valued.	✓	Process	Operations	Operations - Agency specific issues
536	Recovery debrief	Information Management	[redacted] (funding team) has been involved in LRG. Data and evidence collected in an interactive live map to be able to inform the recovery packages.	✓	Process	Governance	Governance - Process
537	Recovery debrief	Information Management	Guardian training required. More than one resource in each sub-group needs to know how to navigate it.		Training	Capability Development	Capability Dev - Training & development

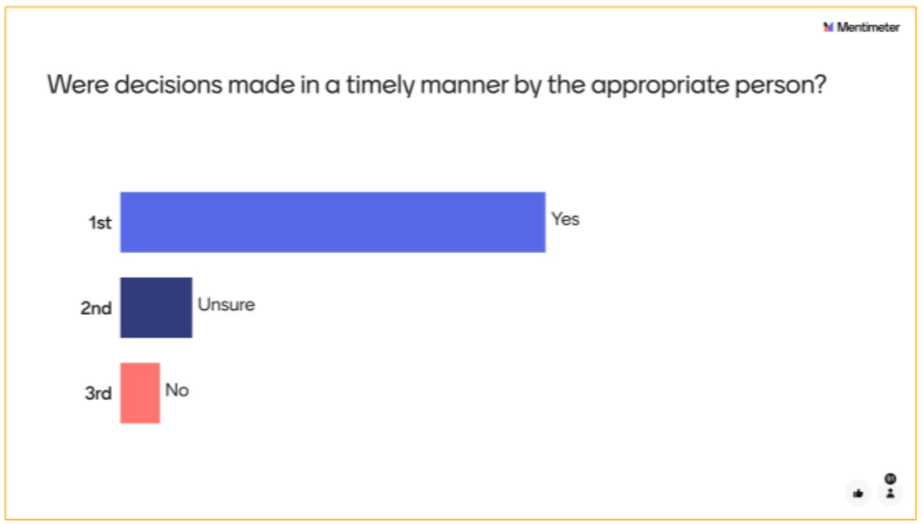
Appendix B - MentiMeter results

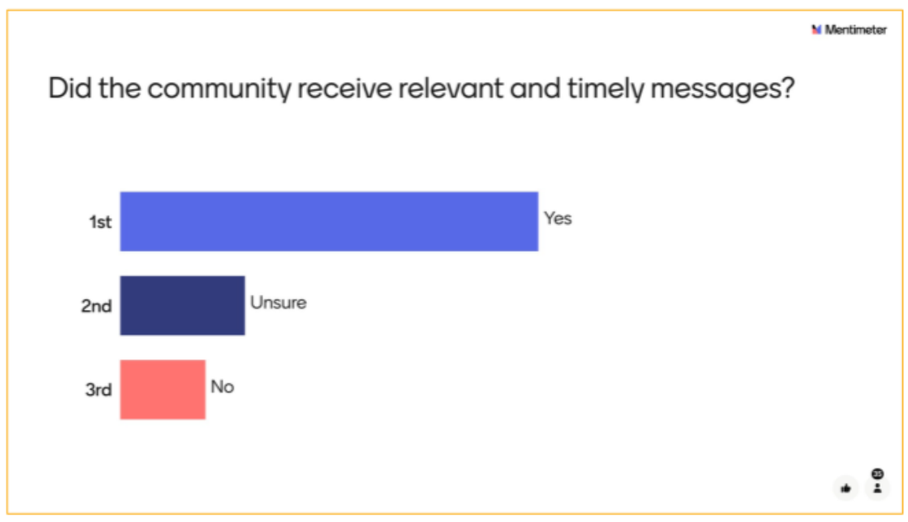
Redland City Council
TC Alfred – MentiMeter results

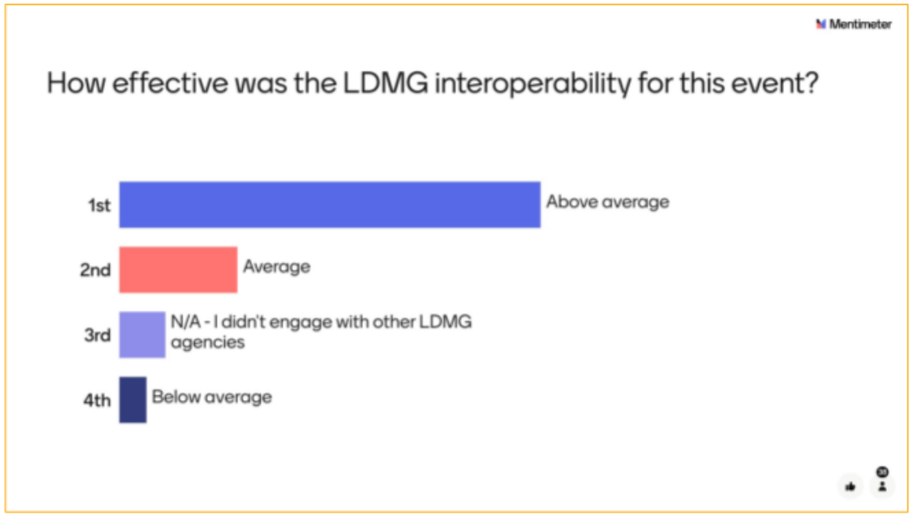
The following information was captured during the debriefs conducted for the TC Alfred After-Action Review. A full report has been provided to Council.

26 March 2025 – Local Disaster Management Group



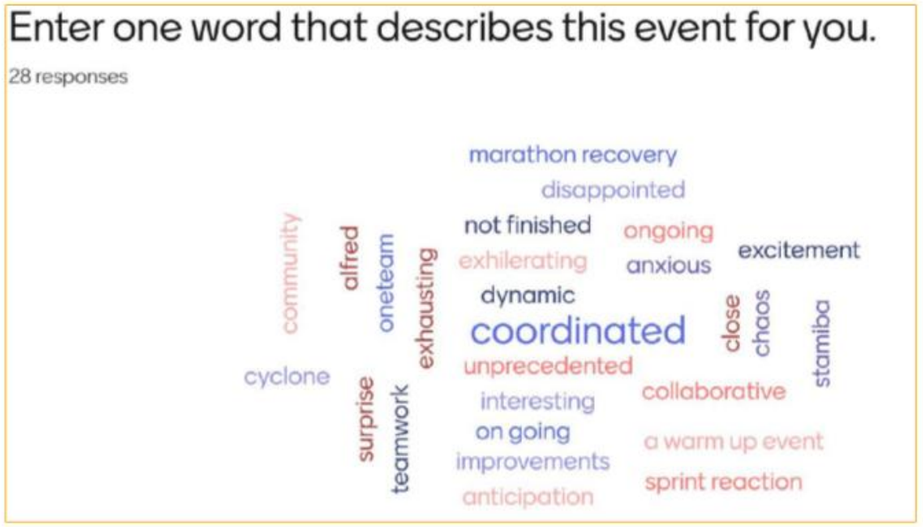


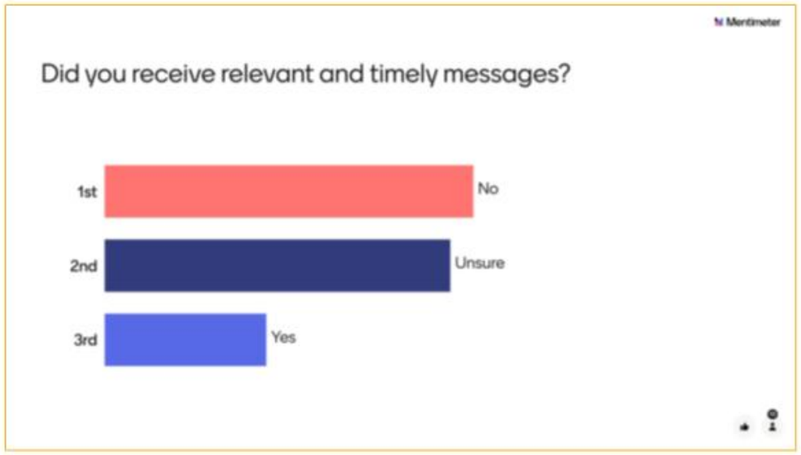


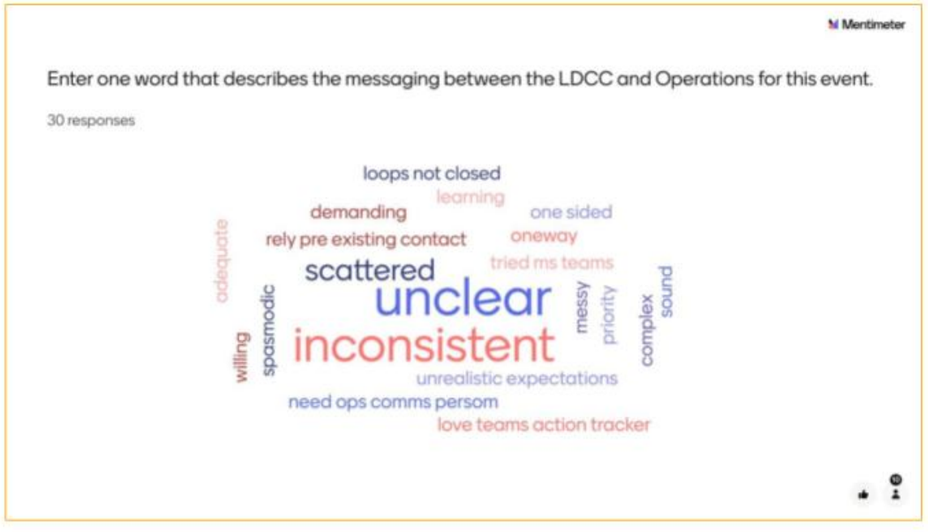

Mentimeter
How effective was the LDMG interoperability for this event?
1st
Above average
2nd
Average
3rd
N/A - I didn't engage with other LDMG agencies
4th
Below average

Mentimeter
Enter a word that describes the LDMG interoperability for you, including the supporting functions e.g. Evacuation Centres, Recovery Hubs?
57 responses
strong relationships
real-time knowledge
well oiled machine
reactive
infrastructure
criticality
assets
solution-focused
challenges
underwhelming
empathetic
collaborative
responsive
timely
fragile
flexible
brilliant
developing
supportive
distracted
challenging
fulsome
locality
remote
connected
worked well
consistent
fluid
hit and miss
frustrating
great
success
fantastic
dedicated
focused
disconnect
amazing
competitive
clarity needed
complex
updated
inconsistent
grounded
professional
fast paced
rapidly changing prioriti

17 April 2025 – City Operations

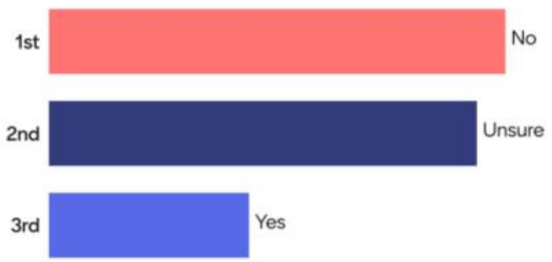






Mentimeter

Did you receive relevant and timely messages?



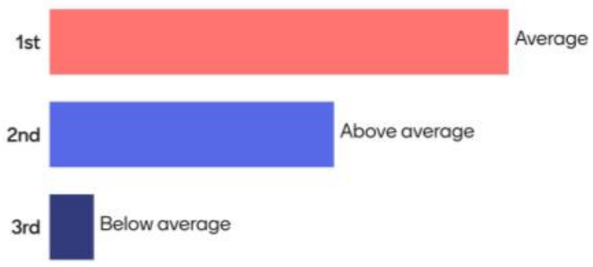
Mentimeter

Enter a word that best describes Council's operational services.

25 responses

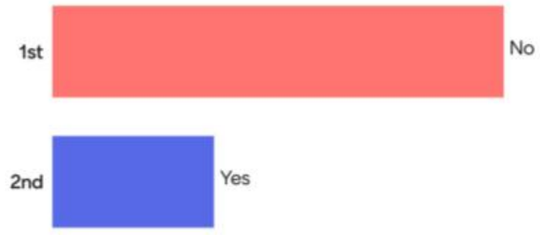
Mentimeter

How effective were Council's operational services for this event?



Mentimeter

Did you use procedures previously developed?



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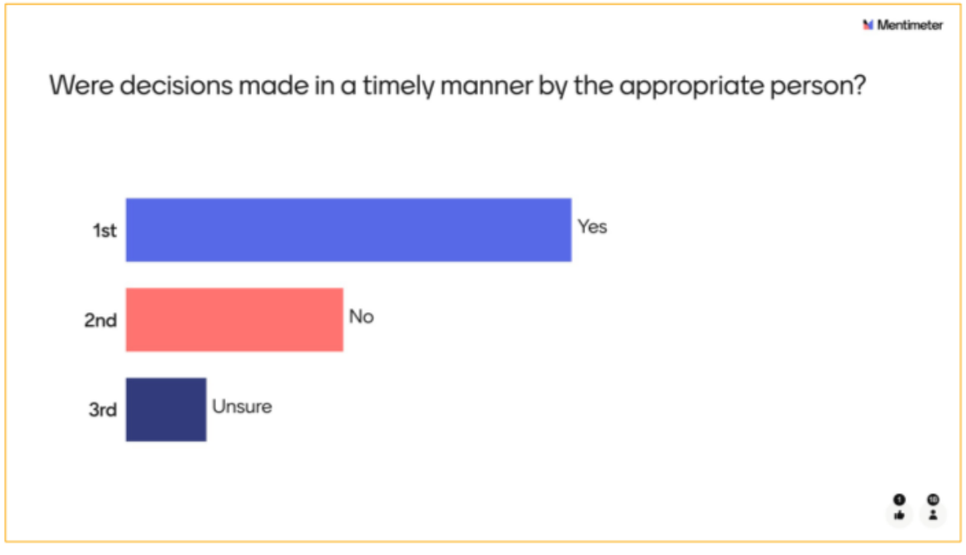
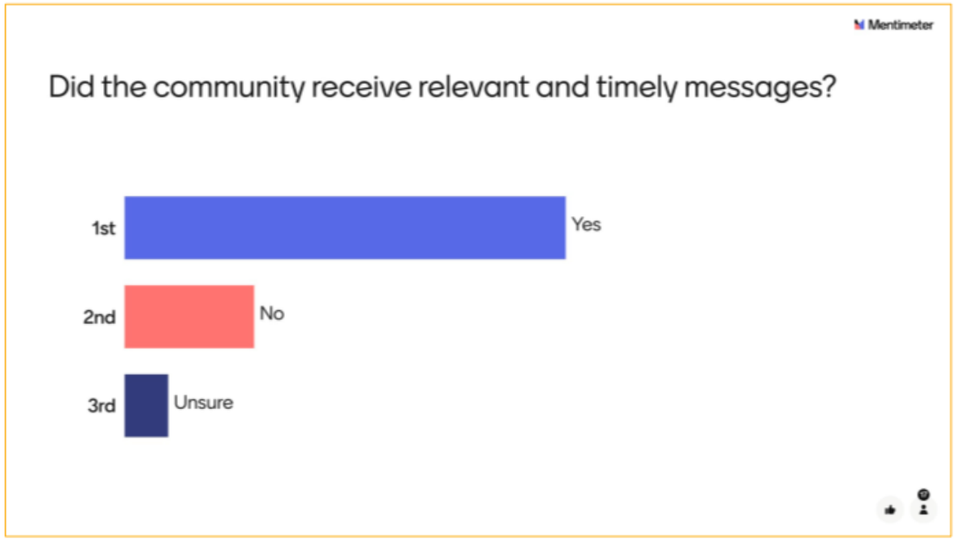
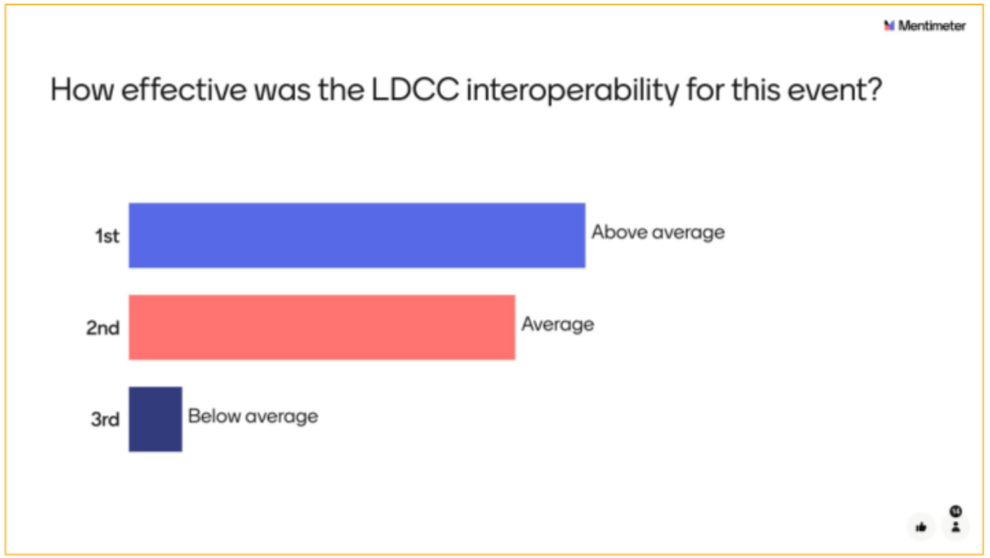
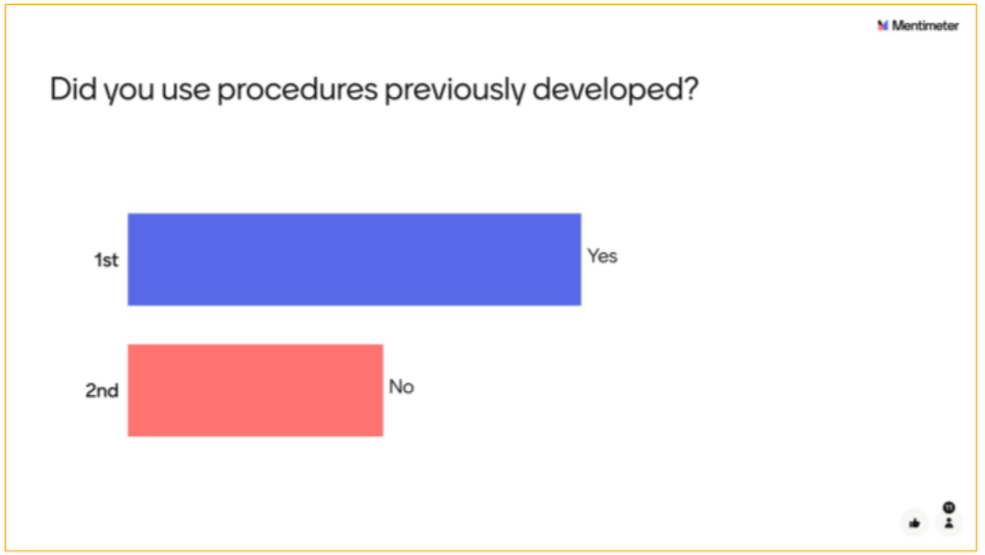
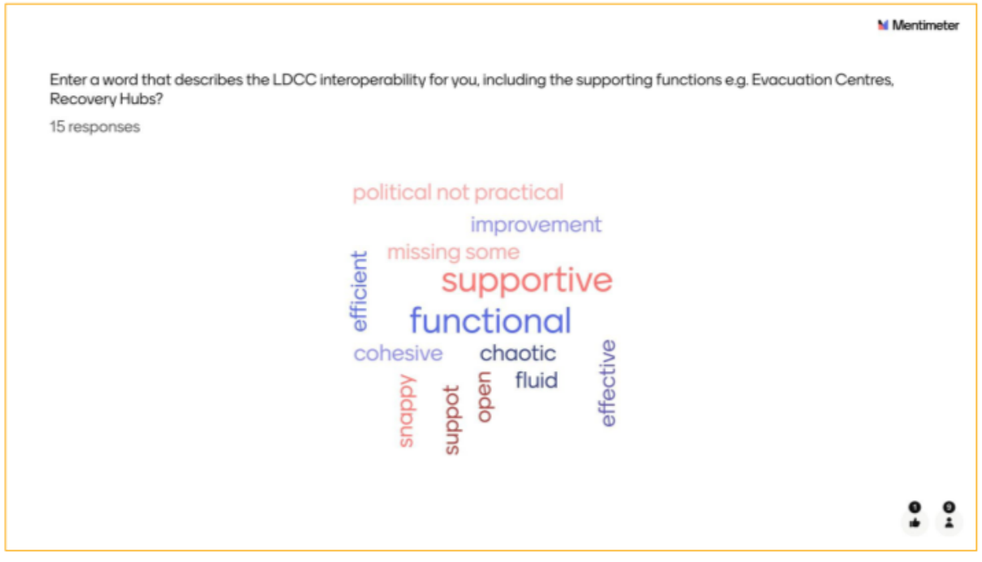
17 April 2025 – Local Disaster Coordination Centre






Mentimeter
How effective was the LDCC interoperability for this event?
1st
Above average
2nd
Average
3rd
Below average


Mentimeter
Did you use procedures previously developed?
1st
Yes
2nd
No


Mentimeter
Enter a word that describes the LDCC interoperability for you, including the supporting functions e.g. Evacuation Centres, Recovery Hubs?
15 responses
political not practical
improvement
missing some
efficient
supportive
functional
cohesive
chaotic
fluid
effective
snappy
suppot
open

Appendix C – Survey results

Redland City Council - TC Alfred Survey results												
Before we begin, please provide your details below. If you prefer to remain anonymous, please leave blank.	Please provide details of your organisation.	From the perspective of your role during the event, what do you believe worked well?	Is there anything that you think could be improved? If so, please explain.	What, if any, immediate actions are required?	Overall, how do you feel the Local Disaster Management Group managed this event?	Overall, how do you feel the Local Disaster Coordination Centre teams managed the event?	Did you work in the Local Disaster Coordination Centre?	On a scale of 1 to 5, how would you rate the LDCC functionality (facility and equipment)?	On a scale of 1 to 5, how would you rate Council's Guardian (Incident Management System)?	On a scale of 1 to 5, how would you rate Council's plans and procedures during this event?	What are your key takeaways from the response to TC Alfred?	Is there anything else that you would like to mention that may not have been covered in the previous questions?
	Redland City Council	Commitment of staff to the work. Reactivity and caoacto adapt	We are set up for day to day operations but gave no processes and clear expectations for weather events preparedness and response. That leads to ongoing scope creep on what's expected, poor record keeping, time list, safety issues, etc	Resources to develop detailed operational plans (relevant to city Operations) and processes for weather events including an agreement on roles and responsibilities, systems ready to be used.	3	3	Yes	1	2	2	Disaster Management is a bout the collaborative approach with external agencies but really need to include the council internal operational response to the disaster.	First responders safety such as when to go out to start clearing beeds to ge discussed and agreed upon at ldmg level so it's consistent across all.
	Metro south health	Meeting frequency (daily). Brisbane and Redland LDMG meetings overlapped which was problematic due to dual memberships.	Sit Reps received from individual email accounts and not LDCC generic account. Advice early re a central contact details for LDCC would have been helpful. Publication of rosters. Agency updates provided at LDMG meeting , however no clarity on whether a written sit rep required submission as well.	More regular circulation of LDMG contact listing for updating and perhaps be circulated at the activation of any event.	4	4	No				Ways to improve communication in early activation stages will prevent confusion in the peak of the event eg send out contact lists, how LDMG wanted sit reps, whether a liaison was required to attend LDCC - setting clear expectations.	No
	Lamb island Residents Association Inc; Lamb Island Community Champions	Community working together	Communication needed, mobile service; generator to allow people to recharge phones, etc	We need a generator in place to help residents recharge phones so they can contact family and friends, for a hot meal, to keep medication cold; Starlink to give residents the ability to communicate and send and receive important information.	4	4	No				Our Community has a lot of new residents who were not sure what 'being prepared' meant - we are having another Disaster Preparedness Meeting on Lamb Island on 24 May to assist with this. We need to know who needs Welfare Checks and hot food, we are in touch with Community Services to see how we can do this.	The morning LDMG BRIEFINGS were very informative and showed the knowledge, need and professionalism of the Group. It was good to be able to keep residents informed, however, due to insufficient connectivity - communication and power - it was difficult to inform most of Lamb Island and other Islands.
	RCC	Collaboration across RCC teams and with organisations in the HSR teams	I wonder if the places of refuge could have been activated earlier	none required	5	5	No				Great teams working diligently with expertise ....impressive sharing of detailed information and speedy responses to community and residents	nothing further
	Redland city council	Team work and supportive environment	BAU managers not understanding how to re allocate work to support those in their team who volunteered	Maybe additional support to teams left lacking in resources so volunteers could be engaged without feeling like they've abandoned their team	4	4	Yes	4	2	3	Training of managers for BAU needs to be improved	Mayors updates shouldn't be video. We didn't have internet or had very sporadic reception so trying to watch updates from her was too hard.

	Redland city council	Response, clean up and preparation	More resources required		2	2	No				More resources required, need communication plan for when phone, internet and gwn radios fail	Assistance and resources for the areas affected the worst requires prioritisation. Outdoor workers had to keep working while office staff told to stay home. No communication regarding outdoor workers having to attend work, only global emails telling staff to stay home. RCC needs to develop a safety plan like Energex have with criteria such as do not go outside working if winds are greater than 80km/hour example. We were asked to go outside to work when there were still falling trees and power lines due to this. RCC staff took disaster leave when they didn't fit into the criteria to do so, which is not fair for Staff who continued to come to work.
	Redland City Council	Collaboration between agencies, ability to pivot between remote and in person LDCC	Providing additional assistance/ a 2IC to help LDCC room controller review and issue approvals		5	5	Yes	4	3	4	Collaboration, and quick but well-considered and informed decisions, were key. Island challenges require 'out of the box' solutions and extra support.	
	RCC	The commradrie amongst staff and the clear direction from centre staff	More equipment on islands and more prep from islanders		5	5	Yes	5	2	3	Better assistance from council to LDCC staff	
	Department of Transport & Main Roads	LDMG group work well across agency.	The Cleveland Redland Bay Road Energex Powerlines over road closure working with Energex and QPS could have been coordinated better.Suggest that a better alignment as Emergency Agencies and critical infrastructure groups require the road to be opened first so they can actually perform and keep the road connectivity for essential services.	Create a core critical asset and infrastructure group within the LDMG to coordinate essential road openings.	4	4	No				Redland LDMG and LDCC are well rehearsed in disaster management	Would like to discuss further with from Redland Water to share some thoughts with agencies working together more responsive effort.
	Department of Transport and Main Roads	Operations during the event at the LDMG level worked well.	Access for clearance, repairs or improvements needs roads to be opened. Historically, roads have not been high on agendas. They need to be considered in conjunction with the areas of special need ie hospitals etc. It's hard to fix it if you cant get to it.	Better alignment to ensure access will reduce time take. In response and recovery.	3	4	No				Provide the media with the questions and answers and do not let them provide input.	Defining terms for other SMEs. Roads and detours otherwise the media will dictate by default through ignorance.
	Redland City Council	Team work, support from C2C,	More training in Guardian with easy to follow instructions. Some people were very stretched in their roles. Finance and HR issues were hard to navigate. More support from officers outside of the LDCC. Clear roles and responsibilities for everyone in the LDCC.	More training, clear written roles and responsibilities, no Councillor requests in LDCC	4	4	Yes	3	3	2	We can always learn and improve from previous activations as long as we implement the recommendations that come from surveys like this one.	I think the wonderful group of people that came together in the LDCC during TC Alfred were amazing. I am very proud of be apart of this team.

	Redland City Council	Teams working together and communicating about tasks, very good interaction. Moving the LDCC to 50 Middle worked well, there was some slight issues with not being able to fit all LDCC Teams in the one large area, but this can easily be rectified for future events so that Logistics aren't downstairs or excluded.	1. We tried a new process with a LDMG Councillor inbox & phone, however this felt like we added an extra layer to the process & created an expectation that the LDCC could assist the Councillor faster than the normal process (we can't remove trees, close roads, assist on private land etc.). In Operations we sent the majority of their emails onto the ICCC to action, as they were operating & the existing processes, to submit a request to City Ops to remove a tree or close a road - for example, worked very well. In future I believe this can be improved by having this managed by the ICCC who were also working extended hours and weekends, also this way the information is captured into the right system (i.e. Assetic or CiA) which allows for accurate works and cost capture relating to that job and can easily be managed by the applicable councillor support officer. 2. Centre Manger & Support - ensure person isn't doing 2 roles and if all are in meetings, make sure 1 person is available to room.	Ensure in future events Centre Manager and Centre Support role is always available to the LDCC Room and it's clear who is in these roles as sometimes it was unclear if someone was the Room Manager or helping Amanda as LDC, made it difficult to know who to talk to as the LDCC Centre Manager. Also ensure only the LDCC Team Leaders attend the LDMG Meeting - if required - as at times most of the LDCC slowed while all were listening into the meeting. LDC should advise Centre Manager of the LDMG decisions and actions that they want the LDCC to operationalise/action.	4	4	Yes	4	4	3	Support is a big thing, make sure the LDCC Teams have support, know who the leads are and who to ask if they need help. Don't let RCC processes, needs/wants and BAU inform LDCC decisions (i.e. LDMG Councillor phone/email) - the LDCC is there to operationalise LDMG decisions, yes it is comprised of council workers - but it is not there just for council - it is there for the community, to manage the impact and coordinate the disaster response and recovery, council is one of the LDMG agencies and it's needs/requests should not impact the ability for the LDMG/LDCC to respond to the disaster as a whole (finding it difficult to word as this event was different to any others before).	Using Teams worked really well - LDCC did very well to adapt very quickly to work remotely and work together. Overnight team weren't able to do LDCC work as they were dedicated to making the Mayor's Briefings - would be better if Mayors Support People/Comm's People reused the sitrep to make these briefings - or LDC should work with LDMG Chair to make SDMC briefing info from sitrep, took trained experienced LDCC staff away from being able to work in other teams. More Centre Support people to ensure they can 100% support the LDCC Teams, these roles were supporting the LDC, Deputy LDC or LDMG at the same time as the LDCC and it didn't work very well. Have other people support the LDC/Deputy so the LDCC has Centre Manager / Support in the room, it worked great once [redacted] rrived from Townsville as there was enough management support for the LDCC
	Rcc	Teams channel, laptops for mobility, new ldcc set up at middle st	Access to documentation and processes in an easier and more accessible space. Difficult to find information.		4	4	Yes	4	3	3	There is still a lot to learn and would be good if there were smaller modules of o line training or instructional videos that could be accessed throughout the year instead of 1 full day of training. It is too easy to forget unless you use it regularly	A clearer understanding of what each cell is responsible for. It is difficult to remember, especially if you are new
[redacted]	RCC	Team comeadery	I think some people defaulted to working in their BAU roles and didn't necessarily pass jobs over to the appropriate teams. Instead they used their own contacts with colleagues throughout the business to get intel or information, which meant when the Intel team contacted people, we were met with comments like, "someone always called us." I don't feel like it's fair for people though out the council to be receiving multiple calls in an already stressful event.	Could a process or info be put in place when a large number of ppl are offline or isolated where they maybe have things ie battery packs, in order to still assist remotely?	5	5	Yes	4	3	4	I was able to wfh but due to extended power outages and flooding over roads, I couldn't. If I had any options to assist though, I would have absolutely been available.	Please train the managers of those who volunteer that they need to reallocate work loads and not just leave it all for when the volunteer returns.
[redacted]	Redland City Council	Highly effective HSR sub group	Resourcing off Recovery key positions and support	Xx	4	4	No				Lots of investment and planning required for residential islands in	Xx

	Brisbane South PHN	The engagement from the chairs, willingness to share frontline service information that helped inform, as a commissioning body, to work with our services to ensure that services could be enhanced.	I sit across 4 LGA regions. Meeting times often clash, might be about just talking to chairs.	Continue to work together - not just at the time of a disaster	4	4	No				As my first disaster it was a huge learning curve both internal to my organisation and at the LDMG and recovery perspective. Thank you for the support and learnings	Looking forward to continuing to work with the group
	Redland City Council	The HSR meetings worked really well.			4	4	Yes	4	5	4	Really cohesive group however there are always lessons to be learned.	
	Redland City Council	Good relationships between Council officers and as well with community orgs	Hard to resolve - clear.direction that stays for more than an hour (changing direction), enough officers to ensure fatigue management		4	4	No				Community has desire for info but don't necessarily act on it such as preparedness	
	RCC	Communication			4	4	No				Job well done	
	Redland City Council	Councillor Phone hotline for urgent support	Sandbagging stations, Post event support	Wrap around support for those few residents that lost their homes and have become homeless, I think there are only two families in this situation.	4	4	No					Our Church community have large kitchens, halls and volunteers, they could have been included a lot more if needed post event.
	Redland City Council	Our LDCC & teams were exemplary and the critical connection with community were deepened in terms of trust and respect as the event unfolded.	Deepen engagement with community members/groups and help understand, manage and support resilience and preparedness. Where community 'leans-in' (for example to make halls feel more welcoming, allow and respect that place, based human response as a natural & compassionate offer of support.	We need cyclone rated halls as resilience hubs.	5	5	No				Time is a luxury. Power is essential. Communications are critical. Remember the wisdom of people on the street is a valuable resource if we can tap in and encourage positive engagement.	Community Development (How we enable communities to enable & respond themselves) and Community Engagement (how we communicate messages to community) are very important. Wherever we can deepen, widen and broaden feedback loops from community members across diverse areas and regions, and help to engage and coordinate them, the better as they help both top down information inputs and assist bottom-up - on the ground responses.

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QLD

Level 13, 10 Market Street
Brisbane QLD 4000

ACT

Level 8, 121 Marcus Clarke St
Canberra ACT 2601

13.5 LOCAL GOVERNMENT ASSOCIATION OF QUEENSLAND SPECIAL MEETING

Objective Reference: **A12697498**

Authorising Officer: **Amanda Pafumi, General Manager Organisational Services**

Responsible Officer: **Amanda Pafumi, General Manager Organisational Services**

Report Author: **Andrew Ross, Executive Group Manager Governance & Legal Services**

Attachments:
1. **LGAQ Letter Dated 25 November 2025 to Council ⇩**
2. **LGAQ Notice of Special General Meeting - Postal Vote ⇩**
3. **LGAQ Voting Paper ⇩**

PURPOSE

To vote on the Local Government Association of Queensland (LGAQ) Special Meeting motion on the proposed State Government legislated changes to remove councillors from office if they nominate for election to the Queensland Parliament.

BACKGROUND

On 18 November 2025, the State Government introduced the *Local Government (Empowering Councils) and Other Legislation Amendment Bill 2025* ("the LGOLA 2025 Bill") into Queensland Parliament. Clause 62 of the LGOLA 2025 Bill proposes to amend section 155 of the *Local Government Act 2009* that states in summary: … *(4) A person automatically stops being a councillor when the person becomes a government member or electoral candidate.*

The effect of this amendment, if passed by Parliament, will be to automatically end a person's role as a Mayor or Councillor at the time of their nomination for election to Queensland Parliament. The LGAQ's current policy position on this issue is that councillors should not be required to vacate their office as a councillor if they nominate (and campaign) for election to the Queensland Parliament. The purpose of the LGAQ motion is to ascertain whether the members still support the LGAQ's current policy position.

The LGAQ require Council's to submit their voting paper as For or Against the proposed amendment by 5:00pm on 17 December 2025.

ISSUES

Further background to the report is detailed in the attachments namely:

1. LGAQ Letter dated 25 November 2025 to Council
2. LGAQ Notice of Special General Meeting – Postal Vote
3. LGAQ Voting Paper

The LGAQ Motion is only in respect to this one proposed change under the LGOLA 2025 Bill. Further information on all proposed changes under the LGOLA 2025 Bill is available at the Queensland Parliament, Local Government, Small Business and Customer Service Committee website, with public submissions closing at 12:00pm, 16 December 2025.

STRATEGIC IMPLICATIONS

Legislative Requirements

The recommendation is consistent with the *Local Government Act 2009* principles of transparency and rule 4.1 of the LGAQ's Constitution.

Risk Management

The report provides Council the only opportunity to vote at a General Meeting prior to the LGAQ Special Meeting on 17 December 2025.

Financial

There are no direct financial implications to this report although there are potential financial implications from the proposed legislative changes individually to councillors and to Council if a by-election is triggered by a Councillor's candidate nomination.

People

There are no direct people implications to this report although there are potential individual implications if the proposed local government reforms are made.

Environmental

There are no direct environmental implications.

Social

There are potential social implications if the proposed local government reforms are made as listed in this report.

Human Rights

There are potential Human Rights implications if the proposed local government reforms are made.

Alignment with Council's Policy and Plans

The report aligns with the Council's values of integrity under *Our Future Redlands – A Corporate Plan to 2026 and Beyond*.

CONSULTATION

Consulted	Consultation Date	Comments/Actions
Councillors	25 Nov 2025	Legal Briefing Session

OPTIONS

Option One

That Council votes FOR maintaining the current Local Government Association of Queensland members' policy position, that councillors should not automatically stop being a councillor, in the event that they nominate (and campaign) for election to the Queensland Parliament.

Option Two

That Council votes AGAINST maintaining the current Local Government Association of Queensland members' policy position, that councillors should not automatically stop being a councillor, in the event that they nominate (and campaign) for election to the Queensland Parliament.

OFFICER'S RECOMMENDATION

That Council resolves to vote FOR / AGAINST maintaining the current Local Government Association of Queensland members' policy position, that councillors should not automatically stop being a councillor, in the event that they nominate (and campaign) for election to the Queensland Parliament.

Every Queensland community deserves to be a liveable one

25 November 2025

Ms Louise Rusan
Chief Executive Officer
Redland City Council
Louise.Rusan@redland.qld.gov.au

Dear Louise,

RE: Notice of LGAQ 17 December special general meeting and postal voting

Earlier today I emailed you with advance notice of the LGAQ Board's direction to me to call a special general meeting convened by postal voting.

I am now writing to provide formal notification.

For your council I have enclosed in this email:

- A notice of 2025 special general meeting and explanatory notes
- A voting paper

The special general meeting, convened by postal vote, seeks to understand member council views about a reform that was introduced to State Parliament last week and which is contrary to the long held policy position of Queensland member councils since 2012.

The proposed reform would automatically end a person's role as Mayor or Councillor in order to run for State Parliament at either a general election or State by-election. There is presently no such requirement in relation to Federal elections.

(*You can read about the Local Government (Empowering Councils) and Other Legislation Amendment Bill 2025* ***here*** *and its Explanatory Notes can be accessed* ***here****).*

Today the LGAQ Board has directed me to convene a special general meeting to gather members' views on this reform via postal voting.

- A vote **"For"** will signal that Queensland member councils wish to retain their existing policy position and do not support having to resign to run for State Parliament
- A vote **"Against"** will signal that Queensland member councils have changed their view and believe that Mayors and Councillors should now have to resign in order to run for State Parliament.

Enclosed is the notice of general meeting and explanatory notes, along with your council's voting paper – with a **5pm 17 December deadline**. Please note that papers can be emailed to the LGAQ returning officer prior to the 17th, but they will not be counted until after 5pm on 17 December.

The LGAQ is member-led and evidenced-based, and the LGAQ Board has requested this process for two reasons:

1. To obtain member views to help inform the LGAQ's submission on the Bill and its participation in the parliamentary committee process
2. To understand the majority views of Queensland councils about this reform, and whether that is to retain the existing policy position or to effect a different policy position.

P 07 3000 2222 | Local Government House | PO Box 2230 | Local Government Association Of Queensland Ltd.
F 07 3252 4473 | 25 Evelyn Street | Fortitude Valley BC | ABN 11 010 883 293 ACN 142 783 917
W www.lgaq.asn.au | Newstead Qld 4006 | Qld 4006

Please contact myself or LGAQ CFO/Company Secretary Darren Leckenby at Darren_leckenby@lgaq.asn.au.

Yours sincerely,

Alison Smith
CHIEF EXECUTIVE OFFICER

Every Queensland community deserves to be a liveable one

Notice of Special General Meeting – Postal Vote

Proposed business: To ascertain whether the members support the State Government's proposed amendment to section 155 of the Local Government Act 2009

To be conducted by postal voting in accordance with rule 4.14 of the Constitution

In accordance with rule 4.1 of the LGAQ's Constitution, and following the decision of the LGAQ Board on 25 November, 2025, all members are notified of the holding of a Special General Meeting of LGAQ Ltd, to be convened at 5pm on 17 December, 2025 at LGAQ House, Evelyn Street Newstead.

In accordance with rule 4.14 of the LGAQ's Constitution, the chief executive officer has determined that this special general meeting be convened by postal voting, with the voting paper to be given to the chief executive officer by email.

As a consequence, the voting paper (as attached) must be received by the chief executive officer, at returning_officer@lgaq.asn.au by not later than 5.00 pm on 17 December 2025.

The business of the Special General Meeting is to consider and vote on one motion, as follows:

Purpose of Motion: To seek the members' view on whether they still support the LGAQ's policy position, which reflects the view of members since 2012, that councillors should not be required to vacate their office as a councillor, in the event that they nominate (and campaign) for election to the Queensland Parliament.

Motion:

That the LGAQ maintains its members' current policy position, held since 2012, that councillors should not automatically stop being a councillor, in the event that they nominate (and campaign) for election to the Queensland Parliament.

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Local Government Association Of Queensland Ltd.
ABN 11 010 883 293 ACN 142 783 917

LOCAL GOVERNMENT ASSOCIATION OF QUEENSLAND

VOTING PAPERS MUST BE SIGNED BY THE MEMBER'S MAYOR OR CEO
VOTING PAPERS MUST BE RETURNED BY 5:00PM ON 17 DECEMBER 2025
VOTING PAPERS MUST BE GIVEN BY EMAIL TO THE CHIEF EXECUTIVE OFFICER AT returning_officer@lgaq.asn.au
ANY VOTING PAPER RECEIVED AFTER 5:00PM ON 17 DECEMBER 2025 WILL BE INVALID AND OF NO EFFECT

LOCAL GOVERNMENT ASSOCIATION OF QUEENSLAND

EXPLANATORY NOTES TO MOTION

At present, the effect of section 155(3) of the *Local Government Act 2009* is that councillors: -

1. Can nominate for election as a State or Federal member of Parliament (and campaign for that election), without having to vacate their office as councillor; and

2. Only after being successfully elected to either State or Federal Parliament, automatically stop being a local government councillor.

On 18 November 2025, the State Government introduced the *Local Government (Empowering Councils) and Other Legislation Amendment Bill 2025* ("the LGOLA 2025 Bill") into Queensland Parliament.

Clause 62 of the LGOLA 2025 Bill proposes to amend section 155 of the *Local Government Act 2009* such that, if the amendment is made, section 155 will read as follows: -

(1) A person can not be a councillor while the person is a government member or electoral candidate.

(2) A government member is—

(a) a member of a Parliament of the Commonwealth or a State (including Queensland); or

(b) a councillor of a local government of another State.

(3) A person is an *electoral candidate* if, under the Electoral Act, section 93(3), the person becomes a candidate for an election of a member of the Legislative Assembly.

(4) A person automatically stops being a councillor when the person becomes a government member or electoral candidate.

The effect of this amendment, if passed by Parliament, will be to automatically end a person's role as a Mayor or councillor at the time that their nomination for election to Queensland Parliament is accepted by the ECQ. That is, regardless of the success (or otherwise) of the person's attempt to be elected to Queensland Parliament, their role as councillor ends at the time that they nominate for the State election.

The LGAQ's current policy position on this issue is that councillors should not be required to vacate their office as a councillor, in the event that they nominate (and campaign) for election to the Queensland Parliament.

The purpose of this motion is to ascertain whether the members still support the LGAQ's current policy position on this issue.

A member's **vote for the motion** means that the member **supports the LGAQ'S current policy position on the issue** (and does not support the State Government's proposed amendment).

A member's **vote against the motion** means that the member **support the State government's proposed amendment** (and no longer supports the LGAQ's current policy position on the issue).

VOTING PAPER

MEMBER: **Redland City Council**

VOTING ENTITLEMENT: **6**

PLEASE INDICATE YOUR VOTING INTENTION BY PLACING A MARK IN THE BOX ADJACENT TO THE WORD "FOR" IF YOU ARE FOR THE MOTION OR ADJACENT TO THE WORD "AGAINST" IF YOU ARE AGAINST THE MOTION

Motion:

That the LGAQ maintains its members' current policy position, held since 2012, that councillors should not automatically stop being a councillor, in the event that they nominate (and campaign) for election to the Queensland Parliament.

MOTION	
FOR	
AGAINST	

.....

SIGNATURE

(TO BE SIGNED BY THE MAYOR OR CEO)

VOTING PAPERS MUST BE RETURNED BY 5:00PM ON 17 DECEMBER, 2025.
VOTING PAPERS MUST BE GIVEN BY EMAIL TO THE CHIEF EXECUTIVE OFFICER AT
returning_officer@lgaq.asn.au
ANY VOTING PAPER RECEIVED AFTER 5:00PM ON 17 DECEMBER, 2025 WILL BE INVALID AND OF NO EFFECT

LGAQ
LOCAL GOVERNMENT ASSOCIATION OF QUEENSLAND

14 REPORTS FROM COMMUNITY & CUSTOMER SERVICES

14.1 MCU23/0085 PRELIMINARY APPROVAL FOR A MATERIAL CHANGE OF USE INCLUDING A VARIATION REQUEST TO VARY THE EFFECT OF CITY PLAN IN ACCORDANCE WITH THE INSPIRE TECHNOLOGY AND INNOVATION CENTRE PLAN OF DEVELOPMENT

Objective Reference: **A11499701**

Authorising Officer: **Brooke Denholder, General Manager Community & Customer Services**

Responsible Officer: **David Jeanes, Group Manager City Planning & Assessment**

Report Author: **Daniel Manathunga, Principal Planner**

Attachments:

1. **Precinct Plan** ⇩
2. **Plan of Development** ⇩
3. **Site and Locality** ⇩
4. **State Assessment Referral Agency Response** ⇩
5. **Industry Lands Assessment** ⇩
6. **Landscaping Concept Plan** ⇩
7. **Noise Impact Assessment** ⇩
8. **Traffic Impact Assessment** ⇩
9. **Stormwater Management Plan** ⇩
10. **Ecological Assessment Report** ⇩
11. **Ecological Assessment Memorandum** ⇩
12. **Ecological Memorandum** ⇩
13. **Bushfire Management Plan** ⇩
14. **Bushfire Peer Review** ⇩
15. **Bushfire Report** ⇩
16. **Sewer Modelling Report** ⇩
17. **Development Conditions** ⇩
18. **Infrastructure Agreement** ⇩

PURPOSE

Variation requests cannot be decided under delegated authority and this application is therefore referred to a General Meeting of Council for determination.

BACKGROUND

The application seeks a preliminary approval, including a variation request, to vary the effect of the City Plan, for a material change of use for a mixed use development.

The owners of the property are Inspire Redland Pty Ltd as Trustee and the applicant is Carndale Pty Ltd c/- Saunders Havill Group.

The application should be decided by 10 December 2025 in accordance with the *Planning Act 2016* (the PAct). Should the decision not be made by that date, the applicant may consider a deemed refusal.

The assessment of the application has occurred in line with the assessment framework outlined in the PAct. The key issues identified in the assessment are:

- Consistency with the planning framework

- Rural character
- Amenity
- Site access and traffic
- Internal road and pedestrian connectivity
- Environmental impact
- Bushfire hazard
- Civil and infrastructure
- Stormwater management
- Inspire Technology and Innovation Centre Plan of Development.

ISSUES

Proposal

The development application is assessed in two parts:

- **PART A – Preliminary Approval:** for a material change of use for mixed industry/business uses (known as the 'innovation precinct') and greenspace precinct (refer to proposed precinct plan in Attachment 1).
- **PART B – Variation request:** The application includes a variation request to vary the effect of City Plan as follows:
    - Establish the Inspire Technology and Innovation Centre (ITIC) Plan of Development (POD) (refer to Attachment 2), which would be applicable to future development applications lodged under the PA.
    - Vary the level of assessment thresholds and assessment benchmarks for specified uses proposed in each of the nominated precincts.

Precinct Layout

The proposed precinct layout is shown below (see figure 1 and included within Attachment 1). The purpose of each precinct is provided below.

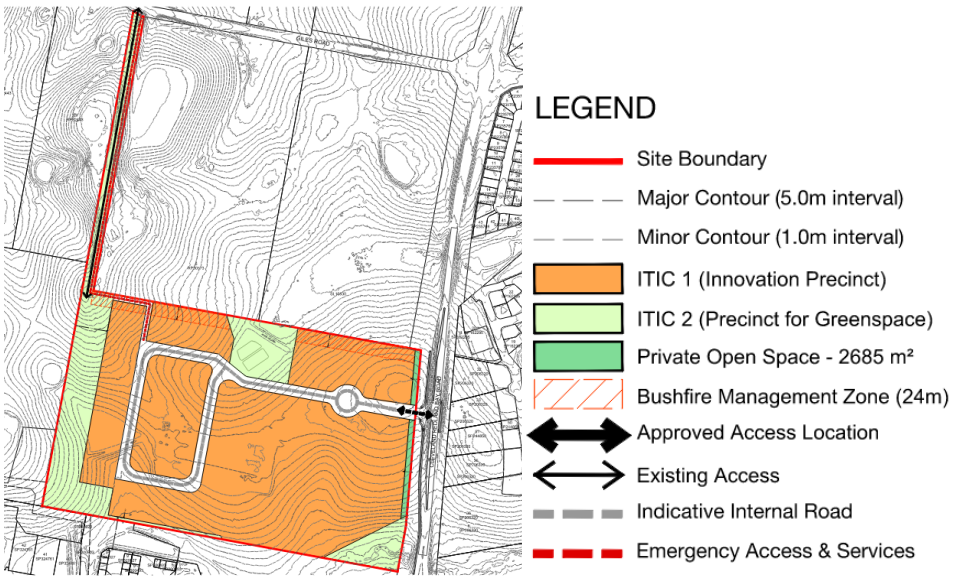


Figure 1: Precinct Plan

Innovation Precinct (ITIC1)

The ITIC1 Innovation Precinct is intended to accommodate a range of mixed industry and commercial uses, as outlined in the proposed Plan of Development (POD). Future access to the precinct is proposed via a central internal road connecting to Cleveland-Redland Bay Road, facilitating vehicle movement and supporting the functionality of the precinct.

The precinct is subject to constraints associated with bushfire. In response a Bushfire Management Zone, which has been strategically incorporated to mitigate bushfire risks from the northern boundary, is proposed. This zone prohibits the storage of hazardous chemicals, restricts the placement of sensitive land uses and buildings near the boundary to ensure compliance with acceptable Bushfire Attack Levels (BALs), and mandates the use of bushfire-resilient landscaping species to enhance safety and resilience.

Greenspace Precinct (ITIC2)

The ITIC2 Greenspace Precinct is identified as a combination of public open space, incorporating mapped ecological features and environmental values. The precinct is intended to support the retention and rehabilitation of these values, including the establishment of a vegetation linkage through the site. This corridor would connect the conservation precinct within the adjoining Redlands Business Park to areas of existing vegetation located north and west of the site, enhancing ecological connectivity.

The precinct comprises of public open space, which is intended to be dedicated to Council for long-term stewardship.

Additionally, the ITIC2 precinct contains mapped koala habitat, which is protected through provisions in the approved Plan of Development (POD). In the event development occurs which results in the loss of koala habitat or rehabilitation, a development application will be triggered, thereby safeguarding the habitat and supporting broader conservation objectives.

Private open space

The designation is proposed to remain under private ownership and be managed by a future Body Corporate, providing a vegetated buffer to public areas being Cleveland-Redland Bay Road.

Change to the application

The applicant submitted a change to the application under section 52 of the PAct. The change involved relocating the ITIC2 greenspace precinct to the western site boundary, reducing the buffer area to Cleveland-Redland Bay Road (from 20m to 10m), updating the stormwater management strategy and changes to the POD.

The change was not considered to be a ‘minor change’ as defined in Schedule 2 of PAct, as the change increased the severity of known impacts such as clearing of vegetation, bushfire and stormwater management when compared to the original development application. However, given the change was in response to a properly made submission, which sought a vegetated buffer and additional separation to address amenity impacts along the western side of the site, the development assessment process is not stopped under section 26 of the *Development Assessment Rules*. Additional public notification was not required given the change is unlikely to attract additional submissions under section 26.2(b) of the *Development Assessment Rules. The* development assessment process was not impacted by the changed application.

SITE & LOCALITY

The subject site is located at 20 Giles Road, Redland Bay (refer Attachment 3). The site is located on Cleveland-Redland Bay Road and benefits from access off Giles Road, via an existing access handle. The site has a total area of 25.13ha and has a frontage of 390m to Cleveland-Redland Bay Road and 20m to Giles Road. The site is improved by a dwelling house with ancillary structures and three (3) poultry sheds, which have been used in conjunction with a long-standing agricultural use of the site.

The site is within a locality that comprises a range of land uses. Directly to the south of the site is the Redlands Business Park, to the north of the site is Council owned property at 17-25 Giles Road, and other adjoining sites are typically rural in nature. To the east of the site is an established residential community.

Figure 2: Subject site shaded green. (Source: Nearmap 2024)

Planning History

The following planning history is relevant to the subject site.

<u>Subject site history</u>

The subject site has an approval for a material change of use for poultry farm and stables (C551) granted 22 February 1979. The poultry farm is no longer operational.

<u>Redlands Business Park (RBP)</u>

The subject site adjoins land subject to the 2006 RBP preliminary approval (MC008666) for a material change of use overriding a local planning instrument for land zoned rural non-urban, to facilitate the establishment of an integrated employment centre. Changes to the development approval were granted in 2021 and 2022, which involved minor amendments to the POD.

The RBP is operated by a body corporate, which owns and manages private roads and infrastructure relevant to the development, such as water and sewer connections.

Review of draft South East Queensland Regional Plan

On 19 April 2023, Council considered a report outlining key matters and policy positions to be addressed as part of the South East Queensland (SEQ) Regional Plan review. Following deliberation, Council resolved to provide a submission to the Minister for State Development, Infrastructure, Local Government and Planning.

The submission recommended the inclusion of the existing RBP within the urban footprint to reflect its current use. In addition, it was recommended to include 20–25 hectares of land within the urban footprint to accommodate an expansion to the existing RBP. This recommendation was made in response to an identified shortfall in employment and industrial land supply, with the additional land intended to support industrial development needs through to 2046 and beyond.

South East Queensland Regional Plan 2023

Since the adoption of the *South East Queensland Regional Plan (SEQRP) 2023*, the subject site is now included within the urban footprint (with the exception of the access handle to Giles Road).

Surrounding development approval

Council resolved to grant a development permit for a material change of use for a warehouse (MCU22/0155) outside of the urban footprint and within the rural zone at 652-676 German Church Road, Redland Bay. This application was decided at the General Meeting of Council on 18 December 2024.

Assessment framework

The application has been made in accordance with the PAct, *Development Assessment Rules* and constitutes an impact assessable application for a material change of use for a preliminary approval that includes a variation request to vary the effect of the City Plan in accordance with the Inspire Technology and Innovation Centre Plan of Development.

In accordance with section 45 of the PAct:

*'(5) An **impact assessment** is an assessment that—*

(a) must be carried out—

(i) against the assessment benchmarks in a categorising instrument for the development; and

(ii) having regard to any matters prescribed by regulation for this subparagraph; and

(b) may be carried out against, or having regard to, any other relevant matter, other than a person's personal circumstances, financial or otherwise.

Examples of another relevant matter—

- *a planning need*
- *the current relevance of the assessment benchmarks in the light of changed circumstances*
- *whether assessment benchmarks or other prescribed matters were based on material errors*

(6) Subsections (7) and (8) apply if an assessment manager is, under subsection (3) or (5), assessing a development application against or having regard to—

(a) a statutory instrument; or

(b) another document applied, adopted or incorporated (with or without changes) in a statutory instrument.

(7) The assessment manager must assess the development application against or having regard to the statutory instrument, or other document, as in effect when the development application was properly made.

(8) However, the assessment manager may give the weight the assessment manager considers is appropriate, in the circumstances, to—

(a) if the statutory instrument or other document is amended or replaced after the development application is properly made but before it is decided by the assessment manager—the amended or replacement instrument or document; or

(b) another statutory instrument—

(i) that comes into effect after the development application is properly made but before it is decided by the assessment manager; and

(ii) that the assessment manager would have been required to assess, or could have assessed, the development application against, or having regard to, if the instrument had been in effect when the application was properly made.

Section 31 of the *Planning Regulation 2017* (the Regulation) identifies that:

'(1) For section 45(5)(a)(ii) of the Act, the impact assessment must be carried out having regard to—

(a) the matters stated in schedules 9 and 10 for the development; and

(c) if the prescribed assessment manager is a person other than the chief executive or the local government—the planning scheme; and

(d) if the prescribed assessment manager is a person other than the chief executive—

(i) the regional plan for a region; and

(ii) the State Planning Policy, to the extent the State Planning Policy is not identified in the planning scheme as being appropriately integrated in the planning scheme; and

(iii) for designated premises—the designation for the premises; and

(e) any temporary State planning policy applying to the premises; and

(f) development approval for, and any lawful use of, the premises or adjacent premises; and

(g) common material.

common material, for a development application, means—

(a) all the material about the application that the assessment manager receives before the application is decided, including—

(i) any material relating to a proposed development application that is substantially similar to the development application as made; and

(ii) any material attached to, or given with, the development application; and

(iii) any material relating to the application given to the assessment manager after the application is made; and

(iv) any referral agency's response, including any advice or comment given by a referral agency and any response given under section 57 of the Act; and

(v) any properly made submissions about the application, other than a submission that is withdrawn; and

(vi) any other submission about the application that the assessment manager has accepted; and

(vii) any other advice or comment about the application that a person gives to the assessment manager; and

(b) if a development approval for the development is in effect—the approval; and

(c) an infrastructure agreement applying to the premises.

Pursuant to section 45(5) of the *PAct*, the application was assessed against the following applicable assessment benchmarks.

- City Plan Version 10
  - Rural zone code
  - Healthy waters code
  - Infrastructure works code
  - Landscape code
  - Transport, servicing, access and parking code
  - Bushfire hazard overlay code
  - Environmental significance overlay code
  - Flood and storm tide hazard overlay code
  - Landslide hazard overlay code
  - Waterway corridors and wetlands overlay code
- State Planning Policy 2017, Part E
- *South East Queensland Regional Plan 2017*
- *Planning Regulation 2017*, Schedule 11

Pursuant to section 45(5) of the PAct, the assessment manager had regard to the following matters in its assessment of the application.

- Economic/planning/community need
- *South East Queensland Regional Plan 2023*
- Common material, including written submissions accepted by the assessment manager
- Existing approval on adjoining land (Redlands Business Park – Integrated Employment Centre)
- City Plan Version 14.

Comments received

External comments received

Council has received comments that form part of the common material to the application. Council has had regard to this information in the assessment of the application, as outlined above.

State Assessment Referral Agency (SARA)

SARA provided a referral agency response, dated 29 July 2024, in regard to development impacting on State transport infrastructure and thresholds (refer Attachment 4). The SARA response includes conditions requiring upgrades to the signalised Cleveland-Redland Bay Road and Double Jump Road intersection prior to the use commencing, stormwater management and intersection upgrade to provide access to the site.

Public notification

The application was publicly notified for 30 business days from Friday, 31 May 2024 to Monday, 15 July 2024. A notice of compliance for public notification was received on 16 July 2024. There was one (1) properly made submission received and one (1) not properly made submission in relation to the application during the notification period.

The following planning matters were raised in the written submissions received. All matters are addressed in the application assessment section of the report:

- Provide a vegetated buffer to screen and manage amenity impacts to adjoining land towards the west which has a sensitive receptor onsite.
- Existing Redland Business Park activities cause noise and dust affecting nearby residences.
- Proposed development may increase noise, dust, light, and odour to sensitive receptors, especially during construction.
- Building form will disrupt the local landscape and bushland environment.
- Sewer and water infrastructure lacks capacity to support the development due to location in an easement on adjacent land.
- Stormwater drainage plans are unclear, raising concerns about uncontrolled overland flow through the site.
- Increased traffic, particularly on 34 Giles Road, may create safety hazards at a nearby driveway located on a bend with limited visibility.
- Proposed site access includes future connection to 34 Giles Road for potential development expansion.
- Building heights up to 23m exceed the 15m Redland Business Park standard, potentially affecting visual amenity and privacy.
- Ongoing major road works nearby could cause severe traffic congestion if the development proceeds.
- Consider rezoning adjoining land from rural to industrial or residential to align with development plans.

Internal comments received

The assessment manager has received assessment advice from the following Council teams/officers:

- Engineering assessment
- Environmental assessment
- Landscaping
- Arborist
- Health and environment
- Infrastructure planning and charging
- Strategic planning
- Economic development
- Infrastructure and operations.

The assessment advice received has been considered by the assessment manager in assessing the development application.

Decision Making Rules

Section 60 of the PAct states that:

(3) To the extent the application involves development that requires impact assessment, and subject to section 62, the assessment manager, after carrying out the assessment, must decide—

(a) to approve all or part of the application; or

(b) to approve all or part of the application, but impose development conditions on the approval; or

(c) to refuse the application.

(5) The assessment manager may give a preliminary approval for all or part of the development application, even though the development application sought a development permit.

(6) If an assessment manager approves only part of a development application, the rest is taken to be refused.

Section 49(2) of the PAct is relevant to a preliminary approval, providing that:

'(2) A preliminary approval is the part of a decision notice for a development application that—

(a) approves the development to the extent stated in the decision notice; but

(b) does not authorise the carrying out of assessable development.'

PART A ASSESSMENT – PRELIMINARY APPROVAL

Consistency with the planning framework

City Plan

The site is located within the rural zone under City Plan, the purpose of which is to '*provide for a range of primary production activities while protecting natural resources and significant environmental and landscape values'*. Other uses may occur where they require a rural location or separation from urban areas. As the development proposes an industrial development, which is not a primary production activity and does not require rural location, the development conflicts with the rural zone code.

Strategic Framework of City Plan

Impact assessable development requires assessment against the entire City Plan where relevant to the assessment, including the strategic framework (Part 3 of City Plan), which sets the policy direction for City Plan. In accordance with section 1.5 of City Plan, the strategic framework prevails over all other elements to the extent of any inconsistency for impact assessment.

Strategic intent

The following sections of the strategic framework are relevant:

'3.4.1.9 Industry and mixed use zones

(1) The primary industry and mixed use areas include:

d) ***Redlands business park at Redland Bay accommodating a mix of manufacturing, processing, distribution, transport and storage uses serving the southern parts of the city****;'*

'3.4.1.10 Rural zone

(2) ***Industry uses*** *occurring* ***in non urban areas are those which are directly related to farming activities or natural resources, or which require separation from urban areas***

(7) In order to protect the landscape character, rural and semi rural amenity, biodiversity values and opportunities for primary production, further fragmentation of rural land is avoided. ***All rural land is protected from fragmentation, regardless of whether it is identified as agricultural land class A or B.***

(8) Intensive animal industries, intensive horticulture and other larger scale and higher impacting activities are protected from encroachment by sensitive land uses.

(9) Intensive animal industries, intensive horticulture and other larger scale and higher impacting activities are not located where they would adversely impact on urban areas and minimise impacts on tourist and recreation facilities established on rural land.

(10) ***Development does not significantly impact on the amenity of small rural lifestyle lots which are used primarily for residential purposes.***

(12) Development ***avoids or mitigates impacts on the natural environment, and maintains a connected network of habitat areas and ecological corridors.'***

'3.7.1.1 Infrastructure

(2) *Urban growth occurs at a time and in locations that facilitate the orderly and cost effective delivery of the full range of infrastructure and services required by the*

community. ***Urban development does not extend beyond the land zoned for urban purposes.***

(6) ***Development does not occur outside the priority infrastructure area (PIA) unless the full spectrum of urban infrastructure can be provided in an efficient and timely manner,*** *without reducing the standard or delaying the provision of infrastructure to areas within the PIA.'*

Whilst industrial development does not support the rural zone objectives under the strategic framework or rural zone code, it is considered the proposed development conforms with parts of the strategic framework, for the following reasons:

- The development is located adjoining the RBP and would be a logical expansion to service the southern parts of the city as prescribed in the 3.4.1.9 listed above.
- The proposed layout avoids impacts to the natural environmental through design and providing habitat connectivity through an open space corridor connecting RBP to surrounding conservation land towards the north.
- The proposed development provides the full spectrum of urban infrastructure in an efficient and timely manner, partly through private connections to the existing private water and sewer main servicing RBP. The development adequately contributes to costs as detailed in later sections of the report (refer to infrastructure section). as prescribed in 3.7.1.1 listed above.

While the proposed development aligns with several objectives of the strategic framework within City Plan, it is acknowledged that the site is not currently zoned for low impact industry, medium impact industry, or mixed use purposes. As such, the proposal represents a conflict with the strategic framework of City Plan, particularly in relation to the intended land uses within the rural zoning provisions.

In accordance with section 45(5)(b) of the PAct, weight may be given to other relevant matters in the assessment of an impact assessable application. It is considered that these matters should be afforded significant weight in the assessment of the application.

These matters are discussed in the following sections.

South East Queensland Regional Plan 2023 (SEQRP 2023)

Background

At the 19 April 2023 General Meeting, Council resolved to make a submission to the State Development, Infrastructure, Local Government and Planning in relation to the amendments to *SEQRP 2023*. Council had undertaken a detailed Industrial Land Supply Review (CDM Smith, dated 2020), which identified a shortfall of industrial zoned land of 9.1 hectares from 2035-36, increasing to 25.5 hectares by 2040-41.

Relevantly, the identified shortfall, resulted in a recommendation to the State Department, to expand the urban footprint by approximately 20 to 25 hectares to accommodate the potential expansion of the business park and to ensure Council has an appropriate level of industrial land supply to 2046 and beyond.

Urban footprint expansion

SEQRP 2023 took effect on the 15 December 2023, which included the subject site within the urban footprint. The rural intent for the site, as identified in the zoning under City Plan (unvaried)

has therefore been overtaken with an identified need for additional industrial and employment zoned land and the location of the subject site is a logical expansion of the existing RBP.

Population projections

SEQRP 2023 results in significant increases to both the population (an extra 49,800 people by 2046) and dwelling projections (19,800 by 2046) for the Redlands Coast. This increase in population imposed by the State Government was not anticipated in Council's Industrial Land Supply Review and therefore it is reasonable to surmise that the shortfall potentially would be greater than previously expected for the planning horizon to 2046.

The rural intent for the site has been overtaken by changes to *SEQRP 2023* and the need for industrial/employment land to service the city and population growth. This is sufficient to outweigh the conflict identified with City Plan.

Infrastructure

Development is located outside zoning intended for urban purposes and the urban area of the Priority Infrastructure Area (PIA) under the current Local Government Infrastructure Plan (LGIP). Typically, development outside of the PIA puts significant pressure on the infrastructure network planning and would conflict with land use planning principles mentioned above (strategic framework 3.7.1.1 of City Plan). The development overcomes this issue by extending existing provisions within the existing RBP and maintaining urban infrastructure in private ownership managed by a future body corporate under a future community title scheme for the site.

Retaining urban infrastructure within private ownership is considered to be more efficient and cost effective, than providing a public infrastructure solution for the broader area. This outcome overcomes the strategic land use intent to maximise development within PIA to avoid unnecessary infrastructure impacts to urban areas.

Industrial land supply need

The applicant has put forward an argument (refer Attachment 5) that there is an overriding need for the development, that Council should have regard to in the assessment of the application, and that these matters should weigh heavily in the decision making process in favour of the application.

The applicant's report draws the conclusion that since Council's industrial land supply study undertaken by CDM Smith in 2020, three (3) distinct events and policy changes have occurred, including:

- RBP has limited vacancy to service the southern part of the city.
- Population projections adopted in the *SEQRP 2023* has a causal link to the need for additional industrial and employment land to service the city.
- Industrial employment land future demand supports a shortfall of industrial zoned land to meet the needs of the city.

The three (3) distinct aspects are discussed below.

Firstly, the RBP provides *a 'mix of manufacturing, processing, distribution, transport and storage uses serving the southern parts of the city' (Strategic Framework 3.4.1.9).* Since Council's industrial land supply study, the RBP had a gross 25 hectares of vacant industrial zoned land available.

This is no longer the case with the majority of the RBP has been developed, sold or leased, indicating a short-term latent need for industrial land within the southern part of the city.

Secondly, the report draws the conclusion that the adoption of *SEQRP 2023* results in significant population increases as mentioned above. This increase will need to be accommodated within future amendments to City Plan and has a causal link to increased need for employment and industrial land supply greater than originally anticipated by Council's study.

Lastly, the report uses population projections and other economic assumptions to determine the likely need for additional industrial employment land. As depicted below, scenario testing using a self-containment rate of 50% within the wider Cleveland-Stradbroke area (statistical area level 3 as relevant to Australian census data) concludes a need for 50-58 hectares (gross) of industrial employment lands by 2046 (figure 3). While scenario testing within Redland Bay (statistical area level 2 as relevant to Australian census data) is stated to need 63.2-72.2hectares (gross).

Scenario Testing- Redland Bay SA2, total population at 2046

	50% self-containment	70% self-containment
Population at 2046	26,339	26,339
Employment participation	48.0%	48%
Jobs	12,643	12,643
Self-containment	50%	70%
Local jobs in SA3	6,321	8,850
Industry share	20%	20%
Industry Jobs	1,264	1,770
Scenario A, net jobs/ha	40	40
Scenario B, net jobs/ha	35	35
Net area at 40/ha	31.6	44.3
Net area at 30/ha	36.1	50.6
Gross area at 40/ha	63.2	88.5
Gross area at 35/ha	72.2	101.1

Scenario Testing- Cleveland- Stradbroke SA3, Population Increase to 2046

Population increase to 2046	20,826
Employment participation	48.0%
Jobs	9,996
Self-containment	50%
Local jobs in SA3	4,998
Industry share	20%
Industry Jobs	1,000
Scenario A, net jobs/ha	40
Scenario B, net jobs/ha	35
Net area at 40/ha	25.0
Net area at 30/ha	28.6
Gross area at 40/ha	50.0
Gross area at 35/ha	57.1

Figure 3: Applicants industrial zoned land scenario testing (Industrial Land Supply Assessment, Giles Consulting P/L)

Council officers have reviewed the report and note several discrepancies within the modelling provided by the applicant, including:

- Self-containment (refers to the proportion of employed residents who work within the same local government area (LGA) in which they live) in the Redlands is currently 42.3%. Assumptions of 50% and 70% self-containment are not considered to be reasonable for this period due to the Redlands proximity to Brisbane City, which is a major regional employment hub in South-East Queensland.
- Insufficient information to determine that the industry share percentage of 20% is reasonable.

Despite the discrepancies, it is evident that there is a need for additional industrial land as verified by Council's Industrial land supply review. It is also agreed that the RBP is predominantly developed and that the changes to the *SEQRP 2023* would result in the need for additional industrial and employment land. On this basis, the development does respond to an overriding need for additional industrial and employment land supply.

Industrial land use supply

Weighting to the *SEQRP 2023* should be afforded with additional industrial land supply likely to be required via a future planning scheme amendment. To not prejudice future access to adjoining land, it is reasonable that the approved precinct plan has an indicative vehicle access to 34 Giles Road, Redland Bay.

The indicative location is considered to be logical balancing development constraints (bushfire, fauna movement and topography) and is contingent upon future development application process and robust land use planning investigation such as expansion of the urban footprint to accommodate the adjoining site.

Out-of-centre development

Strategic framework states the following:

'3.4.1.8 Out-of-centre development

1. *Development of office, showroom or shopping uses do not occur outside of designated centres or the mixed use zone.*
2. *Large format retailing (showrooms, hardware and trade supplies, bulky goods or category based retailing) occurs in centres or in the mixed use zone.'*

The applicant has not provided any supporting economic impact or demonstrated need to justify the inclusion of large format retail and other out-of-centre development outside existing centres and the mixed use zone (as contemplated by the existing City Plan as appropriate locations). Permitting such uses within the precinct could undermine the viability of established centres and result in low employment-generating outcomes, which is contrary to Council's strategic intent in supporting the site's inclusion within the urban footprint. Accordingly, it is recommended that the list of inconsistent uses be amended to specifically reference large format retailing, with only small-scale hardware and trade supplies permitted within the ITIC1 precinct. This does not preclude the lodgement of such proposals in future; however, they would remain impact assessable and subject to assessment against the entire planning scheme.

Conclusion

The identified conflict with the rural zone code has been overcome by the demonstrated overriding need for employment and industrial land supply to meet the needs of the city from 2035 and beyond. In addition, inclusion of the site within the urban footprint and changes to population projections through the adoption of *SEQRP 2023* lends favourably to the development, with the rural intent of the site overcome by these events and policy changes. The identified conflict with City Plan is therefore considered to be overcome by relevant matters. This is subject to managing amenity and other constraints discussed in the below sections.

Rural character

The purpose and overall outcomes of the rural zone code are relevant to the assessment:

'(2) The purpose of the code will be achieved through the following overall outcomes:

(h) the residential amenity of smaller rural lots is not significantly impacted by new development;

(i) built form is generally a subservient element in the landscape, and does not significantly alter the rural or natural character or scenic quality of the locality.

A landscaping plan was submitted (refer to Attachment 6) to demonstrate how built form will not significantly alter the rural, natural character and scenic quality of the locality. It is proposed to provide a minimum 57 metre wide buffer along the western interface with rural zoned land (34 Giles Road) and a 10 metre buffer along Cleveland-Redland Bay Road.

The two (2) distinct interfaces are considered below.

Western buffer

The greenspace precinct located along the western interface is considered to be sufficient to accommodate dense vegetation to screen built form from the wider rural locality. Concept earthworks plans identify that the location of land within the ITIC2 precinct will generally be situated above the future indicative ground level of industrial development and therefore the buffer will assist in ensuring the landscape visual impact is minimised. Whilst currently included in the rural zone, it should be noted that the land is included in the urban footprint and is a natural expansion of the existing RBP. The above assistant benchmarks are therefore not to be afforded full weight. The landscape treatment to minimise the built form of the industrial development is considered consistent with the approach on the adjoining RBP.

Cleveland-Redland Bay Road buffer

A 10 metre wide vegetated buffer is currently proposed along the road frontage to Cleveland-Redland Bay Road. However, upon review of the existing topography, the proposed building height of 15 metres, the expected canopy spread of the selected tree species, and the potential for future vegetation clearing within the road reserve, it is considered that the proposed buffer width is insufficient to maintain the intended rural and vegetated landscape character.

To ensure the visual and environmental objectives are achieved, it is recommended that the buffer width be increased to 15 metres. This adjustment will better accommodate the scale of development and landscape expectations for the area.

Detailed design of the interface will be assessed at reconfiguration and material change of use stage, however the land dedicated to screen and soften can comply with the rural zone code.

Amenity

The purpose and overall outcomes of the rural zone code are relevant to the assessment:

> *'(1) The purpose of the rural zone code is to provide for a wide range of primary production activities while protecting natural resources and significant environmental and landscape values.'*
>
> *'(2) The purpose of the code will be achieved through the following overall outcomes:*
>
> *(f) intensive animal industries, intensive horticulture and other larger scale and higher impacting activities are not established where they would adversely affect land within urban areas;*
>
> *(h) the residential amenity of smaller rural lots is not significantly impacted by new development;'*

Noise

A noise impact assessment was provided to demonstrate how the development will not impact amenity of residential or urban areas (see Attachment 7).

The report considered surrounding sensitive receptors within proximity to the site, against the original precinct plan. A revised noise impact assessment was not provided when the application was changed.

However, the closest sensitive receptors being 34 Giles Road adjoining the site directly to the west remains consistent. The recommendations of the report state that development will need to incorporate into the POD, the following:

- Acoustic barrier of 2.2m in height along the south-west corner of the ITIC1 Precinct and landscape buffer treatment as depicted below (refer to figure 4 below).
- Minimise potential impacts from future industrial development, particularly in relation to air pollutants, noise, and vibration through the Plan of Development (POD) by incorporating specific assessment benchmarks. These benchmarks include a requirement that emissions of any contaminants must not cause environmental harm or nuisance, which is a condition for accepted development within the POD. This approach ensures that environmental performance standards are embedded into the planning framework, supporting sustainable and responsible industrial activity.
- Design of the proposal minimises noise impacts on surrounding uses by building design and layout locating noise generating activities outdoors away from sensitive receptors.

Figure 4: Noise acoustic barrier location

Council engaged an independent review of the noise impact assessment to verify whether compliance has been demonstrated. The findings of the peer review are summarised below:

- The noise report does not provide adequate certainty that appropriate noise outcomes will be achieved. It continues to contain errors and mislabelling which does not assist in understanding whether the report is technically adequate for the purpose.
- The ambient noise monitoring data plots (refer to Figures 5 and 6 of attachment 7) appear to be the same for all metrics other than LA_{90} which cannot be correct (in other words two (2) different locations, two (2) years apart cannot be the same). It is unclear as to what noise criteria are suggested as being applicable to the proposed development.
- The peer review consultant recommends that given the apparent shortcomings in the noise report, rather than request further reporting, development conditions be imposed.

- Conditions require noise assessment reporting prior to future approvals (namely material change of use, reconfiguring a lot and building approvals) for uses that are considered to have potential for noise impacts at nearby sensitive uses. It is also recommended that the plan of development be amended to retain development as assessable, if stipulated noise criteria are not achieved.
- High impacting land uses have the potential to impact sensitive receptors towards the eastern and western boundaries with limited noise mitigation measures (such as noise barrier/s or earthworks) to provide a degree of protection to dwellings to the east or west. As such, it is recommended that high impacting land uses be sited 150m from a sensitive receptor as code assessable, otherwise impact assessment and public notification is warranted if proposed closer.

Having regard to the advice from the independent noise consultant, and given the development seeks approval for a preliminary approval including a variation request, it is reasonable to amend the plan of development as below:

- High impacting land uses such as transport depot, medium impact industry, renewable energy facilities, marine industry, warehouse (if not self-storage facility) and crematorium are not located within 150m of a sensitive land use, unless impact assessable.
- Requirements for accepted development be updated to adopt the numerical values derived between the site measured noise levels and the Queensland *Environmental Protection Act 1994: Environmental Protection (Noise) Policy 2019*: Schedule 1 to ensure protection of residential amenity.
- Updating of assessment benchmarks to avoid adverse amenity impact to sensitive land uses and areas through performance outcomes and acceptable outcomes for assessable development, which are similar to those in the medium impact industry zone code of City Plan.

Subject to the above, the development is considered to comply with the rural zone code with development conditions imposed to provide an acoustic barrier along the western side of the innovation precinct and high impacting land uses being located within 150m from the eastern and western site boundaries, to be subject to impact assessment.

Air and odour

The applicant did not submit an air or odour report to demonstrate compliance with the above assessment benchmarks, stating that given the historical use being a poultry farm, the proposed development is considered to reduce the likely odour and air quality impacts to the locality. It has also been stated that the development application seeks a preliminary approval and therefore individual uses and their respective impacts are unable to be ascertained at this time.

The POD has been amended to reference the air and odour criteria outlined in City Plan. Where development is unable to meet the prescribed criteria, it will be elevated to assessable development, ensuring that air and odour impacts are appropriately considered and managed at subsequent development application stages (material change of use).

Site access

The purpose and overall outcomes of the transport, servicing, access and parking code are relevant to the assessment:

(1) 'The purpose of the transport, servicing, access and parking code is to ensure traffic, movement and end of trip facilities are managed appropriately.
(2) The purpose of the code will be achieved through the following overall outcomes:
*(1) The **safety and efficiency of the movement network is maintained**;*
(2)** development provides for a **high level of accessibility**, **safety and convenience for pedestrians and cyclists;
(3) development is provided with safe and functional vehicular access and on-site parking;
*(4) development facilitates **clear and safe vehicle movements both on and off the site;***
(5) car parking areas and structures are located and designed to minimise their visual impact, interruption of the streetscape and impact on pedestrian accessibility; and
(6) impacts on the surrounding environment and amenity are minimised.'

A traffic report was provided to demonstrate how the site will integrate into the surrounding and proposed road networks (see Attachment 8). As depicted below, future access onto Cleveland-Redland Bay Road, was approved by State Assessment Referral Agency (SARA) and is designed to provide access for articulated vehicles (AVs). Having regard to SARA response, the following intersection upgrades are to occur prior to commencement of use:

- New signalised intersection with Cleveland-Redland Bay Road (figure 5 below).
- Upgrade of the Cleveland-Redland Bay Road and Double Jump Road intersection prior to the commencement of use.

Existing access to Giles Road is not suitable to accommodate AVs and can only be used for emergency response vehicle access purposes. This can be a condition of approval.

Detailed design of internal roads and their layout will be subject to future assessment as part of the subsequent reconfiguring a lot, operational works and material change of use applications.

Subject to the above, the safety and efficiency of the movement network will be maintained.

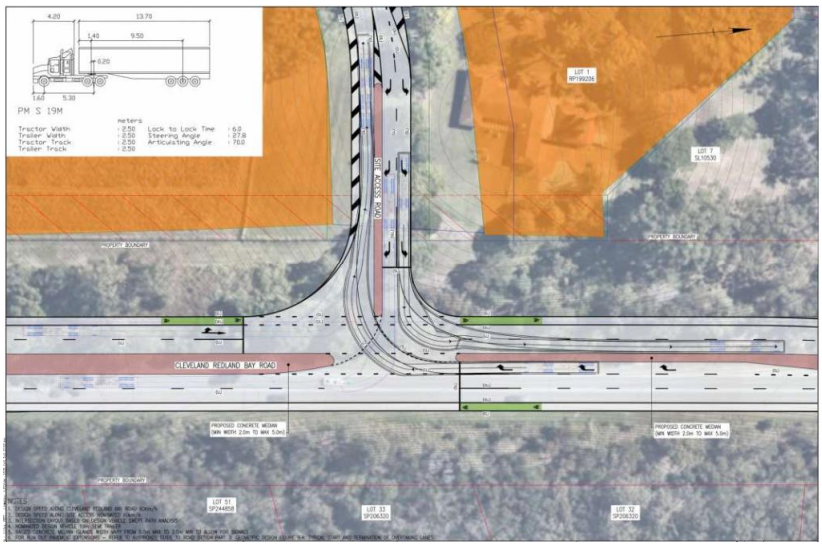


Figure 5: Site Access onto Cleveland-Redland Bay Road

Internal road and pedestrian accessibility

The following performance outcomes of the access and parking code are relevant to the assessment.

PO3
'Development maintains or improves the safe and efficient operation of transport networks having regard to (amongst other things):
(1) the existing or planned function of the roads affected;
(2) available sight distances and the location and design of access points;
(3) accessibility by public transport, pedestrians and cyclists;
(4) the potential for conflict between vehicles, pedestrians and cyclists;
(5) the loss or increase of on-street parking;
(6) the location, construction and maintenance of utility infrastructure; and
(7) the nature and intensity of traffic and parking generated by the development.'
PO4
'Where new roads are constructed, their design and construction is sufficient to accommodate:
(1) their intended function;
(2) safe and efficient movement of all users, including pedestrians and cyclists;
(3) on-street parking;
(4) bus movement and public transport stops;
(5) street tree planting and streetscaping;
(6) utility infrastructure, including stormwater management; and
(7) treatments that prevent excessive speeds.'

PO6
'Safe and convenient pedestrian and cycle infrastructure is provided and, as far as possible, is integrated with external networks to maximise accessibility by walking and cycling.'

PO7
'Pedestrian and cycle path infrastructure is designed and constructed to:
(1) provide for convenient and direct movement within and external to the site;
(2) have a stable, smooth unobstructed surface;
(3) have a width and gradient to cater for all users;
(4) create a safe environment for users and discourage antisocial behaviour; and
(5) be easily maintained.'

A concept engineering report was submitted (refer Attachment 9) providing an indicative road alignment, including a 22m wide road reserve as depicted below (figure 6). The road layout conforms with the industrial collector standard prescribed in planning scheme policy 2-infrastructure works and is therefore acceptable to service future industrial development. The road layout includes a through-road arrangement which ensures efficient access for large AVs. A proposed roundabout is suitable to cater for large traffic generating land uses. This arrangement will be assessed with reconfiguration and material change of use applications.

A properly made submission was received, seeking that road access is provided to service the adjoining lot (34 Giles Road, Redland Bay).

Given the adjoining lot is outside of the urban footprint under the current *SEQRP 2023* and is zoned rural under City Plan. The adjoining land is outside of the urban footprint, however is adjacent to the existing RBP. It is reasonable to provide an indicative road access location so as to not preclude development of this land in the future. The masterplan has been annotated and provisions added to the ITIC2 – Greenspace Precinct intent statement in the POD.

Pedestrian footpath infrastructure is proposed along Cleveland-Redland Bay Road and should be provided through the subject site to maximise pedestrian connectivity within and external to the site.

Development conditions are recommended that the road layout and pedestrian connectivity through the site is generally in accordance with the concept plan and will be assessed via the first development application after this approval.

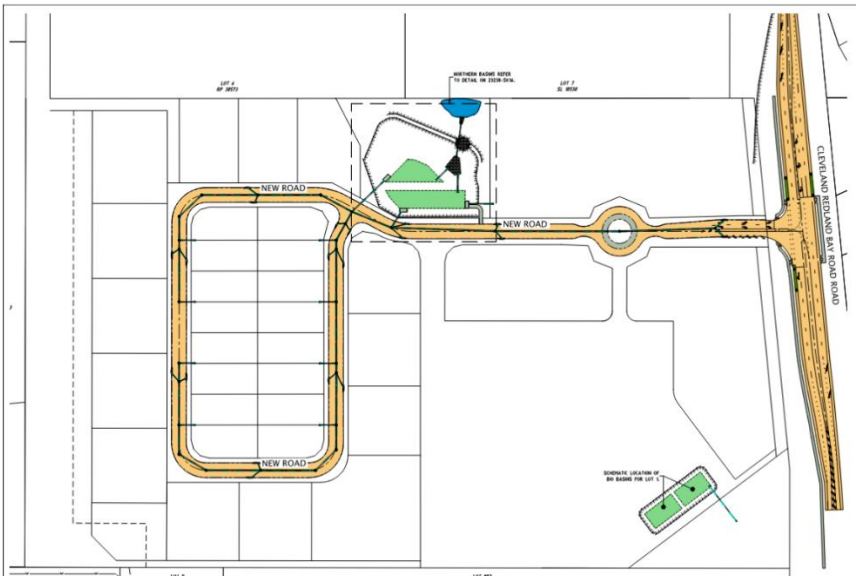


Figure 6: concept engineering layout

Environmental impact

The site is mapped as containing areas of environmental significance. An environmental assessment report was provided (refer Attachment 10-12) to address the matters of State and Local environmental significance. Assessment of the relevant matters is provided below.

Regulated vegetation

The subject site contains category X vegetation and is exempt from requirements under the vegetation management laws (see figure 7). Category C is relevant, however, not proposed to be removed by this application, warranting no further assessment.

The site does contain wildlife habitat in the northern part of the site, which is discussed in the 'environmental significance overlay' section of the report.

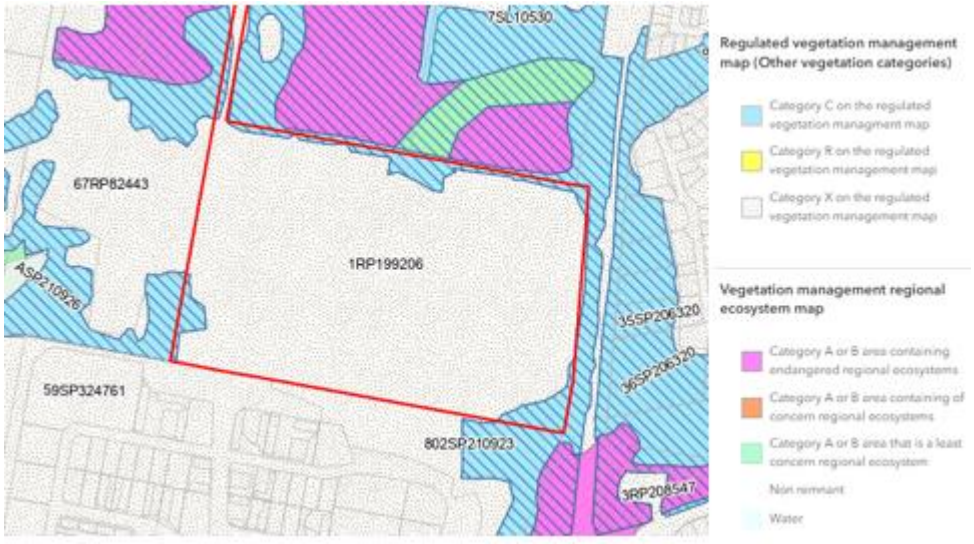


Figure 7: Native vegetation mapping

Koala habitat

As depicted below, the site contains small areas of mapped koala core habitat with a koala priority area, with schedule 10 and 11 of the Regulation relevant to the assessment.

Figure 8: Koala Core Habitat (green hatching)

Schedule 10 of the Regulation

The ITIC1 precinct is designed to avoid areas mapped as containing koala core habitat within a koala priority area to ensure development does not constitute prohibited development under Schedule 10, Part 10, Division 2, section 16A of the *Regulation*. Development conditions and annotations to the concept servicing plans are recommended to ensure that future sewer and water connections avoid mapped koala core habitat, which will be assessed via future development applications.

Schedule 11 of the Regulation

Development is located within 50m of area mapped as containing koala habitat, therefore schedule 11 of the *Regulation is* relevant to the assessment and states:

(a) any change to the condition of soil as a result of the development does not adversely affect a koala habitat area;

(b) any alteration of hydrological flows as a result of the development does not adversely affect a koala habitat area;
(c) any landscaping associated with the development that involves planting non-native vegetation does not adversely affect a koala habitat area;
(d) the development does not adversely affect a koala habitat area by resulting in the increased growth or spread of weeds in the koala habitat area;
(e) a building, structure or works associated with the development is located to minimise the amount of vegetation required to be cleared for safety purposes.'

Development is considered to comply with the above based on the following:

- Koala movement is optimised through the premises, through the implementation of ITIC2 greenspace precinct connecting north-south. Fauna friendly treatments will be required to minimise conflict with ITIC1 innovation precinct.
- Hydrological flows are maintained through the greenspace precinct and managed by future stormwater infrastructure.
- Landscaping will be conditioned to adopt suitable native vegetation commensurate with the Regional Ecosystem and avoid weed species.
- Weed infestation will be avoided through rehabilitation within the greenspace precinct at suitable densities to avoid weed growth.
- The development footprint of the ITIC1 innovation precinct is suitability located to minimise future vegetation clearing.

Future development applications (material change of use and reconfiguring a lot applications) will assess detailed designs and ensure compliance at a later stage.

Environmental significance overlay

The purpose of the environmental significance overlay code states:

(a) 'areas of high biodiversity or ecological significance are retained and protected;
(b) development maximises the retention of native vegetation and significant habitat features;
(c) development minimises the loss of koala habitat trees;
(d) impacts on matters of state or local ecological significance are minimised and mitigated;
(e) development does not cause substantial fragmentation of habitat areas;
(f) opportunities for safe and viable wildlife movement within and between habitat areas are facilitated;
(g) ***landscaping and planting is undertaken in a manner that contributes to the ecological values of the site;*** *and*
(h) where they occur, ***significant residual impacts on matters of local environmental significance or another prescribed environmental matter in accordance with section 15(4) of the Environmental Offsets Act 2014, may need to be offset.'***

As depicted in figure 9 below, the site is mapped as containing matters of local significance. As such, Council officers undertook a site inspection and confirmed the mapped area is comprised almost entirely of regrowth *Melaleuca* and *Eucalypt* with the highest habitat value surrounding the northern dam onsite and in the south-east corner of the site. Locally significant fauna known to be in the vicinity of the site are the tusked frog (*Adelotus brevis)* and grey goshawk (Accipiter novaehollandiae).

To ensure water quality is maintained a bio-basin is proposed to replace the existing dam in the north of the site. Native vegetation will be removed to facilitate the stormwater infrastructure and replanting plus a tusked frog friendly swale solution is proposed to minimise the impact and maximise habitat areas for the relevant specie.

Habitat associated with Moogurrapum Creek in the south-east of the site is proposed to be avoided by locating the development footprint outside of the mapped area.

Clearing that is unavoidable, will not result in a significant reduction in biodiversity through rehabilitation onsite at a compensatory rate of 1:3 (1 tree removed: 3 trees planted) planting within the greenspace precinct, resulting in approximately 800-1000 trees being replanted. In addition, the loss of the 3000m^2 of mapped matters of local environmental significance (MLES) will require additional surveying to determine that a significant residual impact to the grey goshawk is avoided and is a recommended condition of approval.

The development is considered to comply with overall outcomes 8.2.4.2(2) of the environmental significance overlay, through the rehabilitation of an ecological corridor within the ITIC2 greenspace precinct, which provides connection to other habitat areas to the north and to the south as discussed in the following section.

Figure 9: Matters of local environmental significance (source: Redemap)

North-south corridor

The precinct layout proposes a minimum 57m wide corridor comprising wide densely vegetated core habitat corridor (40m wide) and sparse planting (17m wide) to respond to the bushfire constraint, which supports and enhances wildlife movement north-south through the subject site. In addition, a tusked frog friendly swale solution is proposed which is considered to maximise biodiversity and habitat for a locally significant species.

To ensure the viability of fauna connectivity through the site, it is recommended that conditions are imposed to achieve the below:

- Increase the width of the corridor to 49 metres to offset edge effects and the narrow width associated with the existing Redland Business Park corridor (lot 0 on SP324761) from the south.
- Maintain a 17m wide low density bushfire resilient planting area to ensure that the impact of bushfire is suitably managed considering the ITIC1 development footprint and surrounding premises.
- Avoid retaining walls and steep batters being located within the ITIC2 precinct to ensure no obstructions are relevant and maintenance access is optimised.
- A five metre wide fire break along the western edge for bushfire management purposes.
- Emergency egress is proposed through the north-eastern part of the ITIC2 corridor to minimise barriers for fauna movement which will include fauna friendly treatments to maximise safety.

Conditions of approval will require a rehabilitation plan to be submitted for approval, which includes planting design reflecting the local regional ecosystem(s) identified within the Redlands Coast Regional Ecosystem database.

Advice was sought from Parks and Conservation officers who recommended that given the high ecological function connecting conservation areas north and south, that the corridor land be dedicated to Council for conservation purposes.

Development is considered to comply with the environmental significance overlay code through the imposition of development conditions. Detailed design will be assessed via future development applications.

Bushfire

The City Plan's bushfire hazard mapping is superseded by the *State Planning Policy 2017* (SPP) mapping (refer figure 11). An assessment against the SPP and the bushfire hazard overlay code is included below.

Figure 11: SPP bushfire hazard mapping.

The following assessment benchmarks of the bushfire hazard overlay code are relevant to the assessment:

PO2
'Emergency services and uses providing community support services are able to function effectively during and immediately after a bushfire hazard event.'
PO3
Development involving hazardous materials manufactured or stored in bulk is not located on land subject to bushfire hazard.
PO10
Development is located and designed to ensure proposed buildings or building envelopes achieve the following radiant heat flux level at any point:
(1) 10kW/m2 where the use involves the accommodation or congregation of vulnerable sectors of the community such as childcare centres, community care centres, educational establishments, detention facilities, hospitals, rooming accommodation, retirement facilities or residential care facilities; or
(2) 29kW/m2 otherwise.
PO11
'Effective safety and evacuation procedures and measures are established.'
PO15
'Landscaping uses species that are not likely to exacerbate a bushfire event, and does not increase fuel loads within separation areas.'
PO16
'Bushfire risk mitigation treatments do not have a significant impact on the natural environment or landscape character of the locality.'

The applicant submitted a bushfire report undertaken by Land and environment consultants (LEC) and a separate peer review by Rob Friend & Associates Pty Ltd (refer to Attachment 13 to 15). The reports include bushfire mitigation and management strategies to ensure the risk to people and property is maintained at an acceptable level where hazard areas are not able to be avoided. These include:

- Site access and egress will be via new road connections to Cleveland-Redland Bay Road. Emergency vehicle access be available to Giles Road.
- Uses which involve manufacturing or storage of hazardous materials must be located to achieve a radiant heat flux not exceeding 10kW/m².
- Low flammability landscape species are to be utilised in the bushfire management zone.
- Future applications will consider emergency vehicle access and locations of fire hydrants.
- Utility services to be installed underground.

The above bushfire mitigation and management strategies are acceptable. However, Council officers undertook an inspection of the hazardous vegetation and do not agree with the bushfire consultant's findings. Council officers consider that the vegetation hazard classification and slope used in determining asset protection zones (referred to as bushfire management zone in the precinct plan) towards the north and south of the site are not reflective of site conditions (including canopy, regional ecosystem and mid-storey densities).

In addition, modelling used by the bushfire consultant are not reflective of flame temperatures prescribed in the *Bushfire Resilient Communities* verified by Queensland Fire and Emergency Services (QFES).

The implication of underestimating bushfire impact upon development may result in people and property being subject to risk and possible future clearing (future essential management) to achieve a radiant heat flux level of 29kW/m^2, to comply with PO10.

Development conditions are recommended requiring a revised bushfire hazard assessment to be provided prior to lodgement of the first development application, and that a 24m wide bushfire management zone be extended along the southern ITIC1 boundary to ensure that the development complies with PO10 of the bushfire hazard overlay code.

The POD has been amended in red to ensure that development within the bushfire management zone avoids sensitive land uses, achieves 29kW/m² at the building line and uses bushfire resilient landscaping. This will ensure that future development is not subject to unacceptable risk.

Subject to these changes and conditions, the development can achieve compliance with the relevant assessment benchmarks of the bushfire overlay code.

Civil and Infrastructure

The purpose and overall outcomes of the infrastructure works code are relevant to the assessment:

> *'(2) The purpose of the code will be achieved through the following overall outcomes:*
> *(a) development is provided with a level of service that is appropriate for the use, and for the zone or precinct in which the land is located;*
> *(b) infrastructure is provided in a cost-effective and efficient manner;*
> *(c) infrastructure is designed and located to minimise whole-of- lifecycle costs;*
> *(d) infrastructure is integrated with the existing networks;*
> *(e) the design and operation of infrastructure does not result in adverse impacts on environmental or landscape values; and*
> *(f) development does not increase risks to people and property.'*

An engineering report was submitted (refer to Attachments 9 and 16) which seeks to define how the development is proposed to be serviced by infrastructure. The proposal includes the following:

- Private water reticulation is to be derived from the private 200mm diameter main located within the existing RBP to the south. This will include firefighting services.
- Private sewer reticulation is to be derived from the private 225mm diameter main located within Council land from the south (1-51 Jardine Drive, Redland Bay).
- Stormwater management is proposed with two bio-detention basins proposed to service internal developed catchment. The external catchment is intercepted, piped and discharged to downstream system associated with RBP. This is considered acceptable and will be suitably managed by existing stormwater infrastructure.
- An electrical connection is available to the site and will be in accordance with the service provider Energex requirements. This must be installed underground.
- Earthworks will be required to provide level building pads for the ITIC1 innovation precinct, convey stormwater runoff and tie into the surrounding natural ground level.

- Retaining walls are proposed, but of a scale that will not adversely impact the landscape given they are likely to be internally facing or screened by rehabilitation planting. Operational works remains assessable development under the POD level of assessment table.

Development conditions are imposed to ensure that subsequent detailed design is considered at later development application stage (reconfiguring a lot and operational works stage). Sewer and water alignments are conditioned to avoid impacting koala habitat and must adopt minimal clearing of vegetation, using tunnel boring or other similar technique to minimise the impact.

Water and sewer capacity

A water and sewer modelling assessment report (refer Attachment 16) has been submitted by the applicant, which recommends that the development can be serviced by existing water infrastructure without the need for upgrades.

The development is located outside the Priority Infrastructure Area (PIA) identified in the Redland City Council Local Government Infrastructure Plan (LGIP), and outside the planned sewer connection area in the Netserv.

Where additional infrastructure upgrades are required to be undertaken or brought forward by Council to accommodate the additional loading generated by a development outside PIA, it is expected that the developer contributes to the cost of future works to cater for the additional demand generated by the development.

Sewer infrastructure is insufficient in some locations to cater for the proposed additional loading from the development (anticipated to be 515 equivalent persons (EP)), and that downstream pipework upgrades will be required from the 2026 planning horizon. Additionally, modelling indicates that pump upgrades will be necessary at downstream pumping stations in the 2026 planning horizon due to the additional loading. The applicant's report recommends that the development will require an upgrade to sewer pump station (SPS) SPS67 by 2036. The report has noted that this is earlier than Council have planned to upgrade this pump station, currently planned for 2041. It is noted that this item is not in the current LGIP as it is outside the current planning horizon.

Section 130 of the PAct allows an extra payment condition for development outside the PIA under the LGIP that requires the payment of extra trunk infrastructure, which is needed earlier than identified in the LGIP. This should include any bring forward costs of trunk sewer infrastructure being the sewer pump station SPS067. This financial contribution will be secured through an infrastructure agreement (IA) (refer to Attachment 18) between the applicant and Council which is discussed in detail within the 'infrastructure charges' section below.

Stormwater

The purpose and overall outcomes of the healthy waters code are relevant to the assessment:

> *'(2) The purpose of the code will be achieved through the following overall outcomes:*
> *(a) the environmental values of the city's waterways are protected or enhanced;*
> *(b) stormwater run-off does not adversely impact on the quality of receiving waters, including waterways, wetlands and Moreton Bay;*
> *(c) stormwater is managed to ensure the impacts of overland flow or flooding are not worsened for people or property;*

(d) a natural flow regime, including flow paths and quantity, is maintained as far as possible;
(e) potential adverse impacts as a result of disturbing acid sulfate soils, erosion or sediment flow are avoided;
(f) stormwater, water quality and erosion control infrastructure is provided in a cost effective and efficient manner; and
(g) stormwater, water quality and erosion control infrastructure is designed and located to minimise whole-of-lifecycle costs.

A stormwater management plan (refer to Attachment 9) proposes to provide two (2) bio-detention basins to treat and mitigate stormwater runoff prior to discharging downstream. Modelling of the post development stormwater runoff, with mitigation, has been proven to improve volume and velocity downstream compliant with the healthy waters code.

Existing dams located in the future development footprint associated with ITIC1 will be required to be de-watered and are conditioned to avoid any environmental nuisance.

The external catchment associated with the adjoining land will be piped and conveyed through the site to the downstream catchment. Given the location of the catchment, future design will need to avoid removal of koala habitat.

Detailed design will be reviewed at subsequent development application stages and forms a condition of approval.

PART B ASSESSMENT – Variation request

Section 61 of the PAct states:

Assessing and deciding variation requests

(1) This section applies to a part of a properly made application that is a variation request.

(2) When assessing the variation request, the assessment manager must consider—

(a) the result of the assessment of that part of the development application that is not the variation request; and

(b) the consistency of the variations sought with the rest of the local planning instrument that is sought to be varied; and

(c) the effect the variations would have on submission rights for later development applications, particularly considering the amount and detail of information included in, attached to, or given with the application and available to submitters; and

(d) any other matter prescribed by regulation.

(3) The assessment manager must decide—

(a) to approve—

(i) all or some of the variations sought; or (ii) different variations from those sought; or

(b) to refuse the variations sought.

Note— The part of a variation approval that approves variations is a local categorising instrument. Section 43(7) states limits on the variation approval as a categorising instrument.

Plan of Development

The variation request seeks to vary City Plan (which was the local categorising instrument in effect at the time the application was lodged) by establishing the Inspire Technology and Innovation Centre Plan of Development (the POD). The POD, if approved, is intended to establish the framework which future development applications relating to the subject land would be assessed.

The POD is to be read in conjunction with the master plan, which seeks to designate the entire site within the medium impact industry zone. Further, the POD seeks to split the site into two (2) distinct precincts through the precinct plan (discussed above), which identifies an innovation precinct and greenspace precinct (identified as private and public open space).

The POD varies the levels of assessment and assessment benchmarks for specified uses in the nominated precincts, as detailed below. Development not listed within the tables are proposed to be assessed against City Plan version 10 unvaried, as they are not considered to development subject of the approval under section 43(7) of the PAct.

Variations to the zoning mapping

- The POD prescribes development within precincts ITIC1 innovation, which broadly reflects the medium impact industry zone and ITIC2 greenspace, which is typically for conservation purposes.
- Development not contemplated by the application will be assessed against the entire planning scheme using the underlying zoning of the site being the rural zone as designated under City Plan.

Variations to the levels of assessment

A comparison between City Plan and the POD levels of assessment are provided below including officer assessment.

ITIC1-Innovation Precinct – material change of use

Land use	Category/level of assessment		
	City Plan	POD	Officer assessment
Major electricity infrastructure Substation Utility installation Telecommunications facility	Accepted If undertaken by a public sector entity. Code assessment If not accepted. Accepted.	Accepted If undertaken by or on behalf of a public sector entity or services provider Code assessment If not accepted.	✅ Acceptable. Generally consistent with City Plan; medium impact industry zone level of assessment.
Agricultural supplies store Bulk landscape	Accepted subject to requirements If a change of use within	Accepted subject to requirements Where not involving Special	✅ Acceptable. Generally

Land use	Category/level of assessment		
	City Plan	POD	Officer assessment
supplies Emergency services Low impact industry Marine industry Medium impact industry Research and technology industry Renewable energy facilities Service industry Special Industry Temporary Use Transport depot Warehouse	an existing building and involving only minor building work. Code assessment If not accepted subject to requirements.	Industry. Code assessment If not accepted subject to requirements.	consistent with City Plan; medium impact industry zone level of assessment. High impacting land uses such as marine industry, medium impact industry, renewable energy facilities, transport depot and warehouse (exception of self storage facility) have not been demonstrated to achieve adequate amenity to surrounding sensitive areas and therefore are subject to impact assessment if within 150m of a sensitive land use.
Community Use	Impact assessment.		Community use is not compatible with industrial uses and should be retained as impact assessment. Changes to the POD recommended.
Caretakers Accommodation Dwelling Unit	Accepted subject to requirements.	Code assessment.	Acceptable. Generally consistent with City Plan; medium impact industry zone level of assessment.
Car Wash	Code Assessment.	Code assessment: If the total gross floor area of the proposed use, whether or not in combination with a food & drink outlet on the same site, does not exceed 250m^2	Car wash is proposed to be elevated to code assessment with reference to gross floor area relevant to a food and drink outlet, which is acceptable to maintain the integrity of the precinct and ensure water usage is reasonable.
Food and drink outlet	Accepted subject to requirements If a change of use within	Accepted subject to requirements. Premises not exceeding 150m^2	Food and drink outlet of

Land use	Category/level of assessment		
	City Plan	POD	Officer assessment
	an existing building and involving only minor building work. Code Assessment If not accepted subject to requirements and total gross floor area of the proposed and any existing food and drink outlet on the site does not exceed 150m^2	GFA. Code assessment: If not accepted subject to requirements and total gross floor area of the proposed and any existing food and drink outlet on the site does not exceed 250m^2	250m^2 could result in a scale servicing a wider catchment and accommodate a drive-through development which is not intended within an industrial zone. Recommended that the gross floor area be reduced to 200m^2 to avoid land uses that serve a wider catchment.
Crematorium Funeral Parlour	Code assessment.	Code assessment	Crematorium should be suitably separated from nearby sensitive land uses. It is recommended that if located within 200m of a site boundary towards the west and 50m towards the east; elevate to impact assessment to ensure public notification is undertaken. Changes to the POD recommended.
Garden Centre	Impact assessment.	Code assessment ▪ If not involving a showroom or sales area for the general public with a gross floor area of more than 200m²; and ▪ If the site does not exceed 1500m².	Garden centre comprising of 500m^2 is not acceptable given the scale could be akin to a large retail format outcome intended within centre zoned land. It is recommended that the gross floor area of 200m^2 and site are of 1500m^2 be imposed to be consistent with City Plan. Changes to the POD are recommended.
Hardware and trade supplies	Code assessment If not involving a showroom or sales area for the general public with a gross floor area of more than 200m^2	Code assessment ▪ If not involving a showroom or sales area for the general public with a gross floor area of more than 200m²; and ▪ If the site does not exceed 1500m². .	Large scale hardware and trade supplies commonly known as large retail format outcomes intended within centre zoned land or mixed use zone. It is recommended that the

Land use	Category/level of assessment		
	City Plan	POD	Officer assessment
			gross floor area of 200m^2 and site are of 1500m^2 be imposed to be consistent with City Plan. Changes to the POD are recommended.
Sales Office	Impact assessment.	Accepted subject to requirements Code assessment If not accepted subject to requirements.	Acceptable. Generally consistent with City Plan; medium impact industry zone level of assessment.
Service Station	Code assessment.	Code assessment	Acceptable. Generally consistent with City Plan; medium impact industry zone level of assessment.
Shop	Impact assessment.	Accepted subject to requirements ▪ If complying with the Requirements for Accepted Development; and ▪ Ancillary to the primary use on the premises; and ▪ Less than 200m² of Gross Floor Area, combined with any other Shop within the Plan of Development area.	Shop land use is generally encouraged within centres zones. To avoid undermining centre zones only 200m^2 gross floor area is permitted within the plan of development area. This will maintain the integrated of the development and centres in Redlands Coast.
Any other use not listed in this table	Impact	Impact Redland City Plan	Acceptable. Consistent with City Plan. Development will be assessed against City Plan version 10 including underlying zoning of the site.

ITIC2- Greenspace Precinct – material change of use

Land use	Category/level of assessment		
	City Plan	POD	Officer assessment
Major electricity infrastructure Substation Utility installation Telecommunications facility	Accepted If undertaken by a public sector entity.	Accepted If undertaken by or on behalf of a public sector entity or services provider and provided any works do not involve interference with koala habitat[1] within a Koala Priority Area and clearing of native rehabilitation vegetation within the greenspace precinct. Code assessment If not accepted.	 Acceptable.- Generally consistent with City Plan; allowing development while avoiding interference with koala habitat and rehabilitation planting.
Park	Accepted	Accepted subject to requirements Where not involving interfering with koala habitat within a Koala Priority Area and clearing of native rehabilitation vegetation within the greenspace precinct.. Code assessment If not accepted subject to requirements, where not involving building work and where not involving interfering with koala habitat within a Koala Priority Area and clearing of native rehabilitation vegetation within the greenspace precinct..	
Any other use not listed in this table	Impact	Redland City Plan	 Acceptable. Generally consistent with City Plan.

ITIC1 and ITIC2 Precincts – Other development

Land use	**Category/level of assessment**		
	City Plan	**POD**	**Officer assessment**
Reconfiguration of a Lot	Code assessment	Code assessment ▪ Where involving reconfiguration of a lot within the ITIC1 Precinct with a minimum lot size of 1500m²; or ▪ Where creating the base	 Acceptable. Generally consistent with City Plan.

		parcel (or management lot) to contain the ITIC2 Precinct; or ▪ Where creating new road.	
Operational works for driveway crossover	Accepted If undertaken by Redland City Council Accepted subject to requirements All	Accepted subject to requirements Code assessment If not accepted subject to requirements.	 Acceptable. Generally consistent with City Plan.
Operational works for excavation and filling	Accepted If carried out by Redland City Council; or If the proposed filling or excavation: (1) does not involve: a) excavation of 100m^3 or more at or below 5m AHD; or b) filling of 500m^3 with an average depth of 0.5m or more on land below 5m AHD; and (2) does not exceed a depth of 750mm on its own or when combined with any previous excavation or filling; and (3) is not located in an area mapped by any of the following overlays: a) Flood or Storm Tide Hazard Overlay (Flood Prone Area sub-category only); or b) Coastal Protection (Erosion Prone Area) Overlay; or c) Waterway Corridors and Wetlands Overlay; or d) Environmental Significance Overlay. Code assessment If not accepted.	Code assessment	 Acceptable. Generally consistent with City Plan.
Operational works associated with Reconfiguring a lot	Code assessment	Code assessment	 Acceptable. Generally consistent with City Plan.

Operational works other than as mentioned above.	Accepted (subject to requirements) otherwise code	Accepted	Acceptable. Generally consistent with City Plan.
Operational work subsequent to standard format reconfiguration	Code	Code	Acceptable. Generally consistent with City Plan.
Reconfiguration of a Lot not listed in the table	Impact assessment	Impact assessment	Acceptable. Generally consistent with City Plan.

Overlays

The Precinct Plan and Inspire Technology and Innovation Centre Code is deemed to have satisfied or appropriately incorporated the relevant City Plan overlays. These overlays would not be assessment benchmarks for future development applications.

Assessment of the variations requested is considered below.

Overlay	Assessment
Environmental Significance Overlay Code	The ITIC2 greenspace precinct does not anticipate development that removes or interferes with native vegetation and koala habitat. This will provide protection to existing retained native vegetation inclusive of rehabilitated planting required to be undertaken prior to the first development.
Flood and Storm Tide Hazard Overlay Code	The ITIC1 innovation precinct is situated above the relevant flood planning level with drainage lines retained within the ITIC2 greenspace precinct including the use of stormwater devices to ensure no worsening to the surrounding catchment. The existing dam in the south-west of the site is proposed to be removed altering the drainage lines.
Landslide Hazard Overlay Code	Development will undertake earthworks to grade the site to avoid landslide hazards, which can be conditioned when subsequent applications are made.
Waterway Corridors and Wetlands Overlay Code	The ITIC1 innovation precinct is located outside of the relevant overlay situated within the ITIC2 greenspace precinct, which will ensure no adverse impact to the corridor for the life of the development.
Bushfire Hazard Overlay Code	Development conditions are recommended that a revised bushfire hazard assessment be provided prior to lodgement of the first development application to ensure that the development is not subject to unacceptable risk achieving a Bushfire Attack Level (BAL) 29. In addition the POD is revised to ensure development within the 24m wide bushfire management zone achieves BAL29, adopts bushfire resilient landscaping, avoids sensitive land uses and appropriate setbacks to avoid essential management.

Development code

Similar to the existing RBP, the POD seeks to facilitate employment and industrial uses as 'accepted development' providing prescriptive requirements for accepted development (RAD). Non-compliance with such benchmarks typically raises the level of assessment to code or impact depending on the level of assessment above. This approach is compatible with other Planning Schemes in South-East Queensland and is assessed below.

Requirements for accepted development (RAD)

- Shade trees are to be incorporated into car parking areas at a rate of 1 tree per 4 spaces consistent with landscaping code (unvaried).

- Bushfire hazard has not been adequately addressed by the approved bushfire management plan as mentioned above. Changes are proposed to reference the revised bushfire management report to be provided through conditions of the approval. A bushfire management zone is retained however broadened to reference the current bushfire planning framework, rather than the National Construction Code. This is relevant to the Building Act/Regulation rather than the planning framework, which seeks suitable separations from the hazard and not building elements which are non-combustible and the like.
- Noise amenity provisions adopt conservative noise criteria adopted in the approved noise impact assessment to ensure that development will need to demonstrate compliance with these provisions or be elevated to assessable development.
- Other amenity provisions adopt the relevant Australian Standard and are generally consistent with the medium impact industry zone code relevant to the site context adjoining rural zoned land and sensitive land uses.
- Land parcels adjoining Cleveland-Redland Bay Road provide and maintain a minimum 15m wide landscaping strip to that boundary to 'screen' built form not 'soften' as drafted by the applicant.
- ITIC2 greenspace precinct is limited to provision of ecological corridor comprising rehabilitation planting and fauna movement with open space not compatible with the primary function of the precinct.

The Inspire Technology and Innovation Centre Code

The Inspire Technology and Innovation Centre (ITIC) Code functions like the medium impact industry zone code (unvaried) regulating development which is assessable development and not accepted subject to requirements. Acceptable outcomes of the ITIC code typically link to the RADs mentioned above to avoid inconsistencies. The code is acceptable with the following additional provisions:

- An assessment benchmark is recommended to be incorporated which adopts the sewer demand rate assumed for the development. If a development exceeds this provision (22.5 Equivalent Persons (EP) per net developable hectare) assessment against the network capacity is warranted. Further assessable development which exceed this provision potentially could be subject to a further financial contribution, where exceeding the planned EP estimate for the site.
- The proposed code seeks to minimise noise impacts through design and layout considerations referencing the term noise sensitive area/place which is not a defined term. The following is included *'A sensitive place includes a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019'* for certainty.
- Reference is made to development not interfering with mapped koala habitat however these benchmarks do not refer to the rehabilitation planting within the ITIC2 greenspace precinct. As such it is recommended that these assessment benchmarks are broadened to avoid or minimise impacts to rehabilitation planting and maximise fauna movement.
- Development within 150m of a noise sensitive receptor is required to adopt effective building design and layout, situating audible activities away from sensitive land uses.

- Buildings are separated from hazardous vegetation by a distance that achieves a radiant heat flux level at any point on the building respectively, of 29kW/m^2. Reconfiguring a lot provisions adopt a minimum lot size of 1500m^2 and 25m frontage which is acceptable to accommodate future land uses. Additional assessment benchmark are proposed to ensure that a range of lot sizes are provided to ensure large scale employment generating uses can be accommodated in Redlands Coast. Economic development confirm that the availability of larger lots is a barrier to the attraction of a diverse mix of operations.

Submission rights

The variations vary the level of assessment from impact to code assessment in the following instances:

- Crematorium: the site is within proximity to sensitive land uses and therefore the amended level of assessment is not supported where within 200m from the western site boundary and 50m from the eastern site boundary. Impact assessment is maintained if located closer, retaining submission rights.
- High impact land uses (marine industry, medium impact industry, renewable energy facilities, transport depot and warehouse (with the exception of self storage facility): Development within 150m of a sensitive land use is elevated to impact assessment requiring public notification maintaining suitable rights for submissions.
- Community use: retained as impact assessable development given the land use is not compatible with industrial land uses.
- Garden centre: appropriate scaled garden centre has a nexus with rural location and is compatible with industrial development unlikely to generate community interest.
- Shops: land use is generally located within a centre zone and is not supported within an industrial area. However given the intended scale of 200m^2 gross floor area and ancillary to the primary use onsite, this would manage the community expectation for the land use remaining assessable development.

The development application material provided includes an indicative lot layout and other supporting information that provides potential submitters with sufficient information to anticipate the types of development that will form part of future applications, being medium impact industry development within the ITIC1 innovation precinct, and primarily an ecological function within the ITIC2 greenspace precinct. Submissions were received during the extended public notification period for variation applications, with respect to the levels of assessment or any other matter. Accordingly, the variations are not considered to adversely impact on submitter rights.

Infrastructure Charges

Trunk infrastructure

The development is located outside the PIA identified in the Redland City Council LGIP, and outside the planned sewer connection area in the Netserv.

Where additional infrastructure upgrades are required to be undertaken or brought forward by Council to accommodate the additional loading generated by a development outside PIA, it is expected that the developer contributes to the cost of future works to cater for the additional demand generated by the development.

Wastewater Treatment Plant

The water and sewer modelling assessment report prepared by Digital Water Solutions has estimated that the development will place an additional demand on 515 EP on Council's wastewater network, which includes the Victoria Point Wastewater Treatment Plant (WWTP).

Based on the current WWTP strategy for Victoria Point Treatment Plant, the total estimated cost for upgrades required to meet planned growth by 2046 is $38,400,582. By apportioning this cost across planned growth up to 2046, this equates to a cost of $4,546/EP.

For Council to accept the additional loading on the wastewater treatment plant that will be generated by this development, an extra financial contribution has been sought to cover the cost of the EP allocation that will be taken up by the development based on the following:

- The development is outside the PIA.
- The development will create additional demand and loading on the wastewater treatment plant, not currently planned for by Council.
- The development will be taking up part of Council's planned allocation for future growth that would otherwise be utilised by developers inside the PIA.

The developer has agreed to pay an additional financial contribution calculated using a demand generation rate of 10.4EP per net developable hectare at a rate of $4,546/EP. The applicant has agreed to formalise this by entering into an IA with Council (refer to attachment 18).

The demand generation rate of 10.4EP has been accepted by Council for the purposes of calculating the extra financial contribution based on the existing water and sewer demand generated by the adjoining Redland Bay Business Park. For uses that require a code assessable development application under the plan of development, Council will have the opportunity to further assess the sewer demand of future development as required.

Wastewater network (bring forward cost)

The water and sewer modelling assessment prepared by Digital Water Solutions has identified that the development will require pump augmentations at Sewer Pumping Station 67 earlier than Council's current planning predicts (2036 instead of 2041).

The developer has agreed to provide an extra financial contribution of $75,839.47 (subject to indexation) by entering into an IA with Council, which has been calculated based on the cost of bringing forward the planned upgrade in the Netserv from 2041 to 2036.

Water

The development is located within the planned water supply area. The water and wastewater modelling assessment report submitted by the applicant recommends that the development can be serviced by existing water infrastructure and has not identified any necessary upgrades to water infrastructure.

Transport (roads and pathways)

Primary access to the development is proposed from Cleveland-Redland Bay Road, which is a State controlled road. The LGIP identifies a future trunk road upgrade along Giles Road (TR-L-90), however there are no requirements for this upgrade to be delivered by the developer as Giles Road is proposed to be used an emergency access and services corridor only.

The development is not required to provide any trunk infrastructure for the roads or cycleway networks.

Parks

The proposed open space does not include any trunk parks, and the open space proposed will be provided at no cost to Council.

Infrastructure charges

An Infrastructure charges notice (ICN) is not required to be issued for the preliminary approval.

Infrastructure charges will apply for any future development proposed on the site in accordance with the Adopted Infrastructure Charges Resolution and IA. ICNs are to be issued following planning/building approval of future uses, and charges will be payable when the change of use occurs (on or before final plumbing) or prior to plan sealing, whichever occurs first.

Offsets

There are no offsets that apply under Chapter 4 Part 2 of the PAct.

Refunds

There are no refunds that apply under Chapter 4 Part 2 of the PAct.

STRATEGIC IMPLICATIONS

Legislative Requirements

The Development Application has been assessed in accordance with the PAct.

Risk Management

Standard development applications risks apply. In accordance with the PAct the applicant may appeal a condition of approval or a decision to refuse the application. As impact assessable development the decision is subject to submitter appeal rights.

Financial

Should an appeal be filed against the decision of Council, subsequent legal costs will apply.

People

There are no implications for staff associated with this report.

Environmental

Environmental impacts are discussed in the 'Issues' section of this report where relevant.

Social

Social impacts are discussed in the 'Issues' section of this report where relevant.

Human Rights

There are no known human rights implications associated with this report.

Alignment with Council's Policy and Plans

The assessment and officer's recommendation align with Council's policies and plans as described within the 'Issues' section of this report.

CONSULTATION

Consulted	Consultation Date	Comments/Actions
Councillor Division 6	7 July 2023	Referral to Councillor in accordance with standard practice.

OPTIONS

Option One

That Council resolves as follows:

1. To issue a preliminary approval for a material change of use for mixed use development including environmental corridor on land described as Lot 1 on RP199206 situated at 20 Giles Road, Redland Bay, subject to the conditions outlined in Attachment 17.
2. To approve the variations sought to vary the effect of City Plan version 10 in accordance with section 61 of the *Planning Act 2016*, on land described as Lot 1 on RP199206 situated at 20 Giles Road, Redland Bay, subject to the Inspire Technology and Innovation Centre Plan of Development outlined in Attachment 2.

Option Two

That Council resolves as follows:

1. To issue a preliminary approval subject to different conditions.
2. To approve different variations to the City Plan version 10 to those requested.

Option Three

That Council resolves as follows:

1. To refuse the preliminary approval (reasons for refusal must be identified).
2. To refuse the variations requested (reasons for refusal must be identified).

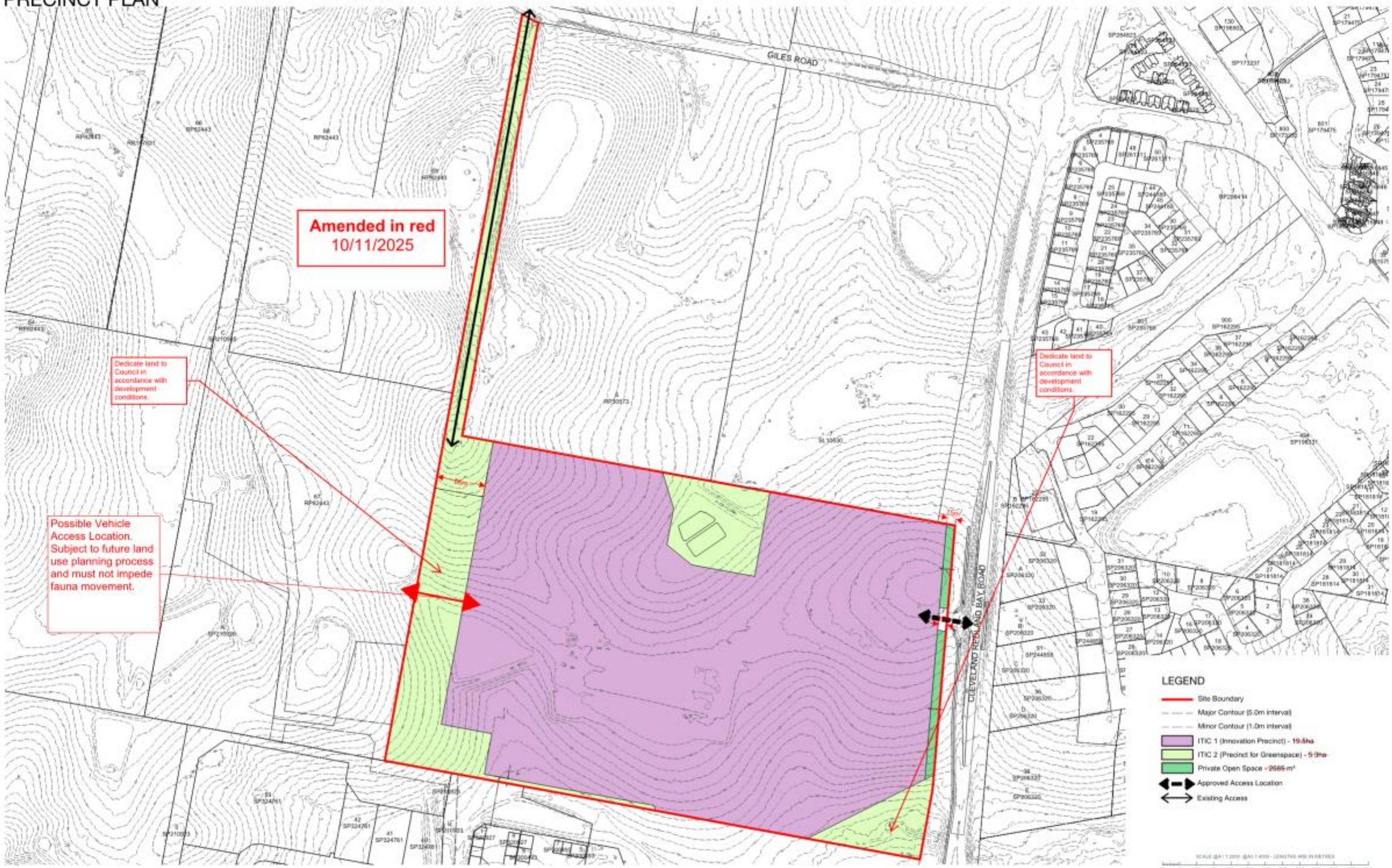
OFFICER'S RECOMMENDATION

That Council resolves as follows:

1. To issue a preliminary approval for a material change of use for mixed use development including environmental corridor on land described as Lot 1 on RP199206 situated at 20 Giles Road, Redland Bay subject to the conditions outlined in Attachment 17.

2. To approve the variations sought to vary the effect of City Plan version 10 in accordance with section 61 of the *Planning Act 2016*, on land described as Lot 1 on RP199206 situated at 20 Giles Road, Redland Bay, subject to the Inspire Technology and Innovation Centre Plan of Development outlined in Attachment 2.

PRECINCT PLAN



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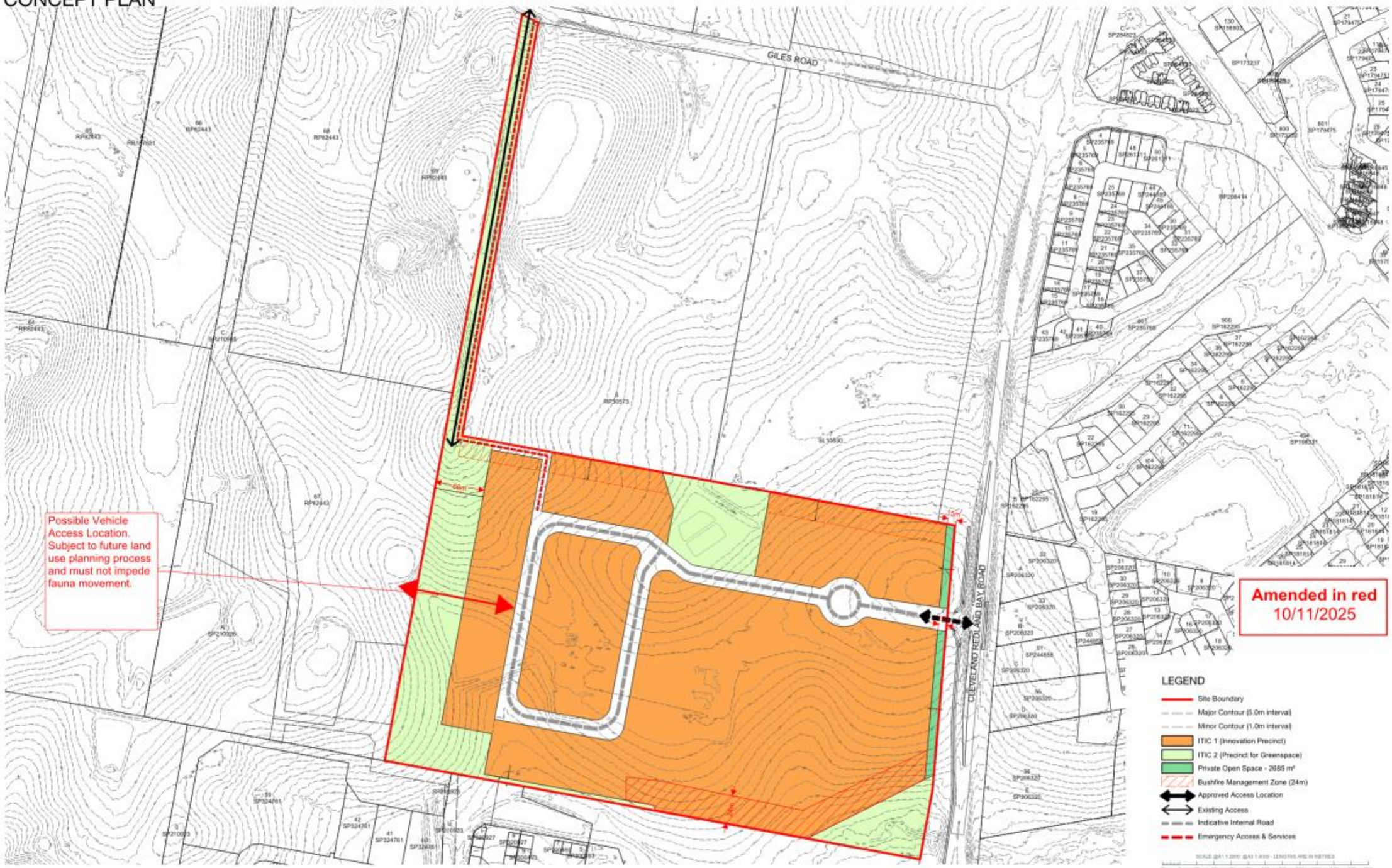
SOURCE
PROJECTION: GDA2020 MGA56
SURVEY BOUNDARIES: COMPILED FROM RECORDS

CLIENT: FOX & BELL PTY LTD

SITE ADDRESS: 20 GILES ROAD, REDLAND BAY
RP DESCRIPTION: LOT 1 ON RP199206

DRAWN: NM
DATE: 28/10/2025
DRAWING NO: 11598 P 05 Rev A - CON 01

CONCEPT PLAN



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PROJECTION: GDA2020 MGA56
SUBJECT BOUNDARIES: COMPILED FROM RECORDS

CLIENT
FOX & BELL PTY LTD

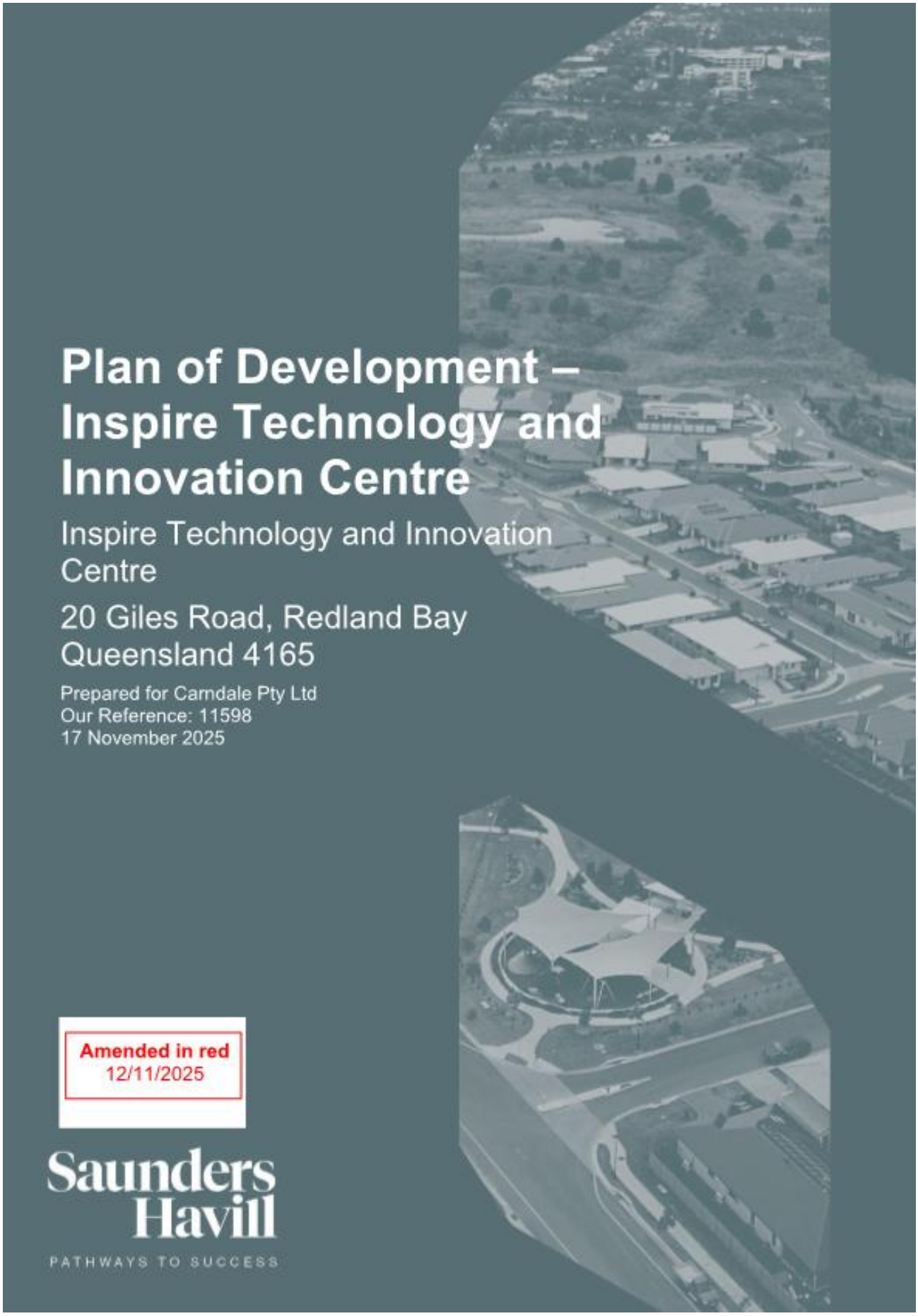
SITE ADDRESS
20 GILES ROAD, REDLAND BAY

DRAWN
NM

DATE
28/10/2025

RP DESCRIPTION
LOT 1 ON RP199206

DRAWING NO.
11598 P 04 Rev H - CON 01



Plan of Development – Inspire Technology and Innovation Centre

Inspire Technology and Innovation Centre

20 Giles Road, Redland Bay
Queensland 4165

Prepared for Carndale Pty Ltd
Our Reference: 11598
17 November 2025

Amended in red
12/11/2025

Saunders Havill

PATHWAYS TO SUCCESS

■ Plan of Development – Inspire Technology and Innovation Centre

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Issue	Date	Prepared By	Checked By
Draft – Revision A	29 May 2023	RC	NC
Draft – For external review	12 June 2023	NC	-
Final Draft	28 June 2023	NC	JW
Rev J	16 May 2024	SH	NC
Rev K	16 October 2024	SH	NC
Rev L	4 June 2025	SH	GH
Rev M	3 November 2025	NC	SH

Amended in red
12/11/2025

Table of Contents

1. Introduction 3
   1.1. Plan of Development 3
   1.2. Precinct Plan 4
   1.3. Determining the Level of Assessment of Development 5
   1.4. Relationship to the Planning Act and Redland City Plan 2018 5

2. Precinct Intent Statements 5

3. Level of Assessment Tables 7
   3.1. Material Change of Use 7
      3.1.1 ITIC1 - Innovation Precinct 7
      3.1.2 ITIC2- Greenspace Precinct 12
   3.2. Other Development 13
      3.2.1 ITIC1 and ITIC2 Precincts 13

4. Inspire Technology and Innovation Centre Code 14
   4.1. Application 14
   4.2. Intent 15
   4.3. Assessment Criteria for Development in the ITIC 15
   4.4. Overall Outcomes 16
      4.4.1 Uses and Other Development 16
      4.4.2 Built Form and Density 16
      4.4.3 Amenity
      4.4.4 Pollution Prevention 17
      4.4.5 Environment 17
      4.4.6 Infrastructure 18
   4.5. Requirements for Accepted Development 18
   4.6. Performance Outcomes and Acceptable Outcomes 38
      4.6.1 Application of these Principles 38

5. Inconsistent uses and other development 49
   5.1. Inconsistent uses and other development for Precinct ITIC1 49

6. Recommended Flood Levels for Community Infrastructure 50

7. Costs for infrastructure 51
   7.1. Infrastructure charges 51

8. Defined Uses and Terms 51
8.1. Use Definitions 51
8.2. Administrative Definitions 52
8.3. Industry thresholds 55

1. Introduction

1.1 Plan of Development

This Plan of Development (POD) is a framework to facilitate the development and use of land within the *plan of development area* for the Inspire Technology and Innovation Centre (**Appendix A**) in an integrated and coordinated manner.

The *plan of development area* is in effect over the following property (shown on **Figure 1.1**):

- 20 Giles Road, Redland Bay (Lot 1 on RP199206)

Figure1: Plan of Development Area

The purpose of this POD is to define the:

- Vision, intent and overall outcomes for the Inspire Technology and Innovation Centre Plan of Development area;
- Precinct plan and intents for each precinct;

- Defined levels of assessment; and
- Provisions applying to assessment of future applications.

1.2 Precinct Plan

The Inspire Technology and Innovation Centre Precinct Plan (**Appendix B**) refines the future land use and development parameters within the Plan of Development area. The Precinct Plan is used to identify the level of assessment and apply future design requirements that support the overall outcomes for the precincts.

The Precinct Plan includes the following precincts:

- **ITIC1 Innovation Precinct** – providing opportunities to cluster multi-disciplinary businesses, driving jobs diversity & industry innovation; and
- **ITIC2 Greenspace Precinct** – to enhance the environmental elements of the ITIC and fauna connections ~~of~~ **through** the site.

Figure 2: Inspire Technology and Innovation Centre Precinct Plan

The Precinct Intent statements (**Section 2**) outline the purpose and objectives for each precinct.

1.3 Determining the Level of Assessment of Development

This POD includes supplementary tables of assessment for each precinct of the POD area as shown on the Precinct Plan.

It is noted that the assessment criteria and assessment tables within the Redland City Plan, as relevant to the Medium Impact Industry Zone, have been modified and to the extent there is any inconsistency with Redland City Plan, this POD prevails.

Relationship to the Planning Act and Redland City Plan 2018

For the purpose of this POD, reference to the 'Redland City Plan' or 'City Plan' means the *Redland City Plan 2018* (version 10).

Pursuant to Section 43(3) of the *Planning Act 2016*, this Plan of Development is a local categorising instrument to the extent outlined in 43(7).

The POD applies to development applications over the site and is intended to prevail over the provisions of the Redland City Plan to the extent of any inconsistency between the two documents.

The POD incorporates the **Inspire Technology and Innovation Centre Code**. The balance of codes referred in the POD are included in the Redland City Plan in effect at the time of writing (ver. 10, 2023) which is available on Council's website at www.redland.qld.gov.au or in hard copy at Council's Customer Service Centres.

Where the POD does not contain specific requirements for a proposal, development would otherwise be required to comply with the provisions of the Redland City Plan including the underlying zoning (meaning the designated zone as per City Plan version 10).

The Precinct Plan and Inspire Technology and Innovation Centre Code is deemed to have satisfied or appropriately incorporated the relevant Redland City Plan overlays.

2. Precinct Intent Statements

Precinct	Intent
ITIC1 - Innovation Precinct	▪ To provide local employment opportunities and choice through the provision of Accepted Uses and/or code assessable uses identified in the Material Change of Use Assessment Tables. ▪ To ensure all potential impacts both external from and internal to the site are identified and adequately mitigated. ▪ To create a core research and technology industry precinct catering for multiple activities onsite. ▪ To provide a home for business including a combination of design and research, assembly, manufacturing, storing, and testing activities in a centralised location. ▪ To build local job opportunities by encouraging businesses to locate a diverse workforce in a single location. ▪ To facilitate an innovation display centre promoting new products and services to the community.
ITIC2 - Greenspace Precinct	▪ To protect mapped Vegetation Management regional ecosystems on the site and maintain/increase koala and grey-headed flying fox resources. ▪ To maintain habitat connectivity for koalas, gliders, macropods, and other species between adjacent habitats. ▪ To buffer and provide appropriate transition areas to surrounding land. ▪ To provide a landscape buffer to Cleveland Redland Bay Road. ▪ **To maintain vehicular access connection to the land adjoining the precinct to the west through provision of a vehicular access and infrastructure, whilst maintaining fauna connectivity**

3. Level of Assessment Tables

3.1 Material Change of Use

3.1.1 ITIC1 - Innovation Precinct

Table 3.1.1: Material Change of Use within the ITIC1 Precinct

Use	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted development
Major electricity infrastructure **Substation** **Utility installation** **Telecommunications facility**	**Accepted**	
	If undertaken by or on behalf of a public sector entity or services provider	Nil required for accepted development.
	Code assessment	
	If not accepted	Inspire Technology and Innovation Centre code Medium impact industry zone code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code Telecommunications facilities, substations and utilities code
Agricultural supplies store **Bulk landscape supplies** **Emergency services** **Low impact industry** **Research and technology industry** **Service industry** **Special industry** **Temporary use**	**Accepted subject to requirements**	
	Where not involving Special Industry	Inspire Technology and Innovation Centre code
	Code assessment	
	If not accepted subject to requirements	Inspire Technology and Innovation Centre code Medium impact industry zone code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code

Marine industry **Medium impact industry** **Renewable energy facilities** **Transport depot**	**Accepted subject to requirements**	
	If the development is not within 150m of a sensitive land use	Inspire Technology and Innovation Centre code
	Code assessment	
	If not accepted subject to requirements and the development is within 150m of a sensitive land use	Inspire Technology and Innovation Centre code Medium impact industry zone code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Warehouse	**Accepted subject to requirements**	
	▪ If the use is for a 'self-storage facility' that is conducted indoors (excluding parking facilities); or ▪ If the use is not for a 'self-storage facility' and is not conducted indoors, development is not within 150m of a sensitive land use.~~; or~~ ~~▪ If the use is not for a 'self-storage facility' and is conducted indoors.~~	Inspire Technology and Innovation Centre code
	Code assessment	
	▪ If not accepted subject to requirements; and ▪ If the use is not for a 'self-storage facility' and is not conducted indoors, development is within 150m of a sensitive land use.	Inspire Technology and Innovation Centre code Medium impact industry zone code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Caretakers Accommodation **Dwelling Unit**	**Code assessment**	
		Inspire Technology and Innovation Centre code Medium impact industry zone code Healthy waters code

		Infrastructure works code Landscape code Transport, servicing, access and parking code
Car Wash	**Code assessment**	
	If the total gross floor area of the proposed use, whether or not in combination with a food & drink outlet on the same site, does not exceed 250m^2	Inspire Technology and Innovation Centre code Medium impact industry zone code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Food and Drink Outlet	**Accepted subject to requirements**	
	If the total gross floor area of the proposed and any existing food and drink outlet on the site does not exceed 150m^2	Inspire Technology and Innovation Centre code
	Code assessment	
	If not accepted subject to requirements and total gross floor area of the proposed Food and drink Outlet combined with any other food and drink outlet on the same site exceeds ~~150m^2~~ 200m^2	Inspire Technology and Innovation Centre code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Crematorium	**Code assessment**	

Funeral Parlour	If the 'crematorium' use area is: ▪ not within 200m of western site boundary as depicted in figure 1.1 - plan of development area; and ▪ not within 50m of eastern site boundary as depicted in figure 1.1 - plan of development area.	Inspire Technology and Innovation Centre code Medium Impact Industry Code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Garden Centre	**Code assessment**	
	▪ If not involving a showroom or sales area for the general public with a gross floor area of more than 200m²; and ▪ If the site does not exceed 1500m².	Inspire Technology and Innovation Centre code Medium Impact Industry Code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Hardware and trade supplies	**Code Assessment**	
	▪ If not involving a showroom or sales area for the general public with a gross floor area of more than 200m²; and ▪ If the site does not exceed 1500m².	Inspire Technology and Innovation Centre code Medium impact industry zone code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Sales Office	**Accepted subject to requirements**	
		Inspire Technology and Innovation Centre code
	Code assessment	

	If not accepted subject to requirements.	Inspire Technology and Innovation Centre code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Service Station	**Code assessment**	
		Inspire Innovation and Technology Centre Code Medium impact industry zone code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Shop	**Accepted subject to requirements**	
	▪ If complying with the Requirements for Accepted Development; and ▪ Ancillary to the primary use on the premises; and ▪ Less than 200m² of Gross Floor Area, combined with any other Shop within the Plan of Development area	Inspire Technology and Innovation Centre code
Impact assessment		
Any other use not listed in this table. Any use listed in this table and not meeting the description listed in the categories of development and assessment column. Any other undefined use.		Redland City Plan
Note: For any use not listed in this Table, the Categories of Development and Assessment Table in the City Plan Version 10 for the underlying zoning will apply.		

3.1.2 ITIC2- Greenspace Precinct

*Table **Error! No text of specified style in document**..1.2: Material Change of Use within the ITIC2 Precinct*

Use	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted development
Major electricity infrastructure **Substation** **Utility installation** **Telecommunications Facility**	**Accepted**	
	If undertaken by or on behalf of a public sector entity or services provider and provided any works do not involve interference with koala habitat[1] within a Koala Priority Area and clearing of native rehabilitation vegetation within the greenspace precinct.	Nil required for accepted development.
	Code assessment	
	If not accepted	Inspire Technology and Innovation Centre code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code Telecommunications facilities, substations and utilities code
Park	**Accepted subject to requirements**	
	Where not involving interference with koala habitat within a Koala Priority Area and clearing of native rehabilitation vegetation within the greenspace precinct.	Inspire Technology and Innovation Centre code
	Code assessment	
	If not accepted subject to requirements, where not involving building work, where not involving interference with koala habitat	Inspire Technology and Innovation Centre code Healthy waters code

[1] *Koala habitat is defined as areas containing mapped core koala habitat areas by the Queensland Government under the South East Queensland Koala Conservation Strategy 2020-2025.*

	within a Koala Priority Area and clearing of native rehabilitation vegetation within the greenspace precinct.	Infrastructure works code Landscape code Transport, servicing, access and parking code
Impact assessment		
Any other use not listed in this table. Any use listed in this table and not meeting the description listed in the categories of development and assessment column. Any other undefined use.		Redland City Plan
Note: For any use not listed in this Table, the Categories of Development and Assessment Table in the City Plan Version 10 for the underlying zoning will apply.		

3.2 Other Development

3.2.1 ITIC1 and ITIC2 Precincts

Table 3.2.1: Other Development

Development	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted development
Reconfiguration of a Lot	**Code assessment**	
	▪ Where involving reconfiguration of a lot within the ITIC1 Precinct with a minimum lot size of 1500m²; or ▪ Where creating the base parcel (or management lot/s) to contain the ITIC2 Precinct; or ▪ Where creating new road.	Inspire Technology and Innovation Centre code Medium Impact Industry Zone code (only where applicable) Reconfiguration of a Lot code Healthy waters code Infrastructure works code Landscape code Transport, servicing, access and parking code
Operational Works for Driveway Crossover	**Accepted subject to requirements**	
		Inspire Technology and Innovation Centre code
	Code assessment	

	If not accepted subject to requirements	Inspire Technology and Innovation Centre code Transport, servicing, access and parking code
Operational Works for Excavation and Filling	**Code assessment**	
		Inspire Technology and Innovation Centre code Healthy waters code Infrastructure works code
Operational Works associated with Reconfiguring a Lot	**Code assessment**	
		Inspire Technology and Innovation Centre code Healthy waters code Infrastructure works code Transport, servicing, access and parking code
Operational Works other than as mentioned above	**Accepted**	
		Nil required for accepted development.
Reconfiguration of a Lot not listed in the table	**Impact Assessment**	
		Redland City Plan

4. Inspire Technology and Innovation Centre Code

4.1 Application

The Inspire Technology and Innovation Centre (ITIC) Code incorporates:

- Intent Statement;
- Overall Outcomes for the ITIC Code;
- Requirements for Accepted Development; and
- Performance Outcomes and Acceptable Outcomes applicable to assessable development categories.

4.2 Intent

The ITIC will serve the Redland City by offering greater employment, technology and innovation opportunities for residents of the southern parts of the City and reducing the need for residents to travel outside the City for employment, or supply of goods and services.

The purpose of the Medium impact industry zone code is to provide land for a range of low and medium impact industrial activities and a range of other employment activities that have a nexus to and are compatible with industrial activities.

It is envisaged its primary benefits will be:

- Increasing and diversifying the Redlands employment base.
- Reinforcing the sense of community and social identity.
- Providing economic opportunity to all residents.
- Reducing reliance on private motor vehicle commuting for extended distances.
- Attraction of uses and wealth from outside Redland City.

The intent of the Inspire Technology and Innovation Centre is:

- To provide land for a range of low and medium impact industrial activities and a range of other employment activities that have a nexus to and are compatible with industrial activities;
- To integrate development and comprehensively plan the use of this land in accordance with the POD and associated Precinct Plan;
- To incorporate elements of the natural environment which are valuable to the sustained existence of the proposed development and to the ethos of the City;
- To create an 'urban' environment which is of a human scale, responsive to prevailing climatic conditions and has a high level of visual and functional amenity and aesthetic merit for occupants and visitors alike;
- To make a positive contribution to the Redland City image by incorporating quality built form and landscape design in keeping with a modern, safe, and attractive employment centre;
- To minimise any adverse impacts on sensitive land uses within rural areas and eliminate any adverse impacts on surrounding residential zoned areas and the hierarchy of centres intended for the City;
- To restrict the use of industrial zoned land for non-industrial purposes such as community activities which are difficult to locate in any other zone without substantial planning need justification;
- To accommodate employment uses which are difficult to locate in any other zone; and
- To contribute to the City's long term enterprise and economic opportunities.
- **To maintain vehicular access connection to the land adjoining the precinct to the west through provision of a vehicular access and infrastructure, whilst maintaining fauna connectivity.**

4.3 Assessment Criteria for Development in the ITIC

Development in the POD area is assessed against the criteria listed in **Table 3.1.1, Table 3.1.2 and Table 3.2.1** above, including the Inspire Technology and Innovation Centre Code. The Code contains:

- Overall Outcomes;
- Requirements for Accepted Development;
- Applicable codes for code assessable development.

Development that does not comply with all the Requirements for Accepted Development is assessable development, requiring assessment against this Code and the relevant provisions of Redland City Plan, as noted in **Table 3.1.1**, **Table 3.1.2 and Table 3.2.1** above.

Impact assessable development will be assessed against the Redland City Plan.

4.4 Overall Outcomes

The overall outcomes of the ITIC Code include six themes:

1. Uses and Other Development
2. Built Form and Density
3. Amenity
4. Pollution Prevention
5. Environment
6. Infrastructure

4.4.1 Uses and Other Development

The ITIC provides land for industrial uses that:

- provide increased local employment opportunities and diversify the employment base of Redland City;
- include manufacturing, assembly and processing activities which are not easily located in existing centres or within close proximity to urban areas;
- serve industrial and agricultural activities;
- store goods for distribution and sale at other locations;
- allow for the creation of land parcels that incorporate a range of lot sizes for a variety of industrial uses at different scales; and
- allow for high technology activities including research and development, information technology and manufacturing of goods related to scientific or medical industries.

Where non-industrial uses are referred to in the table of assessment, these uses shall:

- be not incompatible with industrial uses;
- not compromise the efficient use of land for industrial employment uses;
- serve the immediate workforce; and
- not compromise the existing hierarchy of centres across the City, particularly those located at Redland Bay and Victoria Point.

Future development does not compromise expected uses and associated activities within the Inspire Innovation and Technology Centre and does not accommodate the inconsistent uses listed in Section 5.

Maintain vehicular access connection to the land adjoining the precinct to the west through provision of a vehicular access and infrastructure, whilst maintaining fauna connectivity

4.4.2 Built Form and Density

Uses and other development have a site layout that:

- utilises land efficiently;
- provides for vehicle access, parking, manoeuvring, and loading/unloading areas;
- contributes to security of property and safety of people; and

- mitigates adverse impacts to adjoining properties.

The scale of uses and other development achieve a standard of built form that:

- adopts a building height, width, depth, and bulk that minimise the visual impacts of the large scale-built form associated with uses within this zone.
- Large-scale-built form is located within the core area, with less dominant built form outcomes within 200m of the western site boundary of the ITIC where the site adjoins land within a different zone.

The density of uses and other development:

- result in co-ordinated and efficient use of the land; and
- provide for employee and customer car parking, landscaping and service areas. Lot layout and building design are climatically responsive.

4.4.3 Amenity

Uses and other development in the Inspire Technology and Innovation Centre achieve a high standard of environmental amenity by:

- providing a landscaped setting;
- minimising visual impact associated with fencing and signage along all street frontages;
- softening visual impact of built form to Cleveland Redland Bay Road and rural zoned land.
- providing a clean, modern, and secure work environment; and
- delivering an overall greenspace setting, inclusive of active and passive recreation uses and pedestrian and cycle trails, where possible.

4.4.4 Pollution Prevention

Uses and other development operate in a manner that:

- is within acceptable environmental standards to avoid adverse impact to sensitive land uses;
- mitigates adverse impacts associated with light, noise, vibration, air quality and other emissions; and
- utilise best practice techniques and operations to minimise adverse impacts associated with stormwater run-off and other potentially contaminating substances.

4.4.5 Environment

The scale and operational attributes of uses and other development minimise adverse impacts on the environment by:

- responding to topographical features;
- protecting the site from erosion;
- retaining mature native vegetation within site development where possible;
- utilising plant species native to the area;
- incorporating best practice stormwater management and enhancing water quality;
- providing for fauna movement through the site;
- managing bush fire risk; and
- protecting existing bushland koala habitat and replanting in Greenspace to achieve a net increase in koala foraging and shelter resources.

4.4.6 Infrastructure

Uses and other development:

- make efficient use of existing infrastructure;
- provide for the extension of infrastructure in an orderly and cost-effective manner; and
- do not result in unacceptable risk to community infrastructure.

Uses and other development are serviced by infrastructure including:

- reticulated water supply;
- reticulated sewerage;
- stormwater drainage;
- stormwater quality treatment;
- constructed road access (either public or private road access);
- electricity; and
- telecommunications.

Uses and other development manage the generation, storage and disposal, recycling or re-use of waste to a standard commensurate with the specific activities of the use.

Uses and other development reinforce an attractive, integrated, legible, efficient, and safe movement network that:

- incorporates a full range of modes including public transport, passenger vehicles, walking and cycling; and
- provide pedestrian, cycle and vehicle movement networks that maximise connectivity, permeability and ease of mobility.

4.5 Requirements for Accepted Development

Table 5: Requirements for Accepted Development - Material Change of Use

Building Siting and Massing	
RAD1	Uses and other development are designed so that – a) building site coverage is a maximum of - i. 60% of the site area at the ground floor level; ii. 75% of the site area above ground floor level; b) total development area including access, parking, service, and outdoor work areas is a maximum of 94% of the site area; c) at least 6% of the site area is provided as open space and landscaping of which at least 3% of the site area is provided as planted landscape.
RAD2	Minimum front building setbacks (to a future road whether public or private) are 6.0 metres, or subject to meeting RAD1, RAD10 and the 'Building Design, Form, Materials & Colour' requirements, can be: a) Collector Roads – 4.0 metres; b) Access Roads – 2.0 metres. On corner allotments the non-primary street frontage setback is to be: a) Collector Roads – 4.0 metres; b) Access Roads – 2.0 metres
RAD3	Buildings are sited to:

	a) Allow access for emergency vehicles; and b) Provide clearance for maintenance access to underground services c) Minimise bushfire risk.
RAD4	Overall height of buildings does not exceed 15.0 metres above ground level to the highest projection of the building or structure.
RAD6	Buildings are sited to minimise earthworks by devices such as stepped slabs and undercover parking.
RAD7	Site runoff is directed away from buildings.
RAD8	Overland flow from upstream catchments is designed to travel across sites without causing flooding or nuisance.
RAD9	Buildings or that part of a building located within 6.0 metres of the frontage are: a) a maximum of 8.0 metres in height; b) a minimum of 2.0 metres from the side boundary alignment; c) a maximum building width of 60% of the primary road frontage.
RAD10	Buildings or that part of a building located within 6.0 metres to 10.0 metres from the front alignment (of a future road whether public or private) are a maximum of 10.0 metres in height. Refer to **Figure 4.1** and **Figure 4.2**.
RAD11	Buildings or that part of a building located further than 10.0 metres from the front alignment (of a future road whether public or private) are a maximum of 15.0 metres in height.
RAD12	Food & drink outlet does not exceed 150m^2 on a site whether independent of or combined with other defined uses (in a mixed development scenario).
Building Design, Form, Materials & Colours	
RAD13	Building design incorporates: a) variations in materials, patterns, textures, colours, roof forms and heights; b) articulated structural elements in addition to a) above, such as the use of recesses to ensure the building façade is visually appealing and distinguished from neighbouring properties; c) entrances which address the street, are of a human scale and are clearly identifiable; d) openings in the buildings such as balconies, windows and entrance foyers are provided for office and administrative uses which overlook the street frontage or present to the front of the building; e) visitor parking that is located conveniently to front entrances; and f) window openings that are of a domestic scale.
RAD14	Buildings or that part of a building located within 6.0 metres of the front alignment (of a future road whether public or private) have - a) a low-rise scale incorporating roof, eave, awning, and parapet variations; b) balconies and domestic glazing; c) no blank facades; and d) no major openings to work areas, no loading docks, no storage areas, or areas where work may be conducted outside the building, visible from the street.
RAD15	Apart from the front building façade, where the edge of a building exceeds 40 metres in length, substantial breaks in building form and/or variations in materials, textures, and colours are provided at a minimum interval of every 40 metres, unless building to the boundary of an adjoining allotment.
RAD16	a) Street facades of buildings are constructed of non-reflective materials such as brick, rendered masonry, timber, and non-reflective glass; b) Built form colours are natural earth tones and complementary the natural surroundings of the area;

	Note – To comply with RAD16(b), a colour palette must be provided for consideration and approval by the Inspire Technology and Innovation Centre Design Assessment Panel. c) All built surfaces comply with Australian Standard AS/NZS 2311 20–0 - *Guide to the painting of buildings.*
Access, Driveways & Parking	
RAD17	Car parking rates not otherwise specified: a) On-site parking shall be provided in accordance with the following: i. For premises up to 500m² of gross lettable area that does not include a mezzanine, the greater of: A. 1 space for 40m² of gross lettable area; or B. 1 space per 1.5 employees. ii. For premises above 500m² of gross lettable area, the greater of: A. 1 space per 50m² of gross lettable area; or B. 1 space per 1.5 employees. iii. If self-storage, 1 space per 100m² of gross lettable area.
RAD18	For **Emergency Services**, **Low Impact Industry, Medium Impact Industry**, **Service Industry, Special Industry** and **Research and Technology Industry**: a) On-site parking shall be provided in accordance with the following: i. For premises up to 500m² of gross lettable area that do not include a mezzanine: 1 space for 40m² of gross lettable area or 1 space per 1.5 employees, whichever is the greater; ii. Otherwise: 1 space for 50m² of gross lettable area or 1 space per 1.5 employees, whichever is the greater.
RAD19	For **Agricultural Supplies Store:** a) On-site parking shall be provided at a ratio of 1 space for every 40m² of gross floor area.
RAD20	For **Bulk Landscape Supplies** and **Garden Centre:** a) On-site parking shall be provided at a ratio of 1 space per 25m² of sales area plus 0.75 spaces per 100m² of indoor and outdoor garden display area plus 1 space per employee.
RAD21	For a **Car Wash:** a) On-site parking shall be provided at a ratio 4 spaces per car wash bay plus 1 space per employee.
RAD22	For a **Food and Drink Outlet:** a) On-site parking shall be provided at a ratio of 1 space for every 2.5 persons assessed on the maximum capacity of the refreshment establishment or 1 space per 10m² gross lettable area, whichever is greater.
RAD23	For Indoor Sport and Recreation: a) On-site parking shall be provided in accordance with the following: *i. If Bowling Alley, 3 spaces per lane;* *ii. If Function Room ancillary to the primary indoor sport and recreation use, 1 space per 10m² gross floor area;* *iii. If Fitness Centres / Gymnasium, 1 space per 15m² gross floor area plus the requirements of any associated restaurants, medical centre, squash courts etc;* *iv. If Indoor Cricket or Soccer 20 spaces per court;* *v. If Indoor Squash or Other Court 4 spaces per squash court;* *vi. If Swimming Centre 15 spaces plus 1 space per 100m² gross floor area;* *vii. Otherwise, 1 space per 15m² gross floor area.*
RAD24	For **Low Impact Industry involving the Repairing and servicing of motor vehicles**:

	On-site parking shall be provided at a ratio of 4 spaces per service bay plus 1 space per 40m² of gross floor area of spare parts or vehicle accessory display area plus 1 space per employee.
RAD25	For a Shop: a) On-site parking shall be provided at a ratio of 1 space for every 40m² of gross floor area or one space per 1.5 employees, whichever is the greater.
RAD26	For a **Transport Depot**: a) On-site parking shall be provided at a ratio of 1 space per vehicle plus 0.75 space per employee, or as determined by Redland City Council if storing more than 50 vehicles.
RAD27	Where the vehicle requirements exceed 5 car parking spaces, provide vehicle parking facilities for persons with a disability: a) at the rate of 1 car parking space per 50 spaces with a minimum of 1 space; b) in accordance with Australian Standard AS2890.6 *Parking Facilities - Off Street Parking for People with Disabilities.*
RAD28	Each site shall make provision for a garbage truck to enter and exit the site in a forward gear. For design purposes a garbage truck shall be equivalent to a Heavy Rigid Vehicle (HRV) as defined in Australian Standard AS2890.2 2002 *Parking facilities Part 2: Off-street commercial vehicle facilities.*
RAD29	a) A maximum of one, two-way driveway per site per street frontage for sites less than 40m in width. b) For sites with a 40m or greater width, a maximum number of driveways per site per street frontage is two. *Note – Reciprocal access easements are provided on small allotments to facilitate shared driveways. If reciprocal easements are not used, the allotment owner must build in a manner that does not prejudice the use of the easement by the adjoining allotment.* c) Driveway i. crossovers comply with Planning Scheme Policy 2 – Infrastructure Works; and ii. crossfall is not more than 3% different to the slope of the kerb and channel at the location of the driveway.
RAD30	Driveways provide for queuing and demonstrate they: a) comply with the minimum on-site queuing requirements at **Table 4.5.1**; and b) incorporate a queuing area with the following dimensions – i. on-site single queuing lanes are a minimum of 3.6 metres wide with at least 300mm horizontal clearance provided on each side of the queuing lane; and ii. multiple queuing lanes are a minimum width of 3 metres each with at least 300mm horizontal clearance provided on either side of the queuing area.
RAD31	a) Driveways and carparks must be integrated into the landscaping design; b) Servicing and manoeuvring areas are provided for loading, unloading, waste collection; c) Manoeuvring and queuing areas where visible from the street are visually screened with soft landscaping; d) Driveways and carparks shall be constructed of concrete or asphaltic concrete.
Fences, Walls and Wildlife Movement	
RAD32	Fences, non-building walls - a) on the property boundary to any street frontage are a maximum of 1.2 metres high unless they are at least 50% transparent; b) at the front and side, where greater than 1.2 metres in height are - i. erected behind the front building line rather than the property boundary of any street frontage; and

	ii. screened by landscaping; c) are of a colour and design that blends with the surrounding built, planted and or natural environment; d) which are an extension of retaining walls or earth batters, are landscaped or planted.
RAD33	a) Retaining walls are incorporated into the building; or b) Retaining walls not incorporated into the building are a maximum of 2 metres in height and are stepped or terraced 0.75 metres for every 1 metre in height to incorporate soft landscape planting.
RAD34	Physical barriers on rear and side boundaries adjoining precinct ITIC2 are approved fauna exclusion fences to maintain koala and fauna movement through the ITIC2 corridor and prevent movement through the industrial estate.
Landscaping	
RAD35	A minimum 3% of each lot comprises soft landscape planting.
RAD36	Frontage to any future collector road (with a width of more than 20 metres) maintains a minimum 4.0 metre wide landscaped buffer along at least 60% of allotment frontage (refer to **Figure 4.4**)
RAD37	With the exception of the driveway maintain a minimum of 2.0 metre wide soft landscape planting along any future access road frontages (whether public or private) (refer to **Figure 4.5**)
RAD38	Soft landscape planting is provided at the front of blank walls.
RAD39	Landscaping including shade trees must be incorporated to visually soften any car parking areas visible from the street, respond to climatic conditions and provide comfortable and pleasant spaces for site users (including shade from western sun and providing opportunities for ambient air circulation). Shade trees shall be provided to car parking areas at a rate of one shade tree for every four (4) car spaces.
RAD40	Plants species within the development are to be drought tolerant native vegetation in accordance with the Approved Species Lists at **Table 4.5.2** unless located within a Bushfire Management Zone.
RAD41	No potable water is to be used for irrigation within developments.
RAD42	Development within the Bushfire Management Zone: ~~a) Development meets the mandatory provisions specified by the Building Code of Australia and AS3959-2018: Construction of buildings in bushfire prone areas.~~ **a) Is located and designed to ensure proposed buildings achieve a radiant heat flux level of 29kW/m² at any point.** b) Residential uses, fire sensitive uses (which include land uses which involve the accommodation or congregation of vulnerable sectors of the community such as childcare centres, community care centres, educational establishments, detention facilities, hospitals, rooming accommodation, retirement facilities or residential care facilities) or Essential Community Infrastructure are not to be located within the Bushfire Management Zone. c) Landscaping uses species that are not likely to exacerbate a bushfire event, and does not increase fuel loads within separation areas. Low flammability plant species are identified in **Table 4.5.2.1.** d) No storage of hazardous materials in locations with a Radiant heat flux exposure of greater than 10kW/m²; e) Fences and retaining walls are to be non-flammable in their construction.
RAD43	Fences and walls incorporated in frontage and boundary treatments: a) Provide visual interest to the streetscape and complement the built form; b) Assist in highlighting entrances and pedestrian paths; and c) Allow casual surveillance between public areas, pedestrian and cycle paths.

Signage	
RAD44	Signage is on the premises to which the advertisement relates.
RAD45	Wall signs have a maximum area of 20m² or 30 percent of the wall to which they are affixed, project a maximum of 200mm from the wall, and do not project beyond the edges of the wall.
RAD46	**Projecting wall** signs – a) do not exceed one sign per business; b) are double sided or erected so the back of the sign is not visible from a public place; c) have a maximum width of 500mm; d) have a maximum sign display area of 2m²; and e) have a minimum clearance of 2.4 metres between the lowest part of the projecting sign and ground level (refer to **Figure 4.7**).
RAD47	Signage that is separate from a building – a) does not exceed one sign per allotment access; b) allows for each business to be advertised on the sign where a premise contains more than one business; c) is at least 1 metre from the boundary of the site; d) is double sided or erected so the back of the sign is not visible from a public place; e) is not illuminated other than internally; and f) is integrated with a landscaped environment.
RAD48	**Pylon signs** – a) are not located closer than 25 metres to another pylon or pole sign; b) have a maximum height of 10 metres; c) have a maximum width of 2.5 metres; and d) have a maximum sign display area of 20m².
RAD49	**Pillar signs** – a) have a maximum height of 1.2 metres; b) have a maximum sign display area of 5m²; and c) are not located closer than 20 metres to another pillar sign.
RAD50	**Pole signs** – a) have a maximum height of 10 metres; b) have a maximum sign display area of 2.4m²; and c) are not located closer than 25 metres to another pole or pylon sign.
RAD51	**Flag signs** – a) have a maximum height of 6.5 metres; b) have a maximum width of 2.5 metres; c) have a maximum sign display area of 2.4m²; and d) are not located closer than 20 metres to another flag sign.
RAD52	Prior to the commencement of any construction works associated with a development, a sign of approved size detailing the project team must be placed in a prominent position, at the road frontage, at each entrance to the development. The sign must detail the relevant project coordinator for the works being undertaken on the site, and the following parties (where relevant): a) Developer b) Project Coordinator c) Architect/Building Designer d) Builder e) Civil Engineer f) Civil Contractor

<table>
<tr><td></td><td>g) Landscape Architect</td></tr>
<tr><td colspan="2">Water Management</td></tr>
<tr><td>RAD53</td><td>Development complies with the Queensland Development Code MP 4.3 Alternative Water Sources - Commercial Buildings.</td></tr>
<tr><td>RAD54</td><td>Fixtures and appliances –
a) have a minimum 4-star water conservation rating; or
b) are provided in accordance with the Queensland Development Code MP 4.3 - Alternative Water Sources - Commercial Buildings.</td></tr>
<tr><td>RAD55</td><td>On private property, the landowner must ensure access/egress is maintained for maintenance.</td></tr>
<tr><td>RAD56</td><td>Potential pollutant sources are contained to prevent spillage into the stormwater system.</td></tr>
<tr><td>RAD57</td><td>Stormwater drainage design -
a) protects and maintains land below the 1% Annual Exceedance Probability (AEP) in its natural state;
b) ensures stormwater run-off leaving a lot or premises complies with the water quality objectives below as prescribed in the Healthy Waters Code (Redland City Plan);
<table>
<tr><td colspan="4">Minimum reductions in mean annual load from unmitigated development (%)</td></tr>
<tr><td>Total Suspended solids</td><td>Total phosphorus</td><td>Total nitrogen</td><td>Gross pollutants >5 mm</td></tr>
<tr><td>80</td><td>60</td><td>45</td><td>90</td></tr>
</table>
c) identifies and determines the 1% AEP of natural overland drainage lines where the lot or premises -
i. has an upstream catchment area greater than 5 hectares; or
ii. is 2500m^2 or greater in area;
d) maximises the retention and use of natural overland drainage lines through their identification and minimises earthworks that will result in stormwater run-off being redirected.</td></tr>
<tr><td>RAD58</td><td>Stormwater drainage design –
a) meets the stormwater flow capacity requirements of the relevant design storm event -
i. for the minor system - as detailed in Table 4.5.3 - Minor System Design Storm Event by Road Frontage Classification;
ii. for the major system – 1% AEP;
b) ensures the major system caters for 50% blockage in the minor system without causing inundation of building floor levels.</td></tr>
<tr><td colspan="2">Site Emissions</td></tr>
<tr><td>RAD59</td><td>Technical parameters, design, installation, operation, and maintenance of outdoor lighting complies with requirements of Australian Standard AS4282 - Control of the Obtrusive Effects of Outdoor Lighting.</td></tr>
<tr><td>RAD60</td><td>Lighting is not to be directed to any external boundaries or to the ITIC2 Precinct.</td></tr>
<tr><td>RAD61</td><td>Illumination levels at a distance 1.5m outside the common boundary with the ITIC2 Precinct does not exceed 8 lux in either the vertical or horizontal plane for a height of 10m above ground level.</td></tr>
<tr><td>RAD62</td><td>Design is to provide safe levels of visibility for car parking areas, pathways, and common external spaces in accordance with Figure 4.8.</td></tr>
<tr><td>RAD63</td><td>Building/pathway entrances and exits must be recognisable and well-lit at night.</td></tr>
<tr><td>RAD64</td><td>All lighting provided in accordance with RAD62 and RAD63 above, must have motion sensing capabilities activated.</td></tr>
</table>

RAD65	The building design and layout locates potential noise sources away from noise sensitive areas
RAD66	**Noise generated from the use at noise sensitive areas do not exceed the following maximum noise levels as the LAeq,adj, T at any noise sensitive area:** **a) 45 dB(A) between 7am and 6pm;** **b) 40 dB(A) between 6pm and 10pm;** **c) 37 dB(A) between 10pm and 7am.**
RAD67	Areas where potentially contaminating substances are stored or used are roofed and storage standards for the substance ensure appropriate contamination risk reduction measures are employed.
RAD68	Provision is made for spills to be bunded and retained on site for removal and disposal by an approved means.
RAD69	Waste impacts are minimised by ensuing the proposal complies with the *Environmental Protection (Waste Management) Policy 2000* and the *Queensland Waste Management and Resource Recovery Strategy*.
RAD70	No significant emissions of contaminants occur beyond the boundary of the emitting site.
RAD71	Vibrations do not exceed the maximum acceptable levels identified in Australian Standard AS2670 - *Evaluation of human exposure to whole of body vibration*, Part 2: continuous and shock induced vibration in buildings (1-80Hz) when measured at the boundary of the site.
RAD72	Development achieves the air quality objectives stated in the Queensland *Environmental Protection Act 1994: Environmental Protection (Air) Policy 2019: Schedule 1* at all sensitive land uses and residence (defined in the *Environmental Protection (Air) Policy 2019)*.
RAD73	Odour levels do not exceed 2.5 OU, 99.5%, 1 hour average at all sensitive land uses.
ITIC1 – Innovation Precinct	
RAD74	Major openings in buildings and all areas where work may be conducted outside the building are not located adjacent to noise sensitive areas[1].
RAD75	**Mechanical plant is located and has appropriate acoustic screening such that resultant noise levels do not exceed the following maximum noise levels as the $LA_{eq,adj}$, T at any noise sensitive area:** **a) 45 dB(A) between 7am and 6pm;** **b) 40 dB(A) between 6pm and 10pm;** **c) 37 dB(A) between 10pm and 7am.**
RAD76	Hours of operation are limited to 6am to 10pm Monday to Saturday.
Waste Management	
RAD77	A storage area(s) is provided for all waste and recycling containers, that: a) allows for 0.5m space around containers for manoeuvrability and cleansing; b) has a smooth hardstand surface that will permit easy bin movement; c) is both a storage area and a service point when bulk bins greater than 1.5m³ are used; d) is both a storage area and a service point is positioned within 20m of the service point when bulk bins 1.5m³ or less are used; and e) is not located immediately adjacent to living and eating areas of a neighbouring property.
RAD78	For external waste and recycle storage enclosures: a) container area screened from residential and publicly accessible areas through design and landscaping; and b) if roofed, have a minimum ceiling height of 2.4m and be adequately ventilated.
RAD79	For internal waste and recycling storage rooms: a) doors are close fitting, self-closing and wide enough for bulk bin access and manoeuvrability; b) walls, doors, and roof are constructed and lined with a non-combustible and impervious material with a smooth finish and a fire resistance of one hour;

	c) the junctions of walls with floors are covered and artificial lighting provided; d) door frames are made of metal, hardwood, or metal clad softwood and are rebated with a lock capable of being activated from within the room without a key at all times; e) a hose-cock and adequate length of hand hose of minimum internal diameter 12mm is provided immediately outside the room; f) unless refrigerated below four degrees Celsius, the room has an approved mechanical exhaust system for ventilation or permanent, unobstructed natural ventilation openings direct to the external air not less one-twentieth (1/20th) of the floor area. One half of such openings shall be situated at or near the floor level, and one half as or near the ceiling level; g) fitted with automatic sprinklers or other system for the control of fire which meets Australian Standards; h) are fly and vermin proof; i) has smooth flooring that is graded and drained to a trade waste outlet located outside to the waste room and as close to the doorway as possible, or otherwise agreed to in writing with the local government; j) is designed and constructed to prevent stormwater and surface water from entering the waste room; k) has all conduits concealed in the floor, wall, or ceilings; l) refrigerated waste rooms are fitted with an approved alarm device that is located outside but controlled only from within the waste room.
RAD80	Uses with ten waste and ten recycle wheelie bins or less provide: a) on-street servicing points for the containers using the kerbside dedicated to the use, if sufficient kerbside space is available; and b) one metre of unobstructed kerbside length per wheelie bin, excluding driveways, carparks and landscaping.
RAD81	For uses with greater than ten waste and ten recycle wheelie bins or uses with bulk bins provide: a) off-street servicing points for the containers where the entire refuse collection vehicle is positioned within the site; b) internal access roads that enable refuse collection vehicles to enter and exit the site in a forward gear and have adequate vertical clearance; c) maximum surface gradient of 1:20 (5%) for container servicing and refuse collection vehicle manoeuvring; d) for wheelie bins, one metre of unobstructed internal kerbside length per wheelie bin, excluding driveways, carparks and landscaping; and e) for bulk bins, and unobstructed internal servicing point that – i. is also a waste storage area; or ii. if bins 1.5m3 or less are used, is located within 20m of the waste storage area; or iii. has a hardstand surface for bin movement that is smooth in texture, not including asphaltic concrete.
RAD82	Refuse storage and plant areas are to be visually screened from the street and integrated within the built form.
Excavation and Fill	

RAD83	Excavation or fill does not exceed – a) 1.0 metres in depth from ground level for the purpose of or incidental to building works; and b) Earthworks that exceed 1.0m are to be accompanied by RPEQ certification and/or meet the accepted building works requirements for retaining walls.
RAD84	Erosion and run-off of sediment from the site is controlled through – a) the use of - i. sediment fences or similar trapping measures at stormwater discharge points; ii. silt sausages or silt bags across open drains; iii. mesh fabric on steep slopes; iv. turf filter strips on down slopes to act as a final filter; v. sediment traps and detention ponds that are designed to hold water and allow sediment to settle; b) providing all weather vehicle access to the lot or premises before disturbance of the site occurs; c) stockpiling of erodible materials that are - i. appropriately contained for the material type within the lot or premises; ii. protected from erosion by sediment fences; iii. covered where prone to wind erosion; d) controlling and diverting run-off around disturbed areas by using diversion drains and earth banks; e) discharging down pipes away from the building site and onto a stabilised area within the lot or premises, until roof run-off pipes are provided.
Where adjoining the Cleveland-Redland Bay Road corridor as detailed in Figure 1.1 of the POD.	
RAD86	Land parcels adjoining Cleveland-Redland Bay Road as detailed in Figure 1.1 of the POD provide and maintain a minimum ~~10m~~ 15m wide landscaping strip to that boundary using species identified in Table 4.5.2.
ITIC2 – Greenspace Precinct	
RAD87	Development in this precinct is limited to provision of ~~open space/~~ecological corridor comprising planting in accordance with the approved Rehabilitation Management Plan or ancillary infrastructure as identified in the precinct plan being stormwater infrastructure to support the ITIC1 Precinct.
RAD88	Land disturbing works do not interfere with koala habitat[2] within a koala priority area and comply with the Planning Regulation 2017 Schedule 11, Part 2, Schedule 4 Assessment Benchmarks *Note – Advice from an arborist will be required to demonstrate any land disturbing works within this Precinct do not interfere with koala habitat.*
RAD89	Land disturbing works do not result in the removal of rehabilitation planting approved within an Rehabilitation Management Plan.
Where adjoining the Cleveland-Redland Bay Road corridor as detailed in Figure 1.1 of the POD.	
RAD90	Land parcels adjoining Cleveland-Redland Bay Road as detailed in Figure 1.1 of the POD provide and maintain a minimum ~~10m~~ 15m wide landscaping strip to that boundary to soften built form, using species identified in Table 4.5.2.

Notes:

1. *A noise sensitive area/place includes a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019*

2. *Koala habitat is defined as areas containing mapped core koala habitat areas by the Queensland Government under the South East Queensland Koala Conservation Strategy 2020-2025.*

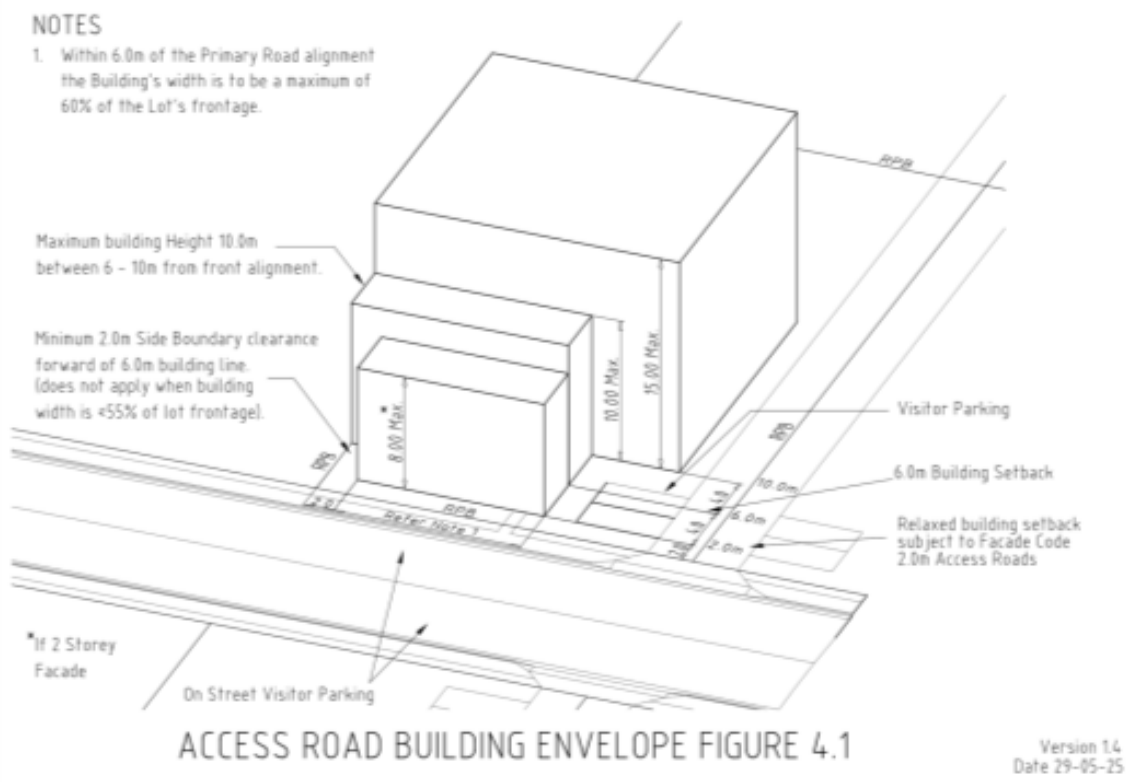

Figure4.1: Future Access Road Building Envelope

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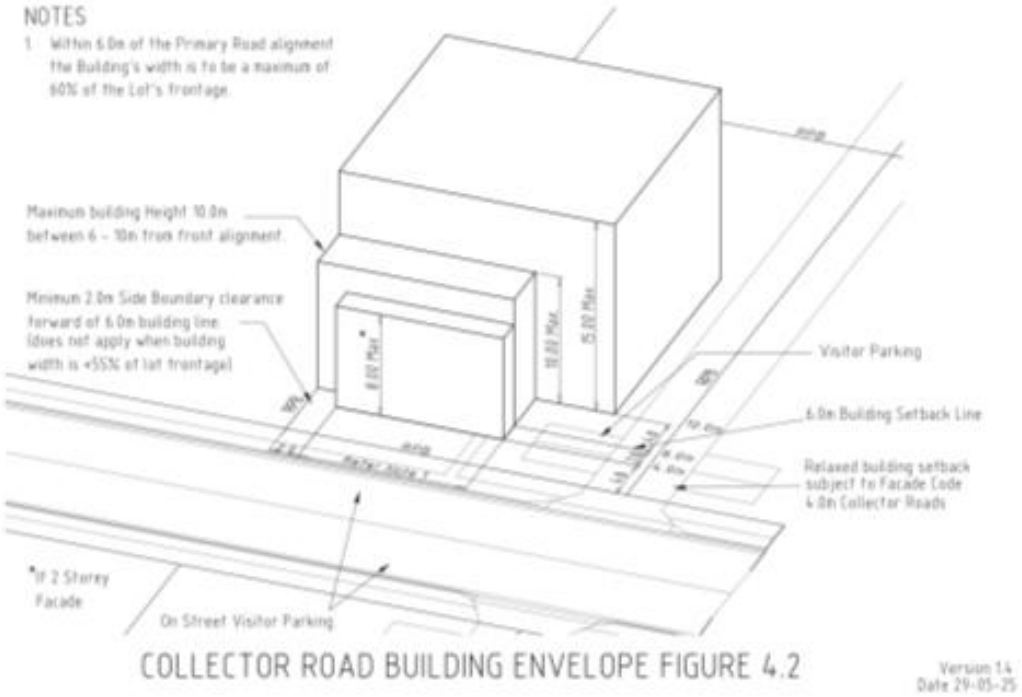

Figure 4.2: Collector Road Building Envelope

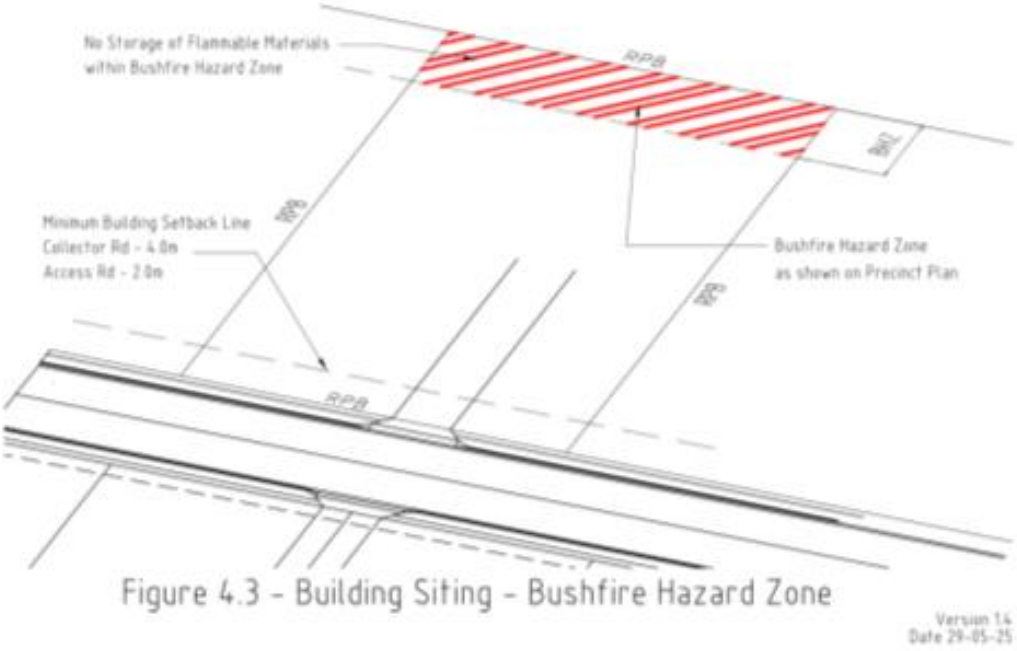

Figure4.3: Bushfire Management Zone Building Siting

*Table **Error! No text of specified style in document.**.5.1: Minimum On-site Queuing Requirements*

Car Parking Area Capacity (Spaces)	Number of Vehicle in Queue
3 to 25	1 (6 metres)
26 - 50	2 (12 metres)
51 - 75	3 (18 metres)
76 - 100	4 (24 metres)
101 - 150	5 (30 metres)
151 - 200	6 (36 metres)
201 - 250	7 (42 metres)
Greater than 250	8 (48 metres), plus 1 percent of capacity over 250 spaces (rounded upwards)

Notes:

- *Each vehicle is assumed to occupy 6 metres in length*
- *Where a standard drawing becomes superseded, compliance with the relevant Australian Standard is required, whichever is the most current.*

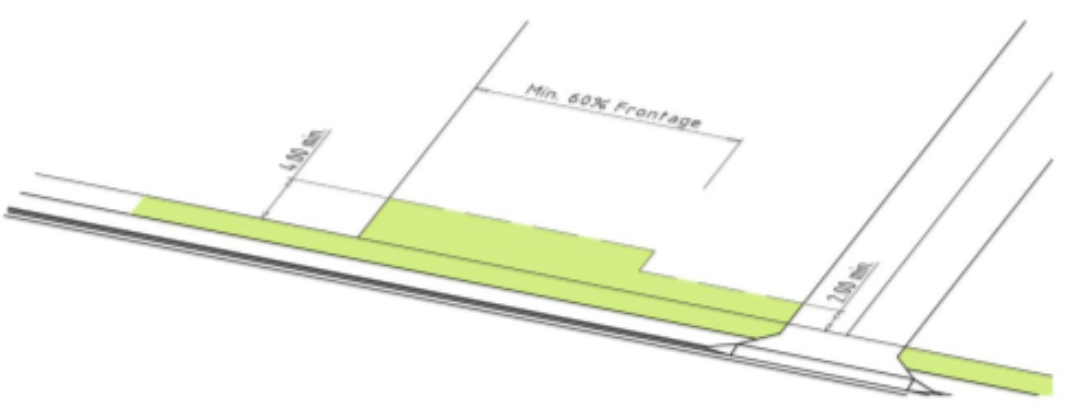

Figure4.4: Collector Road Frontage Landscaping

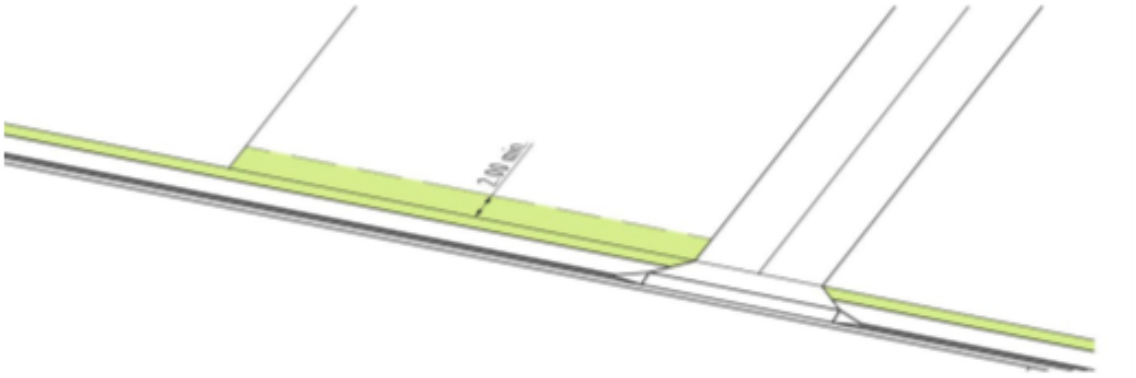

Figure4.5: Access Road Frontage Landscaping

Table 4.5.2: Approved Species List

Botanical Name	Common Name	Botanical Name	Common Name
TREES			
Acmena smithii	Lilly Pilly	*Eucalyptus seeana**	Narrow-leaved Red Gum
Angophora woodsiana	Smudgee	*Eucalyptus siderophloia**	Grey Ironbark
Brachychiton acerifolius	Flame Tree	*Eucalyptus tereticornis**	Forest Red Gum
Callistemon salignus	Pink Tips	*Glochidion ferdinandi*	Cheese Tree
Corymbia intermedia	Pink Bloodwood	*Hymenosporum flavum*	Native Frangipani
Corymbia trachyphloia	Brown Bloodwood	*Lophostemon confertus**	Brush Box
Cupaniopsis anacardioides	Tuckeroo	*Lophostemon suaveolens**	Swamp Box
Elaeocarpus reticulatus	Blueberry Ash	*Mallotus philippensis*	Red Kamala
Eucalyptus carnea	White Mahogany	*Melaleuca quinquenervia**	Broadleaf Paperbark
Eucalyptus pilularis	Blackbutt	*Pittosporum rhombifolium*	Australian Laurel
*Eucalyptus racemosa (E. signata)**	Scribbly Gum	*Rapanea variabilis*	Muttonwood
*Eucalyptus resinifera**	Red Mahogany	*Stenocarpus sinuatus*	Fire wheel
Tristania laurina	Lusciuos	*Elaeocarpus reticulatus*	Blueberry Ash
Backhousia Myrtifolia	Grey Myrtle Coastal		
Banksia integrifolia	Banksia		
** Koala food and habitat trees (At least 80% of the trees within areas accessible to koalas must be koala food and habitat trees)*			
SHRUBS			
Banksia oblongifolia	Dwarf Banksia	*Jacksonia scoparia*	Dogwood
Banksia robur	Swamp Banksia	*Leptospermum polygalifolium*	Wild May
Babingtonia linifolia	Swamp Baeckea	*Melaleuca incana*	Honey Myrtle
Buckinghamia celsissima	Ivory Curl	*Pultenaea villosa*	Hairy Bush Pea
Dodonaea spp	Hop Bush	*Prostanthera sp*	Mint bush
Grevillea sp	Grevillea	*Syzygium sp*	Lilly Pilly
Hibiscus splendens	Native Hibiscus	*Westringia sp*	
Crinum pedunculatum	River Lilly	*Callistemon Candy Burst*	
Austromyrtus dulcis	Midyim Berry	*Callistemon Little John*	
Pittosporum undulatum		*Melastoma malabathricum*	Blue Tongue
GROUND COVER, FEATURE PLANTS & CLIMBERS			
Alpinia coerulea	Native Ginger	*Helichrysum sp.*	Everlasting daisy
Anigozanthos spp	Kangaroo Paw	*Hibbertia scandens*	Guinea Flower
Dianella spp	Flax Lilly	*Lomandra*	Matt Grass
Doryanthes excelsa	Spear Lily	*Pandora jasminoides*	Bower Vine
Gahnia sp	Saw Sedge	*Xanthorrhoea sp*	Grass Tree
Grevillea sp	Grevillea	*Chrysocephalum apiculatum*	Yellow Buttons

Hardenbergia violacea	False Sarsaparilla	*Carpobrotus glaucescent*	Pig Face
Viola hederacea	Native Violet		

Table 4.5.2.1—Low flammability plant species

Mainland	
Species	***Common Name***
Acacia melanoxylon	*Blackwood*
Acacia sophorae	*Coastal Wattle*
Banksia spinulosa var collina	
Brachychiton acerifolius	*Flame*
Buckinghamia celcissima	*Ivory Curl*
Casuarina glauca	*Swamp Oak*
Cupaniopsis anacardioides	*Tuckeroo*
Dodoneaea spp.	
Elaeocarpus reticulatus	*Blueberry Ash*
Ficus macrophylla	*Moreton Bay Fig*
Glochidion ferdinandii	*Cheese Wood*
Guioa semiglauca	
Hymenosporum flavum	*Native Frangipani*
Jacksonia scoparia	*Dog Wood*
Lophostemon confertus	*Brushbox*
Mallotus philippensis	*Red Kamala*
Myoporum acuminatum	*Boobialla*
Pittosporum revolutum	*Brisbane Laurel*
Pittosporum rhombifolium	
Rapanea variabilis	
Stenocarpus sinuatus	
Carpobrotus glaucescens	*Pigs Face*
Hardenbergia violacea	
Kennedia rubicunda	
Lomandra longifolia	
Themeda triandra	

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Viola hederacea	
Chrysocephalum apiculatum	

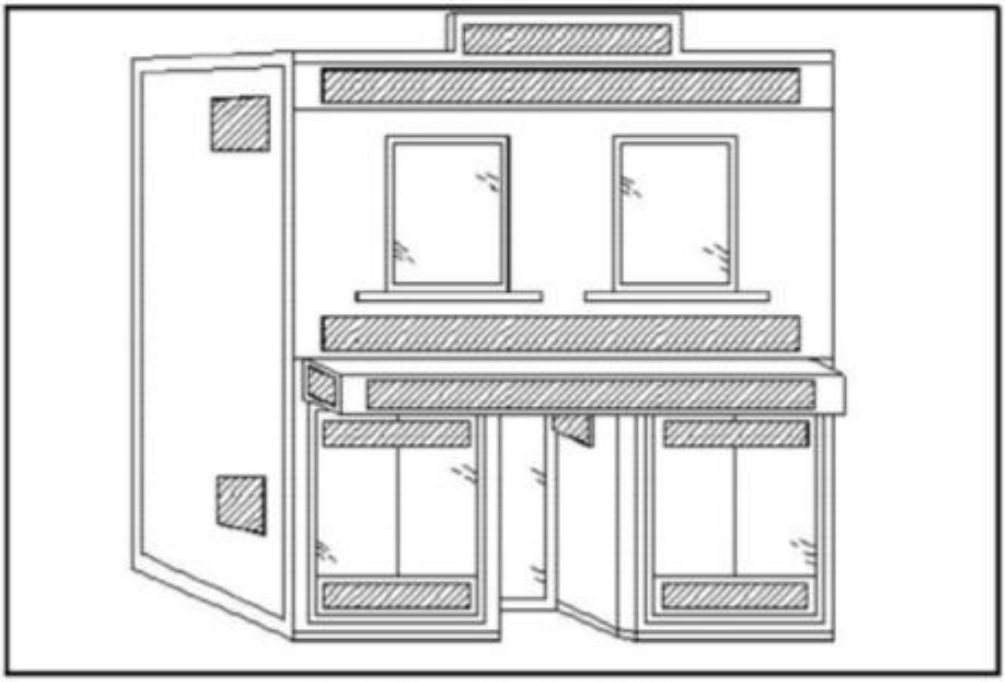

Figure4.6: Signage Contained within Built Form

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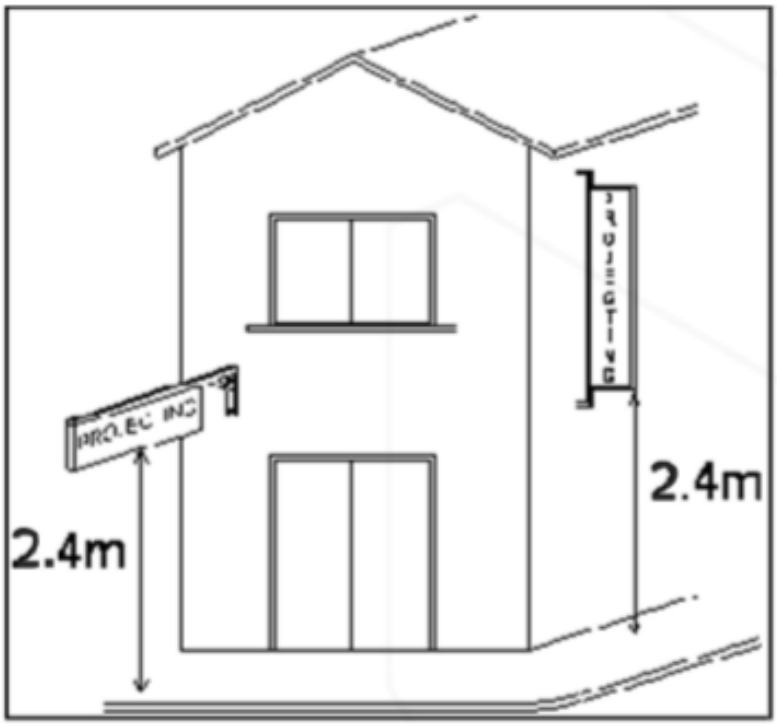

Figure4.7: Projecting Walls Signs

Table 4.5.3: Minor Systems Design Storm Event by Road Frontage Classification

Design Storm Event		
Collector Roads		**Access Roads**
Longitudinal Drainage	**Cross Road Drainage in Sag**	**Longitudinal and Cross Road Drainage**
10 percent AEP (10-year ARI)	2 percent AEP (50-year ARI)	10 percent AEP (10-year ARI)

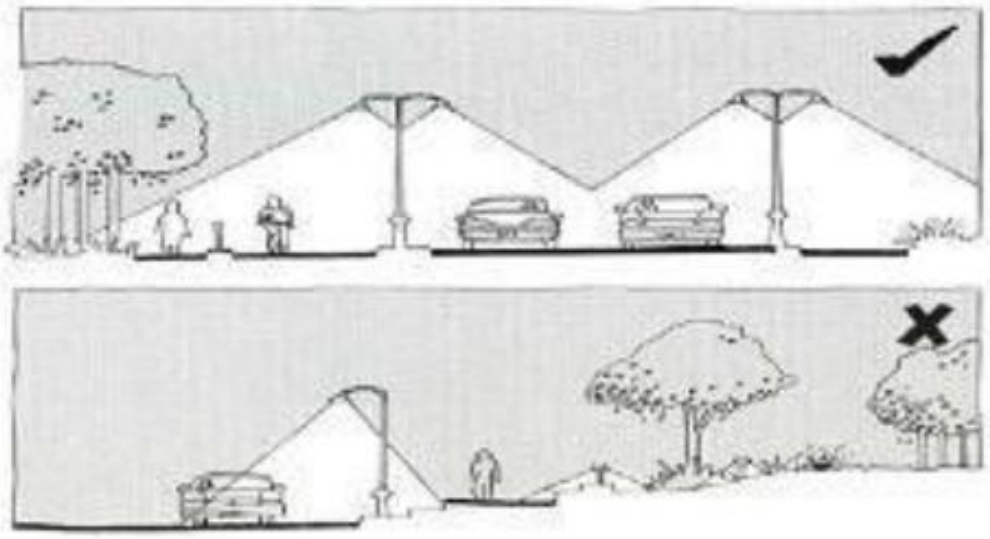

Figure4.8: Lighting Design

4.6 Performance Outcomes and Acceptable Outcomes

4.6.1 Application of these Principles

The Inspire Technology and Innovation Centre Performance Outcomes and Acceptable Outcomes form part of this POD, and their application is outlined in Section 4.3 of the POD.

Table 4.6: Performance Outcomes and Acceptable Outcomes

ASSESSABLE DEVELOPMENT	
Performance Outcomes	**Acceptable Outcomes**
Uses and Other Development	
PO1 Uses and other development identified as inconsistent in Table 5.1 and Table 5.2 are not established in the identified ITIC Precincts.	**AO1** No acceptable outcome identified.
PO2 The following activities are consistent in the zone (ITIC Innovation Precinct) - a) the repair, servicing, assembling and making of a range of products; b) storage and transport logistics activities; c) the supply, repair and service of agricultural equipment; d) value adding or further processing of primary products; e) uses and other development that are suitable for co-location with a mix of industrial, transport, storage, and education uses.	**AO2** No acceptable outcome identified.
PO3 Other activities considered compatible with the ITIC1 Innovation Precinct are those that – a) support industrial and service industry uses. b) do no compromise the role and function of nearby centres; c) require large land areas and industrial style and size buildings; d) are ancillary to an industrial use; and e) serve the immediate workforce. Uses and other development within precinct ITIC2 are restricted to ensure the long-term viability of environmental values associated with this precinct.	**AO3** Other activities include - a) activities ancillary to an industrial use, including administration offices, display areas for products manufactured, assembled or finished on the site and with less than 200m^2 or 10 percent of the gross floor area of the primary use, whichever is the lesser. b) emergency services. No acceptable outcome identified where within the ITIC2 Precinct.
PO4 Other development does not inhibit the ongoing operations and future economic opportunities of uses expected in the ITIC.	**AO4** No acceptable outcome identified.
Performance Outcomes	**Acceptable Outcomes**
Built Form and Density	

PO5.1 Site Layout – a) uses the site efficiently and allocates sufficient areas for all activities related to the use; b) provides for vehicle access to the use that does not adversely affect the function go the road form which the use is accessed; c) locates employee parking, manoeuvring and loading/unloading areas to the side of the site; d) locates customer parking at visible locations that have easy and direct pedestrian access to building entries; e) provides opportunities to consolidate and co-ordinate on-site parking and service areas; f) is designed to maximize personal safety for employees and visitors to the site; g) where having a common boundary with the land within the ITIC2 Precinct – i. openings are not located in walls facing the common boundary; ii. potentially noise emitting equipment, machinery or outdoor work areas are located as far as practical from these zones.	**AO5** No acceptable outcome identified. ***Note -*** *Refer to Redland City Plan* – Transport, servicing, access and parking code *for requirements related to vehicle access and parking outcomes.*
PO6.1 Setbacks of all buildings- a) allow for the safe and efficient use of the site; b) allow for planted landscaping along street frontages; c) provide employee and visitor car parking at visible locations that have easy and direct pedestrian access to building entries; d) contribute to the building form and provide an attractive streetscape; e) enable the effective location of overland flow paths and utility infrastructure; f) are increased where required to provide - i. overland flow paths associated with stormwater management, ii. other infrastructure; iii. car parking; and iv. access to service areas.	**AO6.1** Proposed setbacks comply with the Building, Siting and Massing requirements in **Table 4.5**– Requirements for Accepted Development - Material Change of Use.

Performance Outcomes	**Acceptable Outcomes**
PO6.2 On corner allotments the non-primary street frontage setback to be: a) Collector Roads – 4.0 metres; b) Access Roads – 2.0 metres	**AO6.2** Proposed setbacks comply with the Building, Siting and Massing requirements in Table 4.5– Requirements for Accepted Development - Material Change of Use.

PO7 Building height minimises the visual impact of the large scale-built form associated with the ITIC.	**AO7** Proposed building height complies with the Building, Siting and Massing requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use.
PO8 Building design and materials – a) achieve a high quality industrial style; b) maximise active facades to the street frontage through locating offices, showrooms and customer service areas towards the front of the building; c) limit expansive blank walls along the primary street frontage through horizontal and vertical variation, solid and void, shadow detail and colour; d) utilise non-reflective materials e) must be attractive from the street, with high quality architectural design and finishes.	**AO8** Building design, form, materials and colour comply with the Building Design, Form, Materials & Colour requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use.
PO9 Site layout considers the location of built and unbuilt elements to – a) assist in retaining existing native plants; b) provide space for on-site garden landscaping and planting; c) provide areas for access, parking, manoeuvring, outdoor work and service functions; d) facilitate stormwater management.	**AO9** Site coverage complies with the Building, Siting and Massing requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use.
PO10 Future lot layout, building orientation and design – a) is climatically responsive through the incorporation of - i. natural light; ii. cross ventilation to minimise artificial heating and cooling; iii. optimally located, sized and shaded windows, especially to the north and west; b) is capable of being used or readily adapted for a number of uses throughout the life of the structure.	**AO10** No acceptable outcome identified.
Performance Outcomes	**Acceptable Outcomes**
Amenity	

PO11 High quality landscaping including planting, paving and other components of the landscape are provided that - a) are of a suitable scale relative to the road reserve width and the building size; b) have regard to the nature and scale of the use and the need for any intensive screen planting where adjoining a sensitive environments; c) are used to break up the visual bulk of large scale buildings; d) are sensitive to site attributes and the surrounding natural environment; e) create visual relief and shade particularly within car parking areas; f) are used to screen outdoor storage, work and service or other obtrusive areas from public view; g) are used to define building entrances and pedestrian paths.	**AO11** Open space and landscaping comply with the Landscaping requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use.
PO12 Fences and non-building walls - a) are visually attractive and contribute to or blend with planted landscaping and building materials; b) provide an effective visual and acoustic screen to adjoining sensitive environments; c) assist in highlighting entrances and pedestrian paths; d) maximise safety and security; e) facilitate the movement of native animals through the site by: i. not being erected in precinct ITIC2; ii. being located to direct native animal movement into and through precinct ITIC2; iii. being constructed of materials that inhibit native animals, particularly koala's, from scaling the fence and entering active work and vehicle areas.	**AO12** Fences and walls comply with the Fences, Walls and Koala Movement requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use.
PO13 a) Signage clutter is minimised, especially to the external streetscape; b) Communal signage is provided, preferably in the form of an architectural and landscaped feature.	**AO13** Signage complies with the Signage requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use.
Performance Outcomes	**Acceptable Outcomes**

Pollution Prevention	
PO14 Noise and vibration emissions generated by the operational activities of the use do not result in adverse impact to noise sensitive areas.	**AO14.1** a) Development achieves the acoustic quality objectives stated in the Queensland *Environmental Protection Act 1994: Environmental Protection (Noise) Policy 2019*: Schedule 1 at the sensitive receptor; and b) acoustically housing noise emitting plant and equipment. *Note: Noise impact assessment in accordance with Planning Scheme Policy 6 - Environmental Emissions Of City Plan is required.*
	AO14.2 Vibrations do not exceed the maximum acceptable levels identified in Australian Standard AS2670 Evaluation of human exposure to whole of body vibration, Part 2: continuous and shock induced vibration in buildings (1-80Hz) when measured at the boundary of the site.
PO15 a) Uses and other development minimise emissions of dust and odour and the generation of airborne pollutants; b) Dust impacts of vehicle movements and stockpiling of materials are eliminated or mitigated.	**AO15** Odour levels do not exceed 2.5 OU, 99.5%, 1 hour average at the sensitive land use.
PO16 a) Artificial lighting does not result in unreasonable disturbance to any person or activity; b) Glare and reflection from the sun are minimised through material and glazing choice.	**AO16.1** Lighting complies with the Australian Standard for the Control of the Obtrusive Effects of Outdoor Lighting AS4282 at the nearest sensitive land use.
	AO16.2 Buildings use non-reflective materials.
PO17 Land contamination is minimised by - a) ensuring storage, use and spillage of potential contaminants does not result in the contamination of land; b) incorporating waste storage and collection measures that protect against spillage of contaminated materials; c) ensuring storage areas for potentially contaminating substances are roofed and located on impermeable surfaces; d) incorporating space for accidental spill areas to be bunded and the contaminant retained on-site in an impervious area/system, before removal by an approved means.	**AO17** No acceptable outcome identified.
PO18	**AO18**

Emission of contaminants, including heat, radioactivity, electromagnetic radiation or the like do not cause adverse environmental impacts.	No acceptable outcome identified.
Performance Outcomes	**Acceptable Outcomes**
PO19 The use or other development does not involve radioactive or biohazardous - a) materials; and/ or b) processes.	**AO19** No acceptable outcome identified.
PO20 Risks to people, property and the environment from hazards including, fire, explosion and chemical release are significantly reduced through prudent management.	**AO20** The use is not defined in the Work Health and Safety Regulation 2011 as a Major Hazard Facility. ***Note -*** *Refer to Schedule 15 of the Work Health and Safety Regulation 2011.* ***Note –*** *To comply with pollution prevention criteria, a report by a suitably qualified professional including a Registered Professional Engineer of Queensland (RPEQ) will be required to be supplied with application materials for review and approval, indicating how the proposal is designed and managed to achieve site emission objectives.*
Environment	
PO21 Lot size and layout takes into account the slope, soil and substructure constraints of the land.	**AO21** No acceptable outcome identified.
PO22 Building layout and design is suitable for the slope, soil and substructure constraints of the land.	**AO22** Buildings located on land with a slope of steeper than 15 percent (1 in 7) use multiple slabs that allow the structures to step down the slope. ***Note -*** *Sites with an average slopes in excess of 15 percent (1 in 7) require a Geotechnical Analysis Report to be supplied with application material. Refer to Planning Scheme Policy 2 - Infrastructure Works.*
PO23 Minimise the need for excavation and fill by uses and other development being located and designed to - a) prevent the unnecessary removal of native plants; b) protect overland drainage flows; and c) reduce erosion and sediment run- off.	**AO23** No acceptable outcome identified. ***Note -*** *Refer to* Planning Scheme Policy 2 - Infrastructure Works *for assessment criteria where the site requires earthworks.*
PO24 Landscaping - a) incorporates plant species native to the local area; b) maximises permeable surfaces to improve the quality and reduce the quantity of stormwater run-off;	**AO24** Landscaped areas contain native species in accordance with **Table 4.5.2** Approved Species List or **Table 4.5.2.1** if within the Bushfire Management Zone.

c) is incorporated as a component of the stormwater management system; d) acts as a filter for stormwater run-off from car parking areas contaminated by hydrocarbons	
Infrastructure	
PO25 Uses and other development efficiently utilise existing infrastructure and do not inhibit future extension of infrastructure.	**AO25** No acceptable outcome identified.
PO26 Uses and other development are serviced by infrastructure including - a) reticulated water; b) reticulated sewerage; c) energy supply; d) telecommunications.	**AO26** No acceptable outcome identified.
PO26.1 Wastewater infrastructure is connected to existing networks in a safe, efficient and functional way which does not impose loads on those networks which exceed their capacity. *Note-* *Assessment against this performance outcome should have regard for the demand generation rate estimated for the development under the preliminary approval.*	**AO26.1** ~~**No acceptable outcome identified.**~~ **The proposed use has an estimated sewer demand of no more than 22.5 Equivalent Persons (EP) per net developable hectare.**

PO27 Stormwater management for the site- a) enhances water quality at receiving waters; b) protects waterways from potential contamination; c) effectively manages increased overland water volumes due to large hard stand and roof areas associated with built forms in this zone.	**AO27** Stormwater management complies with Water Management requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use. ***Note –*** *For additional assessment criteria, refer to* Healthy Waters Code *within Redland City Plan.*
PO28 Waste and recycling are managed to minimise impacts on the environment and nearby premises by - a) ensuring secure storage of containers; b) locating containers on impermeable surfaces; c) screening waste storage area(s) to prevent views from external areas of the site; d) providing adequate bunding or containment to prevent unintended contaminant release.	**AO28** Waste management complies with the Waste Management requirements in **Table 4.5** – Requirements for Accepted Development – Material Change of Use. ***Note -*** *For additional assessment criteria, refer to* Planning Scheme Policy 2 - Infrastructure works *for further information.*
PO29 Vehicle access, parking facilities and service delivery areas are located and designed to –	**AO29** Access, driveways and parking comply with the Access, Driveway & Parking requirements in **Table 4.5** –

a) minimise conflicts between pedestrians and cyclists with vehicles and service delivery vehicles; b) provide for integrated car parking and service delivery areas.	Requirements for Accepted Development – Material Change of Use. ***Note*** **–** *For additional assessment criteria refer to the* Transport, servicing, access and parking code *and* Planning Scheme Policy 2 – Infrastructure works *within Redland City Plan.*
Where within ITIC1 – Innovation Precinct	
PO30 Where a site has a common boundary with a noise sensitive area[1] or within 150m to a noise sensitive area: **a) design site layout to ensure buildings openings, outdoor work areas and audible areas are located away from current or future sensitive land uses.** b) effective acoustic screening is provided to all areas where work could be conducted outside the buildings, including refuse collection, so that off-site noise emissions are not unreasonable; and c) noise emitting services such as air conditioning equipment, pumps and ventilation fans are not located adjacent to noise sensitive areas. [1]	**AO30** No acceptable outcome identified.
PO31 Mechanical plant must adopt acoustic mitigation to not result in adverse impact to noise sensitive areas.	**AO31** Comply with acceptable outcome AO14.1.
PO32 Hours of operation are limited to 6am to 10pm Monday to Saturday.	**AO32** No acceptable outcome identified.
Where within a Bushfire Management Zone shown on the Precinct Plan	
PO33 Building works or any land disturbing works do not interfere with koala habitat within a koala priority area and avoid or minimise removal of rehabilitation planting within the ITIC2 precinct. *Note –* *Advice from an arborist will be required to demonstrate any land disturbing works do not interfere with koala habitat and rehabilitation planting in the ITIC2 precinct.*	**AO33** No acceptable outcome identified.
PO34 Building works comply with the recommendations of the Bushfire Management Plan related to the site.	**AO34** No acceptable outcome identified.
PO35 Development in areas at risk from bushfire is designed and located to minimise risks to people and property and does not result in a material increase in the extent or severity of bushfire hazard.	**AO35.1** ~~**Development meets the mandatory provisions specified by the Building Code of Australia and AS3959-2018: Construction of buildings in bushfire-prone areas.**~~

	Buildings are separated from hazardous vegetation by a distance that achieves a radiant heat flux level at any point on the building respectively, of 29kW/m². *Note: In order to demonstrate compliance with the performance outcome, a bushfire management plan prepared by a suitably qualified person may be required. The bushfire management plan should be developed in accordance with the QFES guideline entitled Bushfire Resilient Communities. Advice from the Queensland Fire and Emergency Services (QFES) should be sought as required by Council.*
	AO35.2 The following uses do not occur within bushfire management area: 1. childcare centres; 2. community care centres; 3. educational establishments; 4. detention facilities; 5. hospitals; 6. rooming accommodation; 7. retirement facilities; and 8. residential care facilities.
	AO35.3 Landscaping uses species that are not likely to exacerbate a bushfire event, and does not increase fuel loads within separation areas. Low flammability plant species are identified in Table 4.5.2.1.
Where for Reconfiguration of a Lot	
PO36 Reconfiguration results in the creation of lots that: ▪ are of a size and dimensions which facilitate the uses, character and other outcomes intended for the zone or precinct; ▪ have practical, generally regular shapes; and ▪ have a width and depth that can easily accommodate the intended end use, associated infrastructure, on-site open space and vehicular access.	**AO36** New lots are a minimum of 1500m² with a minimum frontage of 25m.
PO36.1 **Reconfiguration results in a mix of lot sizes and configurations that respond to demonstrated economic need and accommodate a diversity of industrial end users, including those requiring larger sites greater than 4000m² and 1hectare.**	**AO36.1** **No acceptable outcome identified.** ***Note: Council may request the submission of an economic analysis to demonstrate economic need.***

Where within ITIC2 – Greenspace Precinct	
PO37 Development in this precinct is limited to provision of open space/ecological corridor ~~(~~comprising rehabilitation planting. Ancillary infrastructure to support the ITIC1 Precinct must avoid or minimise removal of rehabilitation planting and maximise fauna movement.	**AO37** No acceptable outcome identified.
PO38 Land disturbing works do not interfere with koala habitat[2] within a koala priority area and avoid or minimise removal of rehabilitation planting within the ITIC2 precinct. *Note –* *Advice from an arborist will be required to be supplied with application mate to demonstrate any land disturbing works within this Precinct do not interfere with koala habitat.*	**AO38** No acceptable outcome identified.
PO39 Infrastructure development (including stormwater management devices) are to be installed outside any areas mapped as Core Koala Habitat at the time of approval.	**AO39** No acceptable outcome identified.
PO40 Retaining wall structures and batters are avoided or minimised to maximise fauna movement **and minimise cost burden.**	**AO40** No acceptable outcome identified.
PO41 Wastewater infrastructure minimises clearing of native vegetation by adopting tunnel boring or other construction methods. *Note – Advice from an arborist and ecologist will be required to demonstrate any land disturbing works within this Precinct do not interfere with koala habitat and native vegetation.*	**AO41** No acceptable outcome identified.
Where adjoining the Cleveland-Redland Bay Road frontage as detailed within Figure 1.1 of this POD.	
PO42 Landscaping buffer to soften built form from Cleveland Redland Bay Road as detailed within Figure 1.1 using species identified in Table 4.5.2.	**AO42** Provide a minimum ~~**10m**~~ **15m** wide landscaping buffer to soften built form from Cleveland-Redland Bay Road as detailed within Figure 1.1 using species identified in Table 4.5.2.

Notes:

1. *A noise sensitive area/place includes a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019*

2. *Koala habitat is defined in the Planning Regulation 2017 as areas containing mapped core koala habitat areas by the Queensland Government under the South East Queensland Koala Conservation Strategy 2020-2025.*

5. Inconsistent uses and other development

5.1 Inconsistent uses and other development for Precinct ITIC1

Table 5.1 Inconsistent Uses within Precinct ITIC1

Aged Persons and Special Needs Housing	Hotel
Agriculture	Intensive animal industry
Adult Store	Intensive Horticulture
Air Service	Major Sport, Recreation and Entertainment Facility
Animal Husbandry	Motor Sport Facility
Animal Keeping	Multiple Dwelling
Apartment Building	Nature Based Tourism
Aquaculture	Nightclub
Bar	Park
Brothel	Parking Station
Cemetery	Party House
Childcare Centre	Permanent Plantation
Club	Relocatable Home Park
Cropping	Residential Care Facility
Detention Facility	Resort Complex
Dual Occupancy	Retirement Facility
Dwelling House	Roadside Stall
Dwelling Unit	Rooming Accommodation
Extractive Industry	Rural Industry
Food and Drink Outlet – where having a combined gross floor area exceeding 150m²	Rural Workers Accommodation
Garden Centre- If not involving a showroom or sales area for the general public with a gross floor area of more than 200m² and the site exceeds 1500m²	
Hardware and trade supplies- If not involving a showroom or sales area for the general public with a gross floor area of more than 200m² and the site exceeds 1500m²	**Showrooms**
High Impact Industry	Short-term Accommodation
Home-based Business	Theatre
Hospital	Tourist Attraction/Park
Shop – where having more than 200m² gross floor area	Winery

6. Recommended Flood Levels for Community Infrastructure

Table6.1: Recommended Flood Levels for Community Infrastructure

Type of Community Infrastructure	Recommended Flood Level (AEP)
Emergency services, other than police facilities	0.2% (1 in 500 year ARI)
Emergency shelters	0.5% (1 in 200 year ARI)
Police facilities	0.5% (1 in 200 year ARI)
Hospitals and associated facilities	0.2% (1 in 500 year ARI)
Stores of valuable records or items of historic or cultural significance such as galleries and libraries	0.5% (1 in 200 year ARI)
Power stations	0.2% (1 in 500 year ARI)
Major switch yards	0.2% (1 in 500 year ARI)
Substations	0.5% (1 in 200 year ARI)
Sewerage treatment plants	1% (1 in 100 year ARI)
Water treatment plants	0.5% (1 in 200 year ARI)
State-controlled roads Works of an electricity entity not otherwise listed in this table Railway lines, stations and associated facilities Aviation facilities Communication network facilities	No specific recommended flood level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of the administering government agency.

7. Costs for infrastructure

7.1 Infrastructure charges

Land uses that are consistent with the Inspire Technology and Innovation Centre Code are nominated within section 3.1 of this document. In particular, *Table 3.1.1 – Material Change of Use* within the ITIC1 Precinct and *Table 4.5 – Requirements for Accepted Development* of the ITIC code identify the associated level of assessment for future uses and any scale or intensity considerations potentially affecting the assessment process under which any proposed development is applied for and decided.

The levels of assessment prescribed for some uses are 'Accepted development' in controlled scenarios (e.g. by stipulating threshold limits or specific exclusion) therefore do not require development applications for Material change of use or the establishment of uses on the site. The ITIC code does not incorporate Building work or Operational work in the tables of assessment which will require subsequent processing and approval through council or a certifier.

In the case that the proposed use is identified as 'Accepted development' in Table 3.1.1 and avoids assessment by Council (therefore consent is not accompanied by a council decision notice and ICN), payment of infrastructure charges for the use will be required prior to the use commencing (on or before final plumbing).

Additionally, as outlined within the Community Management Scheme to which all sites must adhere, the development of land parcels within the ITIC will be subject to an ICN related to the site's proposed purpose to reflect the intended use of the site and will be generated for all future land use approvals, regardless of assessment pathway (development application or certification).

8. Defined Uses and Terms

8.1 Use Definitions

As prescribed by section 7 of the Planning Regulation, the use terms and their definitions are located in schedule 3, columns 1 and 2 of the *Planning Regulation 2017*.

8.2 Administrative Definitions

As prescribed by section 8(1) of the Planning Regulation the administrative terms and their definitions are located in schedule 4 columns 1 and 2 of the *Planning Regulation 2017* or as defined in *Redland City Plan 2018* Table SC1.2.1. The below additional administrative definitions are applicable for the purposes of this POD:

Term	Definition
Gross Lettable Area	The floor space contained within a tenancy at each floor level using the following rules: a) In the case of external building walls, measuring from the dominant portion of the outside faces of walls of the building alignment; and b) In the case of inter-tenancy walls or partitions or common areas, measuring to the centre line of the walls Note: Window or door recesses should be ignored. **Included** in the lettable area calculation are areas occupied by: a) Window mullions; b) Window frames; c) Structural columns; d) Engaged perimeter columns or piers *Note: The areas indicated in a) to d) should only be included if they are inside the line of the outside face of the main perimeter wall.* e) Additional facilities specially constructed for individual tenants that are not covered below. **Excluded** from the lettable area of each tenancy in a multiple tenanted building are: a) The following areas: ▪ Stairs; ▪ Accessways; ▪ Fire stairs; ▪ Toilets; ▪ Recessed doorways; ▪ Cupboards; ▪ Telecommunications cupboards; ▪ Fire hose reel cupboards; ▪ Lift shafts; ▪ Escalators; ▪ Smoke lobbies; ▪ Plant/motor rooms; and ▪ Tea rooms and other services where all are provided as standard facilities in the building; b) Lift lobbies where lifts face other lifts, blank walls or areas listed in a); c) Areas set aside for the provision of services, such as electrical or telephone ducts and air conditioning risers to the floor, where such facilities are standard facilities in the building; d) Areas dedicated as public spaces or thoroughfares that are not for the exclusive use of occupiers of the floor or building, such as foyers, atria and access ways in lift and building service areas; e) Areas and access ways set aside for use by service vehicles and for delivery of goods, where such areas are not for the exclusive use of occupiers of a tenancy.

Treatment of unenclosed balconies, verandahs and similar:

a) Balconies, terraces, planter boxes, verandahs, awnings and covered areas should be excluded from tenancy area calculations, but may be measured and separately identified for the purpose of negotiating rentals.

b) Areas should be measured to the inside face of the enclosing walls or structures. The outer edge of the awning or covered area is the defined edge.

Refer to **Figures 7.1 and 7.2** below for guidance on gross lettable area calculations.

Diagram - Gross Lettable Area (GLA)
Single-tenancy Buildings

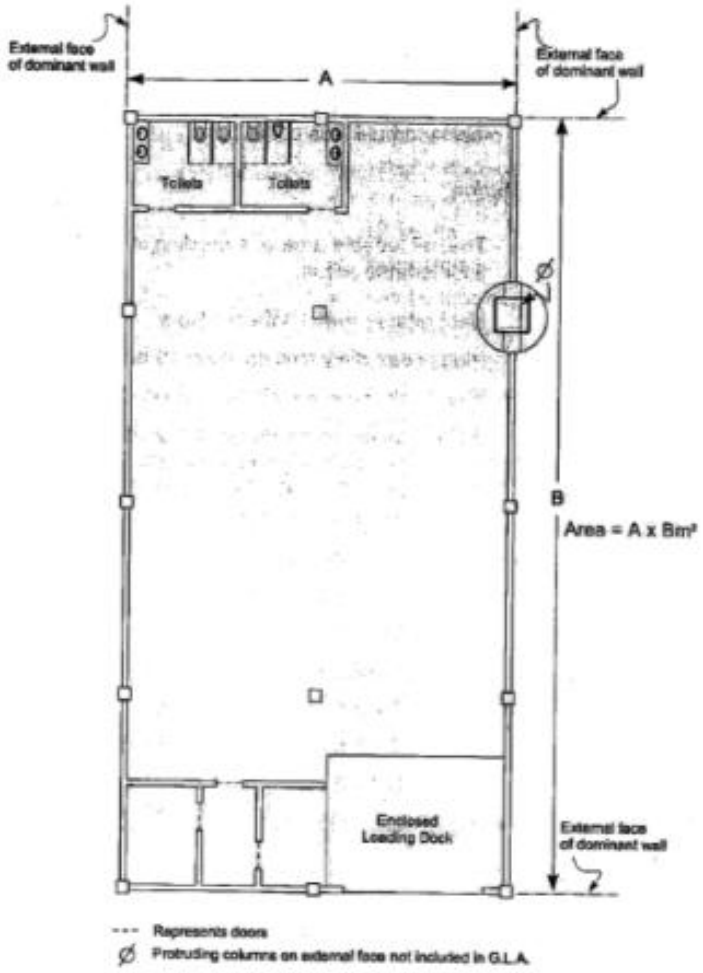

Figure 7.1 Diagram - Gross Lettable Area (GLA) - Single tenancy Buildings

■ Plan of Development – Inspire Technology and Innovation Centre

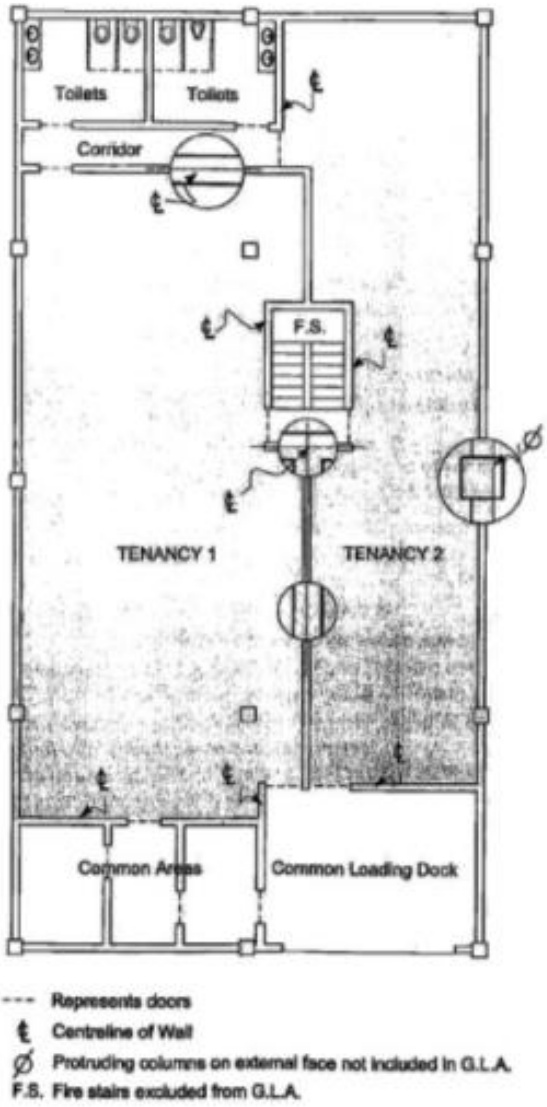

Figure 7.2 Diagram - Gross Lettable Area (GLA) - Multiple tenancy buildings

8.3 Industry thresholds

The limitations listed below are to be used in conjunction with and to assist in correctly nominating the defined uses for low impact industry, medium impact industry, high impact industry and special industry.

Use	Additional examples include
Low impact industry	1. Repairing and servicing motor vehicles, including mechanical components, radiators, electrical components, wheel alignments, exhausts, tyres, suspension or air conditioning, not including spray painting. 2. Repairing and servicing lawn mowers and outboard engines. 3. Fitting and turning workshop. 4. Assembling or fabricating products from sheet metal or welding steel, producing less than 10 tonnes a year and not including spray painting. 5. Assembling wood products not involving cutting, routing, sanding or spray painting. 6. Dismantling automotive or mechanical equipment, not including debonding brake or clutch components.
Medium impact industry	1. Metal foundry producing less than 10 tonnes of metal castings per annum. 2. Boiler making or engineering works producing less than 10,000 tonnes of metal product per annum. 3. Facility, goods yard or warehouse for the storage and distribution of dangerous goods not involving manufacturing processes and not a major hazard facility under the *Work Health and Safety Act 2011*. 4. Abrasive blasting facility using less than 10 tonnes of abrasive material per annum. 5. Enamelling workshop using less than 15,000 litres of enamel per annum. 6. Galvanising works using less than 100 tonnes of zinc per annum. 7. Anodising or electroplating workshop where tank area is less than 400m_2. 8. Powder coating workshop using less than 500 tonnes of coating per annum. 9. Spray painting workshop (including spray painting vehicles, plant, equipment or boats) using less than 20,000 litres of paint per annum. 10. Scrap metal yard (not including a fragmentiser), dismantling automotive or mechanical equipment including debonding brake or clutch components. 11. Manufacturing clay or ceramic products including bricks, tiles, pipes and pottery goods, less than 200 tonnes per annum. 12. Processing, smoking, drying, curing, milling, bottling or canning food, beverages or pet food, less than 200 tonnes per annum. 13. Vegetable oil or oilseed processing in works with a design production capacity of less than 1,000 tonnes per annum. 14. Manufacturing wooden products including cabinet making, joinery, wood working, producing less than 500 tonnes per annum. 15. Manufacturing medium density fibreboard, chipboard, particle board, plywood, laminated board or wood veneer products, less than 250 tonnes per annum. 16. Sawmilling, wood chipping and kiln drying timber and logs, producing less than 500 tonnes per annum. 17. Recycling and reprocessing batteries. 18. Repairing or maintaining boats. 19. Manufacturing substrate for mushroom growing. 20. Manufacturing or processing plaster, producing less than 5,000 tonnes per annum.

	21. Recycling or reprocessing tyres including retreading. 22. Printing advertising material, magazines, newspapers, packaging and stationery. 23. Manufacturing fibreglass, foam plastic, composite plastic or rigid fibre-reinforced plastic or plastic products, less than 5 tonnes per annum (except fibreglass boats, tanks and swimming pools). 24. Manufacturing PET, PETE, polypropylene and polystyrene plastic or plastic products, less than 10,000 tonnes per annum. 25. Reconditioning metal or plastic drums. 26. Glass fibre manufacture less than 200 tonnes per annum. 27. Manufacturing glass or glass products, where not glass fibre, less than 250 tonnes per annum.
High impact industry	1. Metal foundry producing 10 tonnes or greater of metal castings per annum. 2. Boiler making or engineering works producing 10,000 tonnes or greater of metal product per annum. 3. Major hazard facility for the storage and distribution of dangerous goods not involving manufacturing processes. 4. Scrap metal yard including a fragmentiser. 5. Manufacturing clay or ceramic products including bricks, tiles, pipes and pottery goods, greater than 200 tonnes per annum. 6. Processing, smoking, drying, curing, milling, bottling or canning food, beverages or pet food, greater than 200 tonnes per annum. 7. Vegetable oil or oilseed processing in works with a design production capacity of greater than 1,000 tonnes per annum. 8. Manufacturing wooden products including cabinet making, joinery, wood working, producing greater than 500 tonnes per annum. 9. Manufacturing medium density fibreboard, chipboard, particle board, plywood, laminated board or wood veneer products, 250 tonnes or greater per annum. 10. Sawmilling, wood chipping and kiln drying timber and logs, producing greater than 500 tonnes per annum. 11. Manufacturing or processing plaster, producing greater than 5,000 tonnes per annum. 12. Enamelling workshop using 15,000 litres or greater of enamel per annum. 13. Galvanising works using 100 tonnes or greater of zinc per annum. 14. Anodising or electroplating workshop where tank area is 400 square metres or greater. 15. Powder coating workshop using 500 tonnes or greater of coating per annum. 16. Spray painting workshop (including spray painting vehicles, plant, equipment or boats) using 20,000 litres or greater of paint per annum. 17. Concrete batching and producing concrete products. 18. Treating timber for preservation using chemicals including copper, chromium, arsenic, borax and creosote. 19. Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste. 20. Manufacturing fibreglass pools, tanks and boats. 21. Manufacturing, fibreglass, foam plastic, composite plastic or rigid fibre-reinforced plastic or plastic products, 5 tonnes or greater per annum (except fibreglass boats, tanks and swimming pools). 22. Manufacturing PET, PETE, polypropylene and polystyrene plastic or plastic products, 10,000 tonnes or greater per annum.

	23. Manufacturing tyres, asbestos products, asphalt, cement; glass or glass fibre, mineral wool or ceramic fibre. 24. Abattoir. 25. Recycling chemicals, oils or solvents. 26. Manufacturing batteries. 27. Manufacturing wooden products including cabinet making, joinery, wood working, producing greater than 500 tonnes per annum. 28. Abrasive blasting facility using 10 tonnes or greater of abrasive material per annum. 29. Glass fibre manufacture producing 200 tonnes or greater per annum. 30. Manufacturing glass or glass products, where not glass fibre, 250 tonnes or greater per annum.
Special industry	1. Oil refining or processing. 2. Producing, refining or processing gas or fuel gas. 3. Distilling alcohol in works producing greater than 2500 litres per annum. 4. Producing, quenching, cutting, crushing or grading coke. 5. Sugar milling or refining. 6. Pulp or paper manufacturing. 7. Tobacco processing. 8. Tannery or works for curing animal skins, hides or finishing leather. 9. Textile manufacturing, including carpet manufacturing, wool scouring or carbonising, cotton milling, or textile bleaching, dyeing or finishing. 10. Rendering plant. 11. Manufacturing chemicals, poisons and explosives. 12. Manufacturing fertilisers involving ammonia. 13. Manufacturing polyvinyl chloride plastic.

Appendix A

Plan of Development Area

Appendix B

Precinct Plan

ATTACHMENT 1- SITE AND LOCALITY MAPPING

Figure 1-Subject site- aerial (subject site- yellow star).

Figure 2: Streetview- looking south along Cleveland Redland Bay Road (top) and site access via Giles Road (bottom).

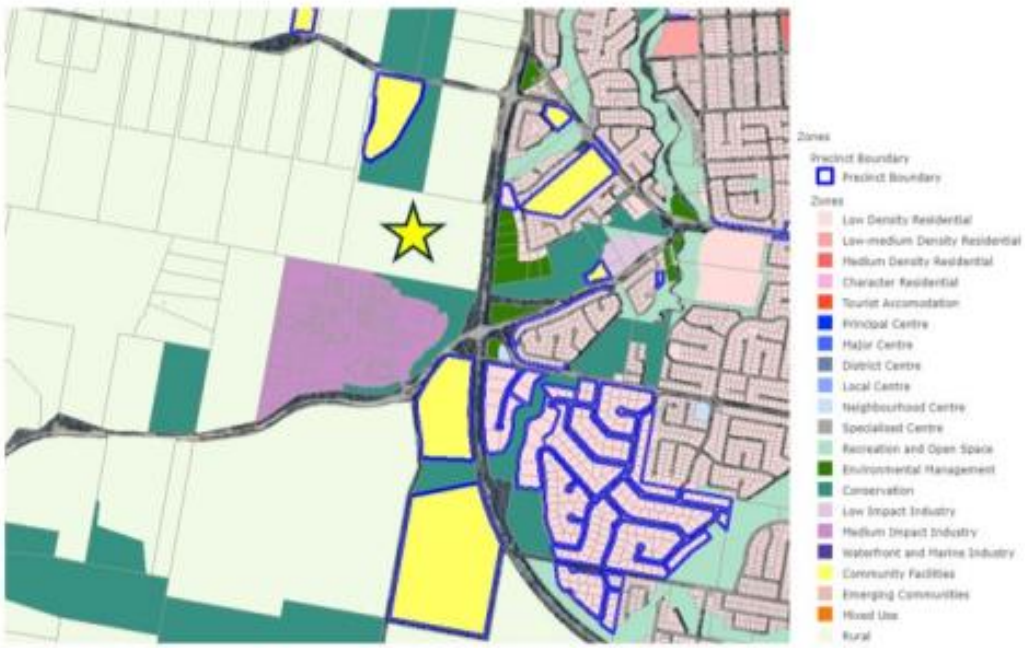

Figure 3: zoning mapping (subject site yellow star).

Queensland Government

RA9-N
SARA reference: 2308-36203 SRA
Applicant reference: 11598
Council reference: MCU23/0085

29 July 2024

Chief Executive Officer
Redland City Council
rcc@redland.qld.gov.au

Dear Sir/Madam

SARA referral agency response—20 Giles Road, Redland Bay

(Referral agency response given under section 56 of the *Planning Act 2016*)

The development application described below was confirmed as properly referred by the State Assessment and Referral Agency (SARA) on 16 August 2023.

Response

Outcome:	Referral agency response - with conditions
Date of response:	29 July 2024
Conditions:	The conditions in **Attachment 1** must be attached to any development approval.
Advice:	Advice to the applicant is in **Attachment 2.**
Reasons:	The reasons for the referral agency response are in **Attachment 3**.

Development details

Description:	Preliminary Approval for a Material change of use including a variation request to vary the effect of City Plan in accordance with the Inspire Technology and Innovation Centre Plan of Development (POD)
SARA role:	Referral agency
SARA trigger:	Planning Regulation 2017: • Schedule 10, Part 9, Division 4, Subdivision 1, Table 1, Item 1 – Development impact on state transport networks. • Schedule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1 – Material change of use near a state transport corridor. • Schedule 10, Part 16, Division 6, Subdivision 4, Table 2, Item 1 – Assessable development under Section 27E or 27F.

South East Queensland (South) regional office
Level 9, 12-14 Marine Parade, Southport QLD 4215
PO Box 3290 Southport BC QLD 4215

SARA reference:	2308-36203 SRA
Assessment Manager:	Redland City Council
Street address:	20 Giles Road, Redland Bay
Real property description:	Lot 1 on RP199206
Applicant name:	Carndale Pty Ltd
Applicant contact details:	Saunders Havill Group rachaelcaton@saundershavill.com
State-controlled road access permit:	This referral included an application for a road access location, under section 62A(2) of *Transport Infrastructure Act 1994*. Below are the details of the decision: • Permitted road access location • Reference: TMR23-040169 • Date: 5 July 2024 If you are seeking further information on the road access permit, please contact the Department of Transport and Main Roads at scr.calm@tmr.qld.gov.au.
Human Rights Act 2019 considerations:	A consideration of the 23 fundamental human rights protected under the *Human Rights Act 2019* has been undertaken as part of this decision. It has been determined that this decision does not limit human rights.

Representations

An applicant may make representations to a concurrence agency, at any time before the application is decided, about changing a matter in the referral agency response (s. 30 Development Assessment Rules). Copies of the relevant provisions are in **Attachment 4**.

A copy of this response has been sent to the applicant for their information.

For further information please contact Brianna Gosper, Senior Planning Officer on (07) 5644 3272 or via email SEQSouthPlanning@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Mark Cridland
Director-General
Department of Housing, Local Government, Planning and Public Works

cc Carndale Pty Ltd c/- Saunders Havill Group, rachaelcaton@saundershavill.com

enc Attachment 1–Referral agency conditions
Attachment 2–Advice to the applicant
Attachment 3–Reasons for referral agency response
Attachment 4–Representations about a referral agency response provisions
Attachment 5–Documents referenced in conditions

2308-36203 SRA

Attachment 1—Referral agency conditions

(Under section 56(1)(b)(i) of the *Planning Act 2016* the following conditions must be attached to any development approval relating to this application) (Copies of the plans and specifications referenced below are found at Attachment 5)

Preliminary Approval for Material change of use		
Schedule 10, Part 9, Division 4, Subdivision 1, Table 1, Item 1 and Schedule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1 (Planning Regulation 2017) — The chief executive administering the *Planning Act 2016* nominates the Director-General of the Department of Transport and Main Roads to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following conditions:		
1.	(a) Road works comprising the following must be provided: (i) New signalised intersection with Cleveland Redland Bay Road must be provided generally in accordance with Intersection Functional Layout, prepared by Lambert and Rehbein, dated 04/06/2024, reference B23038-SK001 and revision F – Approved by A.Green Registered Professional Engineer of Queensland (RPEQ) 31707. (ii) Upgrade the Cleveland Redland Bay Road/Double Jump Road intersection generally in accordance with: (A) External Intersection Functional Layout Plan Sheet 1 of 4, prepared by Lambert and Rehbein, dated 13.02.19 and reference B18480-CSK400 and no. A. (B) External Intersection Functional Layout Plan Sheet 2 of 4, prepared by Lambert and Rehbein, dated 13.02.19 and reference B18480-CSK401 and no. A, as amended in red by SARA on 29 July 2024. (C) External Intersection Functional Layout Plan Sheet 3 of 4, prepared by Lambert and Rehbein, dated 13.02.19 and reference B18480-CSK402 and no. A. (D) External Intersection Functional Layout Plan Sheet 4 of 4, prepared by Lambert and Rehbein, dated 13.02.19 and reference B18480-CSK403 and no. A. (b) The road works must be designed and constructed in accordance with: (i) The Department of Transport and Main Roads (DTMR) Road Planning and Design Manual (RPDM). (ii) The DTMR Manual of Uniform Traffic Control Devices (MUTCD).	Prior to the commencement of use.
2.	Stormwater management of the development must not cause worsening to the operating performance of the state-controlled road, such that any works on the land must not: (a) create any new discharge points for stormwater runoff onto the state-controlled road (b) concentrate or increase the velocity of flows to state controlled road (c) interfere with and/or cause damage to the existing stormwater drainage on the state-controlled road (d) surcharge any existing culvert or drain on the state-controlled road (e) reduce the quality of stormwater discharge onto the state-controlled road (f) impede or interfere with any overland flow or hydraulic conveyance from the state-controlled road (g) reduce the floodplain immunity of the state-controlled road.	At all times.

3.	(a) The road access location, is to be located generally in accordance with Intersection Functional Layout, prepared by Lambert and Rehbein, dated 04/06/2024, reference B23038-SK001 and revision F – Approved by A.Green RPEQ 31707. (b) Road access works comprising signalised intersection, (at the road access location) must be provided generally in accordance with Intersection Functional Layout, prepared by Lambert and Rehbein, dated 04/06/2024, reference B23038-SK001 and revision F – Approved by A.Green Registered Professional Engineer of Queensland (RPEQ) 31707. (c) The road access works must be designed and constructed in accordance with: (i) The DTMR RPDM. (ii) The DTMR MUTCD.	(a) At all times. (b) and (c) Prior to the commencement of use.

Attachment 2—Advice to the applicant

General advice	
1.	Terms and phrases used in this document are defined in the *Planning Act 2016*, its regulation or the State Development Assessment Provisions v3.0 (SDAP). If a word remains undefined it has its ordinary meaning.
State-controlled road	
2.	**Road access works approval required** Written approval is required from the Department of Transport and Main Roads (DTMR) to carry out road works that are road access works (including driveways) on a state-controlled road in accordance with Section 33 of the *Transport Infrastructure Act 1994*. This approval must be obtained prior to commencing any works on the state-controlled road. The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland. Please contact the DTMR to make an application. The applicant is advised that the DTMR technical services team has identified several challenges which may impact the detailed design of the conditioned works. It is recommended that the applicant give consideration to the following when preparing their Section 33 application: • The intersection is located close to knoll and existing road is in about 10 metres deep cutting. This topography is likely to determine elements of the layout. Recommend that 3-D design be undertaken to check the layout and dimensions of the Functional Plan. • Sightlines will be reviewed based on topography at detailed design. • Drainage will need to be considered in more detail at detailed design stage to prevent adverse impacts on the state-controlled road. • Kerb ramps will be required to be delivered to the DTMR standard drawings. The applicant is advised that the DTMR Road Network Operations team will require the following during detailed design in addition to what has been discussed in the submitted reports: • The traffic signals to have pedestrian protection (delayed start for left turners when conflicting pedestrian crossing is demanded) coded and with the associated signals. • CCTV camera be installed and connected to the DTMR DVTEL system. • SNO has advised that the priority merge shown should instead be a zip merge – this can be addressed/discussed at detailed design within the existing layout footprint. The applicant has advised that the road works will comply with the normal design domain (NDD). Any works that do not fall within the NDD will require the approval of the Regional Director (Metropolitan). Approval of any requested departures to the NDD is not guaranteed.

Attachment 3—Reasons for referral agency response

(Given under section 56(7) of the *Planning Act 2016*)

The reasons for SARA's decision are:

The proposed development has been assessed against and complies with State codes 1: Development in a state-controlled road environment and State code 6: Protection of state transport networks of the (SDAP), with conditions. In particular:

- The proposed development is not considered to create a safety, operation or efficiency impact to the state-controlled road, as the proposed new signalised access intersection has been designed to the standard requirements. A condition is imposed to ensure the construction of this intersection is carried out in accordance with the requirements and development plans.
- The proposed development is not considered to result in adverse hydraulic impacts to the state-controlled road, as any stormwater will be directed away from the state-controlled road network and peak flows will be managed via an onsite bio-retention basins. A condition is imposed to ensure the proposed development results in a no worsening stormwater and drainage impact on the state-controlled road.
- Due to the traffic generation of the development, the proposed development is expected to impact the state-controlled road network. Notwithstanding, a condition is imposed to ensure the Cleveland Redland Bay / Double Jump Road intersection is appropriately upgraded to mitigate the anticipated increase in traffic.

The proposed changes are considered to comply with the assessment criteria set out in Schedule 10, Part 16, Division 6, Subdivision 4, Table 2, Item 4 of the Planning Regulation 2017 for the following reasons:

- The proposed development is consistent with the intent of the site under the South East Queensland (SEQ) Regional Plan (*ShapingSEQ 2023*) the area of urban activity for the proposed development is now located within the Urban footprint.
- No new urban development is proposed within the access handle and the intent of this area is to provide for emergency access and a service corridor.

Material used in the assessment of the application:

- the development application material and submitted plans
- *Planning Act 2016*
- Planning Regulation 2017
- the SDAP
- the Development Assessment Rules
- SARA DA Mapping system
- section 58 of the *Human Rights Act 2019*.

Attachment 4—Representations about a referral agency response provisions

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Attachment 5—Documents referenced in conditions

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Development Assessment Rules—Representations about a referral agency response

The following provisions are those set out in sections 28 and 30 of the Development Assessment Rules[1] regarding **representations about a referral agency response**

Part 6: Changes to the application and referral agency responses

28 Concurrence agency changes its response or gives a late response

28.1. Despite part 2, a concurrence agency may, after its referral agency assessment period and any further period agreed ends, change its referral agency response or give a late referral agency response before the application is decided, subject to section 28.2 and 28.3.

28.2. A concurrence agency may change its referral agency response at any time before the application is decided if—

(a) the change is in response to a change which the assessment manager is satisfied is a change under section 26.1; or

(b) the Minister has given the concurrence agency a direction under section 99 of the Act; or

(c) the applicant has given written agreement to the change to the referral agency response.[2]

28.3. A concurrence agency may give a late referral agency response before the application is decided, if the applicant has given written agreement to the late referral agency response.

28.4. If a concurrence agency proposes to change its referral agency response under section 28.2(a), the concurrence agency must—

(a) give notice of its intention to change its referral agency response to the assessment manager and a copy to the applicant within 5 days of receiving notice of the change under section 25.1; and

(b) the concurrence agency has 10 days from the day of giving notice under paragraph (a), or a further period agreed between the applicant and the concurrence agency, to give an amended referral agency response to the assessment manager and a copy to the applicant.

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1 Pursuant to Section 68 of the *Planning Act 2016*

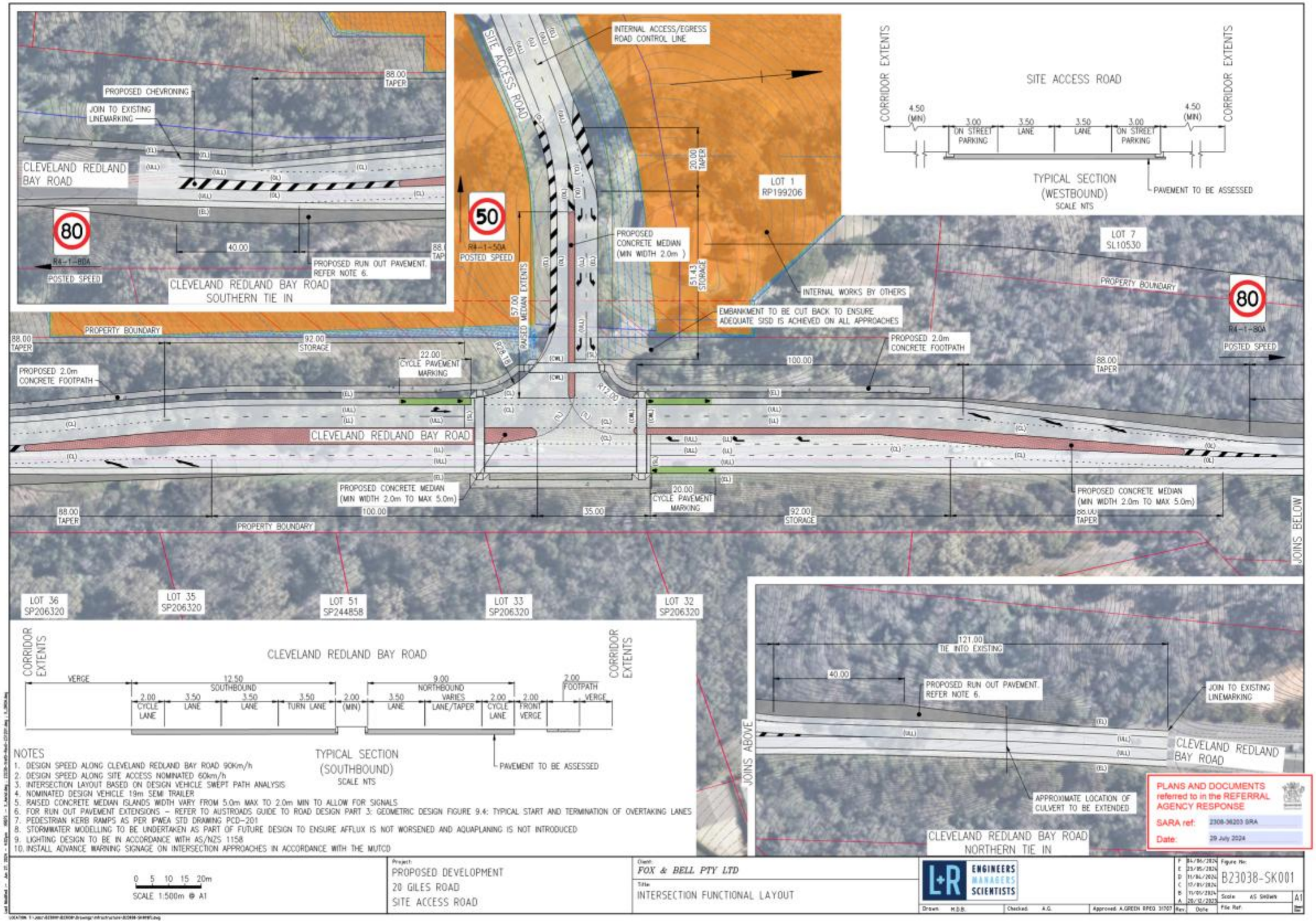
2 In the instance an applicant has made representations to the concurrence agency under section 30, and the concurrence agency agrees to make the change included in the representations, section 28.2(c) is taken to have been satisfied.

Part 7: Miscellaneous

30 Representations about a referral agency response

30.1. An applicant may make representations to a concurrence agency at any time before the application is decided, about changing a matter in the referral agency response.[3]

[3] An applicant may elect, under section 32, to stop the assessment manager's decision period in which to take this action. If a concurrence agency wishes to amend their response in relation to representations made under this section, they must do so in accordance with section 28.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JOIN TO EXISTING LINEMARKING
88.00 TAPER
CLEVELAND REDLAND BAY ROAD
80
R4-1-80A
POSTED SPEED
40.00
PROPOSED RUN OUT PAVEMENT. REFER NOTE 6.
CLEVELAND REDLAND BAY ROAD SOUTHERN TIE IN
SITE ACCESS ROAD
INTERNAL ACCESS/EGRESS ROAD CONTROL LINE
50
R4-1-50A
POSTED SPEED
20.00 TAPER
LOT 1 RP199206
PROPOSED CONCRETE MEDIAN (MIN WIDTH 2.0m)
51.43 STORAGE
57.00 RAISED MEDIAN EXTENTS
INTERNAL WORKS BY OTHERS
EMBANKMENT TO BE CUT BACK TO ENSURE ADEQUATE SISD IS ACHIEVED ON ALL APPROACHES
LOT 7 SL10530
PROPERTY BOUNDARY
80
R4-1-80A
POSTED SPEED
88.00 TAPER
92.00 STORAGE
22.00 CYCLE PAVEMENT MARKING
R28.18
R17.00
PROPOSED 2.0m CONCRETE FOOTPATH
100.00
88.00 TAPER
CLEVELAND REDLAND BAY ROAD
PROPOSED CONCRETE MEDIAN (MIN WIDTH 2.0m TO MAX 5.0m)
100.00
35.00
20.00 CYCLE PAVEMENT MARKING
92.00 STORAGE
88.00 TAPER
PROPOSED CONCRETE MEDIAN (MIN WIDTH 2.0m TO MAX 5.0m)
PROPERTY BOUNDARY
JOINS BELOW
LOT 36 SP206320
LOT 35 SP206320
LOT 51 SP244858
LOT 33 SP206320
LOT 32 SP206320
CORRIDOR EXTENTS
SITE ACCESS ROAD
4.50 (MIN)
3.00 ON STREET PARKING
3.50 LANE
3.50 LANE
3.00 ON STREET PARKING
4.50 (MIN)
CORRIDOR EXTENTS
TYPICAL SECTION (WESTBOUND)
SCALE NTS
PAVEMENT TO BE ASSESSED
CORRIDOR EXTENTS
CLEVELAND REDLAND BAY ROAD
VERGE
12.50 SOUTHBOUND
2.00 CYCLE LANE
3.50 LANE
3.50 LANE
3.50 TURN LANE
2.00 (MIN)
9.00 NORTHBOUND
3.50 LANE
VARIES LANE/TAPER
2.00 CYCLE LANE
2.00 FRONT VERGE
2.00 FOOTPATH
VERGE
CORRIDOR EXTENTS
TYPICAL SECTION (SOUTHBOUND)
SCALE NTS
PAVEMENT TO BE ASSESSED
NOTES
1. DESIGN SPEED ALONG CLEVELAND REDLAND BAY ROAD 90Km/h
2. DESIGN SPEED ALONG SITE ACCESS NOMINATED 60km/h
3. INTERSECTION LAYOUT BASED ON DESIGN VEHICLE SWEPT PATH ANALYSIS
4. NOMINATED DESIGN VEHICLE 19m SEMI TRAILER
5. RAISED CONCRETE MEDIAN ISLANDS WIDTH VARY FROM 5.0m MAX TO 2.0m MIN TO ALLOW FOR SIGNALS
6. FOR RUN OUT PAVEMENT EXTENSIONS – REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FIGURE 9.4: TYPICAL START AND TERMINATION OF OVERTAKING LANES
7. PEDESTRIAN KERB RAMPS AS PER IPWEA STD DRAWING PCD-201
8. STORMWATER MODELLING TO BE UNDERTAKEN AS PART OF FUTURE DESIGN TO ENSURE AFFLUX IS NOT WORSENED AND AQUAPLANING IS NOT INTRODUCED
9. LIGHTING DESIGN TO BE IN ACCORDANCE WITH AS/NZS 1158
10. INSTALL ADVANCE WARNING SIGNAGE ON INTERSECTION APPROACHES IN ACCORDANCE WITH THE MUTCD
JOINS ABOVE
121.00 TIE INTO EXISTING
40.00
PROPOSED RUN OUT PAVEMENT. REFER NOTE 6.
JOIN TO EXISTING LINEMARKING
CLEVELAND REDLAND BAY ROAD
APPROXIMATE LOCATION OF CULVERT TO BE EXTENDED
CLEVELAND REDLAND BAY ROAD NORTHERN TIE IN
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2308-36203 SRA
Date: 29 July 2024
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SCALE 1:500m @ A1
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Client: FOX & BELL PTY LTD
Title: INTERSECTION FUNCTIONAL LAYOUT
ENGINEERS MANAGERS SCIENTISTS
Drawn: M.D.B. Checked: A.G. Approved: A.GREEN RPEQ 31707
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Scale: AS SHOWN A1
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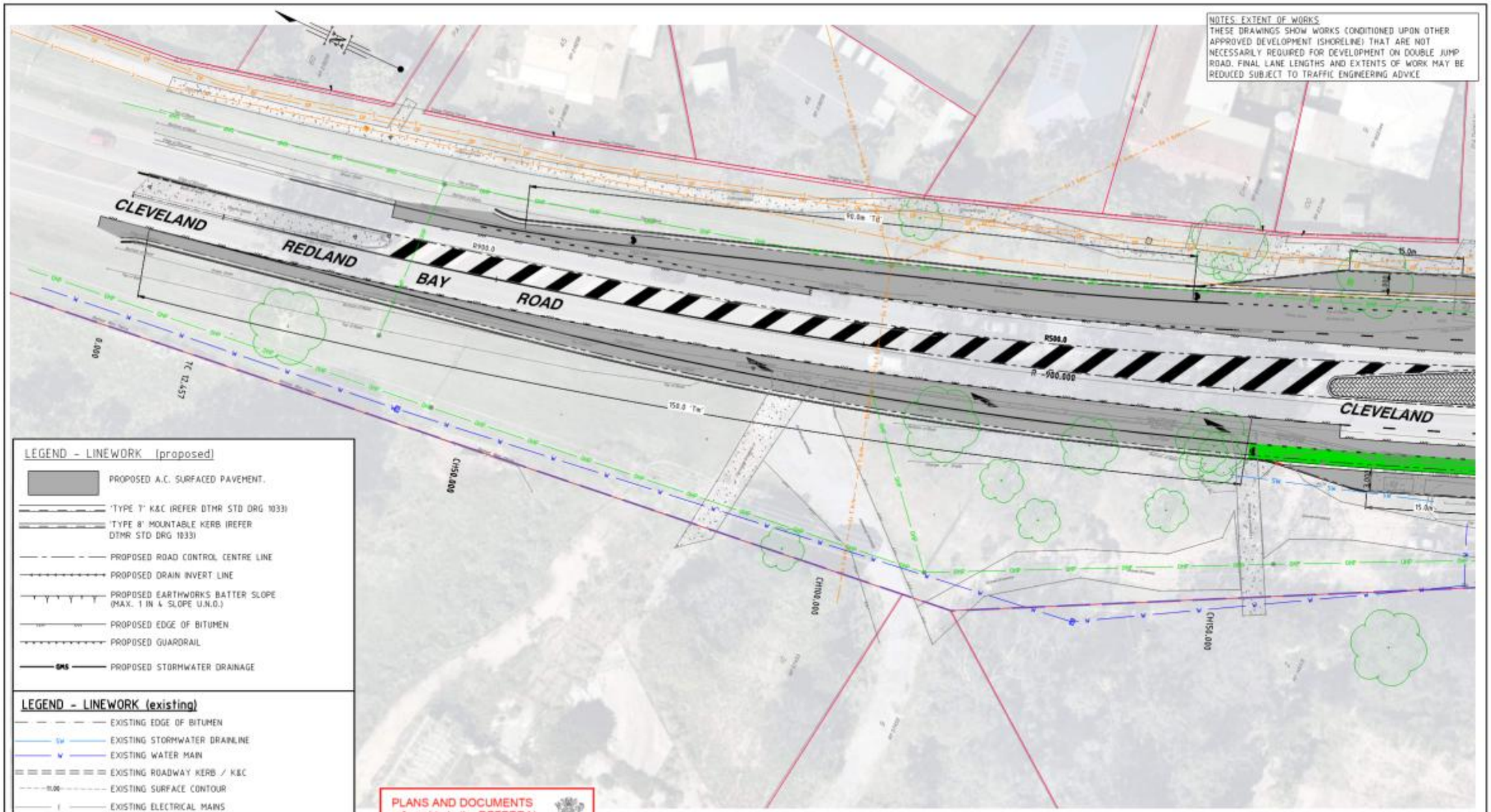
NOTES EXTENT OF WORKS
THESE DRAWINGS SHOW WORKS CONDITIONED UPON OTHER APPROVED DEVELOPMENT (SHORELINE) THAT ARE NOT NECESSARILY REQUIRED FOR DEVELOPMENT ON DOUBLE JUMP ROAD. FINAL LANE LENGTHS AND EXTENTS OF WORK MAY BE REDUCED SUBJECT TO TRAFFIC ENGINEERING ADVICE
CLEVELAND REDLAND BAY ROAD
CLEVELAND
R900.000
R586.0
R938.0
CH50.000
CH100.000
CH150.000
LEGEND - LINEWORK (proposed)
PROPOSED A.C. SURFACED PAVEMENT.
'TYPE 1' K&C (REFER DTMR STD DRG 1033)
'TYPE 8' MOUNTABLE KERB (REFER DTMR STD DRG 1033)
PROPOSED ROAD CONTROL CENTRE LINE
PROPOSED DRAIN INVERT LINE
PROPOSED EARTHWORKS BATTER SLOPE (MAX. 1 IN 4 SLOPE U.N.O.)
PROPOSED EDGE OF BITUMEN
PROPOSED GUARDRAIL
PROPOSED STORMWATER DRAINAGE
LEGEND - LINEWORK (existing)
EXISTING EDGE OF BITUMEN
EXISTING STORMWATER DRAINLINE
EXISTING WATER MAIN
EXISTING ROADWAY KERB / K&C
EXISTING SURFACE CONTOUR
EXISTING ELECTRICAL MAINS
EXISTING OVERHEAD ELECTRICAL
EXISTING TELSTRA/COMMUNICATIONS MAINS
EXISTING OPTIC FIBRE
EXISTING SERVICES
NOTWITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE ENGINEER OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGES CAUSED AS A RESULT OF THE WORKS.
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2308-36203 SRA
Date: 29 July 2024
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EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 1 OF 4
SCALE 1 : 250
Associated Consultants: R.P.D.
LEVEL DATUM
A 13.02.19 S.G. ORIGINAL ISSUE
LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS
CBD HOUSE LEVEL 3, 139 WICKHAM STREET FORTITUDE VALLEY QLD 4006 P.O. BOX 112 FORTITUDE VALLEY QLD 4006 A.C.N. 010 451 902
TELEPHONE (07) 3250 9000 FACSIMILE (07) 3250 9001 EMAIL mail@lar.net.au
Project: PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT
Title: EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 1 OF 4
Client: SUTGOLD PTY LTD
Draftsperson: S.G.
Designer: S.G.
Scale: AS SHOWN
Checked: D.L.
Approved: C.HURLEY RPEQ No: 15157
Date: SEP 2018
Sheet Size: A1
Drawing No. B18480-CSK400
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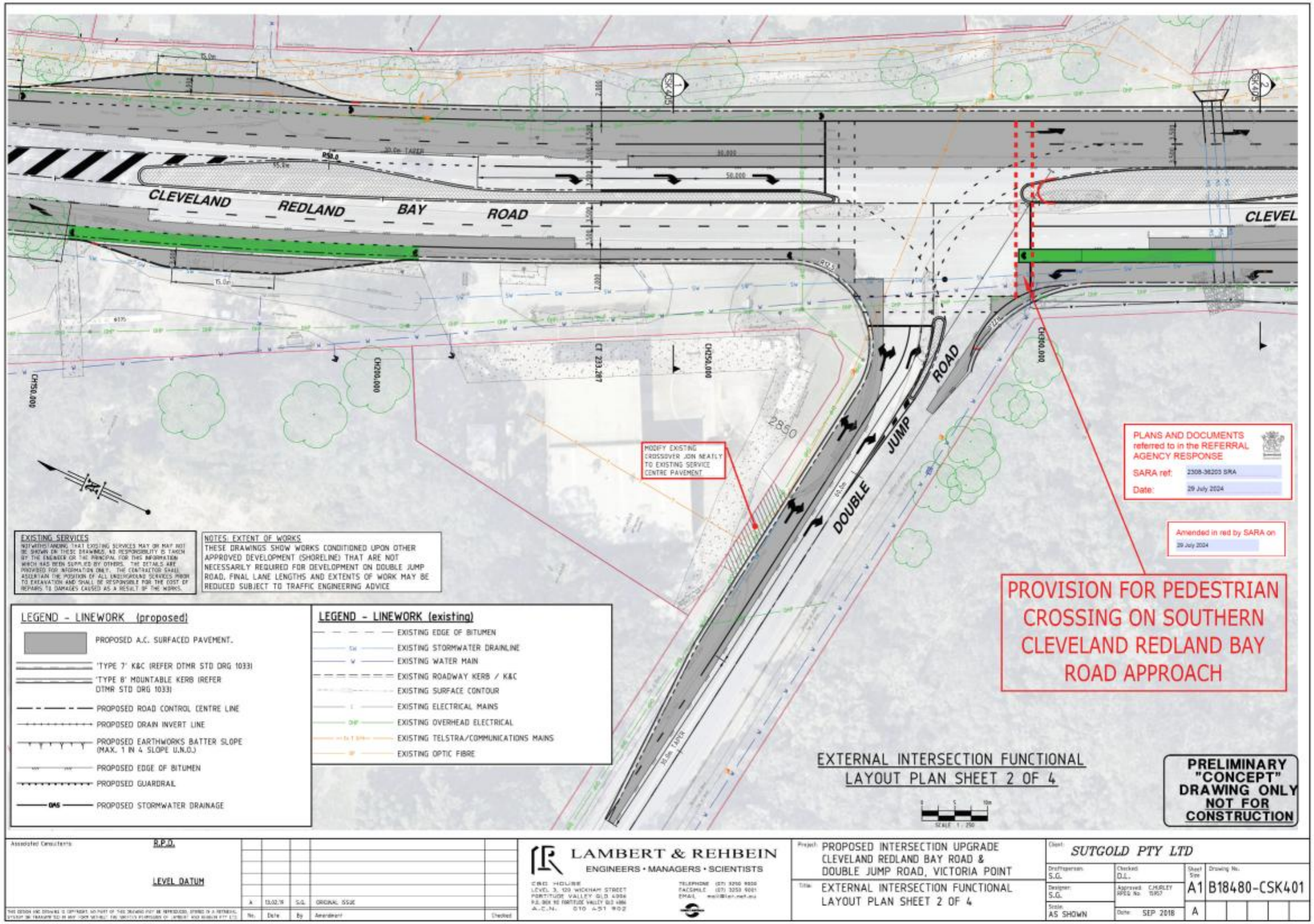
THIS DESIGN AND DRAWING IS COPYRIGHT. NO PART OF THIS DRAWING MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF LAMBERT AND REHBEIN PTY LTD
No. Date By Amendment Checked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JUMP ROAD
DOUBLE
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CSK406
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CH300.000
CH250.000
CH360.000
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PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2308-38203 SRA
Date: 29 July 2024
Amended in red by SARA on 29 July 2024
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EXISTING SERVICES
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THESE DRAWINGS SHOW WORKS CONDITIONED UPON OTHER APPROVED DEVELOPMENT (SHORELINE) THAT ARE NOT NECESSARILY REQUIRED FOR DEVELOPMENT ON DOUBLE JUMP ROAD. FINAL LANE LENGTHS AND EXTENTS OF WORK MAY BE REDUCED SUBJECT TO TRAFFIC ENGINEERING ADVICE
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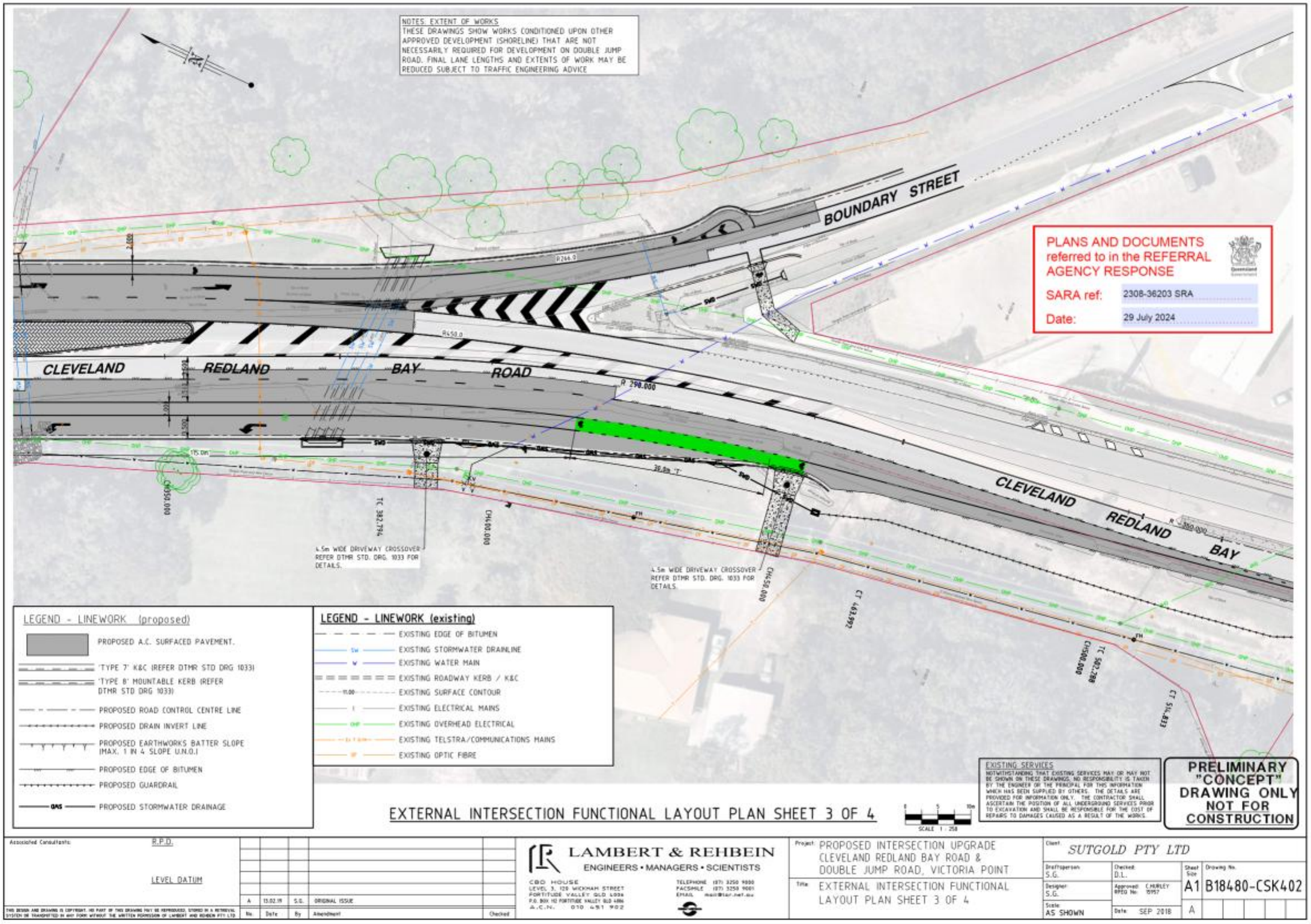
PROPOSED A.C. SURFACED PAVEMENT.
'TYPE 7' K&C (REFER DTMR STD DRG 1033)
'TYPE 8' MOUNTABLE KERB (REFER DTMR STD DRG 1033)
PROPOSED ROAD CONTROL CENTRE LINE
PROPOSED DRAIN INVERT LINE
PROPOSED EARTHWORKS BATTER SLOPE (MAX. 1 IN 4 SLOPE U.N.O.)
PROPOSED EDGE OF BITUMEN
PROPOSED GUARDRAIL
PROPOSED STORMWATER DRAINAGE
LEGEND - LINEWORK (existing)
EXISTING EDGE OF BITUMEN
EXISTING STORMWATER DRAINLINE
EXISTING WATER MAIN
EXISTING ROADWAY KERB / K&C
EXISTING SURFACE CONTOUR
EXISTING ELECTRICAL MAINS
EXISTING OVERHEAD ELECTRICAL
EXISTING TELSTRA/COMMUNICATIONS MAINS
EXISTING OPTIC FIBRE
EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 2 OF 4
PRELIMINARY "CONCEPT" DRAWING ONLY NOT FOR CONSTRUCTION
R.P.D.
LEVEL DATUM
A 13.02.19 S.G. ORIGINAL ISSUE
LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS
PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT
EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 2 OF 4
SUTGOLD PTY LTD
S.G.
S.G.
AS SHOWN
D.L.
SEP 2018
A1
B18480-CSK401
A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THESE DRAWINGS SHOW WORKS CONDITIONED UPON OTHER APPROVED DEVELOPMENT (SHORELINE) THAT ARE NOT NECESSARILY REQUIRED FOR DEVELOPMENT ON DOUBLE JUMP ROAD. FINAL LANE LENGTHS AND EXTENTS OF WORK MAY BE REDUCED SUBJECT TO TRAFFIC ENGINEERING ADVICE
BOUNDARY STREET
CLEVELAND REDLAND BAY ROAD
CLEVELAND REDLAND BAY
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2308-36203 SRA
Date: 29 July 2024
4.5m WIDE DRIVEWAY CROSSOVER REFER DTMR STD. DRG. 1033 FOR DETAILS.
4.5m WIDE DRIVEWAY CROSSOVER REFER DTMR STD. DRG. 1033 FOR DETAILS.
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PROPOSED A.C. SURFACED PAVEMENT.
'TYPE 7' K&C (REFER DTMR STD DRG 1033)
'TYPE 8' MOUNTABLE KERB (REFER DTMR STD DRG 1033)
PROPOSED ROAD CONTROL CENTRE LINE
PROPOSED DRAIN INVERT LINE
PROPOSED EARTHWORKS BATTER SLOPE (MAX. 1 IN 4 SLOPE U.N.O.)
PROPOSED EDGE OF BITUMEN
PROPOSED GUARDRAIL
PROPOSED STORMWATER DRAINAGE
LEGEND - LINEWORK (existing)
EXISTING EDGE OF BITUMEN
EXISTING STORMWATER DRAINLINE
EXISTING WATER MAIN
EXISTING ROADWAY KERB / K&C
EXISTING SURFACE CONTOUR
EXISTING ELECTRICAL MAINS
EXISTING OVERHEAD ELECTRICAL
EXISTING TELSTRA/COMMUNICATIONS MAINS
EXISTING OPTIC FIBRE
EXISTING SERVICES
NOTWITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE ENGINEER OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGES CAUSED AS A RESULT OF THE WORKS
PRELIMINARY "CONCEPT" DRAWING ONLY NOT FOR CONSTRUCTION
EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 3 OF 4
SCALE 1:250
Associated Consultants: R.P.D.
LEVEL DATUM
A 13.02.19 S.G. ORIGINAL ISSUE
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ENGINEERS • MANAGERS • SCIENTISTS
CBD HOUSE
LEVEL 3, 129 WICKHAM STREET
FORTITUDE VALLEY QLD 4006
P.O. BOX 112 FORTITUDE VALLEY QLD 4006
A.C.N. 010 451 902
TELEPHONE (07) 3250 9800
FACSIMILE (07) 3250 9001
Project: PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT
Title: EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 3 OF 4
Client: SUTGOLD PTY LTD
Draftsperson: S.G.
Designer: S.G.
Scale: AS SHOWN
Checked: D.L.
Approved: C.HURLEY RPEQ No: 15957
Date: SEP 2018
Sheet Size: A1
Drawing No.: B18480-CSK402
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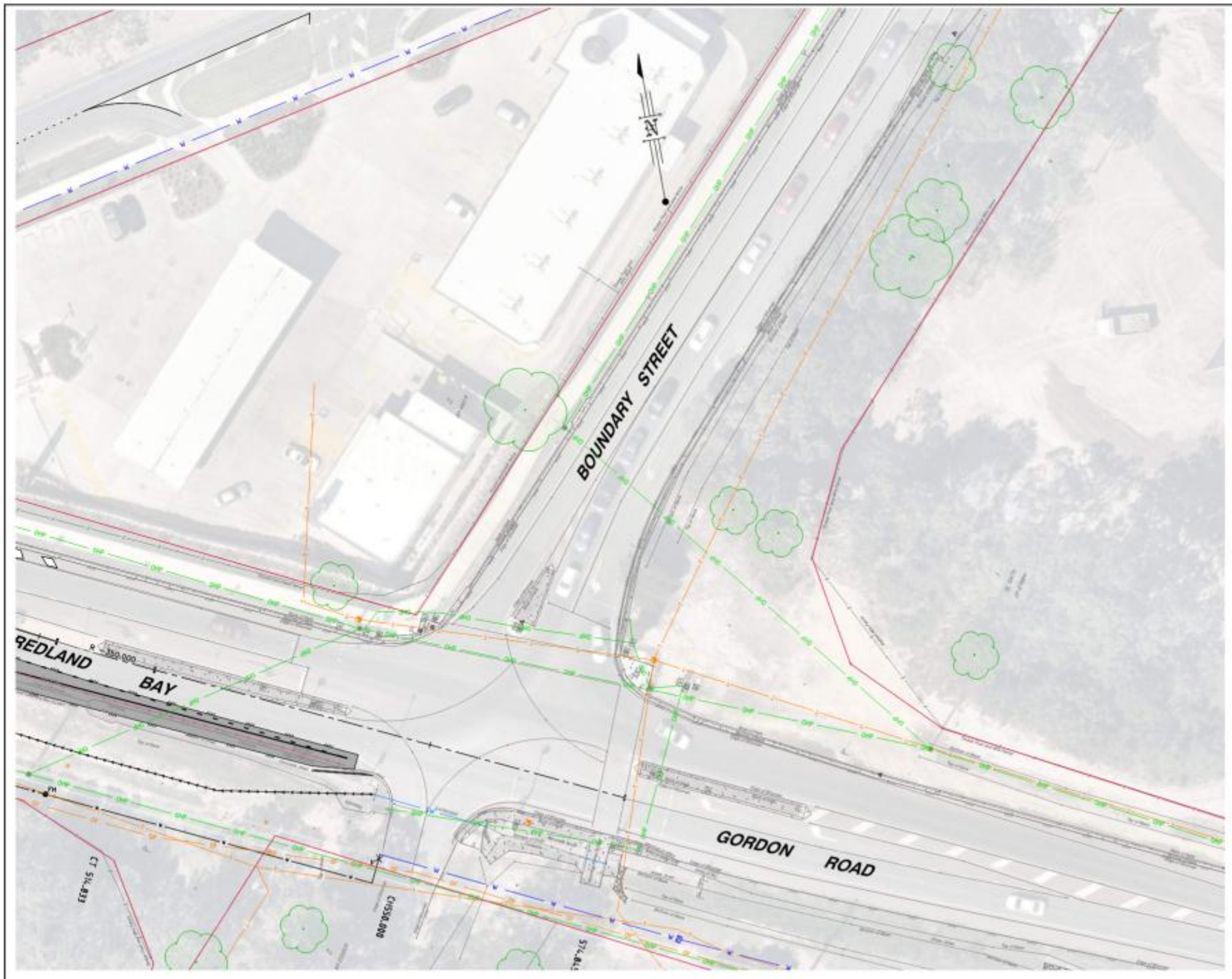

LEGEND - LINEWORK (proposed)

- PROPOSED A.C. SURFACED PAVEMENT.
- 'TYPE 7' K&C (REFER DTMR STD DRG 1033)
- 'TYPE 8' MOUNTABLE KERB (REFER DTMR STD DRG 1033)
- PROPOSED ROAD CONTROL CENTRE LINE
- PROPOSED DRAIN INVERT LINE
- PROPOSED EARTHWORKS BATTER SLOPE (MAX. 1 IN 4 SLOPE U.N.O.)
- PROPOSED EDGE OF BITUMEN
- PROPOSED GUARDRAIL
- PROPOSED STORMWATER DRAINAGE

LEGEND - LINEWORK (existing)

- EXISTING EDGE OF BITUMEN
- EXISTING STORMWATER DRAINLINE
- EXISTING WATER MAIN
- EXISTING ROADWAY KERB / K&C
- EXISTING SURFACE CONTOUR
- EXISTING ELECTRICAL MAINS
- EXISTING OVERHEAD ELECTRICAL
- EXISTING TELSTRA/COMMUNICATIONS MAINS
- EXISTING OPTIC FIBRE

PRELIMINARY "CONCEPT" DRAWING ONLY NOT FOR CONSTRUCTION

EXISTING SERVICES
NOTWITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE ENGINEER OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGES CAUSED AS A RESULT OF THE WORKS.

NOTES: EXTENT OF WORKS
THESE DRAWINGS SHOW WORKS CONDITIONED UPON OTHER APPROVED DEVELOPMENT (SHORELINE) THAT ARE NOT NECESSARILY REQUIRED FOR DEVELOPMENT ON DOUBLE JUMP ROAD. FINAL LANE LENGTHS AND EXTENTS OF WORK MAY BE REDUCED SUBJECT TO TRAFFIC ENGINEERING ADVICE

PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2308-36203 SRA
Date: 29 July 2024

EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 4 OF 4

SCALE 1 : 250

Associated Consultants: R.P.D.

LEVEL DATUM

No.	Date	By	Amendment	Checked
A	13.02.19	S.G.	ORIGINAL ISSUE	

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Project: PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT

Title: EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 4 OF 4

Client: SUTGOLD PTY LTD

Draftsperson: S.G.	Checked: D.L.	Sheet Size: A1	Drawing No.: B18480-CSK403
Designer: S.G.	Approved: C.HURLEY RPEQ No: 15957		
Scale: AS SHOWN	Date: SEP 2018	A	

Attachment B

"Industry Lands Assessment, Redland City" prepared by Giles Consulting International Pty Ltd

Industry Lands Assessment, Redland City

Concerning:

MCU23/0085, 20 Giles Road Redland Bay QLD 4165, proposed use medium impact industry

Prepared for

Carndale Pty Ltd

Prepared by

Giles Consulting International Pty Ltd

October 2023

Disclaimer

This report is dated October 2023 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Giles Consulting International Pty Ltd's opinion in this report.

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CONTENTS

1 PURPOSE 4

2 BACKGROUND 4

3 INFORMATION REQUESTS 5

3.1 REDLAND CITY 5

3.2 SARA 5

4 INFORMATION UPDATE FOR INFORMATION REQUESTS 6

4.1 OVERVIEW 6

4.2 MARKET UPDATE 6

4.3 SEQ PLAN REVIEW UPDATE 2023-DRAFT 7

4.3.1 Contextual SEQ Plan 2017 7

4.3.2 SEQ Plan Update 2023 8

4.4 POPULATION PROJECTIONS UPDATE 9

4.4.1 Population 9

4.4.2 Local employment 10

4.4.3 Employment on industrial lands 12

5 RESPONSE TO RFI 16

5.1 SARA 16

5.2 REDLAND CITY 16

1 Purpose

The purpose of this report is to provide an industry lands assessment responding to the Requests for Information concerning the Development Application MCU23/0085, 20 Giles Road Redland Bay QLD 4165, proposed use medium impact industry.

Specifically, there are two Requests for Information concerning the Application.

A The Information request from Redland City Council dated 21 August 2023, and
B The information request from the Department of Planning, State Assessment and Referral Agency (SARA) dated 5 September 2023.

2 Background

While the Information Requests overlap and common and updated information relates to both, each matter is considered separately in part 5 of this report.

The focus of the assessment is to review changes to market conditions, data and State planning intent since the CDM Smith report[1] was completed in 2020 and since the Requests for Information were made in August/September 2023. Specifically, the following new information has been taken into account:

- Recent market information to October 2023 on industrial land sales, and implications for the existing supply in Redland City and in Redland Bay local area
- The Draft ShapingSEQ Update 2023, particularly the increased focus on the relationship between where people live and work and on the need for improved and realistic land supply data
- The 2023 Queensland Population Projections, particularly the geographic location of the projected growth relative to the location of the proposed development and consequential employment, and
- Additional detailed analysis of the results of the 2021 Census, particularly Journey to Work and employment participation data.

In addition, there has been further review of:

- The CDM Smith report, in relation to the assessment of the value of Agricultural activities in Redland City
- The Saunders Havill Group Planning Report in relation to the application, and
- Correspondence from the Department of State Development, Infrastructure, Local Government and Planning to Redland City Council.

[1] CDM Smith. Economic Feasibility Assessment form Southern Thornlands Potential Future Growth Area, 10 December 2020

3 Information Requests

3.1 Redland City

In relation to economic and industrial needs matters, the Council request notes:

- The information provided within the town planning report goes some way to identify that there is an undersupply of industrial zoned land within Redland City
- The report largely however refers to reports commissioned by Redland City Council, which identifies that there isn't an industrial land shortfall until the late 2030s
- The proposal reduces the potential productive capacity of rural land as anticipated by the City Plan and would not be consistent with the purpose or overall outcomes of the rural zone code, and
- Council can consider any other 'relevant matters' put forward in support of the application, in accordance with s45 of Planning Act 2016. In light of the above conflict, it is considered that compelling matters would need to be presented, in order to justify that the proposed land uses would be in the public interest to approve.

3.2 SARA

In addition to the information request issued on 5 September 2023, which relates to State code 1 and 6 of the SDAP, the following further issues with the proposed development have been identified, namely Urban activity in the Regional Landscape and Rural Production Area.

- The development application does not suitably demonstrate how the proposed development meets the assessment criteria of Schedule 10, Part 16, Division 6, Subdivision 4, Table 2, Item 4 of the Planning Regulation, and
- Section 55(5) of the *Planning Act 2016* identifies matters that a referral agency may give weight to. It is noted that until a statutory instrument (i.e. Draft ShapingSEQ 2023 Update) comes into effect, weight cannot be applied in the assessment of a development application.

The SEQ Regional Plan is in transition following the public release of the Draft ShapingSEQ Update 2023 in August 2023. The SARA request was written during the public consultation period and the finalisation of the SEQ Regional Plan in accordance with the Draft will resolve the land use questions that have been raised.

The Draft ShapingSEQ 2023 Update:

- Has identified some localised areas of SEQ that require additional industrial land to meet the projected demand to 2046, and
- Proposed Urban Footprint expansion area at Redland Bay is an area that will contribute to industrial land supply in the Redland LGA. This area represents a logical expansion of an existing industrial area, and residential development is not supported in this area.

4 Information update for Information Requests

4 .1 Overview

The following information provides information that is directly relevant to the request from both Redland City Council and SARA. On the basis of the updated information, the specific responses to the Information sought by the authorities are provided in Part 5.

In relation to the need for industrial land in Redland City, I find the facts and arguments in the Saunders Havill Group Town Planning Report to be compelling in support of the Development Application with reference to the:

- Findings of the CDM Smith Report
- The submission by Redland City Council to the Shaping SEQ Plan review
- The State Growth Management Program, and
- The brief mention of the employment results from the 2021 Census, a matter that is explored in more detail below.

Council has stated that the Town Planning Report has gone some way to identifying that there is an undersupply of industrial zoned land within Redland City. Council has not specified what additional tests or data are required to fully satisfy the Council.

4 .2 Market update

The CDM Smith report dated December 2020 identified between 39 and 44ha of suitable zoned land available in Redland City in 2020. The report noted this land was "primarily contained within Redland Business Park" and there would be a "shortfall in industrial land supply of 9.1ha after 2035-2036".

At the time of the CDM Smith report, the Redlands Business Park had around 25 gross ha of vacant industry zoned land, that is about two thirds of the total supply identified for Redland City in the CDM Smith report.

The developers of the Redlands Business Park reported on 9 October that:[2]

- With the advent of COVID there has been a marked increase in activity at Redlands Business Park as working patterns have dramatically changed and businesses tend to locate closer to their workforces
- Stage 1 and 2 at RBP consisting of 10.16ha of net saleable land is completely sold and occupied
- Stage 3 consisting of 6.94ha of net saleable area was formally available for occupation in February 2023
    - 2.03ha has been retained by the principal
    - of the balance Stage 3 only Lot 40 (being 0.296ha) is available for sale
- Stage 4 (the final land release) consisting of 5.623ha of saleable land is under construction

[2] Correspondence from Garry Hargrave, Fox and Bell, 9 October 2023.

and will be available for occupation early 2024.

- Of the 24 allotments, 19 lots have been reserved by purchasers
- Only 5 are currently available for sale as per the attached plan. This represents less than 2.0ha of available land for sale
- It is probable by early 2024 there will be no further stock available for sale.

Land supply Redland Business Park, October 2023

Source: Redland Business Park

The Redland Business Park, the major source of industrial land supply identified in the CDM Smith Report has essentially been exhausted. The findings of the CDM Smith Report of 2020 have been overtaken by events and the industrial land supply in Redland will be exhausted well before the time projected in the CDM Smith Report. The supply thresholds identified in the SEQ Plan of 15 years, which were previously identified as under risk will not be achieved as demand has increased, and with it the existing supply diminished to critical levels.

4 .3 SEQ Plan review Update 2023-draft

4.3.1 Contextual SEQ Plan 2017

The SEQ Plan 2017 projects increasing employment self-containment in Redland City from 47% in 2011 to 49% in 2021 and increasing thereafter to 53% by 2041. This is the proportion of Redland City workers who work in Redland City. All the other workers have to travel elsewhere, mostly to Brisbane to obtain employment. The Report notes that SEQ is approaching a tipping point in terms of supply of industrial land, with key areas of the region approaching a critical shortfall of industrial land within the life of this plan, and as early as a ten year horizon. Industrial land demand within SEQ is anticipated to increase by around 60 per cent based on 2016 figures, representing demand for almost 5,000 hectares of additional industrial land.

Two key points to note:

- Rather than increasing from 2016 to 2021, employment self-containment in Redland City, declined in the period (2021 Census)
- The industrial land supply situation has deteriorated between the 2017 SEQ Plan and the 2023 SEQ Plan Update Draft, in particular in the southern Redland City.

4.3.2 SEQ Plan Update 2023

The Draft ShapingSEQ 2023 Update, published 3 years after the CDM Smith report and after the Town Planning Report accompanying the Development Application, significantly strengthens four key areas relating to the Application, two of which bear on the matters raised by Redland City Council and SARA. The key issues are:

- A priority for increased housing land supply
- A priority for increased industrial land supply
- A priority for employment generation, particularly for increased employment self-containment, and
- A robust evidence base, particularly greater accuracy and reliability of land supply data for residential and employment generating uses.

Each of these matters are relevant to the consideration of the Development Application for increased industrial land in the southern part of Redland City.

The provision of well-located homes close to jobs is a key outcome sought from the draft ShapingSEQ 2023 Update, including acceleration of the number and type of jobs across the region.

The ShapingSEQ Update aims to accelerate future jobs across SEQ, and provides strategies that enable:

- More jobs where the people are
- More people where the jobs are, and
- Better connections between where people live and work.

While trade-offs between competing demands for land are inevitable, the draft ShapingSEQ 2023 Update aims to protect and enhance employment land significant to the region and its current and future needs. An industrial land strategy is a core commitment.

The ratification of the SEQ Plan Update is both a sensible and necessary planning response to the challenges facing Redland City and aligns fully with the intended employment outcomes of the proposed industrial development.

4 .4 Population projections update

4.4.1 Population

In September 2023, the Queensland Government released the 2023 edition of the Queensland Population Projections. These projections are inextricably bound with the SEQ Plan 2023 Update.

Broadly the Redland City LGA is divided between the longer established area encompassing Capalaba SA3 and the newly developing area of Cleveland-Stradbroke SA3. The 2023 projections highlight the high growth expected in the southern Redland area (Cleveland-Stradbroke SA3) with an increase of 20,826 (22.0%) from 2021 to 2046. This contrasts with an increase of only 351 in the northern Redland City area (Capalaba SA3).

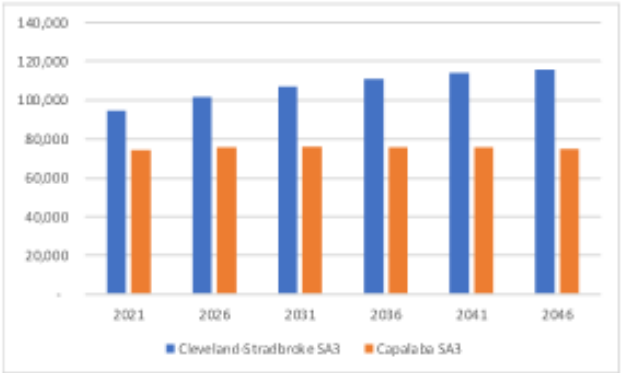
Comparative population growth Redland City SA3s, 2021-2046

SA3	2021	2026	2031	2036	2041	2046	Increase	Increase Percent
Cleveland-Stradbroke SA3	94,834	101,536	107,009	110,849	114,121	115,660	20,826	22.0%
Capalaba SA3	74541	75817	76110	75860	75577	74892	351	0.5%
Total	169,375	177,353	183,118	186,709	189,698	190,552	21,177	12.5%

Source: Queensland Population Projections, medium series, 2023 edition.

While the projection period to 2046 is shown for completeness, it extends beyond the 15 year planning horizon for industrial land supply. However, this time difference is not material to the argument of the relationship between population and workplace locations as the increase to 2036 represents more than three quarters (76.9 %) of the increase in Cleveland-Stradbroke SA3 from 2021 to 2046.

Comparative growth Cleveland-Stradbroke and Capalaba SA3s, 2021 -2046



Source: Queensland Population Projections, medium series, 2023 edition.

The SA2 areas in Cleveland-Stradbroke SA3 are shown in the following ABS map. The black dot marks the location of the proposed industrial lands development.

SA2s in Cleveland-Stradbroke SA3, 2021 boundaries

Source: ABS Maps
. Black dot shows subject site

4.4.2 Local employment

The 2021 Census results for Redland City for the relationship between place of residence population and employment showed that 48.2%, of the residents worked (employment participation rate). Applying this employment participation rate to the projected population in Cleveland-Stradbroke SA3 means that 10,037 net new jobs will be needed for the 2046 population. Not all of these will be local, but the Draft SEQ 2023 Update calls for a much improved relationship between place of living and place of work.

While the future is uncertain, two things are crystal clear. Merely ensuring land is available will not guarantee local employment, but unless land is available for local employment uses it will ensure there is insufficient local employment.

If Redland City responds positively to the directions and aspirations in the SEQ Plan Draft 2023 Update, and seeks to increase local employment self-containment from 50% to 70%, that would mean finding locations for an additional 7,000 jobs in the Cleveland-Stradbroke SA3 by 2046.

The task for the creation of new workplace locations in Redland SA2, and providing better links between where people live and work, is emphasised as nearly half (45.5%) the projected population increase in Cleveland-Stradbroke SA3 is projected to take place in Redland Bay SA2 alone. The southern SA2s in and around Redland Bay (Redland Bay, Sheldon-Mt Cotton, Victoria Point and Southern Moreton Bay Islands) account for:

- 53.9% of the Cleveland-Stradbroke SA3 total 2046 population, and
- 57.2 % of the increase of the Cleveland-Stradbroke SA3 total population from 2021 to 2046.

Almost 70% of this population increase (69.1%) in these southern areas is projected to be located in Redland Bay SA2.

Population increase Cleveland-Stradbroke SA3 by SA2, 2021 to 2046

SA2	2021	2046	Increase	Share of increase
Cleveland	16,075	22,286	38.6%	29.8%
Ormiston	6,446	6,612	2.6%	0.8%
Redland Bay	18,099	26,339	45.5%	39.6%
Sheldon - Mount Cotton	8,461	8,346	-1.4%	-0.5%
Thornlands	19,658	22,133	12.6%	11.9%
Victoria Point	15,330	15,568	1.5%	1.1%
North Stradbroke Island	2,191	2,247	2.5%	0.3%
Southern Moreton Bay Islands	8,574	12,129	41.5%	17.1%
Cleveland-Stradbroke SA3	94,834	115,660	22.0%	100.0%

Source: Queensland Population Projections, medium series, 2023 edition.

In summary:

- Virtually all of the increase in the projected population in Redland City to 2046 is projected to occur in the Cleveland-Stradbroke SA3
- Most of the increase in projected population 2021 to 2046 in the Cleveland-Stradbroke SA3 is in the southern SA2s
- Most of the increase in the population projected for the southern SA2s is in Redland Bay SA2, and
- On the basis of the desired improved relationship between where people live and where they work, Redland Bay is the place In Redland City where net new jobs are most needed.

The imperative for a much improved relationship between place of living and place of work is highlighted for Redland City generally and for Redland Bay SA2 specifically as:

- A very low and declining proportion of the population living in Redland City works in Redland City
- Most of the projected population growth is in the southern suburbs of Redland City, and in particular in Redland Bay SA2
- There is an insufficient supply of employment lands, particularly for industry land uses
- The transport and environmental burden will be greater for those living in the southern Redland City as most trips from the area for work purposes involve considerable travel to the northern parts of Redland City or to Brisbane, and
- The proposed location for the industrial estate is central to the areas of projected rapid population growth.

4.4.3 Employment on industrial lands

The 2021 Census results on a Place of Work basis for Redland City show low employment containment for Industries and Occupations typically associated with medium and light industry land use classified areas.

Based on the 2021 Census of Place of work results for Redland City, 20% of the employment could be accommodated in medium and light industry land use classified areas.[3]

The more workers employed locally means higher retained earnings and local expenditure, a lower age structure with more people in the economically active age group and considerably lower private and public transport costs and much lower environmental costs.

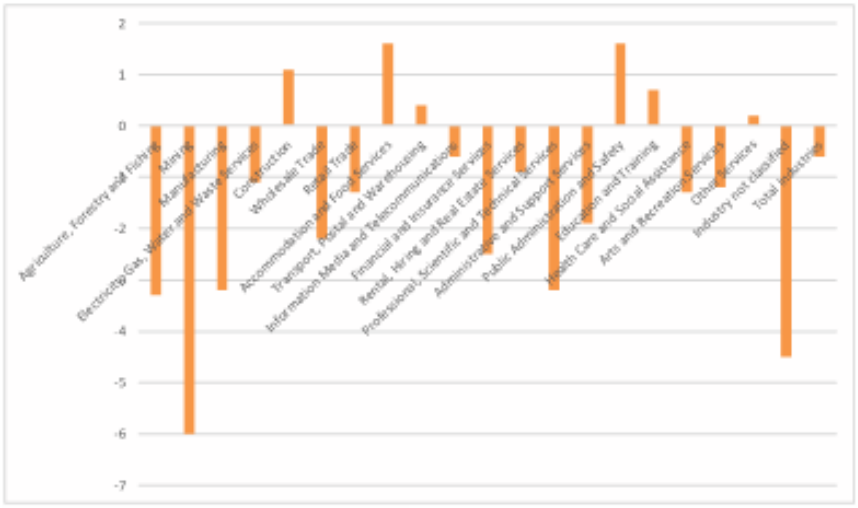
From 2016 to 2021, the employment self-containment in Redland City, which is the measure of the proportion of resident workers who are employed within Redland City:

- For total Employment fell from 42.9% to 42.3%
- For manufacturing industry employment, it fell from a low 32.7% to 29.5%
- For wholesale industry employment, it fell from 24.9% to 22.4%
- In many other sectors, such as Education, Public Administration, Accommodation and Food and Arts and Recreation, the employment self-containment improved, and
- For the Occupational group Machinery operators and drivers, the decline in local employment self-containment fell by three times that for the total workforce (1.9% compared with an overall decline of 0.6%).

Despite the increase in population, total workforce and resident workforce (those who lived and worked in Redland City) there were 150 fewer local residents employed in the manufacturing sector in 2021 than in 2016.

[3] Comprising ANZSIC Class Manufacture, and parts of ANZSIC sub-Classes, Construction Services, Repair and Maintenance, Rental and Hiring, Transport Services, Cleaning, Warehousing.

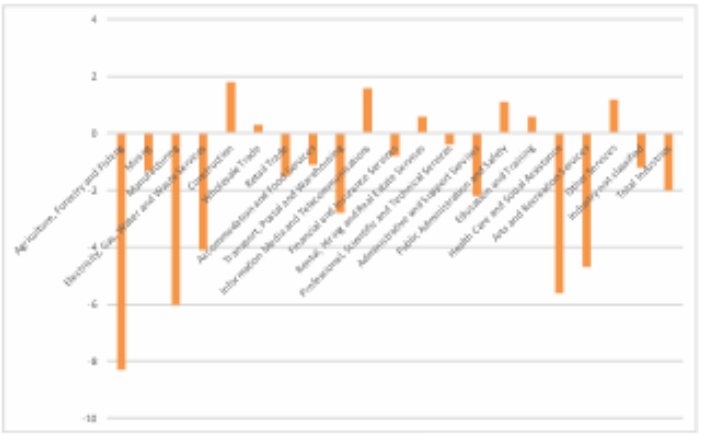
Change in employment self-containment Redland City, 2016 to 2021 (percentage point)



Source: Census/Economy iq. Redland City profile

The related concept of employment self-sufficiency, which is the proportion of local workers in the local area who also live in the Local Government Area shows the same deterioration from 2016 to 2021. For Manufacturing employment, employment self-sufficiency fell by 6.0 percentage points, three times the decline of 2.0% for all workers.

Change in employment self-sufficiency Redland City, 2016 to 2021 (percentage point)



Source: Census/Economy iq. Redland City profile

The CDM Smith report addressed needs in all Redland City, and when the supply is updated to 2023, the report reveals an imminent shortfall of industrial land in Redland City. The assessment below, using a different assessment methodology looks at the southern part of Redland City (where virtually all future population for Redland City is projected) and locally in Redland Bay SA2.

In relation to industrial employment lands, the extent of the future need can be estimated based on:

- The projected population, either as the total population for Redland Bay SA2 only or the increase in the Cleveland-Stradbroke SA3 population
- Projected employment participation rate (assumed constant at 2021 levels)
- Resulting employment (calculation)
- Level of employment self-containment (varies between held constant at 50% or increased to 70%)
- Likely ANZIC industry employment classes associated with light and medium industry land use classifications (percent held constant at 2021 levels for relevant ANZSIC industry classes and sub classes that best fit with the proposed uses)
- Average employment density rates in the CDM Smith Report (range from 35 to 40 workers per ha for industry uses)
- Development efficiency (relationship between net site area and gross area) from the CDM Smith Report ratio of 2:1 gross area to net site area).

There are a number of ways to assess future demand. A wide range of scenarios is possible but with each, the conclusion is clear when taking into account the CDM Smith assessment of the 2020 status and the update of that assessment for market take up from 2020 to 2023. Also, this assessment only considers the southern part of Redland City either all the Cleveland-Stradbroke SA3 or only the Redland Bay SA2.

To merely cater for the projected employment increase in Cleveland-Stradbroke SA3 with no increase in employment self-containment will require an additional 50-58 gross ha of industrial employment lands.

Scenario Testing- Cleveland- Stradbroke SA3, Population Increase to 2046

Population increase to 2046	20,826
Employment participation	48.0%
Jobs	9,996
Self-containment	50%
Local jobs in SA3	4,998
Industry share	20%
Industry Jobs	1,000
Scenario A, net jobs/ha	40
Scenario B, net jobs/ha	35
Net area at 40/ha	25.0
Net area at 30/ha	28.6
Gross area at 40/ha	50.0
Gross area at 35/ha	57.1

Source: Queensland population projections, ABS Census 2021 Redland City, CDM Smith report.

An increase to a self-containment of 70%, would require an additional 70 to 80 gross ha of industrial employment lands.

The following provides scenarios for the total amount of industrial employment lands that would be required in Redland Bay SA2, by 2046, under different employment self-containment assumptions.

Scenario Testing- Redland Bay SA2, total population at 2046

	50% self-containment	70% self-containment
Population at 2046	26,339	26,339
Employment participation	48.0%	48%
Jobs	12,643	12,643
Self-containment	50%	70%
Local jobs in SA3	6,321	8,850
Industry share	20%	20%
Industry Jobs	1,264	1,770
Scenario A, net jobs/ha	40	40
Scenario B, net jobs/ha	35	35
Net area at 40/ha	31.6	44.3
Net area at 30/ha	36.1	50.6
Gross area at 40/ha	63.2	88.5
Gross area at 35/ha	72.2	101.1

Source: Queensland population projections, ABS Census 2021 Redland City, CDM Smith report.

To cater for the estimated employment associated with industry land uses to meet the needs of the Population, and at stable or increasing employment self-containment levels, Redland Bay SA2 would require a total of between 63 and 101ha gross of appropriately zoned land.

The supply of such land is not available. The supply will be assisted by the approval of the Development Application for the subject land.

This data indicates that for many sectors the planning and economic systems in Redland City were meeting the need of local residents and were contributing to higher local incomes and expenditure, but in relation to the manufacturing industry, a core component of medium industry land, this was not happening. The same pattern occurred in relation to the occupation group, machinery operators and drivers, again most likely to be employed on medium industry land.

The decline in industries and occupations most strongly associated with medium impact industry should be a significant concern for Redland City Council.

The analysis strongly indicates a weakness in the local economy, an area where the State is putting considerable priority and other technical developments such as Industry 4.0 are driving more high value workforce opportunities. Redland City missed out in the past and runs the risk of missing out in the future. Local people who were wanting to work locally in industries often associated with medium industry land uses were missing out.

The alternative to suppling sufficient land to meet demand is to willingly accept the consequences of:

- Lower employment self-containment
- Longer trips to work
- Higher environmental costs
- Lower retained income
- Lower local spending
- Lower retained Gross Regional Product and Income

All planning decisions involve a balance. These are matters that the Redland City Council must consider in balancing choices concerning competing land uses.

5 Response to RFI

5.1 SARA

The SEQ Plan Update 2023 Draft accepts the need for additional industrial land in Redland City. If the Draft SEQ Plan is adopted, then the matter is only one of timing. However, it is apparent without going into a detailed assessment that:

The development will have a social, economic and environmental benefit for the community that that outweighs—

- Any adverse impact of the development on a matter or thing stated in the SEQ regional plan, table 11b, and
- The desirability of achieving the goals, elements and strategies stated in the SEQ Regional Plan particularly the goals, elements and strategies about—
    - consolidating urban development in the SEQ urban footprint; and
    - preventing land fragmentation in the SEQ regional landscape and rural production area; and
    - There will be a significant adverse economic, social and environmental impact on the community if the development is not carried out.

The economic assessment and the data on location of future population, the market updates, the delivery of benefits and the avoidance of environmental costs establishes that the proposed development fulfills an overriding need which out-weighs any potential conflict with the planning intent.

In effect the Draft SEQ 2023 Update has answered these questions. This assessment confirms that view by showing how the development can help achieve the objectives of the Draft SEQ Plan.

5.2 Redland City

Once the supply of industrial land is updated to 2023, the emerging shortage of industrial land in Redland City projected by CDM Smith in 2020 should urgently drive remedial action. There is effectively no buffer of industrial medium impact employment land.

This analysis has shown that the greatest need is in the southern Redland City where virtually all the population and residential based labour force will be located. Within the southern Redland City, the greatest need is in Redland Bay SA2, where the bulk of the projected future population will be located.

The proposed development, the subject of the DA, is ideally placed to meet some of the need identified. The development would contribute to:

- Increased non-residential building and construction
- Higher employment self-containment
- Shorter trips to work
- Lower environmental costs
- Higher retained income
- Higher local spending, and
- Higher retained Gross Regional Product and Income.

In summary, in relation to each of Council's main comments:

> *The information provided within the town planning report goes some way to identify that there is an undersupply of industrial zoned land within Redland City.*

Market update since 2020 reaffirms the undersupply of industrial zoned land within Redland City, particularly in the southern part of the city.

> *The report largely however refers to reports commissioned by Redland City Council, which identifies that there isn't an industrial land shortfall until the late 2030s.*

The CDM Smith Report has been overtaken by events between 2020 and 2023 and the industrial land supply shortfall is imminent and will significantly worsen if action is not taken to address the immediate and longer term needs.

Notwithstanding this, the CDM Smith identifies a significant shortfall in industrial land supply in Redland City. They have calculated a 9.1ha deficit in supply in 2035-36. It is noted for land markets to efficiently balance supply and demand pressures requires 25years of planned land supply. 15 years land supply is considered an absolute minimum for best practice planning.

At page 120 the CDM Smith report states:

"This shortfall was to be accommodated within the Southern Thornlands Potential Future Growth Area. However, advice from Council has been that locating population serving employment outside the PFGA should be considered on sites adjacent to the Capalaba MIBA and Redlands Business Park."

The Economic Feasibility Assessment for the Southern Thornlands Potential Future Growth Area suggests the MIBA component will occur over the longer term. CDM Smith states*" That the MIBA precinct* [within the STPFGA] *would not be established prior to 2035-2036."* This assessment is supported.

Thus, the CDM Smith report highlights an imminent gap in the provision of industrial land in Redland City.

The CDM Smith report concludes in its last sentence at Page 122 *"It is suggested that raw land of approximately 20-25 hectares is identified to accommodate this future industrial land within Redland City to 2040-41."*

The STPFGA is located approximately 9 kms north of the subject site and from the increasing population centres of Redland Bay and the Shoreline development. Approving the Development Application will assist in fulfilling one of the strategies of Shaping SEQ to locate jobs and employment as close as possible to where people live.

> *Council can consider any other 'relevant matters' put forward in support of the application, in accordance with s45 of Planning Act 2016. In light of the above conflict, it is considered that compelling matters would need to be presented, in order to justify that the proposed land uses would be in the public interest to approve.*

The public interest test is clearly demonstrated by the economic, employment, demographic and environmental benefits that would flow from the proposed industry uses compared with the existing uses.

20 GILES ROAD **REDLAND BAY** LANDSCAPE MASTERPLAN

Amended in red
10/11/2025

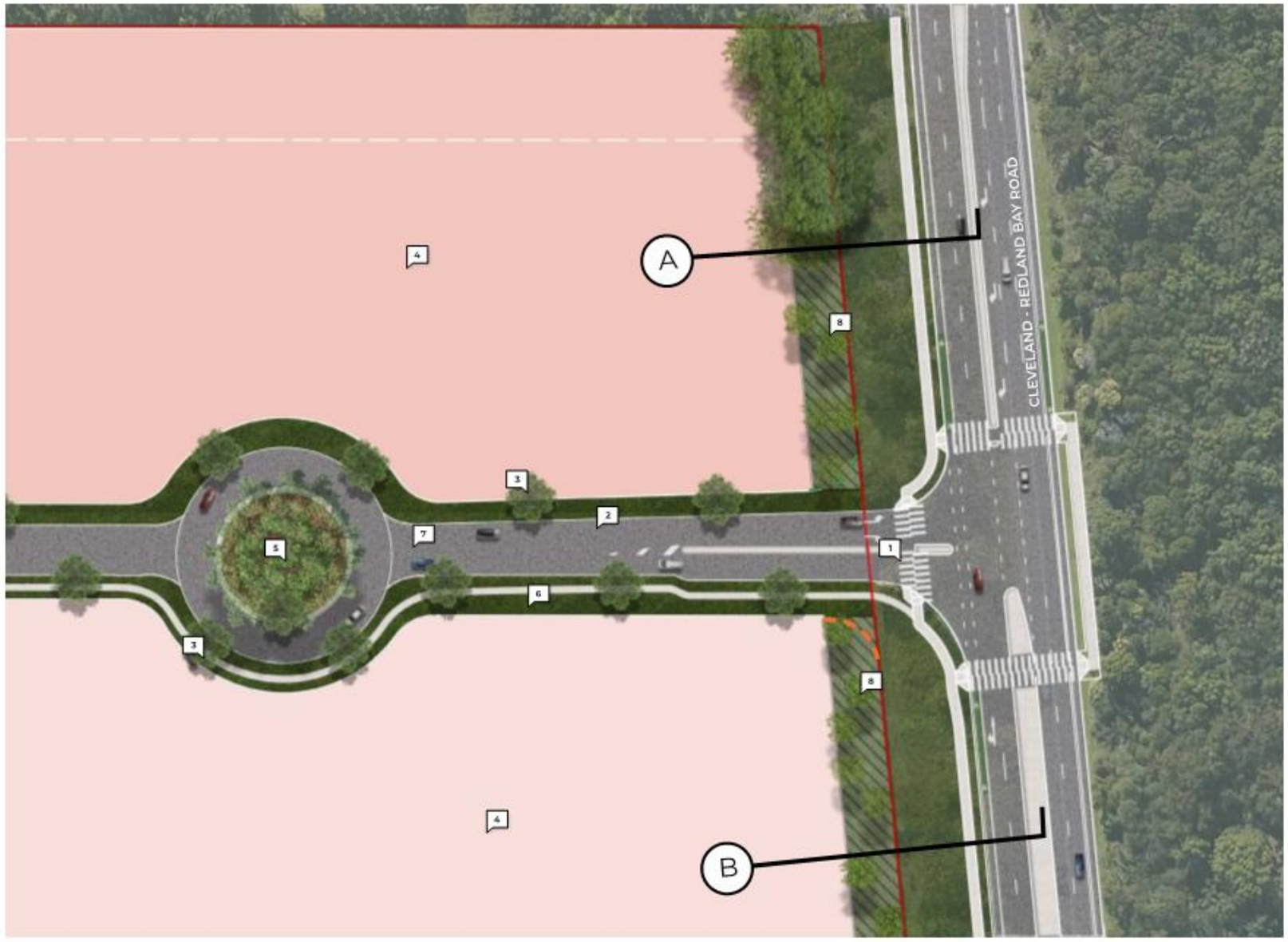
LEGEND

- SITE BOUNDARY
- EXISTING TREES TO BE RETAINED
1. INDICATIVE VEHICLE ACCESS VIA CLEVELAND - REDLAND BAY ROAD
2. EXISTING LEGAL ACCESS AND FUTURE EMERGENCY EGRESS
3. INDICATIVE BIO AND DETENTION BASIN
4. 15m LANDSCAPE BUFFER TO FRONTAGE
5. ~~INDICATIVE 20.0M WIDE INTERNAL ROAD WITH FOOTPATH (Not part of this application)~~
6. ~~INDICATIVE 22.0M WIDE INTERNAL ROAD WITH FOOTPATH (Not part of this application)~~
7. ~~INDICATIVE 26.0M WIDE INTERNAL ROAD WITH FOOTPATH (Not part of this application)~~
8. STREET TREES THROUGHOUT
9. INDICATIVE FUTURE DEVELOPMENT AREA
10. 60m LANDSCAPE BUFFER
    - Consisting of 40m of native vegetation rehabilitation and 17m of low fuel transistion buffer.
11. ~~PUBLIC OPEN SPACE/~~ CONSERVATION AREA
12. 24M BUSHFIRE MANAGEMENT ZONE

INDICATIVE FAUNA EXCLUSION FENCING
1.8M COLOURBOND FENCE OR
SEMI-TRANSPARENT FAUNA-EXCLUSION FENCING
Subject to bushfire and ecology requirments. Final design to be determined at DPW

20 GILES ROAD **REDLAND BAY**

CLEVELAND - REDLAND BAY ROAD INTERFACE



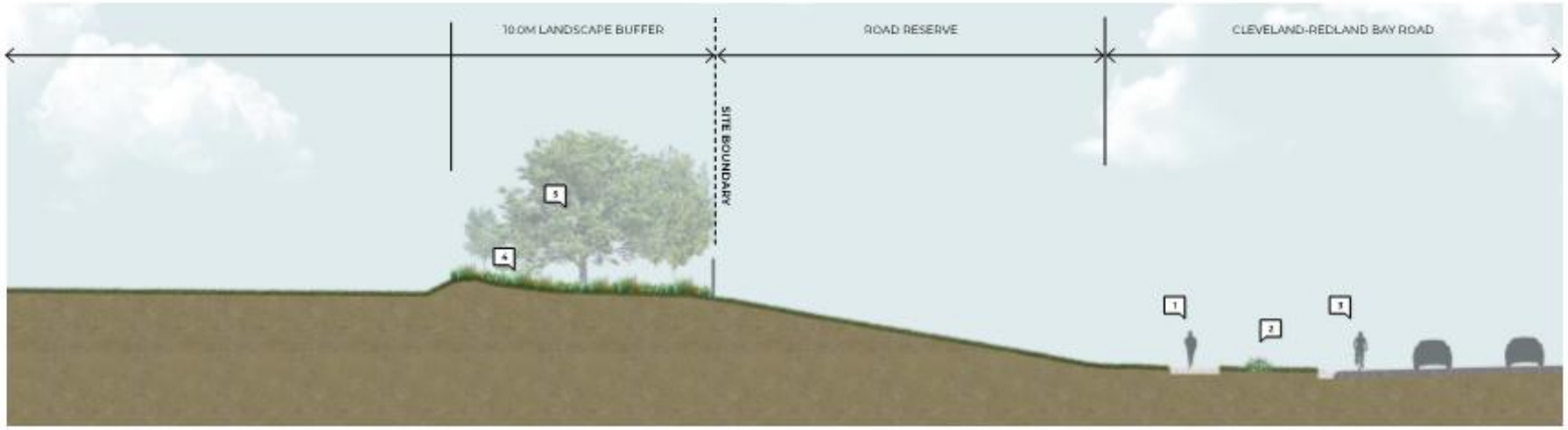
LEGEND

- SITE BOUNDARY
- LANDSCAPE FRONTAGE TREATMENT
- INDICATIVE ENTRY FEATURE LOCATION

1. VEHICLE ACCESS VIA CLEVELAND - REDLAND BAY ROAD
2. INDICATIVE 26M WIDE INTERNAL ROAD WITH FOOTPATH
3. STREET TREES THROUGHOUT
4. INDICATIVE LOT LAYOUT
5. LANDSCAPE ISLAND
6. 4.0M VERGE
7. INDUSTRIAL COLLECTOR STREET TO RCC STANDARDS
8. 15m WIDE LANDSCAPE BUFFER WITH SUPPLEMENTARY PLANTING TO EXISTING VEGETATION

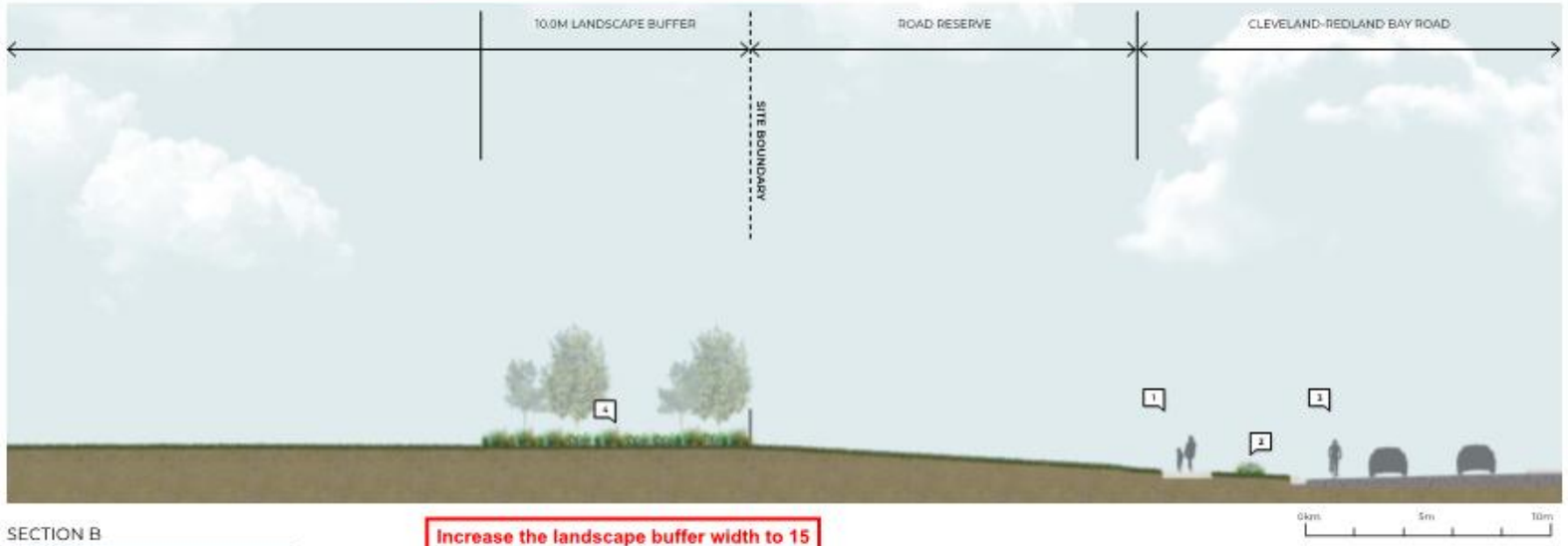
Amended in red
10/11/2025

20 GILES ROAD **REDLAND BAY** SECTIONS



SECTION A

Increase the landscape buffer width to 15 m and illustrate large canopy trees and screening vegetation at appropriate mature scale.



SECTION B

Increase the landscape buffer width to 15 m and illustrate large canopy trees and screening vegetation at appropriate mature scale.

LEGEND

1. 2.0M FOOTPATH
2. LOW LEVEL PLANTING
3. CYCLE LANE
4. 15m LANDSCAPE BUFFER
5. EXISTING TREES TO BE RETAINED

Amended in red
10/11/2025

20 GILES ROAD **REDLAND BAY**

INDICATIVE PLANT PALETTE

GROUNDCOVERS

CAREX appressa

REMOVE & REPLACE

~~CURCULIGO capitulata~~

~~ERIGERON karvinskianus~~

FICINIA nodosa

GAHNIA aspera

REMOVE & REPLACE

~~HYMENOCALLIS littoralis~~

LOMANDRA longifolia

MYOPORUM parvifolium

VIOLA hederacea

SHRUBS

AUSTROMYRTUS inophloia

BAECKEA frutescens

CALLISTEMON viminalis

REMOVE & REPLACE

~~CORDYLINE rubra~~

LEPTOSPERMUM flavescens

TREES

ACMENA smithii

BANKSIA integrifolia

ELAEOCARPUS obovatus

FLINDERSIA australis

GLOCHIDION ferdinandi

STENOCARPUS sinuatus

SYZYGIUM oleosum

REMOVE & REPLACE

~~CUPANIOPSIS anacardioides~~

CALLITRIS columellaris

ARAUCARIA cunninghamii

Amended in red
10/11/2025

JTENVIRONMENTAL
ENGINEERING
CONSULTANTS

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Application Details	
Defined Use	Preliminary Approval for MCU – Medium Impact Industry
Street Address	20 Giles Road, Redland Bay
Client	Carndale Pty Ltd
Local Government Area	Redland City Council
Date	February 2025

In support of an application for

Noise Impact Assessment

MCU for Medium Impact Industry

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Limitations

This report was prepared for the sole use of Carndale Pty Ltd in accordance with generally accepted consulting practice. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has not been prepared for use by parties other than the client, the owner and their respective consulting advisors. It may not contain sufficient information for the purposes of other parties or for other uses. It is recommended that any works planned by others and relating specifically to the content of this report be reviewed by JT Environmental Pty Ltd to verify that the intent of our recommendations is properly reflected in the final design. To the best of our knowledge, information contained in this report is accurate at the date of issue.

Document Status					
Rev No.	**Author**	**Reviewer**	**Approved for Issue**		
			Name	**Signature**	**Date**
A	DRH	TCD	**T.Dodd**		**01.10.23**
B	DRH	TCD	**T.Dodd**		**07.10.23**
C	DRH	TCD	**T.Dodd**		**17.10.23**
D	DRH	TCD	**T.Dodd**		**25.10.23**
E	DRH	TCD	**T.Dodd**		**27.10.23**
F	DRH	TCD	**T.Dodd**		**22.09.24**
G	DRH	TCD	**T.Dodd**		**15.09.24**
H	DRH	TCD	**T.Dodd**		**29.10.24**
I	DRH	TCD	**T.Dodd**		**27.02.25**
J	DRH	TCD	**T.Dodd**		**03.03.25**

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 4

1.1 SITE DETAILS 4
1.2 APPLICATION DETAILS 4
1.3 RCC RFI RESPONSE- 5TH SEPTEMBER 2024 4
1.4 RCC EXPANDED USE AREA SW OF DEVELOPMENT - 25TH FEBRUARY 2025 9

2.0 INTRODUCTION 11

1.2 LIMITATIONS OF THE NIA 12

3.0 SITE DESCRIPTION 13

3.1 SITE LOCATION 13
3.2 EXISTING ENVIRONMENT & SURROUNING USES 14
3.2 PROPOSED DEVELOPMENT 14

4.0 EQUIPMENT AND PROCEDURES 16

4.1 INSTRUMENTATION 16
4.2 MEASUREMENT PROCEDURE 16

5.0 MEASURED NOISE LEVELS 17

5.1 MEASURED ROAD EXISTING NOISE LEVELS 17

6.0 NOISE CRITERIA AND LIMITS 20

6.1 ADOPTED CRITERION 20
6.2 EPP NOISE 2019 20

7.0 ASSESSMENT OF NOISE IMPACT 22

7.1 ON-SITE CAR PARKING NOISE LEVELS 22
7.2 FIXED PLANT, EQUIPMENT NOISE AND VEHICLE AND ACCESS NOISE 27

8.0 CONCLUSIONS 30

9.0 REFERENCES 32

10.0 APPENDIX 33

10.1 APPENDIX A – SITE PLAN 33
10.2 APPENDIX B – NOISE CONTOUR MAPPING – ALL EMISSIONS 37
10.3 APPENDIX C – MODELLING OUTPUT FROM ALL SOURCES FOR ALL RECEPTORS 38
10.4 APPENDIX D – NOISE EMISSION SOURCE MAPS POINT EMISSIONS & LINE EMISSIONS (WITH COORDINATES) 60

1.0 EXECUTIVE SUMMARY

1.1 SITE DETAILS

Local Government Authority:	Redland City Council
Address of Site:	20 Giles Road, Redland Bay
Area Classification:	MCU - Medium Impact Industry
Name of Owner/s:	Carndale Pty Ltd

1.2 APPLICATION DETAILS

Type of Application:	Preliminary Approval for MCU Medium Impact Industry
Contact Person:	Tyson Dodd
Our Reference:	JT2239

1.3 RCC RFI RESPONSE- 5TH SEPTEMBER 2024

1. **Ambient Noise Monitoring**

Action

a) Clarify the ambient noise data provided in terms of dates and data and provide corrected RBL values specific to the measured data.

Response: Updated with specific excerpts from raw data for RBL.

b) Undertake further ambient noise monitoring at a location representative of dwellings to the West of the development site, specifically the house at 35 Giles Road.

Response: Additional monitoring conducted at ML2 in September 2024

2. **Assessment Methodology**

- Justification for Criteria – the report considers background plus criteria as well as Acoustic Quality Objectives. Use of background plus criteria is considered more relevant in low ambient noise areas which would be the residences to the West.
  Response: Criterion allocated to the assessment has adopted a background + criterion however the PoD refers to the AQO's from the EPP Noise 2019.
- The report does not identify proposed operating hours of development – nor does it reference the Plan of Development in respect to the PO's and AO's relevant to noise and operating hours.
  Response: AO and PO reflecting the PoD have been considered in the assessment of the future development of the allotments between 6am-10pm Monday – Saturday and appropriate acoustic screening where/if necessary. The PoD refers to the EPP Noise 2019 AQO's which has been referenced within the context of the NIA as required in Qld together with consideration of the background + criterion.

- The report identifies that noise modelling was undertaken for noise sources (Table 2 in Section 7, including Car start and drive in carpark, car door slamming/closing, truck manoeuvring, truck reverse beeper, forklift and fixed plant and equipment. There is no justification for the noise source levels adopted nor detail provided in respect to activity rates such as number of events per time period upon which the noise assessment has been prepared. On this basis, justification of the source levels and information on activity rates including vehicle movement volumes on internal roads and sites used in the noise modelling should be provided along with the source of the vehicle movement data. This should be related to all time periods in which the uses will operate.
  Response: Updated and additional information included. All noise sources included (Laeq) cumulative for the modelling scenario for a conservative assessment with all allotments having emissions simultaneously. While this is highly unlikely, the overview of the entire development with these noise sources for each allotment active provides an unlikely worst-case scenario.
- The report identifies the modelling has taken account of buildings with openings, given that this is a Preliminary Approval for concept masterplan there is no specific design of the site layout in terms of uses or buildings. On this basis, detail on the representation of future uses and buildings on the land is required to better understand the basis for the predicted noise levels.
  Response: This office has positioned building on the allotments to assist in placing vehicles and external fixed mechanical plant on the allotments. This has been conducted to provide a conservative noise assessment with sources across the allotments. These have been provided for review in the Appendix of this report.
- The reporting in Table 2 (section 7) identifies the noise sources modelled. The listed sources however do not appear to include potential noise generated within future buildings nor do the source noise levels provided assist in understanding the activity rates used in representing each source. Specifically, given that the report in Section 7.1 – On Site Car Parking Noise Levels states that modelling has been undertaken to incorporate multiple emission locations across the subject site – further detail on the location of these emissions is required, specifically a drawing showing noise source locations and reference to source noise levels used in the predictions.
  Response: A full list of coordinates has been provided as part of the modelling undertaken with simulating noise emissions across the site. Further site mapping has been also incorporated to include locations for each allotment, reflecting on the PoD Requirements for Accepted Development. Furthermore, the Appendix provide a screenshot of the GUI of the modelling with the positions of vehicles modelled on the allotments.
- Table 4 in Section 7.1 is stated above to provide separation distances to sensitive receptors, but the table only provides coordinate data.
  Response: Update
- The concluding paragraph in Section 7.1 below Table 4 states that "given the separation distance to the nearest proposed allotments and subsequent future building positions and associated emissions to surrounding receptors ….". The report does not identify the separation distances and if relying upon building positions, provide information on the assumed location, orientation and form of future buildings used in the noise modelling.

Response: The PEN3D2000 GUI modelling interface has been provided in the NIA which provides an indication of the building positions this office has modelled. As this is an ROL, the future building positions by the applicant are not known at this stage other than compliance with a PoD.

The building positions has been incorporated to allot positioning of vehicles entering based on road frontage, and staff parking cars etc.

- The modelling notes below Table 4 include 1 which state "internal and external sources have been modelled as being present simultaneously". Identify what sources and specifically what internal sources were modelled as the detail in the report does not assist in this regard. Further note 2 identifies multiple truck movements and carparking. Provide further information on actual activity rates/numbers of sources modelled and a drawing showing their locations.
  Response: The PEN3D2000 full modelling output provides the noise sources per allotment and resulting emissions from each noise source. An updated Development plan and positions of assumed emissions has been provided to provide for the Noise Contour Mapping.
- Note 3 identifies openings in the south western and northern facades as being opened – provide details of what building, their location, orientation and openings to clarify the modelling.
  Response: Buildings were simulated based on a general design and position in lieu of an actual finalised building footprint. This was done to serve the assessment officer in a conservative review of possible emission positions and likely building footprints with associated manoeuvring on-site. This approach has been modified accordingly and further information provided to justify this conservative approach
- Note 4 discusses full site operations from access, staff emissions, operational forklifts, delivery and distribution trucks and plant and equipment. Clarify each of these sources and their locations, noting that access and staff emissions are not referenced in the source noises list in Table 2.
  Response: Access relates to vehicle movements into and out of the site by staff. Staff to each site will likely drive to work in their vehicle, therefore the PEN3D2000 modelling incorporates vehicles entering each site, and parking which includes the closing of vehicle doors. Therefore, staff noise is referenced by way of their access to each site.
- Note 4 also states "Note: positions and spread across the site for modelling purpose are indicated and not accurate based on future building positions. Emission sources have been placed around the boundaries". This should be clarified and a drawing provided showing source and building locations adopted for the assessment.
  Response: As noted previously, the possible placement of buildings and openings has been included by this office to provide an extremely conservative PEN3D2000 modelling scenario of the development based on:
  - **Allotment positions;**
  - **Possible building positions based on road frontages;**
  - **Building positions by this office allows the possible vehicle movement templates on each lot**

- **Providing the PEN3D2000 GUI screenshot provides the exact (and proof of) the positions and opening relevant to the noise contour mapping provided.**

- The report should also provide recommendations in respect to future development on the site with respect to layout in regard to building openings and external use areas where within proximity of noise sensitive receptors. In addition, advice on potential noise mitigation measures in terms of noise barriers, buildings as barriers etc should be included.
  Response: PEN3D2000 modelling HAS incorporated likely building positions and potential openings to buildings relevant to the road frontages of the allotment. Of note is that this has been completed by this office with the likely positions given the infancy of this application as an ROL and not as an exact development with building positions. Undertaking this has allowed this office to model the possible positions/movement of the use of forklifts as per the previous NIA version.
- The report should reference the POD and make clear the relevant sections to noise and how the report provided compares to the PO's and AO's and where there may be departure from these on the basis of the site-specific assessment. Of immediate note is PO32 which sets mechanical plant noise limits which are much higher than the derived noise criteria in the noise report – would suggest that this PO is not appropriate in allowing noise levels much higher than the noise reporting suggests (and would be a matter for conditions).
  Response: General plant and equipment noise at the source are provided in the range as detailed.
  PO32 Acoustic screening of mechanical plant is required to achieve the following maximum noise levels:
  55 dB(A) between 7am and 10pm; and
  45 dB(A) between 10pm and 7am.

  It is noted that PO32 makes reference to 55dB(A) for external mechanical plant, this office is of the opinion that this criterion is/should be in conjunction with PO31, being " Where a site has a common boundary with a noise sensitive area". I.e., all allotments along the western edge of the proposed development should ensure that any mechanical plant achieves 55dB(A). This is also in keeping with the AQO's of the EPP Noise 2019. On this basis, all fixed external plant external plant has been modelled in line with PO32, with the addition of internal modelling within the likely building positions to account for any other associated tool emissions from possible future business.

  Further to note is that PO32 is assumed to be:
  - 55dB(A) **Leq-t** between 7am and 10pm; and
  - 45dB(A) **Leq-t** between 10pm and 7am and

- The report should also consider cumulative impacts of Redlands Business Park to the South in conjunction with representing the proposed development on 20 Giles Road – noting that Redlands Business Park is still being developed in the interface area to 20 and 34 Giles Road and hence ambient monitoring at the present time would not take account of the impacts of RBP now (as when fully developed). This is in part the purpose of background creep type noise criteria, but as there are no actual

background noise levels relevant to 34 Giles Road provided in the assessment there is no basis for consideration of impact.
Response: In alignment with the PoD, modelling has now incorporated emission sources at the southern boundary to the Redlands Business Park South based on the PoD emission sources (unattenuated).

Requirement of RAD68, adoption of the Acoustic Quality Objectives of the EEP Noise 2019 are to be achieved. Therefore, this reporting has considered the AQO's as required. Furthermore, the EPP Noise 2019 make no requirement for Background Creep type of noise. Consideration of the Background + criterions with updated noise monitoring have occurred in addition to RAD72.

- Whilst the report provides tabulated predicted noise levels and tabulated source coordinates and source levels, without a drawing which shows the source locations, technical review cannot be undertaken to readily understand this data.
  Response: The full output noise modelling provided complete coordinates for the noise sources together with the PEN3D2000 GUI for reference. A full site plan and position of noise sources has been provided for a clearer view for the assessment officer.
- The house at 34 Giles Road is within approximately 150-180 metres of future use areas. This is relatively close in a rural area.
- Earthworks design shows fill to northwestern pad. With the house at 34 Giles Road sited at around RL48, with natural surface falling to the east, the house is elevated above the pad areas and any topographic screening, specifically to Pad 4 appears negligible, especially where southwest corner of Pad 4 is up to 4 metres above natural surface level on the boundary to 34 Giles Road.
- The noise report should clearly state the basis of the representation of the proposed development including the earthworks design and natural surface.

1.4 RCC EXPANDED USE AREA SW OF DEVELOPMENT - 25TH FEBRUARY 2025

Item: Request for an expanded PEN3D2000 modelling to account for an expanded use area in the SW corner of the development.

Response: Updated modelling has been conducted for the site to account for the expanded developable area in the SW corner of the site. The expanded area will result in earthworks into an area that was previously allocated as "Greenspace" which will result in the greenspace area being squared off to the boundary as noted below.

With the addition of the further developable area, a 2.2m Acoustic barrier relative to the final FFL of the hardstand is required to provided additional attenuation from movements within the area to the Western Receptor RL1. This will ensure that the day and night-time Criterion is achieved and the EPP AQO's are also achieved.

- Updated modelling has included this area being established with noise sources as allocated to each of the other future allotments of the development including:
  - Line noise source for vehicle movement;
  - Point source noise levels from likely plants equipment (A/C etc)
  - Car/truck door slams etc
- Modelling has identified that there is possible potential for noise emissions at the RL1 (western receptor) above the identified criterion

2.0 INTRODUCTION

JT Environmental has been commissioned by Carndale to prepare a Noise Impact Assessment, to review the proposed use and investigate the future operations of the site for Medium Impact Industry uses. This report has been prepared to further investigate and recommend the operational conditions that would be required to ensure that the site and future operations has negligible impacts on the locality in respect to the surrounding sensitive uses.

The Plan of Layout is presented in **Appendix A.**

The purpose of this document is to provide a Noise Impact Assessment that addresses Redland City Council's code concerns for the establishment of the layout proposed and future possible emissions to any surrounding residential uses from. Furthermore, the Environmental Protection (Noise) Policy has been referenced and compliance demonstrated herein this report.

On the basis of the size of the proposed use following review and scoping and the separation distance from the site to the existing sensitive uses in the locality, this assessment is required to demonstrate that the proposed development can be located on-site with minimal impacts. Sensitive uses being of most concern include residential dwellings to the east across Cleveland Redland Bay Road and west at rural residential receptors however it is expected that this allotment will transition to the proposed medium impact industry uses with negligible impacts on surround receptors. Initial review and consideration from site location inspections indicates that the size/scale of the proposed use, separation and the historical review of the locality there is unlikely to be off-site impacts from the proposal. Consideration of the ambient noise environment indicates dominance by road traffic noise.

The intent of this investigation is to provide direction to ensure that the proposed development is designed, constructed and operated in a manner that will achieve noise levels where appropriate for the locality for adjoining sensitive receptors. On review of the current design the possible building positions will be of a spec industry type construction of a substantial nature.

This NIA seeks to assess:

- Determined through conducting an ambient noise assessment given the location of the site to surrounding uses;
- Noise impacts from deliveries and any fixed plant/equipment to appropriate allotments;
- Noise Impacts from the proposed development from on-site car parking and manoeuvring; and
- To recommend noise control measures to ensure compliance with the relevant noise criteria (council objectives and Australian Standards) where necessary;
- Determine ability of the business to operate outside of the 7am-6pm periods.

This assessment has been conducted with reference to Australian Standard AS 1055:1997 *Description and Measurement of Environmental Noise* Parts 1, 2 and 3 and in accordance with the Queensland Environmental Protection (Noise) Policy 2019 [EPP(Noise)], the Environmental Protection Agency (EPA) Noise Measurement Manual (2000) and the Environmental Protection Agency's EcoAccess Guideline "Planning for Noise Control".

1.2 LIMITATIONS OF THE NIA

It is stressed that this NIA does not negate the need for site Owner/s, owner of the development to implement the recommendations of this report. The recommendations provided are to be implemented on site not only to gain the relevant development permits or approvals but to ensure that the site will maintain an appropriate level of environmental performance and most importantly, acoustic amenity. Further, compliance with this NIA does not necessarily exempt the operators from prosecution or ensure compliance with legislation.

3.0 SITE DESCRIPTION

3.1 SITE LOCATION

Figure 1: Site estate with overlay in google. Receptor Locations (RL) identified and ML1 and ML2.

North – Rural allotments;
South – Industrial/Warehousing allotments;
East – Cleveland Redland Bay Road and residential dwellings;
West – Large Rural Lots and receptors.

Figure 1.1: SPP Aerial view detailing current extent of works in the locality.

3.2 EXISTING ENVIRONMENT & SURROUNING USES

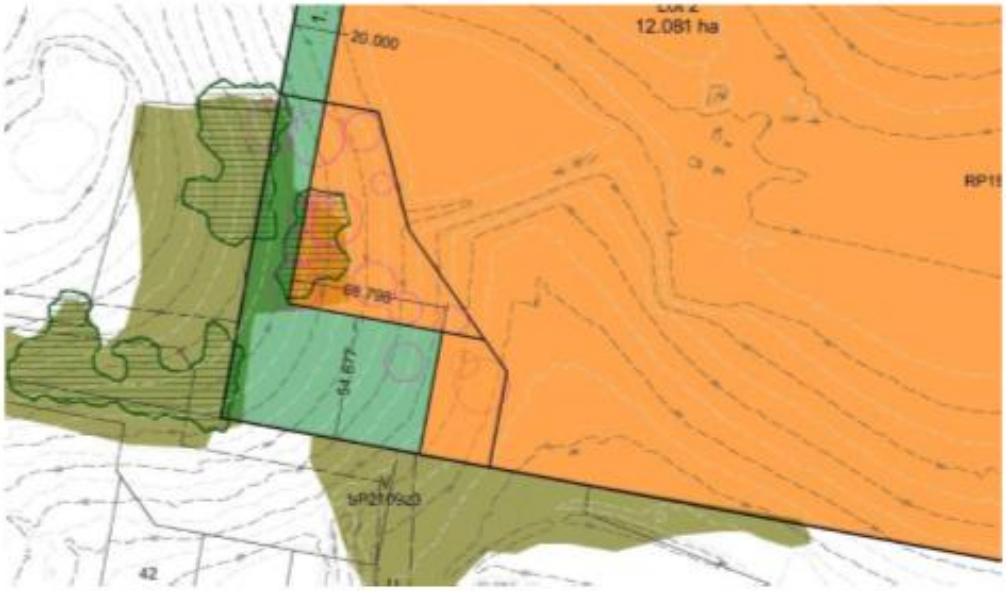
The immediate land surrounding the development site is dominated by a mixture of industrial/warehousing to the south and residential to the east across the line noise source.

Figure 2: Surrounding land use (source: Redland City Council Planning Scheme).

3.2 PROPOSED DEVELOPMENT

Figure 3: Specific site layout.

Figure 3.1: Updated modelling layout to include additional hardstand/allotment levels in the SW corner of the development:



4.0 EQUIPMENT AND PROCEDURES

4.1 INSTRUMENTATION

- Norsonic 131 (Type 1) Noise Logger– Field Calibration of 94.2dB(A) prior to sampling and 94.1dB(A) post samplings
  - Microphone Height = 1.5m
  - Orientation – pointing vertically
  - SLM Time Weighting = Fast
  - SLM Frequency Weighting = A
  - Measurement period = 15min ; and
- Rion NC 73 Calibrator

The operation of the sound level measuring equipment was field calibrated to the reference signal and checked at the end of each measurement session to ensure it was within 0.5dB of the reference signal. All instrumentation used in this assessment hold a current calibration certificate from a certified NATA calibration laboratory.

4.2 MEASUREMENT PROCEDURE

ML1 - Ambient noise was measured at the site from the 11th – 16th September 2023. The resultant noise levels are provided in **Table 1** and graphical representation in the Appendix of this report. **As the proposed future industrial/warehousing sites will be accessed by staff prior to 7am and after 6pm, adoption of the lower ambient noise levels has been considered appropriate by this consultancy. Furthermore, modelling undertake from the full site operations (day-time emissions profile) will be assessed against the night-time criterion to account for early morning access.**

5.0 MEASURED NOISE LEVELS

5.1 MEASURED ROAD EXISTING NOISE LEVELS

Existing free-field noise exposure levels were determined and the typical noise levels measured at ML1 as detailed in the attached site plan are presented in **Table 1**. The ambient noise of the area was dominated by general environmental noise and road traffic noise along Cleveland Redland Bay Road.

Figure 4: Proposed site with monitoring logger location (ML1 & ML2) and sensitive receptors (RL1-8).

Existing free-field noise exposure levels were determined and the typical noise levels measured at ML1 as detailed in the attached site plan are presented in Table 2. The ambient noise of the area was dominated by road traffic noise. Summaries of these results are shown in Table 1.0. **Note: site monitoring was started on Monday 11th – 16th September 2023.**

Table 1: Measured Ambient Noise Levels ML1 &ML2.

- Fast response, 15min sample
- SLM Rion 23, microphone @1.5m
- Weather noted as generally fine
- ML1 Monitoring conducted from 11th – 16th September 2023.
- ML1 Monitoring conducted from 9th – 15th September 2024.
- Daily graphs provided in the Appendix

Table 1: Measured Ambient Noise Levels ML1 & ML2.

Parameter	Period	Recorded Noise Levels ML1	Recorded Noise Levels ML2
L1	Daytime (7am-6pm)	65.9	65.8
	Evening (6pm-10pm)	60.5	77.9
	Night-time (10pm-7am)	54.7	52.8

L10	Daytime (7am-6pm)	59.3	47.4
	Evening (6pm-10pm)	51.6	43.3
	18 Hour	55.8	46.0
	Night-time (10pm-7am)	45.2	41.4
L90	Daytime (7am-6pm)	43.5	38.4
	Evening (6pm-10pm)	41.7	37.5
	Night-time (10pm-7am)	35.8	33.2
Leq	Daytime (7am-6pm)	55.9	46.5
	Evening (6pm-10pm)	50.3	42.0
	Night-time (10pm-7am)	45.1	39.5

Table2: RBL ML1.

Parameter	Period	Recorded RBL ML1	RBL Background RBL +5dB(A)
11th	Daytime (7am-6pm)	40.7	45.7
	Evening (6pm-10pm)	39.7	44.7
12th	Daytime (7am-6pm)	40.3	45.3
	Evening (6pm-10pm)	43.0	48.0
13th	Daytime (7am-6pm)	41.6	46.6
	Evening (6pm-10pm)	34.3	**39.3**
14th	Daytime (7am-6pm)	42.2	47.2
	Evening (6pm-10pm)	35.9	40.9
15th	Daytime (7am-6pm)	39.8	44.8
	Evening (6pm-10pm)	37.6	42.6
16th	Daytime (7am-6pm)	39.1	**44.1**

Table 2.1: RBL ML2 -

Parameter	Period	Recorded RBL ML2	Background RBL +5db(A)
9th	Daytime (7am-6pm)	40.9	45.9
	Evening (6pm-10pm)	40.2	45.2
10th	Daytime (7am-6pm)	36.5	41.5
	Evening (6pm-10pm)	31.9	36.9
11th	Daytime (7am-6pm)	34.6	**39.6**
	Evening (6pm-10pm)	32.2	37.2
12th	Daytime (7am-6pm)	35.4	40.4
	Evening (6pm-10pm)	36.9	41.9
13th	Daytime (7am-6pm)	36.5	41.5
	Evening (6pm-10pm)	34.8	39.8
14th	Daytime (7am-6pm)	35.8	40.8
	Evening (6pm-10pm)	30.9	**35.9**
15th	Daytime (7am-6pm)	36.5	36.5

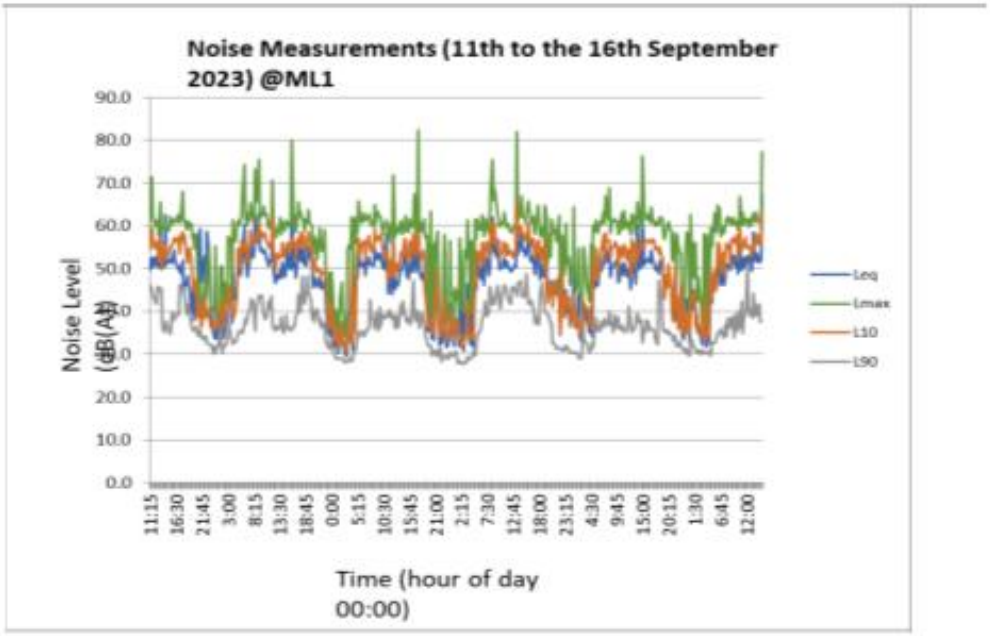


Figure 5: Graphical noise results ML1.

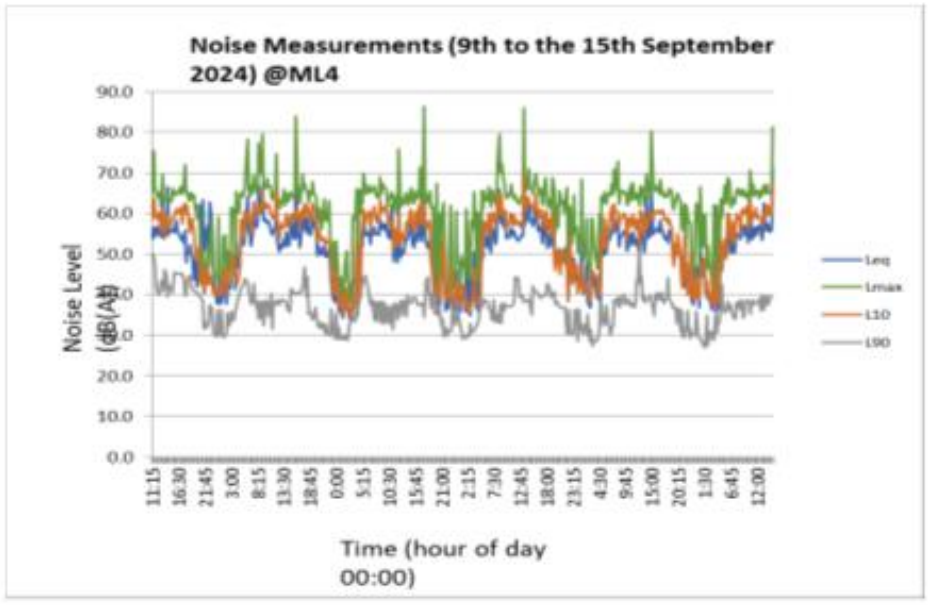


Figure 5.1: Graphical noise results ML2.

6.0 NOISE CRITERIA AND LIMITS

6.1 ADOPTED CRITERION

Noise level at the boundary of premises			
Noise type	Time period	Monday to Saturday	Sunday and public holidays
Non-steady sound*	Day 7:00am – 6:00pm	$L_{Aeq,adj,T} \leq L_{A90}$ plus 5 dB(A)	$L_{Aeq,adj,T} \leq L_{A90}$ plus 5 dB(A)
	Evening 6:00pm to 10:00pm	$L_{Aeq,adj,T} \leq L_{A90}$ plus 5 dB(A)	$L_{Aeq,adj,T} \leq L_{A90}$ plus 5 dB(A)
	Night 10:00 – 7:00am	$L_{Aeq,adj,T} \leq L_{A90}$ plus 0 dB(A) and $L_{Amax} \leq$ 60dB(A)	$L_{Aeq,adj,T} \leq L_{A90}$ plus 0 dB(A) and $L_{Amax} \leq$ 60dB(A)
Continuous noise*	Anytime	$L_{A90,T}$ plus 0dB(A)	$L_{A90,T}$ plus 0dB(A)

Non-Steady State - Criterion		Existing RBL – ML1	**Adopted LAeq - Criterion Monday-Sat – Day-time**	Existing RBL – ML2	**Adopted LAeq - Criterion Monday-Sat Evening**
	Day	39.1	44.1	34.6	**39.6**
	Evening	34.3	**39.3**	30.9	**35.9**

Appropriate noise assessment should consider the following:

- Emissions of any contaminants including air pollutants **and noise**, do not cause environmental harm or nuisance (EPP Act 1994 and EPP Regulation 2019);
- The design of the proposal minimises noise impacts on surrounding uses where possible;
- Noise emission and vibrations from the site must not cause an environmental nuisance to sensitive receptors;
- The building design and layout locates potential noise sources away from sensitive surrounding uses.

6.2 EPP NOISE 2019

In accordance with the agreed assessment methodology, the relevant noise criteria for assessment of impacts at sensitive receptors have been determined based upon the Acoustic Quality Objectives of the *Environmental Protection (Noise) Policy 2019.* The EPP forms part of the recommendations of the PoD for the estate in addition to the fixed mechanical plant and equipment conditions of the PoD. The EPP (Noise) 2019 no longer refers to or makes reference to background creep, however the adopted criterion considered will accommodate the background + criterion from both the ML1 and ML2 monitoring locations.

As detailed in the EP (Noise) 2019, the objectives of an NIA are to determine and more so ensure that the resultant noise emissions from the entire proposal are achieved for the particular land use categories.

Schedule 1

Schedule 1 Acoustic quality objectives

section 7

Column 1	Column 2	Column 3			Column 4
Sensitive receptor	Time of day	Acoustic quality objectives (measured at the receptor) dB(A)			Environmental value
		$L_{Aeq,adj,1hr}$	$L_{A10,adj,1hr}$	$L_{A1,adj,1hr}$	
residence (for outdoors)	daytime and evening	50	55	65	health and wellbeing
residence (for indoors)	daytime and evening	35	40	45	health and wellbeing
	night-time	30	35	40	health and wellbeing, in relation to the ability to sleep

In regards to the provided operation hours for the development, the relevant night-time criteria have been applied to the development and derived from the Ecoaccess Guidelines: Planning for Noise Control provides the relevant criteria for night-time assessment:

> *As a rule in planning for short-term or transient noise events, for good sleep over eight hours, the indoor sound pressure level measured as a maximum instantaneous value should not exceed approximately 45dBA maxLpA more than 10-15 times per night. The corresponding external noise level, assuming partially closed windows, is 52dBA maxLpA, measured in the free field.*

Furthermore, the NIA should confirm that the impact on human health at the sensitive receivers is to be appropriately mitigated to achieve a satisfactory internal noise level for the preservation of health and well-being as identified within the EPP (Noise).

For residential dwellings, and taking due account of the proposed hours of operation the future industrial/commercial/ uses (could include service trades or uses consistent with the Medium Impact Industry Definition), the acoustic quality objectives (measured using the most stringent noise level parameter, i.e. LAeq adj,1hr) for satisfactory internal noise levels (together with equivalent external noise levels) would be as follows:

- 06:00-07:00: 30dBA internally (i.e. 40dBA free field externally with windows open)
- 07:00-18:00: 35dBA internally (i.e. 45dBA free field externally with windows open)

EPP appropriate noise assessment should consider the following:

- Emissions of any contaminants including air pollutants, noise, and vibration do not cause environmental harm or nuisance.
- The design of the proposal minimises noise impacts on surrounding uses.
- Noise emission and vibrations from the site must not cause an environmental nuisance to sensitive receptors.
- The building design and layout locates potential noise sources away from sensitive surrounding uses.

7.0 ASSESSMENT OF NOISE IMPACT

Table 3 provides the noise sources relevant to the future proposed development that have the potential to generate noise emissions above those already experienced in the locality (ambient data). For truck manoeuvring, this relates to the delivery trucks loading or unloading product for dispatch with internal movements and along the internal road included for emissions. All other identified sources are general vehicle movements on-site forklift manoeuvring in and out of the future buildings, fixed plant and equipment (A/C or extraction) as shown on the site plans in **Appendix A.** The maximum-recorded (worst-case scenario) source noise levels have been gathered by this consultancy previously and for the articulated and heavy vehicles:

Table 2: Relevant EP (Noise) P 2019 adopted emissions from site use in corresponding parameter for future emissions.

Machine/Activity	Noise Levels, dB(A)
	L_{Aeq}
Car start and drive in car park	67 @ 1-metres
Car door slam/closing	69 @ 1-metres
Truck Manoeuvring	74 @ 1-metres
Truck Reverse beeper	87dB(A) (adjusted for impulsiveness)
Forklift	70@ 1-metres
Fixed Plant and equipment	External plant set at 55dB- each site
Plant and equipment (hand tools etc internal)	85dB- each site

7.1 ON-SITE CAR PARKING NOISE LEVELS

Car parking and manoeuvring noises are typical short-term noise event (door slamming, car starts-ups) with large articulated trucks for deliveries and distribution that in the Daytime periods is to be compared to ambient like parameter noise levels, and as short-term noise events have been assessed against the ambient L_{max} noise levels. The external on-site noise emissions from car parking and truck manoeuvring have the potential to cause noise impacts on the adjoining residences identified above. PEN3D2000 modelling has been completed to incorporate multiple emissions locations across the subject site and results indicated compliance with the relevant criteria from the EP (Noise) Policy 2019 and RCC background +3/5dB(A).

For this assessment the $L_{eq\text{-}1hr}$ impact levels at all receptors has been determined from the Pen3D2000 modelling with simultaneous emissions from cars, forklifts, delivery trucks and internal manoeuvring and movements along the internal road.

The separation distances to the identified sensitive receptors are summarised in **Table 4**.

Table 4: Co-ordinates of sensitive receptors (RS1-8)

Sensitive Receptor	Eastings	Northings
RS1	527642.5	6944632.0
RS2	528476.7	6945030.7
RS3	528491.3	6944869.6
RS4	528549.7	6944800.9
RS5	528581.5	6944724.7
RS6	528594.3	6944636.0
RS7	528525.9	6944394.4
RS8	527866.6	6945121.0

Given the separation distance to the nearest proposed allotments and subsequent future building positions and associated emissions to the surrounding receptors, the following demonstrates the resultant noise levels from all activities operating simultaneously on the proposed sites throughout the entire day-time/evening regime. Emissions contours and resultant emissions are below the identified criterion modelled on the worse-case scenario of all emissions simultaneously.

MODELLING NOTES:

1. Internal and external noise sources have been modelled as being present simultaneously to account for worst-case scenario. Assumed building positions have been modelled and are detailed in the appendix for the approximate positions;

2. Multiple Truck movements and car parking has been modelled as operating simultaneously to account for worst-case scenario. All emission sources have been utilised in the PEN3D2000 modelling to account for a worst-case possible scenario to identify potential impacts from completed/fully developed allotments;

3. Openings in the southern, western and norther facades modelled as open for any cross-flow ventilation as would be required for future site operations;

4. Modelling results indicate compliance with the EPP AQO and background + criterions with full site operations from the access, staff emissions, operational forklifts, delivery and distribution trucks and fixed plant and equipment. Note: positions and spread across the site for modelling purposes are indicative and not accurate based on future building positions. Emission sources have been placed around the boundaries. As noted in the RFI response, staff emissions include site access with vehicles;

5. Noise emissions sources modelled simultaneously (coordinates and frequency distribution have been modelled and supplied in the appendix of this report).

6. Expanded use into the SW corner OS area has been in modelled with the inclusion of vehicle movements, vehicle door slams for a potential lot 8. The inclusions results in point sources moving closed to RL 1 (Western receptor) which has resulted in the need for addition acoustic treatment in this corner as the likely FFL will be between 30-32m AHD. On this consideration, the PEN3D2000 modellings has been completed with the worst case scenario of 32m AHD for the FFL.

RESULTANT POINT CALCULATIONS AT ALL RECEPTORS ALL DAYTIME OPERATIONS
POINT CALCULATIONS

Pen3D2000 V 1.10.0
Project Code:JB....
Project Description:Noise assessment of ...
File:C:\Users\User\JT Environmental Dropbox\Tyson Dodd\JT2239 - 20 Giles Road Redland Bay-DONE\Updated NIA\Updated NIA 2.0 291024.PEN
File Description:Data file covering area

Tuesday 22 Oct, 2024 at 12:43:45

Environmental Calculations

All point and line sources included. Line source segmentation angle: 10 degrees. Calculations for specified meteorology.
Noise level results are the logarithmic addition of all the noise sources
Noise level results incorporate the incoherent ground reflection algorithm
Meteorology :
Wind speed 0.0 (m/s) Wind direction 0 Mast height 10.0 (m)
Temperature 20.0 (C) Temperature Gradient 0.0 (C/100m) Humidity 50.0 (%)
Surface Roughness of terrain 0.023000000 (m) Zero plane offset 0.080000000 (m)

Receptor	X Posn	Y Posn	Height	Noise Level - FC	Adopted Daytime Criterion– dB(A) Leq (RBL=5dB(A) @ML2 for evening RBL	Adopted Evening Criterion– dB(A) Leq (RBL=5dB(A) @ML2 for evening RBL	EPP Criterion – dB(A) Leq
	(m)	(m)	(m)	(dB(A))			
RL1	527642.5	6944632.0	1.8	36.0	**39.6**	**35.9**	50
RL2	528476.7	6945030.7	1.8	22.2	**39.6**	**35.9**	50
RL3	528491.3	6944869.6	1.8	25.2	**39.6**	**35.9**	50
RL4	528549.7	6944800.9	1.8	22.0	**39.6**	**35.9**	50
RL5	528581.5	6944724.7	1.8	31.3	**39.6**	**35.9**	50
RL6	528594.3	6944636.0	1.8	31.2	**39.6**	**35.9**	50
RL7	528525.9	6944394.4	1.8	29.3	**39.6**	**35.9**	50
RL8	527866.6	6945121.0	1.8	26.0	**39.6**	**35.9**	50

Figure 6: Day-time Noise Operations Contours.

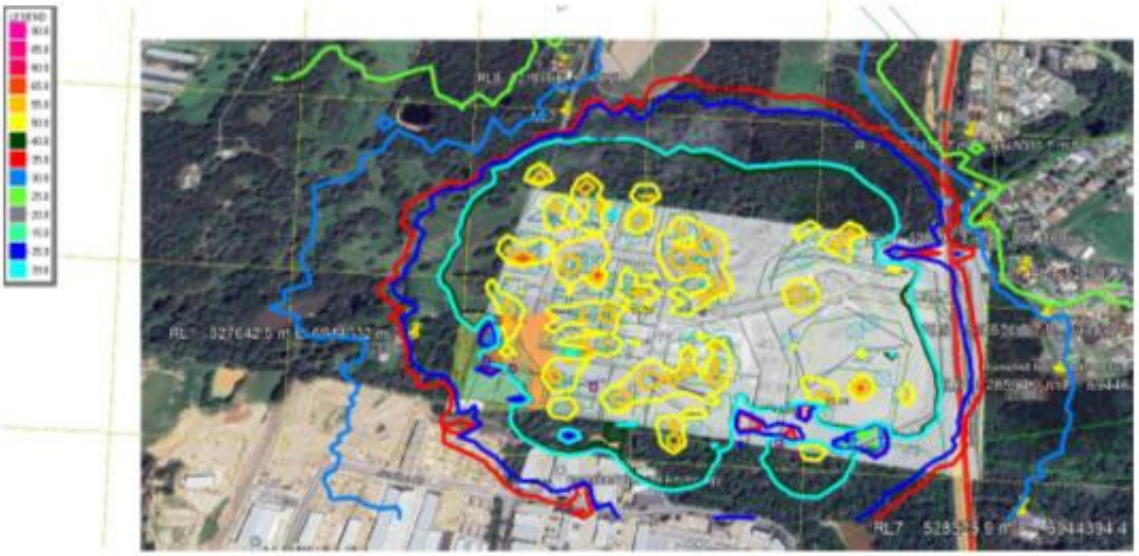
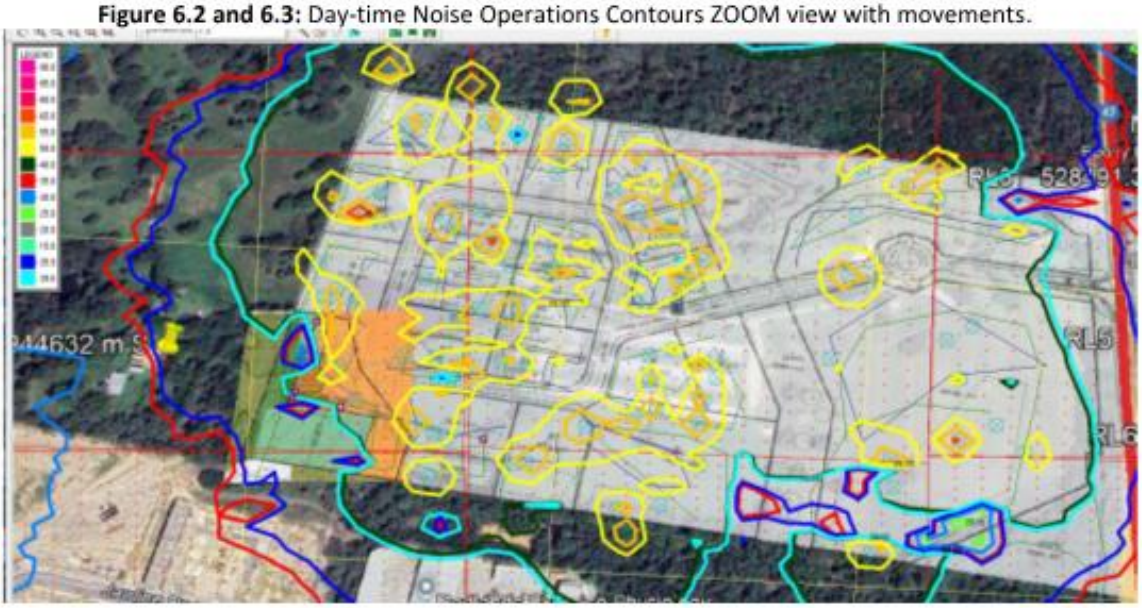
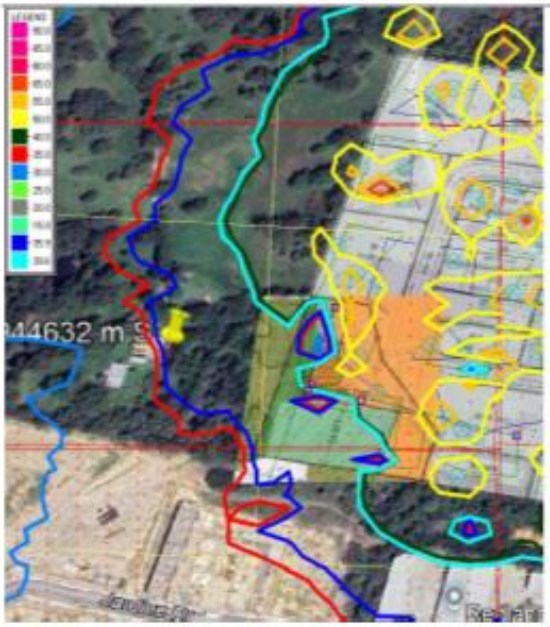


Figure 6.2 and 6.3: Day-time Noise Operations Contours ZOOM view with movements.





As the modelling indicates, the day-time operational noise levels have been determined to not exceed the current ambient noise +5dB(A) criterion levels. Further consideration of vehicles accessing the site before 7am has been undertaken and applying these resultant noise levels to the night-time criterion for access for staff/deliveries. It is evident from analysis of the results that the use/access to the proposed Medium Industry Estate with the current 5 allotments that 24-hour access without impacts on or exceeding the EPP Noise AQO's or background+ criterion at the closest receptors is possible.

Additional attenuation in the form of an acoustic barrier 2.2m as noted on the below plan extract is needed for the increased developed area in the SW corner of the proposal.

Figure 6.4: Modelled Acoustic Barrier positions with expanded developable area.

7.2 FIXED PLANT, EQUIPMENT NOISE AND VEHICLE AND ACCESS NOISE

The scale of the fixed plant and equipment has been assumed at this stage of the proposal, however bulk fixed plant emissions point sources have been placed around each modelled allotment as detailed in the emission source table (coordinates included). Fixed plant has been modelled as per the requirements of the PoD, however additional noise sources within the possible future buildings have also been modelled for a conservative approach to the consideration of the estate.

Table 4: Point source plant and equipment emissions and possible tools

Point	x Start	y Start	Source Name	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Overall
1	527887.22	6944730.82	Car Door/start 001	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
2	527863.40	6944838.50	Car Door/start 0002	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
3	527989.66	6944821.86	Car Door/start 0003	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
4	527847.30	6944775.03	Car Door/start 0004	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
5	527873.36	6944667.44	Car Door/start 0005	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
6	528219.65	6944683.79	Car Door/start 0006	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
7	528313.78	6944703.63	Car Door/start 0007	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
8	528334.05	6944716.23	Car Door/start 0008	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
9	528072.58	6944677.84	Car Door/start 0009	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
10	528090.81	6944684.54	Car Door/start 0010	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
11	528112.21	6944673.99	Car Door/start 0011	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
12	528126.05	6944675.83	Car Door/start 0012	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
13	527830.08	6944708.57	Car Door/start 0013	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
14	528060.19	6944721.07	Car Door/start 0014	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
15	528036.48	6944812.18	Car Door/start 0015	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
16	528057.91	6944746.56	Car Door/start 0016	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
17	527954.42	6944745.12	Car Door/start 0017	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
18	527866.22	6944611.70	Car Door/start 0018	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
19	527912.63	6944770.76	Car Door/start 0019	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
20	527922.34	6944832.52	Car Door/start 0020	60.0	61.0	62.0	63.0	64.0	62.0	61.0	60.0	70.9
21	527815.61	6944718.54	Forklifts 001	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
22	527847.38	6944799.44	Forklifts 0002	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
23	527865.12	6944855.28	Forklifts 0003	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
24	527989.63	6944763.78	Forklifts 0004	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
25	527993.94	6944840.79	Forklifts 0005	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
26	527936.64	6944859.14	Forklifts 0006	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
27	527913.89	6944592.67	Forklifts 0007	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
28	527973.09	6944666.80	Forklifts 0008	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
29	527899.14	6944667.75	Forklifts 0009	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
30	527963.89	6944577.40	Forklifts 0010	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
31	528074.53	6944658.37	Forklifts 0011	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
32	528128.21	6944663.22	Forklifts 0012	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
34	528357.98	6944636.71	Forklifts 0013	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
35	528276.90	6944582.50	Forklifts 0014	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
36	528088.07	6944557.63	Forklifts 0015	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
37	528326.53	6944673.06	Forklifts 0016	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
38	528117.88	6944591.51	Forklifts 0017	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3

February 2025 JT Environmental PTY LTD

39	528099.66	6944743.10	Forklifts 0018	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
40	528084.91	6944784.79	Forklifts 0019	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
41	528234.52	6944800.75	Forklifts 0020	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
42	528300.93	6944817.79	Forklifts 0021	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
43	527814.87	6944796.65	External Plant 001	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
44	527845.87	6944899.88	External Plant 0002	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
45	528001.88	6944883.21	External Plant 0003	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
46	527928.31	6944789.97	External Plant 0004	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
47	527896.95	6944568.51	External Plant 0005	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
48	527800.90	6944737.49	External Plant 0006	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
49	528059.14	6944532.33	External Plant 0007	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
50	528115.71	6944625.47	External Plant 0008	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
51	528062.94	6944628.50	External Plant 0009	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
52	528261.05	6944530.33	External Plant 0010	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
53	528382.73	6944616.27	External Plant 0011	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
54	528237.45	6944840.25	External Plant 0012	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
55	528303.48	6944842.34	External Plant 0013	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
56	527989.39	6944745.29	External Plant 0014	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
57	528089.64	6944822.04	External Plant 0015	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
58	527902.24	6944778.63	Truck Reversing beepers	78.0	79.0	80.0	81.0	82.0	80.0	79.0	79.0	89.0
59	528057.19	6944795.55	Truck Reversing beepers0002	78.0	79.0	80.0	81.0	82.0	80.0	79.0	79.0	89.0
60	528231.34	6944752.96	Truck Reversing beepers0003	78.0	79.0	80.0	81.0	82.0	80.0	79.0	79.0	89.0
61	528273.49	6944605.06	Truck Reversing beepers0004	78.0	79.0	80.0	81.0	82.0	80.0	79.0	79.0	89.0
62	528024.05	6944618.37	Truck Reversing beepers0005	78.0	79.0	80.0	81.0	82.0	80.0	79.0	79.0	89.0
63	527914.75	6944701.43	External Plant 0016	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
64	527950.40	6944699.45	External Plant 0017	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
65	527909.74	6944646.41	External Plant 0018	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
66	528112.15	6944758.82	External Plant 0019	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
67	527918.41	6944888.53	External Plant 0020	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
68	528097.18	6944804.05	External Plant 0021	75.0	76.0	78.0	79.0	80.0	78.0	78.0	78.0	87.0
69	528327.58	6944623.05	Tool/Equipment 001	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
70	528274.69	6944827.85	Tool/Equipment 0002	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
71	528097.63	6944741.21	Tool/Equipment 0003	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
72	528081.61	6944780.68	Tool/Equipment 0004	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
73	528058.75	6944838.20	Tool/Equipment 0005	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
74	527996.19	6944849.82	Tool/Equipment 0006	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
75	527928.68	6944861.14	Tool/Equipment 0007	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
76	527880.43	6944860.18	Tool/Equipment 0008	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
77	527829.32	6944781.60	Tool/Equipment 0009	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
78	527806.07	6944711.91	Tool/Equipment 0010	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
79	527896.71	6944583.42	Tool/Equipment 0011	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
80	527968.00	6944557.43	Tool/Equipment 0012	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0

February 2025 JT Environmental PTY LTD

81	528052.88	6944552.20	Tool/Equipment 0013	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
82	528080.94	6944635.70	Tool/Equipment 0014	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
83	528119.49	6944643.85	Tool/Equipment 0015	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
84	527952.49	6944666.56	Tool/Equipment 0016	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
85	527964.64	6944709.97	Tool/Equipment 0017	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
86	527968.50	6944760.66	Tool/Equipment 0018	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
87	527941.38	6944762.48	Tool/Equipment 0019	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
88	527932.66	6944710.05	Tool/Equipment 0020	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
89	527921.76	6944658.20	Tool/Equipment 0021	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
90	527911.77	6944601.26	Forklifts	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
91	527889.70	6944613.36	Tool/Equipment 0011	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0
92	527815.61	6944718.54	Forklifts	60.0	61.0	62.0	63.0	64.0	64.0	62.0	60.0	71.3
93	527806.07	6944711.91	Tool/Equipment 0011	72.0	74.0	76.0	78.0	80.0	78.0	77.0	76.0	86.0

8.0 CONCLUSIONS

For the proposed development over land at 20 Giles Road ambient noise level measurements for the locality were conducted from the 11th to 16th September at ML1 location. Further monitoring has been conducted at ML2 from 9th – 15th September 2024. This location was chosen as it provides the most representative data to that of the subject site and existing closest receptor which lay to the east of the major line noise source in the locality and was the safest location for the equipment utilised. For the receptors to the east and west of the site, the consideration of the night-time current ambient and the AQO of the EPP Noise 2019 can be utilised, demonstrating that the impact associated with the future development, topography and design mitigate the propagation of noise emissions.

The locality in which this site is situated supports rural residential and mixed industrial and commercial uses to the south with major line noise sources and a significant expansion for Warehousing and Industrial uses, vehicle movements and plant and equipment. This NIA has been prepared and modelling completed to investigate and demonstrate the possible impacts that the proposed development will have and if any negative impacts on the surrounding residential sensitive uses to the west or east will occur **with an assessment and consideration of movements/use on-site for the proposed uses.** Incorporation/continuation of the PoD PO and AO are to be continued on-site for future developments and where needed compliance monitoring/certification incorporated. The AO where building openings are to be faced away from sensitive receptors external to the estate as detailed by the PoD.

Review of the site operation, design and ultimate operational conditions will not impact outside of the estate boundaries.

As demonstrated by the attenuation calculations in section 7.0 – Assessment of Noise Impacts, the proposal is compliant with all the relevant day/night-time, and pre-7am access requirements time criteria from the Environmental Protection (Noise) Policy 2019. The night-time criterion for the locality can be achieved through all hours of the day demonstrating that the site does not need to be restricted by operational hours.

Acoustic Barrier: Inclusion of an acoustic barrier to the SW corner of the proposal with the expanded developable area is required. Modelling additional noise sources as indicated results in a minor exceedance of the identified criterion should this additional area have full emissions profiles. **Recommended 2.2m Acoustic Barrier** along the SW edge of the additional developable area as noted in the Innovation Precinct Development area:

Figure 6.5: 2.2m Acoustic Barriers modelled with FFL @32.0m AHD.

9.0 REFERENCES

Australian Standard (AS 2107:2000). Acoustics—Recommended design sound levels and reverberation times for building interiors.

Australian Standard 1055 (1997). Acoustics—Description and measurement of environmental noise Part 1: General procedures.

Australian Standard AS3671 (1989). Acoustics—Road traffic noise intrusion—Building siting and construction.

Environmental Protection (Noise) Policy 2019

Inspire Technology and Innovation Centre Plan of Development (2024) Rev J

Environmental Protection Act 1994

Environmental Protection Regulation 2019

Noise Measurement Manual Queensland EPA, March 2000

10.0 APPENDIX

10.1 APPENDIX A – SITE PLAN

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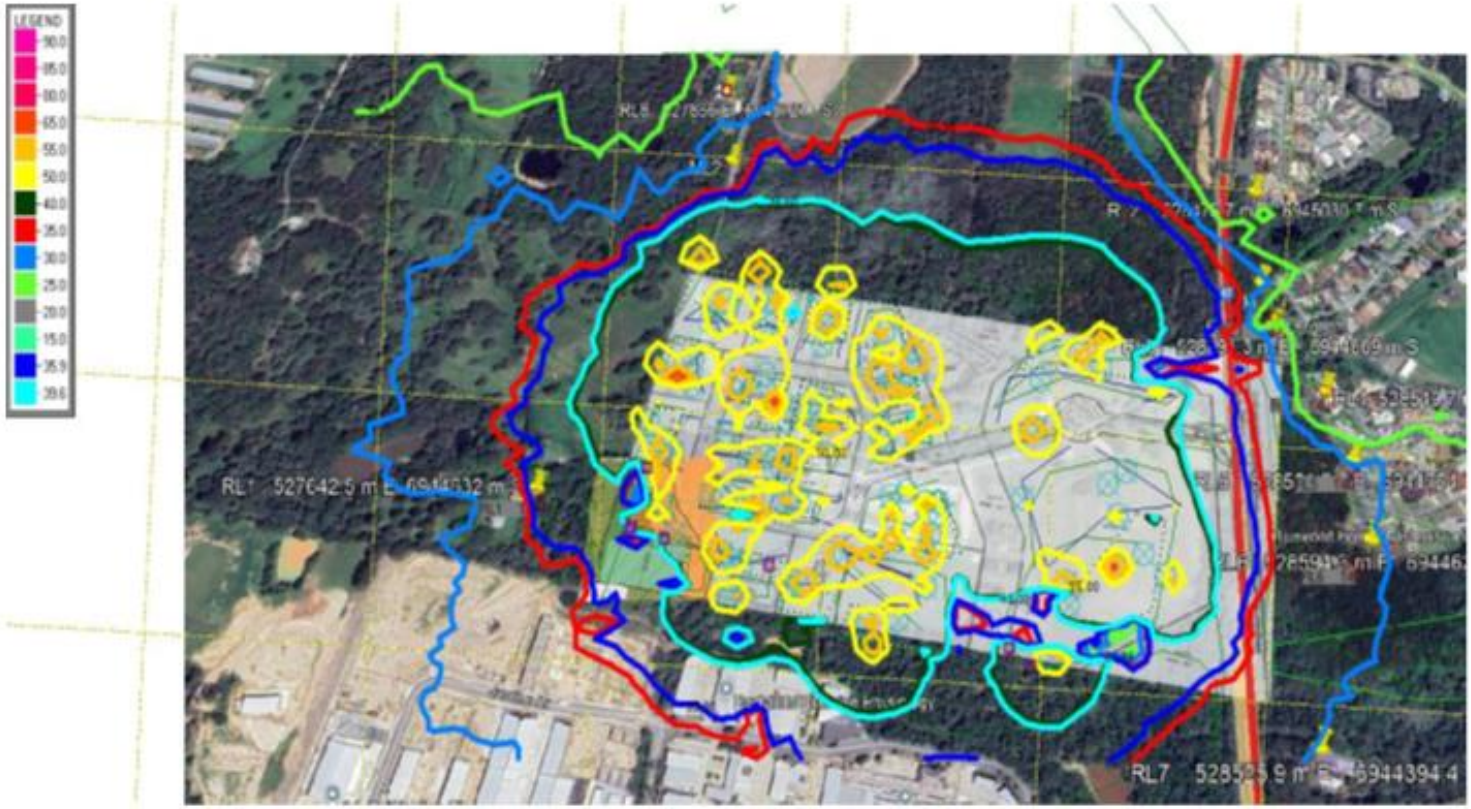
Family Tree Care
Redlands Exercise Physiology
Image © 2024 Airbus

10.2 APPENDIX B – NOISE CONTOUR MAPPING – ALL EMISSIONS



10.3 APPENDIX C – MODELLING OUTPUT FROM ALL SOURCES FOR ALL RECEPTORS WITH 2.2M ACOUSTIC BARRIER

RESULTANT POINT CALCULATIONS AT ALL RECEPTORS ALL DAYTIME OPERATIONS

Pen3D2000 V 1.10.0
Project Code:JB....
Project Description:Noise assessment of ....
File:C:\Users\User\JT Environmental Dropbox\Tyson Dodd\JT2239 - 20 Giles Road Redland Bay-DONE\Updated NIA to change level\Updated use and levels.PEN
File Description:Data file covering area

Sunday 02 Mar, 2025 at 12:54:58

Environmental Calculations

All point and line sources included. Line source segmentation angle: 10 degrees. Calculations for specified meteorology.
Noise level results are the logarithmic addition of all the noise sources
Noise level results incorporate the incoherent ground reflection algorithm
Meteorology :
Wind speed 0.0 (m/s) Wind direction 0 Mast height 10.0 (m)
Temperature 20.0 (C) Temperature Gradient 0.0 (C/100m) Humidity 50.0 (%)
Surface Roughness of terrain 0.023000000 (m) Zero plane offset 0.080000000 (m)

Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL1	527677.3	6944652.4		36.0
Source	X Posn	Y Posn	Noise Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	527887.2	6944730.8	4.1	
Car Door\start 0002	527863.4	6944838.5	-4.1	
Car Door\start 0003	527989.7	6944821.9	0.2	
Car Door\start 0004	527847.3	6944775.0	1.8	
Car Door\start 0005	527873.4	6944667.4	6.5	
Car Door\start 0006	528219.6	6944683.8	-9.9	
Car Door\start 0007	528313.8	6944703.6	-1.0	
Car Door\start 0008	528334.0	6944716.2	-1.3	
Car Door\start 0009	528072.6	6944677.8	-0.3	
Car Door\start 0010	528090.8	6944684.5	0.0	
Car Door\start 0011	528112.2	6944674.0	0.2	
Car Door\start 0012	528126.0	6944675.8	-20.6	
Car Door\start 0014	528060.2	6944721.1	-3.1	
Car Door\start 0015	528036.5	6944812.2	-4.4	
Car Door\start 0016	528057.9	6944746.6	-1.5	
Car Door\start 0017	527954.4	6944745.1	-9.4	
Car Door\start 0018	527835.2	6944629.7	8.9	
Car Door\start 0019	527912.6	6944770.8	4.0	
Car Door\start 0020	527922.3	6944832.5	7.3	
Forklifts 001	527820.9	6944656.1	-0.0	
Forklifts 0002	527847.4	6944799.4	-2.0	

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Forklifts 0003	527865.1	6944855.3	-0.7	
Forklifts 0004	527989.6	6944763.8	-7.3	
Forklifts 0005	527993.9	6944840.8	5.9	
Forklifts 0006	527936.6	6944859.1	-9.8	
Forklifts 0007	527899.9	6944605.9	-6.0	
Forklifts 0008	527973.1	6944666.8	-5.9	
Forklifts 0009	527899.1	6944667.8	10.8	
Forklifts 0010	527966.5	6944584.3	-14.4	
Forklifts 0011	528074.5	6944658.4	-1.7	
Forklifts 0012	528128.2	6944663.2	-11.8	
Forklifts 0013	528358.0	6944636.7	-13.9	
Forklifts 0014	528276.9	6944582.5	-12.2	
Forklifts 0015	528088.1	6944557.6	-6.7	
Forklifts 0016	528326.5	6944673.1	-7.4	
Forklifts 0017	528117.9	6944591.5	3.7	
Forklifts 0018	528099.7	6944743.1	0.1	
Forklifts 0019	528084.9	6944784.8	-0.8	
Forklifts 0020	528234.5	6944800.8	0.8	
Forklifts 0021	528300.9	6944817.8	-18.3	
External Plant 001	527814.9	6944796.6	27.1	
External Plant 0002	527845.9	6944899.9	23.9	
External Plant 0003	528001.9	6944883.2	8.3	
External Plant 0004	527928.3	6944790.0	8.8	
External Plant 0005	527898.5	6944570.0	25.4	
External Plant 0006	527800.9	6944737.5	29.7	
External Plant 0007	528059.1	6944532.3	12.3	
External Plant 0008	528115.7	6944625.5	19.1	
External Plant 0009	528062.9	6944628.5	20.4	
External Plant 0010	528261.1	6944530.3	10.1	
External Plant 0011	528382.7	6944616.3	2.0	
External Plant 0012	528237.5	6944840.3	9.9	
External Plant 0013	528303.5	6944842.3	2.7	
External Plant 0014	527989.4	6944745.3	14.4	
External Plant 0015	528089.6	6944822.0	4.3	
Truck Reversing beepers	527902.2	6944778.6	26.7	
Truck Reversing beepers0002	528057.2	6944795.5	11.5	
Truck Reversing beepers0003	528231.3	6944753.0	11.5	
Truck Reversing beepers0004	528273.5	6944605.1	17.8	
Truck Reversing beepers0005	528024.1	6944618.4	23.6	
External Plant 0016	527914.8	6944701.4	25.1	
External Plant 0017	527950.4	6944699.5	19.0	
External Plant 0018	527909.7	6944646.4	25.4	
External Plant 0019	528112.2	6944758.8	5.4	
External Plant 0020	527918.4	6944888.5	22.2	
External Plant 0021	528097.2	6944804.0	4.0	
Tool/Equipment 001	528327.6	6944623.1	-1.1	
Tool/Equipment 0002	528274.7	6944827.8	3.8	
Tool/Equipment 0003	528097.6	6944741.2	15.3	
Tool/Equipment 0004	528081.6	6944780.7	13.9	
Tool/Equipment 0005	528058.7	6944838.2	15.2	
Tool/Equipment 0006	527996.2	6944849.8	20.8	
Tool/Equipment 0007	527928.7	6944861.1	5.5	
Tool/Equipment 0008	527880.4	6944860.2	14.8	
Tool/Equipment 0009	527829.3	6944781.6	7.1	
Tool/Equipment 0010	527803.4	6944683.3	9.7	
Tool/Equipment 0012	527977.1	6944585.5	9.7	
Tool/Equipment 0013	528052.9	6944552.2	4.5	
Tool/Equipment 0014	528080.9	6944635.7	4.7	
Tool/Equipment 0015	528119.5	6944643.8	-0.7	
Tool/Equipment 0016	527952.5	6944666.6	4.6	
Tool/Equipment 0017	527964.6	6944710.0	4.8	
Tool/Equipment 0018	527968.5	6944760.7	1.9	
Tool/Equipment 0019	527941.4	6944762.5	4.1	
Tool/Equipment 0020	527932.7	6944710.1	8.3	
Tool/Equipment 0021	527921.8	6944658.2	9.5	
Car Door\start 0013	527830.1	6944708.6	-3.5	

Forklifts 001	527815.6	6944718.5	0.5	
Tool/Equipment 0010	527806.1	6944711.9	13.3	
Forklifts 0007	527911.8	6944601.3	-4.2	
Tool/Equipment 0011	527889.7	6944613.4	7.1	
Truck drive 001	528242.7	6944719.7	4.2	
Truck drive 0002	528233.2	6944661.4	-5.0	
Truck drive 0003	528281.9	6944645.5	-3.8	
Truck drive 0004	528354.7	6944681.6	-2.4	
Truck drive 0005	528343.0	6944715.4	4.6	
Truck drive 0005	528060.9	6944612.0	9.5	
Truck Drive 006	528059.5	6944611.1	8.8	
Truck Drive 0007	528104.6	6944587.2	1.2	
Truck Drive 0008	528093.2	6944573.1	1.4	
Truck Drive 0009	528046.2	6944591.5	1.2	
Truck Drive 0010	528000.6	6944599.4	-5.7	
Truck Drive 0011	527983.1	6944588.1	-4.4	
Truck Drive 0012	527980.7	6944596.9	-6.3	
Truck Drive 0013	527886.1	6944600.2	-16.3	
Truck Drive 0016	527858.8	6944617.9	4.6	
Truck Drive 0018	527810.4	6944688.5	-3.3	
Truck Drive 0018	527806.2	6944664.8	-3.7	
Truck Drive 0019	527816.2	6944644.8	0.8	
Truck Drive 0020	527855.8	6944775.7	-1.4	
Truck Drive 0021	527851.8	6944796.4	-2.2	
Truck Drive 0022	527863.6	6944808.6	-0.9	
Truck Drive 0023	527872.7	6944833.4	-1.2	
Truck Drive 0024	527851.2	6944839.0	-2.9	
Truck Drive 0025	527845.1	6944847.7	9.3	
Truck Drive 0026	527873.3	6944843.7	-0.8	
Truck Drive 0027	527900.0	6944832.1	1.9	
Truck Drive 0028	527920.4	6944837.3	5.9	
Truck Drive 0029	527939.3	6944833.0	6.6	
Truck Drive 0030	527949.1	6944821.9	0.4	
Truck Drive 0031	527969.6	6944825.3	5.3	
Truck Drive 0032	527991.8	6944831.8	6.8	
Truck Drive 0033	528008.0	6944821.2	-4.5	
Truck Drive 0034	528006.7	6944812.3	-11.2	
Truck Drive 0035	528030.5	6944819.3	-1.3	
Truck Drive 0036	528043.4	6944820.6	-1.5	
Truck Drive 0037	528047.4	6944802.4	-8.2	
Truck Drive 0038	528051.1	6944788.5	-6.3	
Truck Drive 0039	528062.9	6944784.0	-3.7	
Truck Drive 0040	528066.8	6944769.2	-5.0	
Truck Drive 0041	528059.7	6944761.7	-8.2	
Truck Drive 0042	528060.2	6944744.2	-3.9	
Truck Drive 0043	528071.6	6944732.0	-1.2	
Truck Drive 0044	528062.4	6944719.9	-2.9	
Truck Drive 0045	528188.4	6944762.3	-12.5	
Truck Drive 0046	528193.6	6944784.9	-8.2	
Truck Drive 0047	528224.1	6944806.2	0.3	
Truck Drive 0048	528312.0	6944803.2	-0.4	
Truck Drive 0049	528365.5	6944790.1	-5.2	
Truck Drive 0050	528027.1	6944755.4	-9.5	
Truck Drive 0051	528021.2	6944763.3	-6.1	
Truck Drive 0052	528006.1	6944767.5	-7.0	
Truck Drive 0053	528008.3	6944751.8	-10.4	
Truck Drive 0054	528023.6	6944724.5	-7.8	
Truck Drive 0055	528011.3	6944720.6	-5.1	
Truck Drive 0056	528002.5	6944709.7	-9.3	
Truck Drive 0057	528013.5	6944697.3	-5.2	
Truck Drive 0058	528016.2	6944673.8	-6.6	
Truck Drive 0059	528002.8	6944670.9	-3.6	
Truck Drive 0060	527988.4	6944663.1	-5.4	
Truck Drive 0061	527997.9	6944649.9	-7.2	
Truck Drive 0062	527861.0	6944658.9	-1.9	
Truck Drive 0063	527881.4	6944657.9	9.3	

Truck Drive 0064	527888.8	6944677.7	9.2	
Truck Drive 0064	527871.2	6944694.1	-3.3	
Truck Drive 0065	527873.7	6944710.2	-2.9	
Truck Drive 0066	527887.5	6944709.6	6.8	
Truck Drive 0067	527902.5	6944722.9	10.1	
Truck Drive 0068	527890.0	6944740.3	3.6	
Truck Drive 0069	527878.5	6944740.7	-7.7	
Truck Drive 0070	527897.0	6944762.5	3.0	
Truck Drive 0071	527912.0	6944773.7	3.6	
Truck Drive 0072	527900.8	6944790.2	8.6	
Truck Drive 0017	527832.2	6944694.8	0.5	
Truck Drive 0018	527828.9	6944716.3	-3.9	
Truck Drive 0018	527835.6	6944740.2	-1.7	
Truck Drive 0019	527847.0	6944743.9	-3.6	
Truck Drive 0016	527882.7	6944624.2	10.1	
Truck Drive 0015	527901.1	6944608.7	-5.0	
Truck Drive 0014	527925.0	6944606.4	-3.5	
Truck Drive 0013	527945.6	6944611.8	8.1	
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL2	528476.7	6945030.7		22.2
Source	X Posn	Y Posn	Noise Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	528076.8	6944733.7	-14.6	
Car Door\start 0002	528284.7	6944752.1	-9.2	
Car Door\start 0003	528293.8	6944756.0	-9.1	
Car Door\start 0004	528262.8	6944748.7	-8.5	
Car Door\start 0005	528285.4	6944691.8	-10.0	
Car Door\start 0006	528303.1	6944707.7	-9.7	
Car Door\start 0007	528313.8	6944703.6	-9.6	
Car Door\start 0008	528334.0	6944716.2	-6.6	
Car Door\start 0009	528072.6	6944677.8	-11.2	
Car Door\start 0010	528090.8	6944684.5	-10.9	
Car Door\start 0011	528112.2	6944674.0	-11.1	
Car Door\start 0012	528126.0	6944675.8	-22.7	
Car Door\start 0013	528070.0	6944729.9	-14.2	
Car Door\start 0014	528095.5	6944731.2	-16.4	
Car Door\start 0015	528098.3	6944745.2	-18.0	
Car Door\start 0016	528096.4	6944760.2	-8.2	
Car Door\start 0017	527954.4	6944745.1	-20.2	
Car Door\start 0018	527960.6	6944761.7	-22.6	
Car Door\start 0019	527952.3	6944787.9	-13.3	
Car Door\start 0020	527949.1	6944806.3	-13.0	
Forklifts 001	527815.6	6944718.5	-23.5	
Forklifts 0002	527847.4	6944799.4	-15.1	
Forklifts 0003	527865.1	6944855.3	-16.4	
Forklifts 0004	527989.6	6944763.8	-9.7	
Forklifts 0005	527993.9	6944840.8	-16.3	
Forklifts 0006	527936.6	6944859.1	-17.7	
Forklifts 0007	527913.9	6944592.7	-15.1	
Forklifts 0008	527973.1	6944666.8	-14.1	
Forklifts 0009	527899.1	6944667.8	-16.3	
Forklifts 0010	527963.9	6944577.4	-23.3	
Forklifts 0011	528074.5	6944658.4	-20.5	
Forklifts 0012	528128.2	6944663.2	-17.9	
Forklifts 0013	528358.0	6944636.7	-11.0	
Forklifts 0014	528276.9	6944582.5	-14.7	
Forklifts 0015	528088.1	6944557.6	-13.8	
Forklifts 0016	528326.5	6944673.1	-7.5	
Forklifts 0017	528117.9	6944591.5	-15.0	
Forklifts 0018	528099.7	6944743.1	-17.9	
Forklifts 0019	528084.9	6944784.8	-17.1	
Forklifts 0020	528234.5	6944800.8	-10.8	

Forklifts 0021	528300.9	6944817.8	-9.0	
External Plant 001	527814.9	6944796.6	-5.8	
External Plant 0002	527845.9	6944899.9	10.1	
External Plant 0003	528001.9	6944883.2	9.4	
External Plant 0004	527948.9	6944790.0	4.2	
External Plant 0005	527896.9	6944568.5	-3.2	
External Plant 0006	527800.9	6944737.5	-2.9	
External Plant 0007	528059.1	6944532.3	-0.3	
External Plant 0008	528115.7	6944625.5	-3.1	
External Plant 0009	528062.9	6944628.5	-6.0	
External Plant 0010	528261.1	6944530.3	2.0	
External Plant 0011	528382.7	6944616.3	8.1	
External Plant 0012	528237.5	6944840.3	12.8	
External Plant 0013	528303.5	6944842.3	14.9	
External Plant 0014	527989.4	6944745.3	-0.9	
External Plant 0015	528089.6	6944822.0	8.0	
Truck Reversing beepers	527902.2	6944778.6	0.6	
Truck Reversing beepers0002	528057.2	6944795.5	9.2	
Truck Reversing beepers0003	528231.3	6944753.0	9.2	
Truck Reversing beepers0004	528273.5	6944605.1	6.8	
Truck Reversing beepers0005	528024.1	6944618.4	3.7	
Truck drive 001	528246.0	6944722.0	-5.2	
Truck drive 0002	528232.7	6944662.7	-5.8	
Truck drive 0003	528287.1	6944649.9	-5.4	
Truck drive 0004	528356.1	6944681.8	-2.9	
Truck drive 0004	528393.1	6944687.6	-13.5	
Truck drive 0005	528368.0	6944702.3	-3.0	
Truck drive 0005	528319.2	6944727.8	-6.9	
Truck drive 0005	528067.1	6944610.3	-12.4	
Truck Drive 006	528063.8	6944609.9	-13.1	
Truck Drive 0007	528104.7	6944587.1	-14.1	
Truck Drive 0008	528094.2	6944573.1	-12.9	
Truck Drive 0009	528048.7	6944589.9	-11.5	
Truck Drive 0010	528000.6	6944599.5	-13.2	
Truck Drive 0011	527984.1	6944588.1	-12.3	
Truck Drive 0012	527981.5	6944597.4	-12.3	
Truck Drive 0013	527938.7	6944608.2	-16.5	
Truck Drive 0014	527922.4	6944600.9	-16.8	
Truck Drive 0015	527891.6	6944600.9	-13.0	
Truck Drive 0016	527862.1	6944614.4	-17.3	
Truck Drive 0017	527832.6	6944694.6	-16.1	
Truck Drive 0018	527830.8	6944723.0	-12.1	
Truck Drive 0019	527847.6	6944743.8	-15.2	
Truck Drive 0020	527855.8	6944775.6	-16.9	
Truck Drive 0021	527851.9	6944797.2	-14.2	
Truck Drive 0022	527864.1	6944808.5	-15.6	
Truck Drive 0023	527872.7	6944833.4	-20.5	
Truck Drive 0024	527852.5	6944839.0	-15.6	
Truck Drive 0025	527846.0	6944848.4	-15.0	
Truck Drive 0026	527873.7	6944843.3	-14.6	
Truck Drive 0027	527900.6	6944832.2	-16.4	
Truck Drive 0028	527920.8	6944837.4	-17.8	
Truck Drive 0029	527939.5	6944832.8	-16.7	
Truck Drive 0030	527949.1	6944821.9	-20.5	
Truck Drive 0031	527969.8	6944825.7	-16.9	
Truck Drive 0032	527993.0	6944831.6	-17.1	
Truck Drive 0033	528008.1	6944821.3	-16.6	
Truck Drive 0034	528006.7	6944812.3	-20.2	
Truck Drive 0035	528030.5	6944819.7	-12.4	
Truck Drive 0036	528043.8	6944820.2	-11.7	
Truck Drive 0037	528047.8	6944802.6	-15.0	
Truck Drive 0038	528051.3	6944788.5	-12.0	
Truck Drive 0039	528063.0	6944783.9	-16.6	
Truck Drive 0040	528066.8	6944769.4	-21.6	
Truck Drive 0041	528059.8	6944761.7	-21.5	
Truck Drive 0042	528060.3	6944744.1	-11.5	

Truck Drive 0043	528071.6	6944732.0	-14.9	
Truck Drive 0044	528063.1	6944720.0	-13.9	
Truck Drive 0045	528188.4	6944762.3	-12.9	
Truck Drive 0046	528193.8	6944785.9	-9.0	
Truck Drive 0047	528227.1	6944806.7	-10.4	
Truck Drive 0048	528284.9	6944806.4	-9.3	
Truck Drive 0048	528340.5	6944799.8	-9.8	
Truck Drive 0048	528374.9	6944795.7	-3.9	
Truck Drive 0049	528366.8	6944790.4	-1.5	
Truck Drive 0050	528027.1	6944755.3	-15.2	
Truck Drive 0051	528021.3	6944763.1	-13.5	
Truck Drive 0052	528006.4	6944767.8	-10.9	
Truck Drive 0053	528008.6	6944751.6	-13.3	
Truck Drive 0054	528023.6	6944724.6	-14.6	
Truck Drive 0055	528011.7	6944720.6	-15.6	
Truck Drive 0056	528002.5	6944709.8	-11.3	
Truck Drive 0057	528013.9	6944697.3	-14.8	
Truck Drive 0058	528016.2	6944673.8	-18.6	
Truck Drive 0059	528003.4	6944670.8	-14.2	
Truck Drive 0060	527988.5	6944663.3	-15.2	
Truck Drive 0061	527998.5	6944649.7	-14.2	
Truck Drive 0062	527861.0	6944658.9	-24.0	
Truck Drive 0063	527884.8	6944658.1	-12.8	
Truck Drive 0064	527889.3	6944677.2	-14.8	
Truck Drive 0065	527873.7	6944710.2	-24.5	
Truck Drive 0066	527888.5	6944709.5	-14.7	
Truck Drive 0067	527902.5	6944723.4	-15.4	
Truck Drive 0068	527890.8	6944740.2	-15.5	
Truck Drive 0069	527878.5	6944740.7	-25.1	
Truck Drive 0070	527897.7	6944762.5	-14.9	
Truck Drive 0071	527912.1	6944774.2	-16.5	
Truck Drive 0072	527901.5	6944790.0	-15.6	
External Plant 0016	527914.8	6944701.4	-3.5	
External Plant 0017	527950.4	6944699.5	-1.1	
External Plant 0018	527909.7	6944646.4	-3.3	
External Plant 0019	528112.2	6944758.8	8.4	
External Plant 0020	527918.4	6944888.5	8.8	
External Plant 0021	528097.2	6944804.0	9.4	
Tool/Equipment 001	528327.6	6944623.1	4.7	
Tool/Equipment 0002	528274.7	6944827.8	4.5	
Tool/Equipment 0003	528097.6	6944741.2	-2.3	
Tool/Equipment 0004	528081.6	6944780.7	-1.2	
Tool/Equipment 0005	528058.7	6944838.2	0.4	
Tool/Equipment 0006	527996.2	6944849.8	-1.1	
Tool/Equipment 0007	527928.7	6944861.1	-1.6	
Tool/Equipment 0008	527880.4	6944860.2	-3.2	
Tool/Equipment 0009	527829.3	6944781.6	0.1	
Tool/Equipment 0010	527806.1	6944711.9	-5.5	
Tool/Equipment 0011	527896.7	6944583.4	-0.3	
Tool/Equipment 0012	527968.0	6944557.4	-3.1	
Tool/Equipment 0013	528052.9	6944552.2	-2.7	
Tool/Equipment 0014	528080.9	6944635.7	-4.5	
Tool/Equipment 0015	528119.5	6944643.8	-0.5	
Tool/Equipment 0016	527952.5	6944666.6	-1.2	
Tool/Equipment 0017	527964.6	6944710.0	0.9	
Tool/Equipment 0018	527968.5	6944760.7	0.4	
Tool/Equipment 0019	527941.4	6944762.5	-4.7	
Tool/Equipment 0020	527932.7	6944710.1	-4.7	
Tool/Equipment 0021	527921.8	6944658.2	-6.5	
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL3	528491.3	6944869.6		25.2
Source	X Posn	Y Posn	Noise	

February 2025 JT Environmental PTY LTD

			Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	528076.8	6944733.7	-13.1	
Car Door\start 0002	528284.7	6944752.1	-2.3	
Car Door\start 0003	528293.8	6944756.0	-1.9	
Car Door\start 0004	528262.8	6944748.7	-4.7	
Car Door\start 0005	528285.4	6944691.8	-0.6	
Car Door\start 0006	528303.1	6944707.7	-0.0	
Car Door\start 0007	528313.8	6944703.6	0.3	
Car Door\start 0008	528334.0	6944716.2	1.0	
Car Door\start 0009	528072.6	6944677.8	-9.5	
Car Door\start 0010	528090.8	6944684.5	-9.1	
Car Door\start 0011	528112.2	6944674.0	-8.8	
Car Door\start 0012	528126.0	6944675.8	-19.3	
Car Door\start 0013	528070.0	6944729.9	-12.6	
Car Door\start 0014	528095.5	6944731.2	-14.9	
Car Door\start 0015	528098.3	6944745.2	-16.5	
Car Door\start 0016	528096.4	6944760.2	-18.6	
Car Door\start 0017	527954.4	6944745.1	-17.3	
Car Door\start 0018	527960.6	6944761.7	-22.1	
Car Door\start 0019	527952.3	6944787.9	-10.2	
Car Door\start 0020	527949.1	6944806.3	-11.1	
Forklifts 001	527815.6	6944718.5	-23.3	
Forklifts 0002	527847.4	6944799.4	-12.1	
Forklifts 0003	527865.1	6944855.3	-17.3	
Forklifts 0004	527989.6	6944763.8	-12.3	
Forklifts 0005	527993.9	6944840.8	-16.1	
Forklifts 0006	527936.6	6944859.1	-17.7	
Forklifts 0007	527913.9	6944592.7	-20.7	
Forklifts 0008	527973.1	6944666.8	-11.1	
Forklifts 0009	527899.1	6944667.8	-15.5	
Forklifts 0010	527963.9	6944577.4	-21.1	
Forklifts 0011	528074.5	6944658.4	-18.9	
Forklifts 0012	528128.2	6944663.2	-16.1	
Forklifts 0013	528358.0	6944636.7	-5.8	
Forklifts 0014	528276.9	6944582.5	-5.0	
Forklifts 0015	528088.1	6944557.6	-4.2	
Forklifts 0016	528326.5	6944673.1	3.2	
Forklifts 0017	528117.9	6944591.5	-3.5	
Forklifts 0018	528099.7	6944743.1	-16.5	
Forklifts 0019	528084.9	6944784.8	-16.0	
Forklifts 0020	528234.5	6944800.8	-5.8	
Forklifts 0021	528300.9	6944817.8	-3.6	
External Plant 001	527814.9	6944796.6	-5.6	
External Plant 0002	527845.9	6944899.9	4.4	
External Plant 0003	528001.9	6944883.2	6.9	
External Plant 0004	527948.9	6944790.0	5.2	
External Plant 0005	527896.9	6944568.5	-1.0	
External Plant 0006	527800.9	6944737.5	-2.8	
External Plant 0007	528059.1	6944532.3	2.3	
External Plant 0008	528115.7	6944625.5	-0.1	
External Plant 0009	528062.9	6944628.5	-4.1	
External Plant 0010	528261.1	6944530.3	5.6	
External Plant 0011	528382.7	6944616.3	15.0	
External Plant 0012	528237.5	6944840.3	13.2	
External Plant 0013	528303.5	6944842.3	16.3	
External Plant 0014	527989.4	6944745.3	2.0	
External Plant 0015	528089.6	6944822.0	8.7	
Truck Reversing beepers	527902.2	6944778.6	0.8	
Truck Reversing beepers0002	528057.2	6944795.5	3.6	
Truck Reversing beepers0003	528231.3	6944753.0	13.2	
Truck Reversing beepers0004	528273.5	6944605.1	18.2	
Truck Reversing beepers0005	528024.1	6944618.4	3.0	
Truck drive 001	528246.9	6944722.6	5.3	
Truck drive 0002	528228.0	6944675.0	1.4	
Truck drive 0002	528244.0	6944632.6	-1.2	

February 2025 JT Environmental PTY LTD

Truck drive 0003	528288.9	6944651.3	4.5	
Truck drive 0004	528350.2	6944680.9	6.8	
Truck drive 0004	528386.5	6944686.6	2.4	
Truck drive 0005	528379.7	6944696.3	5.5	
Truck drive 0005	528346.8	6944713.4	2.9	
Truck drive 0005	528313.7	6944730.6	1.9	
Truck drive 0005	528068.1	6944610.0	-9.3	
Truck Drive 006	528064.5	6944609.7	-10.0	
Truck Drive 0007	528104.7	6944587.0	-3.4	
Truck Drive 0008	528094.4	6944573.1	-3.0	
Truck Drive 0009	528049.2	6944589.6	-8.0	
Truck Drive 0010	528000.6	6944599.4	-13.7	
Truck Drive 0011	527984.2	6944588.1	-11.8	
Truck Drive 0012	527981.5	6944597.4	-11.9	
Truck Drive 0013	527938.7	6944608.2	-14.0	
Truck Drive 0014	527922.4	6944600.9	-14.3	
Truck Drive 0015	527891.7	6944600.9	-10.7	
Truck Drive 0016	527862.1	6944614.4	-14.4	
Truck Drive 0017	527832.6	6944694.5	-14.9	
Truck Drive 0018	527830.8	6944722.9	-11.0	
Truck Drive 0019	527847.6	6944743.8	-14.2	
Truck Drive 0020	527855.8	6944775.6	-14.3	
Truck Drive 0021	527851.9	6944797.1	-11.6	
Truck Drive 0022	527864.1	6944808.5	-12.4	
Truck Drive 0023	527872.7	6944833.4	-16.0	
Truck Drive 0024	527852.5	6944839.0	-12.5	
Truck Drive 0025	527846.0	6944848.4	-15.6	
Truck Drive 0026	527873.8	6944843.3	-12.3	
Truck Drive 0027	527900.6	6944832.2	-13.3	
Truck Drive 0028	527920.8	6944837.4	-14.0	
Truck Drive 0029	527939.6	6944832.7	-13.6	
Truck Drive 0030	527949.1	6944821.9	-16.8	
Truck Drive 0031	527969.8	6944825.7	-11.1	
Truck Drive 0032	527993.1	6944831.5	-8.9	
Truck Drive 0033	528008.0	6944821.3	-13.7	
Truck Drive 0034	528006.7	6944812.3	-18.5	
Truck Drive 0035	528030.5	6944819.6	-11.2	
Truck Drive 0036	528043.9	6944820.0	-10.7	
Truck Drive 0037	528047.8	6944802.6	-9.7	
Truck Drive 0038	528051.3	6944788.5	-16.0	
Truck Drive 0039	528063.1	6944783.9	-15.7	
Truck Drive 0040	528066.8	6944769.3	-20.3	
Truck Drive 0041	528059.9	6944761.7	-13.1	
Truck Drive 0042	528060.4	6944744.1	-15.0	
Truck Drive 0043	528071.7	6944731.9	-13.4	
Truck Drive 0044	528063.2	6944720.0	-15.9	
Truck Drive 0045	528188.4	6944762.3	-9.5	
Truck Drive 0046	528193.8	6944785.7	-4.7	
Truck Drive 0047	528228.0	6944806.8	-4.0	
Truck Drive 0048	528301.3	6944804.4	-2.7	
Truck Drive 0048	528360.7	6944797.4	-3.7	
Truck Drive 0048	528382.5	6944794.8	-3.5	
Truck Drive 0049	528368.2	6944790.7	6.2	
Truck Drive 0050	528027.2	6944755.3	-15.2	
Truck Drive 0051	528021.4	6944763.0	-12.6	
Truck Drive 0052	528006.4	6944767.8	-13.9	
Truck Drive 0053	528008.7	6944751.5	-13.1	
Truck Drive 0054	528023.6	6944724.6	-16.3	
Truck Drive 0055	528011.8	6944720.6	-12.8	
Truck Drive 0056	528002.5	6944709.8	-12.4	
Truck Drive 0057	528014.0	6944697.3	-11.2	
Truck Drive 0058	528016.2	6944673.8	-14.5	
Truck Drive 0059	528003.5	6944670.8	-10.9	
Truck Drive 0060	527988.5	6944663.3	-12.1	
Truck Drive 0061	527998.6	6944649.7	-11.1	
Truck Drive 0062	527861.0	6944658.9	-21.0	

Truck Drive 0063	527885.0	6944658.2	-11.9	
Truck Drive 0064	527889.5	6944677.1	-12.3	
Truck Drive 0065	527873.7	6944710.2	-24.0	
Truck Drive 0066	527888.6	6944709.5	-16.4	
Truck Drive 0067	527902.5	6944723.3	-15.7	
Truck Drive 0068	527890.9	6944740.2	-14.4	
Truck Drive 0069	527878.5	6944740.7	-24.4	
Truck Drive 0070	527897.8	6944762.5	-15.2	
Truck Drive 0071	527912.1	6944774.2	-14.7	
Truck Drive 0072	527901.5	6944790.0	-11.5	
External Plant 0016	527914.8	6944701.4	-1.3	
External Plant 0017	527950.4	6944699.5	1.3	
External Plant 0018	527909.7	6944646.4	-1.2	
External Plant 0019	528112.2	6944758.8	8.8	
External Plant 0020	527918.4	6944888.5	5.4	
External Plant 0021	528097.2	6944804.0	8.6	
Tool/Equipment 001	528327.6	6944623.1	9.9	
Tool/Equipment 0002	528274.7	6944827.8	10.0	
Tool/Equipment 0003	528097.6	6944741.2	-0.8	
Tool/Equipment 0004	528081.6	6944780.7	-0.1	
Tool/Equipment 0005	528058.7	6944838.2	1.0	
Tool/Equipment 0006	527996.2	6944849.8	-1.1	
Tool/Equipment 0007	527928.7	6944861.1	-1.5	
Tool/Equipment 0008	527880.4	6944860.2	-4.3	
Tool/Equipment 0009	527829.3	6944781.6	-6.5	
Tool/Equipment 0010	527806.1	6944711.9	-5.4	
Tool/Equipment 0011	527896.7	6944583.4	-2.3	
Tool/Equipment 0012	527968.0	6944557.4	-0.6	
Tool/Equipment 0013	528052.9	6944552.2	11.0	
Tool/Equipment 0014	528080.9	6944635.7	-2.8	
Tool/Equipment 0015	528119.5	6944643.8	1.6	
Tool/Equipment 0016	527952.5	6944666.6	3.6	
Tool/Equipment 0017	527964.6	6944710.0	3.4	
Tool/Equipment 0018	527968.5	6944760.7	2.8	
Tool/Equipment 0019	527941.4	6944762.5	-4.3	
Tool/Equipment 0020	527932.7	6944710.1	-4.3	
Tool/Equipment 0021	527921.8	6944658.2	-6.0	
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL4	528549.7	6944800.9		22.0
Source	X Posn	Y Posn	Noise Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	528076.8	6944733.7	-14.0	
Car Door\start 0002	528284.7	6944752.1	-3.2	
Car Door\start 0003	528293.8	6944756.0	-2.8	
Car Door\start 0004	528262.8	6944748.7	-4.1	
Car Door\start 0005	528285.4	6944691.8	-4.8	
Car Door\start 0006	528303.1	6944707.7	-4.0	
Car Door\start 0007	528313.8	6944703.6	-3.7	
Car Door\start 0008	528334.0	6944716.2	-2.8	
Car Door\start 0009	528072.6	6944677.8	-10.1	
Car Door\start 0010	528090.8	6944684.5	-9.6	
Car Door\start 0011	528112.2	6944674.0	-9.2	
Car Door\start 0012	528126.0	6944675.8	-17.7	
Car Door\start 0013	528070.0	6944729.9	-13.6	
Car Door\start 0014	528095.5	6944731.2	-17.0	
Car Door\start 0015	528098.3	6944745.2	-17.5	
Car Door\start 0016	528096.4	6944760.2	-21.3	
Car Door\start 0017	527954.4	6944745.1	-16.2	
Car Door\start 0018	527960.6	6944761.7	-23.1	
Car Door\start 0019	527952.3	6944787.9	-13.6	
Car Door\start 0020	527949.1	6944806.3	-11.4	

Forklifts 001	527815.6	6944718.5	-24.1	
Forklifts 0002	527847.4	6944799.4	-13.6	
Forklifts 0003	527865.1	6944855.3	-18.7	
Forklifts 0004	527989.6	6944763.8	-14.0	
Forklifts 0005	527993.9	6944840.8	-17.4	
Forklifts 0006	527936.6	6944859.1	-18.9	
Forklifts 0007	527913.9	6944592.7	-20.6	
Forklifts 0008	527973.1	6944666.8	-11.8	
Forklifts 0009	527899.1	6944667.8	-16.2	
Forklifts 0010	527963.9	6944577.4	-20.8	
Forklifts 0011	528074.5	6944658.4	-19.5	
Forklifts 0012	528128.2	6944663.2	-16.8	
Forklifts 0013	528358.0	6944636.7	-7.3	
Forklifts 0014	528276.9	6944582.5	-9.4	
Forklifts 0015	528088.1	6944557.6	-11.3	
Forklifts 0016	528326.5	6944673.1	-3.4	
Forklifts 0017	528117.9	6944591.5	-9.3	
Forklifts 0018	528099.7	6944743.1	-17.4	
Forklifts 0019	528084.9	6944784.8	-17.2	
Forklifts 0020	528234.5	6944800.8	-4.7	
Forklifts 0021	528300.9	6944817.8	-5.4	
External Plant 001	527814.9	6944796.6	-6.4	
External Plant 0002	527845.9	6944899.9	4.4	
External Plant 0003	528001.9	6944883.2	6.7	
External Plant 0004	527948.9	6944790.0	3.9	
External Plant 0005	527896.9	6944568.5	-1.5	
External Plant 0006	527800.9	6944737.5	-3.7	
External Plant 0007	528059.1	6944532.3	2.4	
External Plant 0008	528115.7	6944625.5	0.5	
External Plant 0009	528062.9	6944628.5	-4.3	
External Plant 0010	528261.1	6944530.3	5.2	
External Plant 0011	528382.7	6944616.3	9.8	
External Plant 0012	528237.5	6944840.3	7.4	
External Plant 0013	528303.5	6944842.3	12.0	
External Plant 0014	527989.4	6944745.3	5.1	
External Plant 0015	528089.6	6944822.0	7.8	
Truck Reversing beepers	527902.2	6944778.6	3.1	
Truck Reversing beepers0002	528057.2	6944795.5	-0.2	
Truck Reversing beepers0003	528231.3	6944753.0	12.9	
Truck Reversing beepers0004	528273.5	6944605.1	8.7	
Truck Reversing beepers0005	528024.1	6944618.4	2.3	
Truck drive 001	528246.4	6944722.3	-2.0	
Truck drive 0002	528228.4	6944673.9	-3.2	
Truck drive 0002	528244.2	6944632.0	-6.2	
Truck drive 0003	528288.8	6944651.2	-0.3	
Truck drive 0004	528363.1	6944682.9	1.9	
Truck drive 0005	528378.3	6944697.0	0.2	
Truck drive 0005	528337.3	6944718.3	0.1	
Truck drive 0005	528304.6	6944735.3	-5.6	
Truck drive 0005	528068.4	6944610.0	-8.6	
Truck Drive 006	528064.7	6944609.7	-9.2	
Truck Drive 0007	528104.7	6944587.0	-9.1	
Truck Drive 0008	528094.4	6944573.1	-10.2	
Truck Drive 0009	528049.4	6944589.5	-8.4	
Truck Drive 0010	528000.6	6944599.4	-13.5	
Truck Drive 0011	527984.3	6944588.1	-11.8	
Truck Drive 0012	527981.5	6944597.4	-12.3	
Truck Drive 0013	527938.7	6944608.2	-14.9	
Truck Drive 0014	527922.4	6944600.9	-14.9	
Truck Drive 0015	527891.7	6944600.9	-10.9	
Truck Drive 0016	527862.1	6944614.4	-14.5	
Truck Drive 0017	527832.6	6944694.5	-15.8	
Truck Drive 0018	527830.8	6944722.8	-11.2	
Truck Drive 0019	527847.6	6944743.8	-15.1	
Truck Drive 0020	527855.8	6944775.6	-15.7	
Truck Drive 0021	527851.8	6944797.1	-13.1	

Truck Drive 0022	527864.1	6944808.5	-13.3	
Truck Drive 0023	527872.7	6944833.4	-16.2	
Truck Drive 0024	527852.5	6944839.0	-11.0	
Truck Drive 0025	527845.9	6944848.3	-13.7	
Truck Drive 0026	527873.8	6944843.3	-10.7	
Truck Drive 0027	527900.6	6944832.2	-12.7	
Truck Drive 0028	527920.8	6944837.4	-13.0	
Truck Drive 0029	527939.6	6944832.7	-11.3	
Truck Drive 0030	527949.1	6944821.9	-17.6	
Truck Drive 0031	527969.8	6944825.7	-12.1	
Truck Drive 0032	527993.0	6944831.5	-10.1	
Truck Drive 0033	528008.0	6944821.3	-14.1	
Truck Drive 0034	528006.7	6944812.3	-18.2	
Truck Drive 0035	528030.5	6944819.5	-11.7	
Truck Drive 0036	528043.9	6944820.0	-11.5	
Truck Drive 0037	528047.7	6944802.6	-14.8	
Truck Drive 0038	528051.3	6944788.5	-17.3	
Truck Drive 0039	528063.1	6944783.9	-16.5	
Truck Drive 0040	528066.8	6944769.3	-21.3	
Truck Drive 0041	528059.9	6944761.7	-13.4	
Truck Drive 0042	528060.4	6944744.1	-16.0	
Truck Drive 0043	528071.7	6944731.9	-14.3	
Truck Drive 0044	528063.2	6944720.0	-16.1	
Truck Drive 0045	528188.4	6944762.3	-9.8	
Truck Drive 0046	528193.7	6944785.5	-5.0	
Truck Drive 0047	528227.5	6944806.7	-4.0	
Truck Drive 0048	528337.3	6944800.2	5.0	
Truck Drive 0049	528367.9	6944790.6	1.7	
Truck Drive 0050	528027.2	6944755.3	-14.1	
Truck Drive 0051	528021.4	6944763.0	-14.9	
Truck Drive 0052	528006.4	6944767.8	-15.9	
Truck Drive 0053	528008.7	6944751.5	-12.4	
Truck Drive 0054	528023.6	6944724.6	-17.3	
Truck Drive 0055	528011.8	6944720.6	-13.8	
Truck Drive 0056	528002.5	6944709.7	-11.6	
Truck Drive 0057	528014.0	6944697.3	-11.9	
Truck Drive 0058	528016.2	6944673.8	-15.1	
Truck Drive 0059	528003.5	6944670.8	-11.6	
Truck Drive 0060	527988.4	6944663.2	-12.8	
Truck Drive 0061	527998.6	6944649.7	-11.6	
Truck Drive 0062	527861.0	6944658.9	-21.7	
Truck Drive 0063	527885.0	6944658.1	-12.9	
Truck Drive 0064	527889.5	6944677.0	-12.7	
Truck Drive 0065	527873.7	6944710.2	-25.0	
Truck Drive 0066	527888.6	6944709.5	-17.3	
Truck Drive 0067	527902.5	6944723.3	-14.7	
Truck Drive 0068	527890.8	6944740.2	-13.7	
Truck Drive 0069	527878.5	6944740.7	-24.0	
Truck Drive 0070	527897.8	6944762.5	-16.3	
Truck Drive 0071	527912.1	6944774.1	-17.6	
Truck Drive 0072	527901.5	6944790.0	-13.7	
External Plant 0016	527914.8	6944701.4	-0.7	
External Plant 0017	527950.4	6944699.5	1.5	
External Plant 0018	527909.7	6944646.4	-1.2	
External Plant 0019	528112.2	6944758.8	7.9	
External Plant 0020	527918.4	6944888.5	5.1	
External Plant 0021	528097.2	6944804.0	7.6	
Tool/Equipment 001	528327.6	6944623.1	7.7	
Tool/Equipment 0002	528274.7	6944827.8	9.3	
Tool/Equipment 0003	528097.6	6944741.2	-1.7	
Tool/Equipment 0004	528081.6	6944780.7	-1.2	
Tool/Equipment 0005	528058.7	6944838.2	-0.2	
Tool/Equipment 0006	527996.2	6944849.8	-2.5	
Tool/Equipment 0007	527928.7	6944861.1	-2.7	
Tool/Equipment 0008	527880.4	6944860.2	-5.7	
Tool/Equipment 0009	527829.3	6944781.6	-7.7	

Tool/Equipment 0010	527806.1	6944711.9	-6.4	
Tool/Equipment 0011	527896.7	6944583.4	-2.2	
Tool/Equipment 0012	527968.0	6944557.4	-1.4	
Tool/Equipment 0013	528052.9	6944552.2	4.2	
Tool/Equipment 0014	528080.9	6944635.7	-3.4	
Tool/Equipment 0015	528119.5	6944643.8	0.7	
Tool/Equipment 0016	527952.5	6944666.6	2.9	
Tool/Equipment 0017	527964.6	6944710.0	2.3	
Tool/Equipment 0018	527968.5	6944760.7	1.2	
Tool/Equipment 0019	527941.4	6944762.5	-5.4	
Tool/Equipment 0020	527932.7	6944710.1	-5.2	
Tool/Equipment 0021	527921.8	6944658.2	-6.9	
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL5	528581.5	6944724.7		31.3
Source	X Posn	Y Posn	Noise Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	528076.8	6944733.7	-14.4	
Car Door\start 0002	528284.7	6944752.1	8.0	
Car Door\start 0003	528293.8	6944756.0	8.3	
Car Door\start 0004	528262.8	6944748.7	7.3	
Car Door\start 0005	528285.4	6944691.8	7.7	
Car Door\start 0006	528303.1	6944707.7	8.4	
Car Door\start 0007	528313.8	6944703.6	8.8	
Car Door\start 0008	528334.0	6944716.2	9.6	
Car Door\start 0009	528072.6	6944677.8	2.2	
Car Door\start 0010	528090.8	6944684.5	2.6	
Car Door\start 0011	528112.2	6944674.0	-17.6	
Car Door\start 0012	528126.0	6944675.8	-17.7	
Car Door\start 0013	528070.0	6944729.9	-14.6	
Car Door\start 0014	528095.5	6944731.2	-18.9	
Car Door\start 0015	528098.3	6944745.2	-17.7	
Car Door\start 0016	528096.4	6944760.2	-22.3	
Car Door\start 0017	527954.4	6944745.1	-11.0	
Car Door\start 0018	527960.6	6944761.7	-25.6	
Car Door\start 0019	527952.3	6944787.9	-18.3	
Car Door\start 0020	527949.1	6944806.3	-11.4	
Forklifts 001	527815.6	6944718.5	-24.6	
Forklifts 0002	527847.4	6944799.4	-11.6	
Forklifts 0003	527865.1	6944855.3	-19.3	
Forklifts 0004	527989.6	6944763.8	-11.7	
Forklifts 0005	527993.9	6944840.8	-17.9	
Forklifts 0006	527936.6	6944859.1	-19.3	
Forklifts 0007	527913.9	6944592.7	-19.6	
Forklifts 0008	527973.1	6944666.8	0.6	
Forklifts 0009	527899.1	6944667.8	-16.2	
Forklifts 0010	527963.9	6944577.4	-19.6	
Forklifts 0011	528074.5	6944658.4	-19.6	
Forklifts 0012	528128.2	6944663.2	-16.8	
Forklifts 0013	528358.0	6944636.7	-6.7	
Forklifts 0014	528276.9	6944582.5	-2.8	
Forklifts 0015	528088.1	6944557.6	-10.4	
Forklifts 0016	528326.5	6944673.1	9.8	
Forklifts 0017	528117.9	6944591.5	-11.9	
Forklifts 0018	528099.7	6944743.1	-17.6	
Forklifts 0019	528084.9	6944784.8	-17.5	
Forklifts 0020	528234.5	6944800.8	6.7	
Forklifts 0021	528300.9	6944817.8	-7.5	
External Plant 001	527814.9	6944796.6	-6.2	
External Plant 0002	527845.9	6944899.9	13.8	
External Plant 0003	528001.9	6944883.2	11.2	
External Plant 0004	527948.9	6944790.0	6.8	

External Plant 0005	527896.9	6944568.5	-0.5	
External Plant 0006	527800.9	6944737.5	-4.1	
External Plant 0007	528059.1	6944532.3	3.5	
External Plant 0008	528115.7	6944625.5	2.6	
External Plant 0009	528062.9	6944628.5	-3.7	
External Plant 0010	528261.1	6944530.3	8.0	
External Plant 0011	528382.7	6944616.3	26.2	
External Plant 0012	528237.5	6944840.3	5.8	
External Plant 0013	528303.5	6944842.3	10.6	
External Plant 0014	527989.4	6944745.3	7.3	
External Plant 0015	528089.6	6944822.0	18.3	
Truck Reversing beepers	527902.2	6944778.6	1.7	
Truck Reversing beepers0002	528057.2	6944795.5	-1.9	
Truck Reversing beepers0003	528231.3	6944753.0	24.3	
Truck Reversing beepers0004	528273.5	6944605.1	8.2	
Truck Reversing beepers0005	528024.1	6944618.4	4.4	
Truck drive 001	528246.0	6944722.0	10.2	
Truck drive 0002	528229.3	6944671.8	9.5	
Truck drive 0002	528244.9	6944630.3	-4.7	
Truck drive 0003	528288.4	6944650.9	-0.7	
Truck drive 0004	528363.5	6944683.0	14.8	
Truck drive 0005	528369.2	6944701.7	14.6	
Truck drive 0005	528317.3	6944728.7	11.2	
Truck drive 0005	528068.7	6944609.9	-6.0	
Truck Drive 006	528064.9	6944609.6	-6.8	
Truck Drive 0007	528104.8	6944586.9	-10.3	
Truck Drive 0008	528094.5	6944573.1	-9.3	
Truck Drive 0009	528049.5	6944589.4	0.6	
Truck Drive 0010	528000.6	6944599.4	-10.8	
Truck Drive 0011	527984.3	6944588.1	-3.1	
Truck Drive 0012	527981.5	6944597.4	-9.7	
Truck Drive 0013	527938.7	6944608.2	-13.8	
Truck Drive 0014	527922.4	6944600.9	-13.3	
Truck Drive 0015	527891.8	6944600.9	-9.5	
Truck Drive 0016	527862.1	6944614.4	-12.2	
Truck Drive 0017	527832.6	6944694.5	-13.2	
Truck Drive 0018	527830.7	6944722.7	-10.2	
Truck Drive 0019	527847.6	6944743.8	-12.2	
Truck Drive 0020	527855.8	6944775.6	-14.4	
Truck Drive 0021	527851.8	6944797.1	-11.3	
Truck Drive 0022	527864.1	6944808.5	-12.0	
Truck Drive 0023	527872.7	6944833.4	-10.9	
Truck Drive 0024	527852.5	6944839.0	-7.8	
Truck Drive 0025	527845.9	6944848.3	-1.4	
Truck Drive 0026	527873.8	6944843.2	0.5	
Truck Drive 0027	527900.6	6944832.2	-10.0	
Truck Drive 0028	527920.8	6944837.4	-1.9	
Truck Drive 0029	527939.6	6944832.7	-0.5	
Truck Drive 0030	527949.1	6944821.9	-14.8	
Truck Drive 0031	527969.8	6944825.6	-0.5	
Truck Drive 0032	527993.0	6944831.5	-9.1	
Truck Drive 0033	528008.0	6944821.3	-1.6	
Truck Drive 0034	528006.7	6944812.3	-18.0	
Truck Drive 0035	528030.5	6944819.5	1.8	
Truck Drive 0036	528044.0	6944820.0	-14.4	
Truck Drive 0037	528047.7	6944802.6	-15.7	
Truck Drive 0038	528051.3	6944788.5	-16.6	
Truck Drive 0039	528063.1	6944783.9	-16.1	
Truck Drive 0040	528066.8	6944769.3	-21.6	
Truck Drive 0041	528059.9	6944761.7	-18.2	
Truck Drive 0042	528060.4	6944744.1	-15.3	
Truck Drive 0043	528071.7	6944731.8	-14.8	
Truck Drive 0044	528063.2	6944720.0	2.2	
Truck Drive 0045	528188.4	6944762.3	1.5	
Truck Drive 0046	528193.7	6944785.3	6.4	
Truck Drive 0047	528227.2	6944806.7	8.8	

Truck Drive 0048	528334.1	6944800.5	15.5	
Truck Drive 0049	528367.3	6944790.5	12.1	
Truck Drive 0050	528027.2	6944755.3	-14.8	
Truck Drive 0051	528021.4	6944763.0	-12.4	
Truck Drive 0052	528006.3	6944767.8	-13.1	
Truck Drive 0053	528008.7	6944751.5	-11.1	
Truck Drive 0054	528023.6	6944724.6	-17.8	
Truck Drive 0055	528011.8	6944720.6	-0.0	
Truck Drive 0056	528002.5	6944709.7	0.2	
Truck Drive 0057	528014.0	6944697.3	-0.1	
Truck Drive 0058	528016.2	6944673.8	-3.0	
Truck Drive 0059	528003.5	6944670.8	0.6	
Truck Drive 0060	527988.4	6944663.2	-11.3	
Truck Drive 0061	527998.6	6944649.7	-11.9	
Truck Drive 0062	527861.0	6944658.9	-21.3	
Truck Drive 0063	527884.9	6944658.1	-12.7	
Truck Drive 0064	527889.6	6944677.0	-12.2	
Truck Drive 0065	527873.7	6944710.2	-24.8	
Truck Drive 0066	527888.6	6944709.5	-17.4	
Truck Drive 0067	527902.5	6944723.2	-14.5	
Truck Drive 0068	527890.8	6944740.2	-13.8	
Truck Drive 0069	527878.5	6944740.7	-23.4	
Truck Drive 0070	527897.7	6944762.5	-16.4	
Truck Drive 0071	527912.1	6944774.1	-17.8	
Truck Drive 0072	527901.5	6944790.0	-17.7	
External Plant 0016	527914.8	6944701.4	1.7	
External Plant 0017	527950.4	6944699.5	3.7	
External Plant 0018	527909.7	6944646.4	0.1	
External Plant 0019	528112.2	6944758.8	19.0	
External Plant 0020	527918.4	6944888.5	4.7	
External Plant 0021	528097.2	6944804.0	18.5	
Tool/Equipment 001	528327.6	6944623.1	11.3	
Tool/Equipment 0002	528274.7	6944827.8	9.7	
Tool/Equipment 0003	528097.6	6944741.2	-1.8	
Tool/Equipment 0004	528081.6	6944780.7	-1.4	
Tool/Equipment 0005	528058.7	6944838.2	-0.3	
Tool/Equipment 0006	527996.2	6944849.8	-2.9	
Tool/Equipment 0007	527928.7	6944861.1	-3.1	
Tool/Equipment 0008	527880.4	6944860.2	-6.5	
Tool/Equipment 0009	527829.3	6944781.6	-8.2	
Tool/Equipment 0010	527806.1	6944711.9	-6.8	
Tool/Equipment 0011	527896.7	6944583.4	-1.2	
Tool/Equipment 0012	527968.0	6944557.4	-1.1	
Tool/Equipment 0013	528052.9	6944552.2	5.8	
Tool/Equipment 0014	528080.9	6944635.7	-3.3	
Tool/Equipment 0015	528119.5	6944643.8	1.1	
Tool/Equipment 0016	527952.5	6944666.6	15.4	
Tool/Equipment 0017	527964.6	6944710.0	15.7	
Tool/Equipment 0018	527968.5	6944760.7	3.5	
Tool/Equipment 0019	527941.4	6944762.5	-5.8	
Tool/Equipment 0020	527932.7	6944710.1	-5.7	
Tool/Equipment 0021	527921.8	6944658.2	-7.2	
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL6	528594.3	6944636.0		31.2
Source	X Posn	Y Posn	Noise Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	528076.8	6944733.7	-15.9	
Car Door\start 0002	528284.7	6944752.1	6.9	
Car Door\start 0003	528293.8	6944756.0	7.2	
Car Door\start 0004	528262.8	6944748.7	6.3	
Car Door\start 0005	528285.4	6944691.8	7.2	

Car Door\start 0006	528303.1	6944707.7	3.6	
Car Door\start 0007	528313.8	6944703.6	4.0	
Car Door\start 0008	528334.0	6944716.2	4.5	
Car Door\start 0009	528072.6	6944677.8	-11.7	
Car Door\start 0010	528090.8	6944684.5	-2.7	
Car Door\start 0011	528112.2	6944674.0	-14.7	
Car Door\start 0012	528126.0	6944675.8	-17.7	
Car Door\start 0013	528070.0	6944729.9	-16.3	
Car Door\start 0014	528095.5	6944731.2	-20.2	
Car Door\start 0015	528098.3	6944745.2	-17.8	
Car Door\start 0016	528096.4	6944760.2	-23.0	
Car Door\start 0017	527954.4	6944745.1	-0.6	
Car Door\start 0018	527960.6	6944761.7	-24.1	
Car Door\start 0019	527952.3	6944787.9	-18.4	
Car Door\start 0020	527949.1	6944806.3	-9.3	
Forklifts 001	527815.6	6944718.5	-24.9	
Forklifts 0002	527847.4	6944799.4	-12.7	
Forklifts 0003	527865.1	6944855.3	-20.1	
Forklifts 0004	527989.6	6944763.8	-11.4	
Forklifts 0005	527993.9	6944840.8	-20.5	
Forklifts 0006	527936.6	6944859.1	-19.8	
Forklifts 0007	527913.9	6944592.7	-18.0	
Forklifts 0008	527973.1	6944666.8	-11.4	
Forklifts 0009	527899.1	6944667.8	-16.6	
Forklifts 0010	527963.9	6944577.4	-17.5	
Forklifts 0011	528074.5	6944658.4	-19.6	
Forklifts 0012	528128.2	6944663.2	-16.7	
Forklifts 0013	528358.0	6944636.7	-7.1	
Forklifts 0014	528276.9	6944582.5	-2.9	
Forklifts 0015	528088.1	6944557.6	-10.5	
Forklifts 0016	528326.5	6944673.1	-9.2	
Forklifts 0017	528117.9	6944591.5	-12.0	
Forklifts 0018	528099.7	6944743.1	-17.8	
Forklifts 0019	528084.9	6944784.8	-17.7	
Forklifts 0020	528234.5	6944800.8	5.5	
Forklifts 0021	528300.9	6944817.8	-12.3	
External Plant 001	527814.9	6944796.6	-6.7	
External Plant 0002	527845.9	6944899.9	13.2	
External Plant 0003	528001.9	6944883.2	15.8	
External Plant 0004	527948.9	6944790.0	4.6	
External Plant 0005	527896.9	6944568.5	0.8	
External Plant 0006	527800.9	6944737.5	-4.5	
External Plant 0007	528059.1	6944532.3	4.9	
External Plant 0008	528115.7	6944625.5	18.7	
External Plant 0009	528062.9	6944628.5	-0.7	
External Plant 0010	528261.1	6944530.3	10.2	
External Plant 0011	528382.7	6944616.3	26.8	
External Plant 0012	528237.5	6944840.3	4.2	
External Plant 0013	528303.5	6944842.3	6.0	
External Plant 0014	527989.4	6944745.3	6.8	
External Plant 0015	528089.6	6944822.0	17.6	
Truck Reversing beepers	527902.2	6944778.6	1.3	
Truck Reversing beepers0002	528057.2	6944795.5	3.7	
Truck Reversing beepers0003	528231.3	6944753.0	23.5	
Truck Reversing beepers0004	528273.5	6944605.1	6.9	
Truck Reversing beepers0005	528024.1	6944618.4	14.1	
Truck drive 001	528245.5	6944721.6	9.5	
Truck drive 0002	528230.8	6944667.6	-0.3	
Truck drive 0002	528246.2	6944627.0	-7.5	
Truck drive 0003	528283.9	6944647.1	-2.4	
Truck drive 0003	528315.3	6944673.4	-12.7	
Truck drive 0004	528362.8	6944682.9	9.5	
Truck drive 0005	528356.7	6944708.2	10.6	
Truck drive 0005	528068.9	6944609.8	1.7	
Truck Drive 006	528065.0	6944609.6	0.9	
Truck Drive 0007	528104.8	6944586.8	-10.4	

February 2025 JT Environmental PTY LTD

Truck Drive 0008	528094.5	6944573.1	-9.4	
Truck Drive 0009	528049.7	6944589.3	-5.4	
Truck Drive 0010	528000.6	6944599.3	-4.4	
Truck Drive 0011	527984.3	6944588.1	-7.8	
Truck Drive 0012	527981.5	6944597.4	-3.5	
Truck Drive 0013	527938.7	6944608.2	-6.7	
Truck Drive 0014	527922.4	6944600.9	-6.9	
Truck Drive 0015	527891.8	6944600.9	-3.2	
Truck Drive 0016	527862.2	6944614.4	-7.4	
Truck Drive 0017	527832.6	6944694.5	-14.0	
Truck Drive 0018	527830.7	6944722.7	-11.5	
Truck Drive 0019	527847.6	6944743.8	-14.1	
Truck Drive 0020	527855.8	6944775.6	-14.8	
Truck Drive 0021	527851.8	6944797.0	-12.5	
Truck Drive 0022	527864.1	6944808.5	-12.2	
Truck Drive 0023	527872.7	6944833.4	-14.9	
Truck Drive 0024	527852.4	6944839.0	-9.9	
Truck Drive 0025	527845.9	6944848.3	-10.7	
Truck Drive 0026	527873.8	6944843.2	-9.0	
Truck Drive 0027	527900.6	6944832.2	-11.6	
Truck Drive 0028	527920.8	6944837.4	-12.5	
Truck Drive 0029	527939.6	6944832.7	-11.5	
Truck Drive 0030	527949.1	6944821.9	-17.3	
Truck Drive 0031	527969.8	6944825.6	-12.5	
Truck Drive 0032	527992.9	6944831.6	-10.2	
Truck Drive 0033	528008.0	6944821.3	-14.8	
Truck Drive 0034	528006.7	6944812.3	-20.8	
Truck Drive 0035	528030.5	6944819.4	-12.4	
Truck Drive 0036	528044.0	6944820.0	-17.7	
Truck Drive 0037	528047.7	6944802.6	-18.0	
Truck Drive 0038	528051.3	6944788.5	-16.8	
Truck Drive 0039	528063.1	6944783.9	-16.8	
Truck Drive 0040	528066.8	6944769.3	-21.7	
Truck Drive 0041	528059.8	6944761.7	-19.9	
Truck Drive 0042	528060.4	6944744.1	-15.7	
Truck Drive 0043	528071.7	6944731.8	-16.5	
Truck Drive 0044	528063.1	6944720.0	-2.2	
Truck Drive 0045	528188.4	6944762.3	0.6	
Truck Drive 0046	528193.6	6944785.1	5.5	
Truck Drive 0047	528226.8	6944806.6	7.7	
Truck Drive 0048	528330.1	6944801.0	13.8	
Truck Drive 0048	528384.1	6944794.6	-5.4	
Truck Drive 0049	528366.9	6944790.4	10.2	
Truck Drive 0050	528027.2	6944755.2	-13.3	
Truck Drive 0051	528021.4	6944763.0	-13.9	
Truck Drive 0052	528006.3	6944767.7	-14.4	
Truck Drive 0053	528008.7	6944751.5	-11.6	
Truck Drive 0054	528023.6	6944724.6	-9.2	
Truck Drive 0055	528011.7	6944720.6	-4.3	
Truck Drive 0056	528002.5	6944709.7	-4.0	
Truck Drive 0057	528014.0	6944697.3	-4.2	
Truck Drive 0058	528016.2	6944673.8	-15.8	
Truck Drive 0059	528003.5	6944670.8	-12.5	
Truck Drive 0060	527988.4	6944663.2	-12.9	
Truck Drive 0061	527998.6	6944649.7	-12.9	
Truck Drive 0062	527861.0	6944658.9	-23.9	
Truck Drive 0063	527884.9	6944658.1	-17.6	
Truck Drive 0064	527889.6	6944676.9	-12.6	
Truck Drive 0065	527873.7	6944710.2	-25.1	
Truck Drive 0066	527888.6	6944709.5	-17.7	
Truck Drive 0067	527902.5	6944723.2	-19.5	
Truck Drive 0068	527890.8	6944740.2	-14.8	
Truck Drive 0069	527878.5	6944740.7	-24.5	
Truck Drive 0070	527897.7	6944762.5	-16.4	
Truck Drive 0071	527912.1	6944774.1	-18.2	
Truck Drive 0072	527901.5	6944790.0	-18.1	

External Plant 0016	527914.8	6944701.4	14.7	
External Plant 0017	527950.4	6944699.5	15.3	
External Plant 0018	527909.7	6944646.4	4.7	
External Plant 0019	528112.2	6944758.8	18.3	
External Plant 0020	527918.4	6944888.5	4.1	
External Plant 0021	528097.2	6944804.0	17.8	
Tool/Equipment 001	528327.6	6944623.1	11.0	
Tool/Equipment 0002	528274.7	6944827.8	5.3	
Tool/Equipment 0003	528097.6	6944741.2	-2.0	
Tool/Equipment 0004	528081.6	6944780.7	-2.0	
Tool/Equipment 0005	528058.7	6944838.2	-0.7	
Tool/Equipment 0006	527996.2	6944849.8	-3.6	
Tool/Equipment 0007	527928.7	6944861.1	-3.6	
Tool/Equipment 0008	527880.4	6944860.2	-7.3	
Tool/Equipment 0009	527829.3	6944781.6	-8.8	
Tool/Equipment 0010	527806.1	6944711.9	-7.2	
Tool/Equipment 0011	527896.7	6944583.4	-1.4	
Tool/Equipment 0012	527968.0	6944557.4	-1.3	
Tool/Equipment 0013	528052.9	6944552.2	5.7	
Tool/Equipment 0014	528080.9	6944635.7	-3.2	
Tool/Equipment 0015	528119.5	6944643.8	1.2	
Tool/Equipment 0016	527952.5	6944666.6	4.0	
Tool/Equipment 0017	527964.6	6944710.0	-3.8	
Tool/Equipment 0018	527968.5	6944760.7	3.8	
Tool/Equipment 0019	527941.4	6944762.5	-6.3	
Tool/Equipment 0020	527932.7	6944710.1	-6.0	
Tool/Equipment 0021	527921.8	6944658.2	-7.5	
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL7	528525.9	6944394.4		29.3
Source	X Posn	Y Posn	Noise Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	528076.8	6944733.7	-18.9	
Car Door\start 0002	528284.7	6944752.1	-8.9	
Car Door\start 0003	528293.8	6944756.0	-8.9	
Car Door\start 0004	528262.8	6944748.7	-8.0	
Car Door\start 0005	528285.4	6944691.8	-9.5	
Car Door\start 0006	528303.1	6944707.7	-9.7	
Car Door\start 0007	528313.8	6944703.6	-10.0	
Car Door\start 0008	528334.0	6944716.2	-9.8	
Car Door\start 0009	528072.6	6944677.8	-15.1	
Car Door\start 0010	528090.8	6944684.5	-13.2	
Car Door\start 0011	528112.2	6944674.0	-14.3	
Car Door\start 0012	528126.0	6944675.8	-16.9	
Car Door\start 0013	528070.0	6944729.9	-9.9	
Car Door\start 0014	528095.5	6944731.2	-22.3	
Car Door\start 0015	528098.3	6944745.2	-18.2	
Car Door\start 0016	528096.4	6944760.2	-24.3	
Car Door\start 0017	527954.4	6944745.1	-20.0	
Car Door\start 0018	527960.6	6944761.7	-24.6	
Car Door\start 0019	527952.3	6944787.9	-18.8	
Car Door\start 0020	527949.1	6944806.3	-16.1	
Forklifts 001	527815.6	6944718.5	-25.1	
Forklifts 0002	527847.4	6944799.4	-13.5	
Forklifts 0003	527865.1	6944855.3	-13.2	
Forklifts 0004	527989.6	6944763.8	-12.3	
Forklifts 0005	527993.9	6944840.8	-24.7	
Forklifts 0006	527936.6	6944859.1	-19.5	
Forklifts 0007	527913.9	6944592.7	-18.6	
Forklifts 0008	527973.1	6944666.8	-11.7	
Forklifts 0009	527899.1	6944667.8	-17.1	
Forklifts 0010	527963.9	6944577.4	-15.8	

February 2025 JT Environmental PTY LTD

Forklifts 0011	528074.5	6944658.4	-18.5	
Forklifts 0012	528128.2	6944663.2	-15.9	
Forklifts 0013	528358.0	6944636.7	-9.1	
Forklifts 0014	528276.9	6944582.5	-7.8	
Forklifts 0015	528088.1	6944557.6	-11.3	
Forklifts 0016	528326.5	6944673.1	-12.8	
Forklifts 0017	528117.9	6944591.5	-12.5	
Forklifts 0018	528099.7	6944743.1	-18.6	
Forklifts 0019	528084.9	6944784.8	-19.1	
Forklifts 0020	528234.5	6944800.8	-9.2	
Forklifts 0021	528300.9	6944817.8	-18.4	
External Plant 001	527814.9	6944796.6	-7.3	
External Plant 0002	527845.9	6944899.9	4.0	
External Plant 0003	528001.9	6944883.2	0.2	
External Plant 0004	527948.9	6944790.0	4.2	
External Plant 0005	527896.9	6944568.5	1.5	
External Plant 0006	527800.9	6944737.5	-4.7	
External Plant 0007	528059.1	6944532.3	19.1	
External Plant 0008	528115.7	6944625.5	8.9	
External Plant 0009	528062.9	6944628.5	7.3	
External Plant 0010	528261.1	6944530.3	24.5	
External Plant 0011	528382.7	6944616.3	25.8	
External Plant 0012	528237.5	6944840.3	-0.5	
External Plant 0013	528303.5	6944842.3	0.7	
External Plant 0014	527989.4	6944745.3	4.7	
External Plant 0015	528089.6	6944822.0	6.0	
Truck Reversing beepers	527902.2	6944778.6	0.5	
Truck Reversing beepers0002	528057.2	6944795.5	1.5	
Truck Reversing beepers0003	528231.3	6944753.0	8.7	
Truck Reversing beepers0004	528273.5	6944605.1	4.8	
Truck Reversing beepers0005	528024.1	6944618.4	6.8	
Truck drive 001	528244.2	6944720.7	-5.4	
Truck drive 0002	528235.2	6944656.0	-4.1	
Truck drive 0003	528273.3	6944638.3	-6.8	
Truck drive 0003	528307.5	6944666.9	-10.9	
Truck drive 0004	528350.9	6944681.0	-11.7	
Truck drive 0004	528388.4	6944686.9	5.0	
Truck drive 0005	528352.6	6944710.4	-3.9	
Truck drive 0005	528069.1	6944609.8	-6.2	
Truck Drive 006	528065.2	6944609.5	-6.9	
Truck Drive 0007	528104.9	6944586.6	-11.2	
Truck Drive 0008	528094.5	6944573.1	-10.4	
Truck Drive 0009	528050.1	6944589.0	-7.4	
Truck Drive 0010	528000.6	6944599.2	-12.0	
Truck Drive 0011	527984.3	6944588.1	-12.6	
Truck Drive 0012	527981.4	6944597.3	-11.7	
Truck Drive 0013	527938.7	6944608.2	-14.4	
Truck Drive 0014	527922.4	6944600.9	-20.7	
Truck Drive 0015	527891.8	6944600.9	-14.9	
Truck Drive 0016	527862.2	6944614.3	-16.3	
Truck Drive 0017	527832.6	6944694.5	-15.4	
Truck Drive 0018	527830.6	6944722.4	-11.3	
Truck Drive 0019	527847.6	6944743.8	-16.5	
Truck Drive 0020	527855.8	6944775.6	-17.0	
Truck Drive 0021	527851.8	6944797.0	-13.1	
Truck Drive 0022	527864.1	6944808.5	-14.8	
Truck Drive 0023	527872.7	6944833.4	-17.4	
Truck Drive 0024	527852.4	6944839.0	-12.1	
Truck Drive 0025	527845.8	6944848.3	-13.0	
Truck Drive 0026	527873.8	6944843.2	-11.1	
Truck Drive 0027	527900.5	6944832.2	-13.6	
Truck Drive 0028	527920.7	6944837.4	-13.8	
Truck Drive 0029	527939.6	6944832.7	-13.0	
Truck Drive 0030	527949.1	6944821.9	-19.7	
Truck Drive 0031	527969.7	6944825.6	-13.5	
Truck Drive 0032	527992.9	6944831.6	-11.4	

Truck Drive 0033	528008.0	6944821.3	-15.3	
Truck Drive 0034	528006.7	6944812.3	-20.7	
Truck Drive 0035	528030.5	6944819.3	-14.1	
Truck Drive 0036	528044.0	6944820.0	-15.5	
Truck Drive 0037	528047.7	6944802.5	-16.9	
Truck Drive 0038	528051.3	6944788.5	-20.2	
Truck Drive 0039	528063.1	6944783.9	-19.7	
Truck Drive 0040	528066.8	6944769.2	-18.2	
Truck Drive 0041	528059.8	6944761.7	-22.3	
Truck Drive 0042	528060.4	6944744.1	-18.5	
Truck Drive 0043	528071.7	6944731.7	-21.3	
Truck Drive 0044	528063.1	6944720.0	-12.8	
Truck Drive 0045	528188.4	6944762.2	-13.4	
Truck Drive 0046	528193.6	6944784.9	-8.5	
Truck Drive 0047	528226.0	6944806.5	-6.6	
Truck Drive 0048	528304.8	6944804.0	-2.9	
Truck Drive 0048	528368.2	6944796.5	5.2	
Truck Drive 0049	528366.1	6944790.2	5.9	
Truck Drive 0050	528027.2	6944755.2	-13.4	
Truck Drive 0051	528021.4	6944762.9	-11.1	
Truck Drive 0052	528006.3	6944767.7	-13.7	
Truck Drive 0053	528008.7	6944751.4	-11.8	
Truck Drive 0054	528023.6	6944724.6	-17.3	
Truck Drive 0055	528011.7	6944720.6	-13.7	
Truck Drive 0056	528002.5	6944709.6	-13.5	
Truck Drive 0057	528013.9	6944697.3	-14.0	
Truck Drive 0058	528016.2	6944673.8	-18.4	
Truck Drive 0059	528003.5	6944670.8	-14.5	
Truck Drive 0060	527988.4	6944663.1	-15.3	
Truck Drive 0061	527998.6	6944649.7	-11.5	
Truck Drive 0062	527861.0	6944658.9	-20.2	
Truck Drive 0063	527884.9	6944658.1	-17.5	
Truck Drive 0064	527889.8	6944676.8	-13.5	
Truck Drive 0065	527873.7	6944710.2	-25.0	
Truck Drive 0066	527888.5	6944709.5	-15.2	
Truck Drive 0067	527902.5	6944723.1	-19.7	
Truck Drive 0068	527890.8	6944740.2	-15.6	
Truck Drive 0069	527878.5	6944740.7	-26.9	
Truck Drive 0070	527897.7	6944762.5	-16.2	
Truck Drive 0071	527912.0	6944774.0	-18.9	
Truck Drive 0072	527901.5	6944790.0	-17.0	
External Plant 0016	527914.8	6944701.4	4.6	
External Plant 0017	527950.4	6944699.5	4.8	
External Plant 0018	527909.7	6944646.4	4.4	
External Plant 0019	528112.2	6944758.8	7.2	
External Plant 0020	527918.4	6944888.5	0.5	
External Plant 0021	528097.2	6944804.0	6.4	
Tool/Equipment 001	528327.6	6944623.1	7.7	
Tool/Equipment 0002	528274.7	6944827.8	-1.2	
Tool/Equipment 0003	528097.6	6944741.2	-3.9	
Tool/Equipment 0004	528081.6	6944780.7	-4.8	
Tool/Equipment 0005	528058.7	6944838.2	-1.2	
Tool/Equipment 0006	527996.2	6944849.8	-4.8	
Tool/Equipment 0007	527928.7	6944861.1	-4.7	
Tool/Equipment 0008	527880.4	6944860.2	-8.5	
Tool/Equipment 0009	527829.3	6944781.6	-9.4	
Tool/Equipment 0010	527806.1	6944711.9	1.3	
Tool/Equipment 0011	527896.7	6944583.4	-1.6	
Tool/Equipment 0012	527968.0	6944557.4	-1.2	
Tool/Equipment 0013	528052.9	6944552.2	3.6	
Tool/Equipment 0014	528080.9	6944635.7	-2.0	
Tool/Equipment 0015	528119.5	6944643.8	0.7	
Tool/Equipment 0016	527952.5	6944666.6	-3.0	
Tool/Equipment 0017	527964.6	6944710.0	-4.0	
Tool/Equipment 0018	527968.5	6944760.7	-2.2	
Tool/Equipment 0019	527941.4	6944762.5	-6.6	

Tool/Equipment 0020	527932.7	6944710.1	-6.1	
Tool/Equipment 0021	527921.8	6944658.2	-7.5	
Receptor	X Posn	Y Posn		Noise Level
	(m)	(m)		(dB(A))
RL8	527866.6	6945121.0		26.0
Source	X Posn	Y Posn	Noise Level	
	(m)	(m)	(dB(A))	
Car Door\start 001	528076.8	6944733.7	-9.8	
Car Door\start 0002	528284.7	6944752.1	-10.8	
Car Door\start 0003	528293.8	6944756.0	-10.9	
Car Door\start 0004	528262.8	6944748.7	-3.4	
Car Door\start 0005	528285.4	6944691.8	-5.5	
Car Door\start 0006	528303.1	6944707.7	-5.6	
Car Door\start 0007	528313.8	6944703.6	-5.4	
Car Door\start 0008	528334.0	6944716.2	-10.5	
Car Door\start 0009	528072.6	6944677.8	-10.6	
Car Door\start 0010	528090.8	6944684.5	-10.8	
Car Door\start 0011	528112.2	6944674.0	-13.4	
Car Door\start 0012	528126.0	6944675.8	-23.3	
Car Door\start 0013	528070.0	6944729.9	-9.9	
Car Door\start 0014	528095.5	6944731.2	-13.8	
Car Door\start 0015	528098.3	6944745.2	-16.0	
Car Door\start 0016	528096.4	6944760.2	-16.9	
Car Door\start 0017	527954.4	6944745.1	-12.3	
Car Door\start 0018	527960.6	6944761.7	-11.8	
Car Door\start 0019	527952.3	6944787.9	-8.7	
Car Door\start 0020	527949.1	6944806.3	-7.5	
Forklifts 001	527815.6	6944718.5	-10.7	
Forklifts 0002	527847.4	6944799.4	-11.0	
Forklifts 0003	527865.1	6944855.3	-8.5	
Forklifts 0004	527989.6	6944763.8	-11.3	
Forklifts 0005	527993.9	6944840.8	-8.4	
Forklifts 0006	527936.6	6944859.1	-9.2	
Forklifts 0007	527913.9	6944592.7	-10.9	
Forklifts 0008	527973.1	6944666.8	-13.8	
Forklifts 0009	527899.1	6944667.8	-9.8	
Forklifts 0010	527963.9	6944577.4	-10.0	
Forklifts 0011	528074.5	6944658.4	-9.8	
Forklifts 0012	528128.2	6944663.2	-12.5	
Forklifts 0013	528358.0	6944636.7	-15.7	
Forklifts 0014	528276.9	6944582.5	-18.6	
Forklifts 0015	528088.1	6944557.6	-12.2	
Forklifts 0016	528326.5	6944673.1	-5.5	
Forklifts 0017	528117.9	6944591.5	-10.9	
Forklifts 0018	528099.7	6944743.1	-15.2	
Forklifts 0019	528084.9	6944784.8	-14.5	
Forklifts 0020	528234.5	6944800.8	-14.8	
Forklifts 0021	528300.9	6944817.8	-12.1	
External Plant 001	527814.9	6944796.6	9.3	
External Plant 0002	527845.9	6944899.9	15.3	
External Plant 0003	528001.9	6944883.2	15.2	
External Plant 0004	527948.9	6944790.0	9.1	
External Plant 0005	527896.9	6944568.5	-0.6	
External Plant 0006	527800.9	6944737.5	6.9	
External Plant 0007	528059.1	6944532.3	0.6	
External Plant 0008	528115.7	6944625.5	6.0	
External Plant 0009	528062.9	6944628.5	-5.1	
External Plant 0010	528261.1	6944530.3	0.3	
External Plant 0011	528382.7	6944616.3	1.4	
External Plant 0012	528237.5	6944840.3	18.8	
External Plant 0013	528303.5	6944842.3	17.5	
External Plant 0014	527989.4	6944745.3	1.3	

External Plant 0015	528089.6	6944822.0	9.1	
Truck Reversing beepers	527902.2	6944778.6	8.6	
Truck Reversing beepers0002	528057.2	6944795.5	8.8	
Truck Reversing beepers0003	528231.3	6944753.0	13.8	
Truck Reversing beepers0004	528273.5	6944605.1	8.2	
Truck Reversing beepers0005	528024.1	6944618.4	7.3	
Truck drive 001	528243.7	6944720.4	-1.3	
Truck drive 0002	528232.5	6944663.3	5.5	
Truck drive 0003	528283.8	6944647.0	-0.8	
Truck drive 0004	528355.5	6944681.7	-5.4	
Truck drive 0005	528342.1	6944715.8	-4.5	
Truck drive 0005	528063.5	6944611.3	-11.9	
Truck Drive 006	528061.4	6944610.6	-12.5	
Truck Drive 0007	528104.5	6944587.3	-13.5	
Truck Drive 0008	528093.7	6944573.1	-11.8	
Truck Drive 0009	528047.2	6944590.9	-7.0	
Truck Drive 0010	528000.6	6944599.6	-10.7	
Truck Drive 0011	527983.7	6944588.1	-9.4	
Truck Drive 0012	527981.3	6944597.3	-9.2	
Truck Drive 0013	527938.7	6944608.2	-12.1	
Truck Drive 0014	527922.3	6944600.9	-13.3	
Truck Drive 0015	527890.8	6944601.0	-8.4	
Truck Drive 0016	527862.0	6944614.6	-11.2	
Truck Drive 0017	527832.4	6944694.7	-10.9	
Truck Drive 0018	527831.1	6944723.9	-7.4	
Truck Drive 0019	527847.4	6944743.9	-10.4	
Truck Drive 0020	527855.7	6944775.8	-10.7	
Truck Drive 0021	527851.9	6944797.7	-8.5	
Truck Drive 0022	527863.8	6944808.5	-9.4	
Truck Drive 0023	527872.6	6944833.5	-12.1	
Truck Drive 0024	527852.0	6944839.0	-7.5	
Truck Drive 0025	527846.1	6944848.5	-8.6	
Truck Drive 0026	527872.6	6944844.2	-6.8	
Truck Drive 0027	527900.4	6944832.2	-9.7	
Truck Drive 0028	527920.7	6944837.4	-14.7	
Truck Drive 0029	527939.1	6944833.1	-7.9	
Truck Drive 0030	527949.1	6944822.0	-13.9	
Truck Drive 0031	527969.9	6944825.8	-9.9	
Truck Drive 0032	527991.9	6944831.8	-8.0	
Truck Drive 0033	528008.1	6944821.4	-15.0	
Truck Drive 0034	528006.7	6944812.3	-18.7	
Truck Drive 0035	528030.5	6944820.0	-11.0	
Truck Drive 0036	528043.0	6944821.0	-8.6	
Truck Drive 0037	528047.6	6944802.5	-10.9	
Truck Drive 0038	528051.2	6944788.5	-13.0	
Truck Drive 0039	528062.9	6944784.1	-10.8	
Truck Drive 0040	528066.8	6944769.4	-10.5	
Truck Drive 0041	528059.8	6944761.7	-13.9	
Truck Drive 0042	528060.2	6944744.2	-12.2	
Truck Drive 0043	528071.5	6944732.2	-10.5	
Truck Drive 0044	528062.7	6944720.0	-10.2	
Truck Drive 0045	528188.4	6944762.3	-7.7	
Truck Drive 0046	528193.7	6944785.5	-1.9	
Truck Drive 0047	528224.3	6944806.3	-14.5	
Truck Drive 0048	528311.3	6944803.2	-9.9	
Truck Drive 0049	528365.6	6944790.1	-13.2	
Truck Drive 0050	528027.0	6944755.5	-10.2	
Truck Drive 0051	528021.0	6944763.5	-9.5	
Truck Drive 0052	528006.3	6944767.7	-16.5	
Truck Drive 0053	528008.2	6944752.0	-10.2	
Truck Drive 0054	528023.6	6944724.6	-14.1	
Truck Drive 0055	528011.5	6944720.6	-10.4	
Truck Drive 0056	528002.5	6944710.0	-11.4	
Truck Drive 0057	528013.7	6944697.3	-10.9	
Truck Drive 0058	528016.2	6944673.9	-13.9	
Truck Drive 0059	528003.1	6944670.9	-10.3	

Truck Drive 0060	527988.5	6944663.3	-14.9	
Truck Drive 0061	527998.2	6944649.8	-10.0	
Truck Drive 0062	527861.0	6944658.9	-17.0	
Truck Drive 0063	527884.2	6944658.1	-7.6	
Truck Drive 0064	527888.3	6944678.1	-7.1	
Truck Drive 0065	527873.7	6944710.2	-18.6	
Truck Drive 0066	527888.2	6944709.5	-9.3	
Truck Drive 0067	527902.6	6944723.8	-8.7	
Truck Drive 0068	527890.5	6944740.2	-9.2	
Truck Drive 0069	527878.5	6944740.7	-19.5	
Truck Drive 0070	527897.5	6944762.5	-9.3	
Truck Drive 0071	527912.1	6944774.5	-8.4	
Truck Drive 0072	527901.1	6944790.2	-9.1	
External Plant 0016	527914.8	6944701.4	0.2	
External Plant 0017	527950.4	6944699.5	8.8	
External Plant 0018	527909.7	6944646.4	-0.3	
External Plant 0019	528112.2	6944758.8	5.5	
External Plant 0020	527918.4	6944888.5	12.6	
External Plant 0021	528097.2	6944804.0	9.1	
Tool/Equipment 001	528327.6	6944623.1	-2.9	
Tool/Equipment 0002	528274.7	6944827.8	1.5	
Tool/Equipment 0003	528097.6	6944741.2	0.0	
Tool/Equipment 0004	528081.6	6944780.7	1.1	
Tool/Equipment 0005	528058.7	6944838.2	6.3	
Tool/Equipment 0006	527996.2	6944849.8	5.9	
Tool/Equipment 0007	527928.7	6944861.1	5.4	
Tool/Equipment 0008	527880.4	6944860.2	6.3	
Tool/Equipment 0009	527829.3	6944781.6	6.3	
Tool/Equipment 0010	527806.1	6944711.9	5.2	
Tool/Equipment 0011	527896.7	6944583.4	-4.3	
Tool/Equipment 0012	527968.0	6944557.4	6.1	
Tool/Equipment 0013	528052.9	6944552.2	-1.9	
Tool/Equipment 0014	528080.9	6944635.7	4.7	
Tool/Equipment 0015	528119.5	6944643.8	4.5	
Tool/Equipment 0016	527952.5	6944666.6	2.3	
Tool/Equipment 0017	527964.6	6944710.0	3.8	
Tool/Equipment 0018	527968.5	6944760.7	0.8	
Tool/Equipment 0019	527941.4	6944762.5	5.5	
Tool/Equipment 0020	527932.7	6944710.1	5.2	
Tool/Equipment 0021	527921.8	6944658.2	3.6	

10.4 APPENDIX D – NOISE EMISSION SOURCE MAPS POINT EMISSIONS & LINE EMISSIONS (WITH COORDINATES)

Modelled:

- Assumed building positioning (detailed with dotted lines):

Modelled:

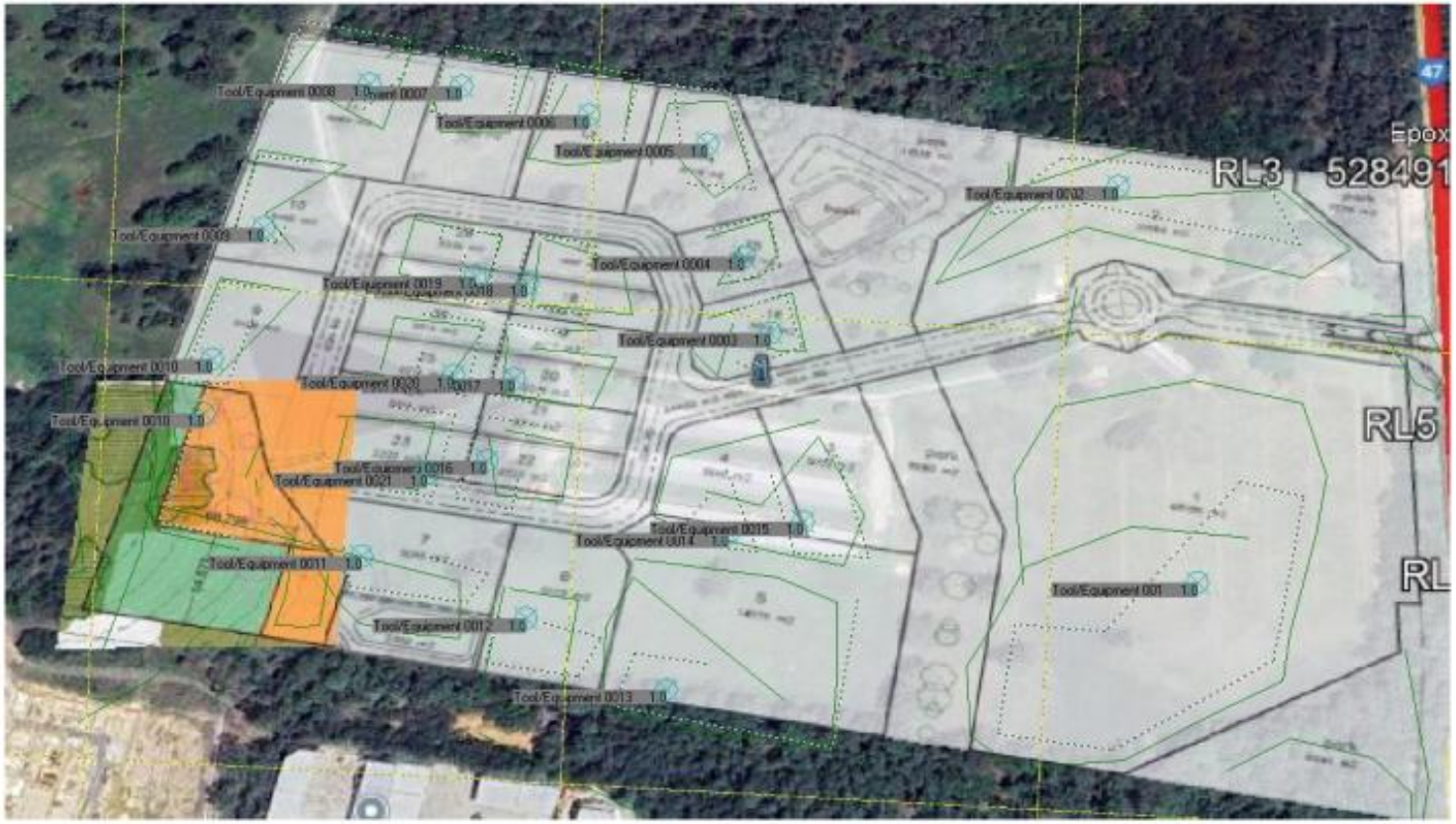
- Assumed building positioning &
- External Mechanical Plant Positions:

Modelled Assumed:

- Building positioning &
- External Mechanical Plant Positions &
- Car parking noise source

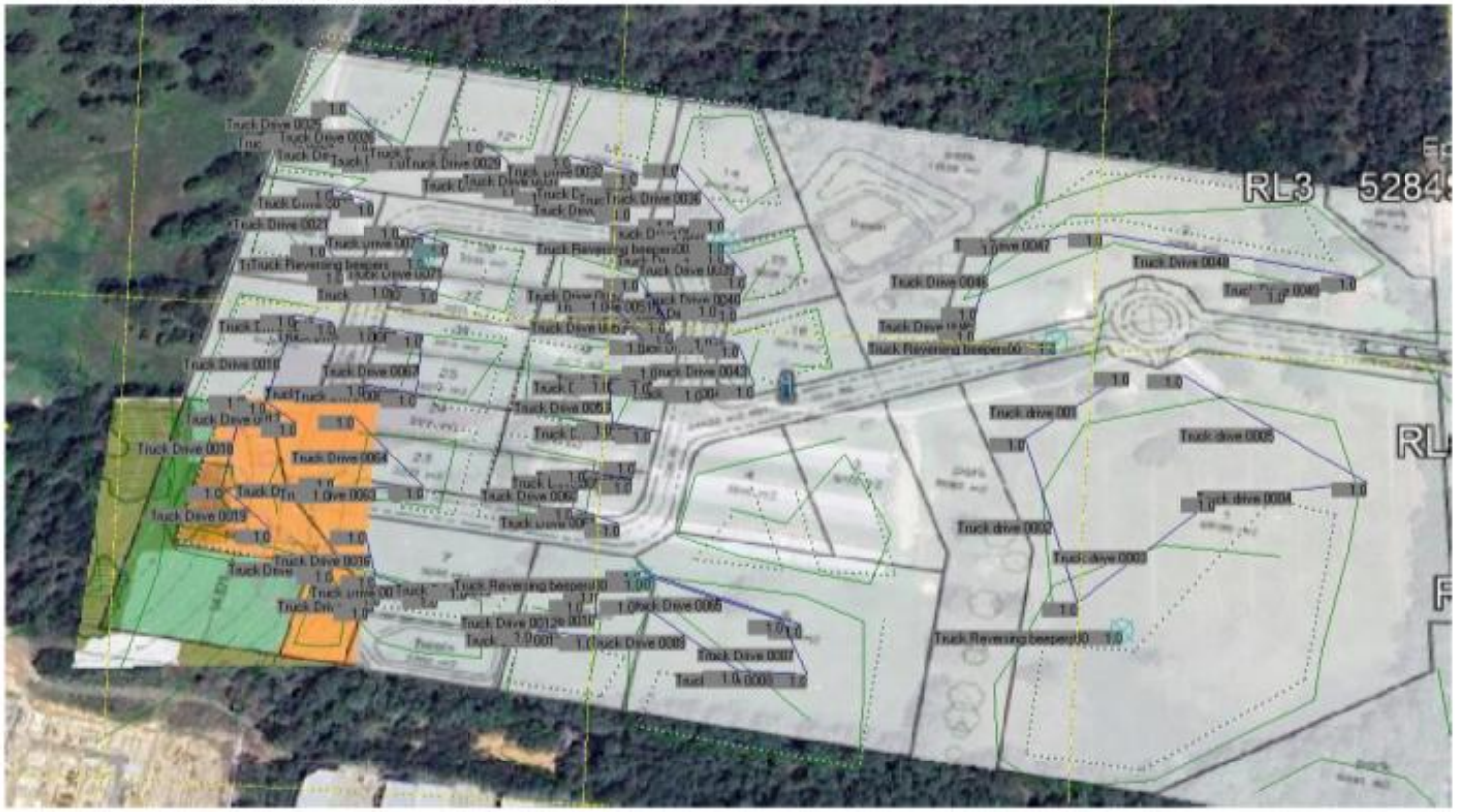
Modelled Assumed:

- Building positioning &
- Possible tools/equipment used internally of buildings.



Modelled:

- Assumed building positioning &
- Truck movements modelled for all allotments.



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16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

Fox & Bell Pty Ltd
By Email: garry@foxandbell.com.au

Attention: Garry Hargrave

RE: PROPOSED DEVELOPMENT - 20 GILES ROAD, REDLAND BAY QLD 4165
TRAFFIC ENGINEERING RESPONSE TO SARA FURTHER ADVICE NOTICE

This letter has been prepared in response to the State Assessment and Referral Agency (SARA) Further Advice Notice dated 26 March 2024 for the proposed development located at 20 Giles Road, Redland Bay QLD 4165. The traffic engineering issues being addressed are stated below in italics followed by the L+R response.

SARA Item 1 – Traffic Impact Assessment and Access

Issues:
Upgrade to Cleveland Redland Bay Road / Double Jump Road intersection
The proposed upgrade and associated modelling are not based on the existing intersection design. SARA does not support the proposed upgrade or associated modelling, as it is reliant upon upgrades by other parties, which may or may not occur. The intersection analysis and any required upgrades must be based on the existing intersection design. The applicant has also confirmed they do not intend to undertake the works to this intersection relied upon in the SIDRA modelling.

Cleveland Redland Bay Road access intersection
The response to the further advice includes proposed access to Cleveland Redland Bay Road. Cleveland Redland Bay Road is a limited access road, however as demonstrated within the report, access via Giles Road is unsuitable. The proposed Cleveland Redland Bay Road access intersection provides approximately 500 metres separation from adjacent signalised intersections and therefore, the location of the proposed access intersection is expected to be suitable from an intersection spacing perspective.

The following issues have been identified:

(a) A functional layout plan of the proposed Cleveland Redland Bay Road access intersection has been provided. Based on a desktop review it is identified that elements of the functional layout plan deviate from the requirements within Austroads, the Department of Transport and Main Roads (DTMR) Road Planning Design Manual (RPDM), DTMR's Safety Policy and DTMR's Manual of Uniform Traffic Control Devices (MUTCD), in particular these include:

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

- The auxiliary departure through lane lengths are not in accordance with Austroads Guide to Road Design Part 4A: Signalised and Unsignalised Intersections, more specifically that the departure lane does not provide sufficient length to accommodate 4 – 6 seconds of travel time at the operating speed of Cleveland Redland Bay Road (80km/h+10km/h = 90km/h), this is expected to be a minimum of 100 metres based on 4 seconds of travel time.

- The merging taper on auxiliary departure through lanes does not provide a run-out area in accordance with the requirements within DTMR's Road RPDM. As per the RPDM, the run-out area provided through the merge area is achieved by maintaining a total pavement width in the direction of travel equal to at least the sum of the full lane width plus a sealed shoulder width of 3 metres over the full length of the taper plus 40 metres.

- A2.5 metres wide pedestrian path has been provided on the western side of the road in the typical cross-section and on the inset plan at the Cleveland Redland Bay Road northern tie in, but this is not shown within the verge of the functional layout plan. Also, there are no pedestrian crossings at the signalised intersection. DTMR's Road Safety Policy states that pedestrian crossings shall be provided on all approaches at signalised intersections.

- Discrepancies between the signage and line marking illustrated on the functional layout plan and relevant standards have been identified, including:

  - The turn lanes on the site access approach require a minimum of three equally spaced turn arrow pavement markings as per DTMR's MUTCD.

  - The arrow pavement markings for the auxiliary through lane merges on Cleveland Redland Bay Road are not located in accordance with DTMR's MUTCD. DTMR's MUTCD requires the pavement markings to be placed outside of the taper / before the taper begins.

  - The proposed cycle lane has bicycle pavement markings every 200 metres maximum as per DTMR's MUTCD requirements.

(b) No commentary has been provided regarding the proposed intersection impacts on existing stormwater infrastructure/culverts located north and south of the site access. It is expected the proposed works could impact this existing infrastructure, particularly if the tie-in point is relocated because of the above issues.

(c) No swept paths have been provided that demonstrate the proposed intersection layout can accommodate design vehicles' swept paths.

Note: Many of the above issues would typically be identified as part of a Road Safety Audit (RSA).

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

Safety Assessment & Road Safety Audit
The response to the further advice did not include a RSA as required by DTMR's Guide to Traffic Impact Assessment (GTIA) and requested by SARA. Although the response states that the RSA is unnecessary at this stage of design, it is SARA's view that an RSA should be undertaken to demonstrate compliance with Performance Outcome (PO) PO15 and PO16 of State code 1: Development in a state-controlled road environment (State code 1) of the SDAP. Additionally, a road safety audit is expected to identify issues that can be addressed in these early stages of design.

Action:
To address the issues raised above and demonstrate the proposed intersection will not adversely impact the safety, function and efficiency of the state-controlled road in accordance with PO15, PO16, PO25 and PO30 of State code 1 of the SDAP, provide an amended Traffic Impact Assessment prepared in accordance with the GTIA which addresses the following:

Cleveland Redland Bay Road / Double Jump Road intersection

(a) Provide a Traffic Impact Assessment of the existing Cleveland Redland Bay Road / Double Jump Road intersection (no signals) in accordance with GTIA.
(b) Identify mitigation measures to the existing intersection to mitigate the proposed developments impacts.
(c) Provide a functional layout plan of the required mitigation measures and swept paths demonstrating the mitigation measures can accommodate the relevant design vehicle.

Cleveland Redland Bay Road Access intersection

(a) Provide swept paths of the proposed works to demonstrate the relevant design vehicle can be accommodated.
(b) Provide an amended functional layout plan complying with the minimum requirements within Austroads, DTMR's RPDM or MUTCD. In particular, this includes updating the:
    - auxiliary departure through lane lengths.
    - merging taper on the auxiliary departure through lanes.
    - short left turn lane on the Double Jump Road approach.

    The amended functional layout plan should accommodate pedestrian crossings on all approaches and a pedestrian path along the entire frontage of the site (western side of Cleveland Redland Bay only) in accordance with the typical cross-section of Cleveland Redland Bay Road.

(c) Provide commentary accompanying the amended functional layout plan of the proposed Cleveland Redland Bay Road access intersection addressing how the proposed works will impact existing stormwater infrastructure/culverts located north and south of the site access.

RSA
Provide a RSA for the proposed works to the state-controlled road in accordance with GTIA requirements.

SDAP codes
Provide amended the responses to State code 1 and State code 6: Protection of state transport networks of the SDAP where necessary.

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

L+R Response

Cleveland Redland Bay Road / Double Jump Road Intersection

a) The traffic impact assessment has been undertaken in accordance with the requirements of DTMR's Guide to Traffic Impact Assessment (GTIA), including the following steps in relation to the Cleveland Redland Bay Road / Double Jump Road intersection:

   1) Assessment of the existing form of the intersection
   As described in our original traffic report (ref: B23038TR001_RevB) and the response to SARA's Advice Notice dated 13th February 2024 (ref: B23038TL003_RevA), the intersection is not currently operating how a typical unsignalised intersection should. A review of the video footage of the intersection survey shows that it is common for vehicles on the through road (Cleveland Redland Bay Road) to stop and give way to traffic turning from Double Jump Road during slow moving traffic conditions, providing "courtesy gaps" to turning traffic. This behaviour creates artificial gaps and a clear indication of the existing constraints and safety issues at this location.

   2) Assessment of the upgraded form of the intersection to address the safety related issues
   The assessment considers the minimum works required to address the safety issues identified with the existing form of the intersection. GTIA allows the safety related upgrades to form the base case for the net delay assessment.

   3) Assessment of the upgraded form of the intersection with development traffic
   A net delay assessment was then undertaken that considered the safety related upgrade in the base case 'with' and 'without development' traffic. The assessment identified a net delay impact of 7% which required mitigation to bring the net delay below DTMR's 5% threshold.

   4) Assessment of the intersection with safety related upgrade and mitigation measures
   The assessment identifies the additional upgrades to the intersection to accommodate development traffic. The assessment with mitigation measures (on top of the safety related upgrade in the base case) was then used as part of the updated net delay assessment and found the net delay impact reduced to 3.8%, within DTMR's threshold.

b) Mitigation measures to the intersection have been identified to mitigate the proposed development impacts on top of the safety related upgrade, as noted above.

c) It is understood that DTMR is planning an upgrade of Cleveland Redland Bay Road between Anita Street and Giles Road. The project includes duplication of the corridor as well as signalisation of the Cleveland Redland Bay Road / Double Jump Road intersection. More information can be found here: https://www.tmr.qld.gov.au/projects/cleveland-redland-bay-road-anita-street-to-giles-road-duplicate-lanes.

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

Furthermore, it is understood that a nearby Development Approval includes a condition that requires upgrade of the intersection to signals. The safety related and additional upgrades required for the proposed development are consistent with the functional layout plan prepared in support of the nearby Development Approval. We have enclosed a copy of this plan with this letter.

On this basis, the applicant would prefer to avoid the safety related upgrade works to be conditioned on their development, however, we understand the need for SARA to condition the safety related and mitigation works in the event that the DTMR project or other development upgrade do not go ahead as planned.

Cleveland Redland Bay Road Access Intersection

a) Please find a swept path assessment attached, reference B23038-SK003-RevA, showing the movements of the largest vehicle anticipated to use the site entering and exiting in both directions at the proposed new access intersection.

b) The functional layout plan, reference B23038-SK001-RevD, of the proposed Cleveland Redland Bay Road access intersection has been updated with the following:

- Extended auxiliary departure through lane lengths to 100m to accommodate 4 seconds of travel time at an operating speed of 90km/h;
- A run-out area at each of the merging tapers on the auxiliary departure through lanes. It is noted that the inclusion of the run-out area allows the merging taper distance to be reduced based on a merge rate of 1.0m/s; and
- Removal of the pedestrian pathway from the typical cross section. It is noted that there are no pedestrian facilities provided within the vicinity of the site, and no bus stops along the site frontage that require a connection. We also note that the upgrade of the nearby Giles Road intersection, did not include any signalised pedestrian crossings or pathways. Furthermore, we note that the DTMR Road Safety Policy referred to in the SARA Advice Notice is an organisation policy.

The points regarding the line marking are duly noted, however, the intent of these drawings is to confirm they can work from a functionality perspective, not to reflect the detailed form of the intersection. The changes to line marking can be included in the detailed design as part of the s33 application.

It is also worth noting that the intersection has been shifted slightly west to reduce the works required in the eastern verge.

c) The Redland City Council Planning Scheme mapping does not include any stormwater infrastructure in the locations described, however, we note that a waterway is mapped north of the proposed new access. The pipe culverts provided in this location are shown in Figure 1.

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

Figure 1 Pipe Culvert under CRBR North of Proposed Access Intersection

The functional layout plan shows road widening in the vicinity of the waterway crossing / culverts. The culverts will require extension to allow for the road widening to occur. The specifics of the culvert extension/s north and south of the proposed access will be confirmed as part of detailed design, when detailed survey is available and will form part of future s33 approvals.

Safety Assessment & Road Safety Audit

The intersection has been designed in accordance with Normal Design Domain parameters and can be conditioned to be designed in accordance with the Road Planning and Design Manual 2nd Edition which will inherently ensure a safe intersection design. We do not believe there are any fundamental constraints that would result in the proposed intersection not being possible to construct.

We have completed a risk assessment of the proposed new access on Cleveland Redland Bay Road in accordance with DTMR's GTIA guidelines. The risk assessment is presented in Table 1.

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

Table 1 Risk Assessment – New Access Intersection

	Without Development			With Development				With Development & Mitigation		
Risk Item	Likelihood	Consequence	Risk Score	Likelihood	Consequence	Risk Score	Mitigation Measures	Likelihood	Consequence	Risk Score
Left turn movements into the site from Cleveland Redland Bay Road; potential for left-rear conflicts (DCA-302) in kerbside northbound through lane.	0	2	NA	2	2	L	Introduction of a signalised intersection and traffic turning left into the site introduces a likelihood of these crash types. Crash data from four (4) adjacent signalised intersections revealed a total of only four (4) rear-end crashes and zero KSIs from 2017 to 2021. This crash type is considered to be unlikely and therefore there is no increase to the risk score as a result of the development, and no requirement for mitigation works.	NA	NA	NA
Right turn movements into Cleveland Redland Bay Road from the Site Access; potential for right-rear conflicts (DCA-303) in eastbound-right lane.	0	2	NA	2	2	L	Introduction of a signalised intersection and traffic turning right out of the site introduces a likelihood of these crash types. Crash data from four (4) adjacent signalised intersections revealed a total of only four (4) rear-end crashes and zero KSIs from 2017 to 2021. This crash type is considered to be unlikely given it is under signal control and therefore there is no increase to the risk score as a result of the development, and no requirement for mitigation works.	NA	NA	NA
Left turn movements out of the site onto Cleveland Redland Bay Road; potential for through-left conflicts (DCA-107) with northbound traffic.	0	2	NA	2	2	L	Introduction of a signalised intersection and traffic turning left out of the site. Given this movement will occur under signal control, there is only a minor increase in risk likelihood, however no increase to the risk score as a result of the development OR 'High' risk score, therefore no mitigation works required.	NA	NA	NA
Right turn movements into the site from Cleveland Redland Bay Road; potential for right-rear conflicts (DCA-303) in median-side southbound turn lane.	0	2	NA	2	2	L	Introduction of a signalised intersection and traffic turning right into the site. Given this movement will occur under signal control, there is only a minor increase in risk likelihood. No increase to the risk score as a consequence of the development OR 'High' risk score, therefore no mitigation works required.	NA	NA	NA
Right turn movement into the site from Cleveland Redland Bay Road; potential for a through-right conflict (DCA-202).	0	2	NA	2	2	L	Introduction of a signalised intersection and traffic turning right into the site. Given this movement will occur under signal control, there is only a minor increase in risk likelihood. No increase to the risk score as a result of the development OR 'High' risk score, therefore no mitigation works required.	NA	NA	NA

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

As summarised in Table 1, the new signalised intersection will introduce conflict points for turning traffic, however, these are mitigated through time separation of movements with appropriate signal phasing and coordination.

We maintain the view that a Road Safety Audit (RSA) is not necessary at this stage of the project. The Guide to Traffic Impact Assessment states that a Road Safety Audit should be undertaken, not that it shall, and therefore this is not an absolute requirement. This application is for a Material Change of Use, not Operational Works – it would be more appropriate for an RSA to be carried out at Operational Works Stage.

As noted, the functional layout plan has been formulated based on the adoption of Normal Design Domain design criteria and as such it is expected that the design can be delivered in accordance with the Road Planning and Design Manual 2nd Edition.

SDAP Codes
We have provided State Code 1 and 6 responses, enclosed with this letter.

It is our view that there are no outstanding items from a traffic engineering perspective that should preclude approval of the proposed development.

Yours faithfully,
For and on behalf of
Lambert & Rehbein (SEQ) PTY LTD

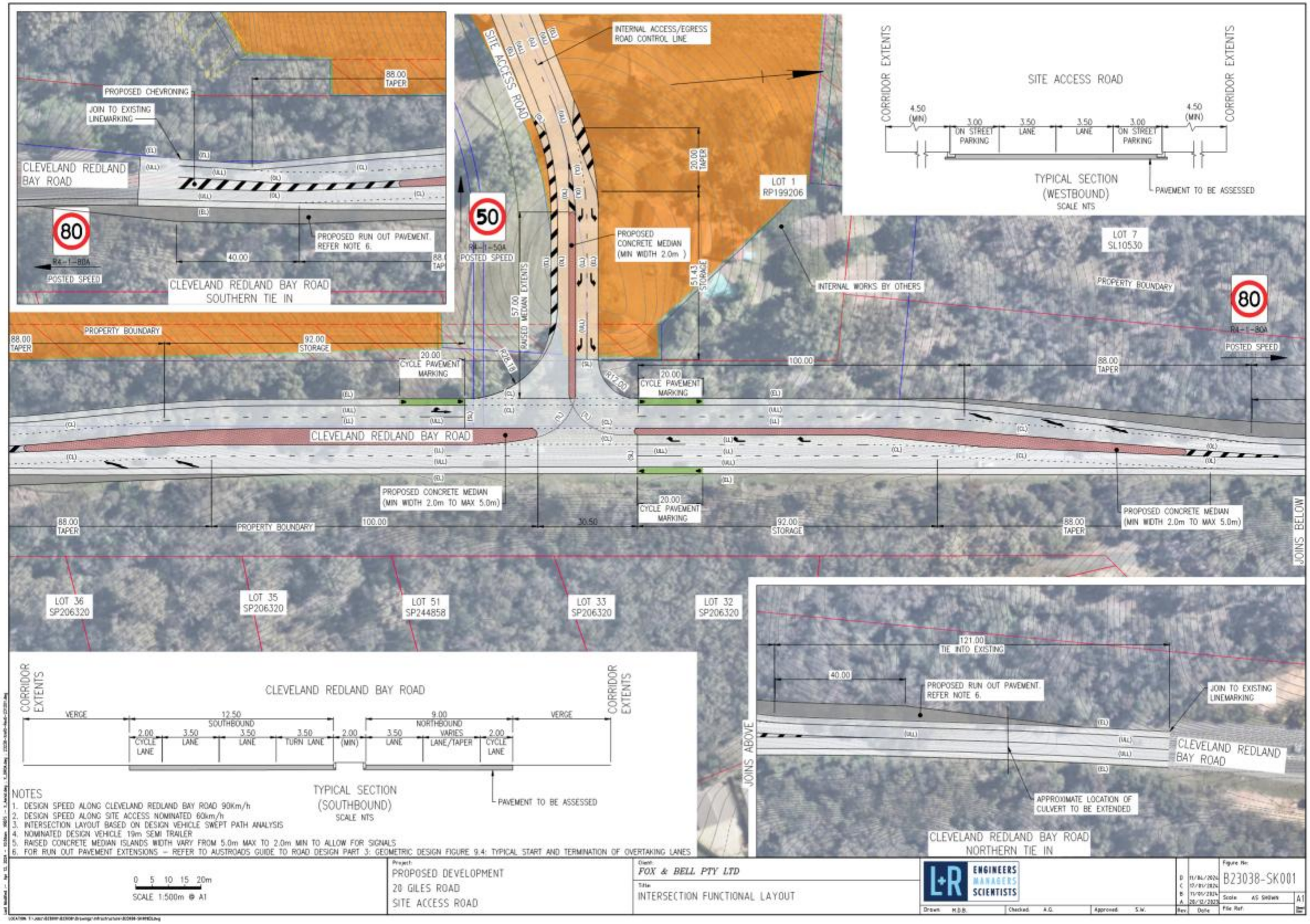
A.W. GREEN BE(Civil & Construction) (Hons), RPEQ #31707, CPEng
PRINCIPAL TRAFFIC ENGINEER

S.A. WILLIAMS BE(Civil), FIEAust, RPEQ #06417
EXECUTIVE MANAGER
TRANSPORT & INFRASTRUCTURE

Enc: Cleveland-Redland Bay Road Access Intersection Functional Layout Plan (B23038-SK001-RevD)
Swept Path Assessment (B23038-SK003-RevA)
Response to State Code 1
Response to State Code 6
Approved Cleveland-Redland Bay Road / Double Jump Road Intersection Functional Layout Plan

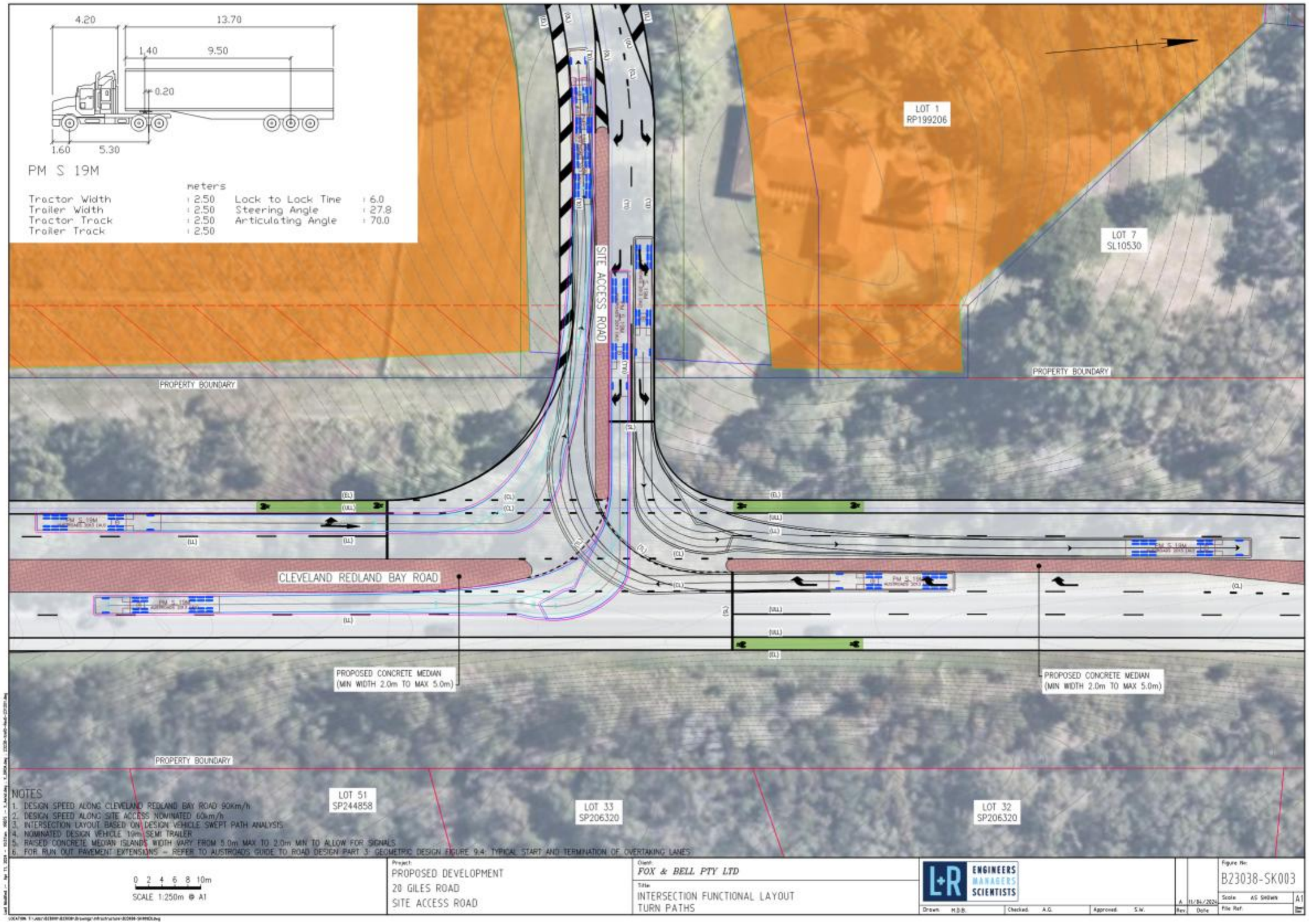
16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

CLEVELAND-REDLAND BAY ROAD ACCESS INTERSECTION FUNCTIONAL LAYOUT PLAN


PROPOSED CHEVRONING
JOIN TO EXISTING LINEMARKING
88.00 TAPER
CLEVELAND REDLAND BAY ROAD
80
R4-1-80A
POSTED SPEED
40.00
PROPOSED RUN OUT PAVEMENT. REFER NOTE 6.
CLEVELAND REDLAND BAY ROAD SOUTHERN TIE IN
INTERNAL ACCESS/EGRESS ROAD CONTROL LINE
SITE ACCESS ROAD
50
R4-1-50A
POSTED SPEED
PROPOSED CONCRETE MEDIAN (MIN WIDTH 2.0m)
20.00 TAPER
LOT 1 RP199206
57.00 RAISED MEDIAN EXTENTS
51.43 STORAGE
INTERNAL WORKS BY OTHERS
LOT 7 SL10530
PROPERTY BOUNDARY
88.00 TAPER
92.00 STORAGE
20.00 CYCLE PAVEMENT MARKING
R28.18
R12.00
100.00
CLEVELAND REDLAND BAY ROAD
PROPOSED CONCRETE MEDIAN (MIN WIDTH 2.0m TO MAX 5.0m)
30.50
JOINS BELOW
LOT 36 SP206320
LOT 35 SP206320
LOT 51 SP244858
LOT 33 SP206320
LOT 32 SP206320
CORRIDOR EXTENTS
SITE ACCESS ROAD
4.50 (MIN)
3.00 ON STREET PARKING
3.50 LANE
3.50 LANE
3.00 ON STREET PARKING
4.50 (MIN)
TYPICAL SECTION (WESTBOUND)
SCALE NTS
PAVEMENT TO BE ASSESSED
CLEVELAND REDLAND BAY ROAD
VERGE
12.50 SOUTHBOUND
9.00 NORTHBOUND VARIES
VERGE
2.00 CYCLE LANE
3.50 LANE
3.50 LANE
3.50 TURN LANE
2.00 (MIN)
3.50 LANE
LANE/TAPER
2.00 CYCLE LANE
TYPICAL SECTION (SOUTHBOUND)
SCALE NTS
PAVEMENT TO BE ASSESSED
NOTES
1. DESIGN SPEED ALONG CLEVELAND REDLAND BAY ROAD 90Km/h
2. DESIGN SPEED ALONG SITE ACCESS NOMINATED 60km/h
3. INTERSECTION LAYOUT BASED ON DESIGN VEHICLE SWEPT PATH ANALYSIS
4. NOMINATED DESIGN VEHICLE 19m SEMI TRAILER
5. RAISED CONCRETE MEDIAN ISLANDS WIDTH VARY FROM 5.0m MAX TO 2.0m MIN TO ALLOW FOR SIGNALS
6. FOR RUN OUT PAVEMENT EXTENSIONS – REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FIGURE 9.4: TYPICAL START AND TERMINATION OF OVERTAKING LANES
JOINS ABOVE
121.00 TIE INTO EXISTING
40.00
PROPOSED RUN OUT PAVEMENT. REFER NOTE 6.
JOIN TO EXISTING LINEMARKING
CLEVELAND REDLAND BAY ROAD
APPROXIMATE LOCATION OF CULVERT TO BE EXTENDED
CLEVELAND REDLAND BAY ROAD NORTHERN TIE IN
0 5 10 15 20m
SCALE 1:500m @ A1
Project: PROPOSED DEVELOPMENT 20 GILES ROAD SITE ACCESS ROAD
Client: FOX & BELL PTY LTD
Title: INTERSECTION FUNCTIONAL LAYOUT
ENGINEERS MANAGERS SCIENTISTS
Drawn: M.D.B. Checked: A.G. Approved: S.W.
D 11/04/2024
C 17/01/2024
B 11/05/2023
A 26/02/2023
Rev. Date
Figure No: B23038-SK001
Scale: AS SHOWN A1
File Ref:

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

SWEPT PATH ASSESSMENT


4.20
13.70
1.40
9.50
0.20
1.60
5.30
PM S 19M
meters
Tractor Width 2.50
Trailer Width 2.50
Tractor Track 2.50
Trailer Track 2.50
Lock to Lock Time 6.0
Steering Angle 27.8
Articulating Angle 70.0
LOT 1
RP199206
LOT 7
SL10530
SITE ACCESS ROAD
PROPERTY BOUNDARY
PROPERTY BOUNDARY
CLEVELAND REDLAND BAY ROAD
PROPOSED CONCRETE MEDIAN
(MIN WIDTH 2.0m TO MAX 5.0m)
PROPOSED CONCRETE MEDIAN
(MIN WIDTH 2.0m TO MAX 5.0m)
PROPERTY BOUNDARY
LOT 51
SP244858
LOT 33
SP206320
LOT 32
SP206320
NOTES
1. DESIGN SPEED ALONG CLEVELAND REDLAND BAY ROAD 90Km/h
2. DESIGN SPEED ALONG SITE ACCESS NOMINATED 60km/h
3. INTERSECTION LAYOUT BASED ON DESIGN VEHICLE SWEPT PATH ANALYSIS
4. NOMINATED DESIGN VEHICLE 19m SEMI TRAILER
5. RAISED CONCRETE MEDIAN ISLANDS WIDTH VARY FROM 5.0m MAX TO 2.0m MIN TO ALLOW FOR SIGNALS
6. FOR RUN OUT PAVEMENT EXTENSIONS – REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FIGURE 9.4: TYPICAL START AND TERMINATION OF OVERTAKING LANES
0 2 4 6 8 10m
SCALE 1:250m @ A1
Project:
PROPOSED DEVELOPMENT
20 GILES ROAD
SITE ACCESS ROAD
Client:
FOX & BELL PTY LTD
Title:
INTERSECTION FUNCTIONAL LAYOUT
TURN PATHS
ENGINEERS
MANAGERS
SCIENTISTS
Drawn M.D.B.
Checked A.G.
Approved S.W.
A 11/04/2024
Rev Date
Figure No:
B23038-SK003
Scale AS SHOWN
A1
File Ref:

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

RESPONSE TO STATE CODE 1

State code 1: Development in a state-controlled road environment

Table 1.1 Development in general

Performance outcomes	Acceptable outcomes	Response
Buildings, structures, infrastructure, services and utilities		
PO1 The location of the development does not create a safety hazard for users of the **state-controlled road**.	**AO1.1** Development is not located in a **state-controlled road**. AND **AO1.2** Development can be maintained without requiring access to a **state-controlled road**.	Complies with PO1 – refer to Traffic Report B23038TR001_RevB - Section 4.10. A new signalised intersection will introduce conflict points for turning traffic, however, these are mitigated through time separation of movements with appropriate signal phasing and coordination.
PO2 The design and construction of the development does not adversely impact the **structural integrity** or physical condition of the **state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	Not applicable.
PO3 The location of the development does not obstruct **road transport infrastructure** or adversely impact the operating performance of the **state-controlled road**.	No acceptable outcome is prescribed.	Complies with PO3 - refer to Traffic Letter B23038TL003 – Item 2, Table 4 and the Traffic Impact Assessment - Section 4.9. The aggregate delay with mitigation measures is 3.8% (<5%).
PO4 The location, placement, design and operation of advertising devices, visible from the **state-controlled road**, do not create a safety hazard for users of the **state-controlled road**.	No acceptable outcome is prescribed.	Not applicable.
PO5 The design and construction of buildings and **structures** does not create a safety hazard	**AO5.1** Facades of buildings and **structures** fronting the **state-controlled road** are made of non-reflective materials.	Not applicable.

Performance outcomes	Acceptable outcomes	Response
by distracting users of the **state-controlled road**.	AND **AO5.2** Facades of buildings and **structures** do not direct or reflect point light sources into the face of oncoming traffic on the **state-controlled road**. AND **AO5.3** External lighting of buildings and **structures** is not directed into the face of oncoming traffic on the **state-controlled road**. AND **AO5.4** External lighting of buildings and **structures** does not involve flashing or laser lights.	
PO6 Road, pedestrian and bikeway bridges over a **state-controlled road** are designed and constructed to prevent projectiles from being thrown onto the **state-controlled road**.	**AO6.1** Road, pedestrian and bikeway bridges over the **state-controlled road** include throw protection screens in accordance with section 4.11 of the Design Criteria for Bridges and Other Structures Manual, Department of Transport and Main Roads, 2020.	Not applicable.
Landscaping		
PO7 The location of landscaping does not create a safety hazard for users of the **state-controlled road**.	**AO7.1** Landscaping is not located in a **state-controlled road**. AND **AO7.2** Landscaping can be maintained without requiring access to a **state-controlled road**. AND	To be addressed by others.

Performance outcomes	Acceptable outcomes	Response
	AO7.3 Landscaping does not block or obscure the sight lines for vehicular access to a **state-controlled road**.	
Stormwater and overland flow		
PO8 Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard for users of the **state-controlled road**.	No acceptable outcome is prescribed.	To be addressed by others.
PO9 Stormwater run-off or overland flow from the development site does not result in a material worsening of the operating performance of the **state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	To be addressed by others.
PO10 Stormwater run-off or overland flow from the development site does not adversely impact the **structural integrity** or physical condition of the **state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	To be addressed by others.
PO11 Development ensures that stormwater is lawfully discharged.	**AO11.1** Development does not create any new points of discharge to a **state-controlled road.** AND **AO11.2** Development does not concentrate flows to a **state-controlled road**. AND **AO11.3** Stormwater run-off is discharged to a **lawful point of discharge**. AND	To be addressed by others.

Performance outcomes	Acceptable outcomes	Response
	AO11.4 Development does not worsen the condition of an existing **lawful point of discharge** to the **state-controlled road**.	
Flooding		
PO12 Development does not result in a material worsening of flooding impacts within a **state-controlled road**.	**AO12.1** For all flood events up to 1% **annual exceedance probability**, development results in negligible impacts (within +/- 10mm) to existing flood levels within a **state-controlled road**. AND **AO12.2** For all flood events up to 1% **annual exceedance probability**, development results in negligible impacts (up to a 10% increase) to existing peak velocities within a **state-controlled road**. AND **AO12.3** For all flood events up to 1% **annual exceedance probability**, development results in negligible impacts (up to a 10% increase) to existing time of submergence of a **state-controlled road**.	To be addressed by others.
Drainage Infrastructure		
PO13 Drainage infrastructure does not create a safety hazard for users in the **state-controlled road**.	**AO13.1** Drainage infrastructure is wholly contained within the development site, except at the **lawful point of discharge**. AND **AO13.2** Drainage infrastructure can be maintained without requiring access to a **state-controlled road**.	To be addressed by others.

Performance outcomes	Acceptable outcomes	Response
PO14 Drainage infrastructure associated with, or within, a **state-controlled road** is constructed, and designed to ensure the **structural integrity** and physical condition of existing drainage infrastructure and the surrounding drainage network.	No acceptable outcome is prescribed.	Not for traffic response

Table 1.2 Vehicular access, road layout and local roads

Performance outcomes	Acceptable outcomes	Response
Vehicular access to a state-controlled road or within 100 metres of a state-controlled road intersection		
PO15 The location, design and operation of a **new or changed access** to a **state-controlled road** does not compromise the safety of users of the **state-controlled road**.	No acceptable outcome is prescribed.	Complies with PO15 – refer to Traffic Report B23038TR001_RevB - Section 4.10. A new signalised intersection will introduce conflict points for turning traffic, however, these are mitigated through time separation of movements with appropriate signal phasing and coordination.
PO16 The location, design and operation of a **new or changed access** does not adversely impact the **functional requirements** of the **state-controlled road**.	No acceptable outcome is prescribed.	Complies with PO16 – the proposed signalised intersection at the state-controlled road is located approximately 550m from the German Church Road intersection and approximately 510m from the Giles Road intersection.
PO17 The location, design and operation of a **new or changed access** is consistent with the **future intent** of the **state-controlled road**.	No acceptable outcome is prescribed.	Complies with PO17 – refer to Section 2.5 of the Traffic Impact Assessment. The development does not impede delivery of planned upgrades.
PO18 New or changed access is consistent with the access for the relevant **limited access road policy**: 1. **LAR 1** where direct access is prohibited; or 2. **LAR 2** where access may be permitted, subject to assessment.	No acceptable outcome is prescribed.	Complies with PO18 – Cleveland Redland Bay Road is a Limited Access Road 2 (LAR 2) where access may be permitted subject to assessment.
PO19 New or changed access to a **local road** within 100 metres of an intersection with a **state-controlled road** does not compromise the safety of users of the **state-controlled road**.	No acceptable outcome is prescribed.	Complies with PO19 - the proposed signalised intersection at the state-controlled road is located approximately 550m from the German Church

Performance outcomes	Acceptable outcomes	Response
		Road intersection and approximately 510m from the Giles Road intersection.
PO20 New or changed access to a **local road** within 100 metres of an intersection with a **state-controlled road** does not adversely impact on the operating performance of the intersection.	No acceptable outcome is prescribed.	Complies with PO20 – refer to Traffic Letter B23038TL003 – Item 2, Table 4, and the Traffic Impact Assessment - Section 4.9. The aggregate delay with mitigation measures is 3.8% (<5%).
Public passenger transport and active transport		
PO21 Development does not compromise the safety of users of **public passenger transport infrastructure**, **public passenger services** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO21 – refer to Section 2.3 and Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.
PO22 Development maintains the ability for people to access **public passenger transport infrastructure, public passenger services** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO22 – refer to Section 2.3 and Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.
PO23 Development does not adversely impact the operating performance of **public passenger transport infrastructure, public passenger services** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO23 – refer to Section 2.3 and Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.
PO24 Development does not adversely impact the **structural integrity** or physical condition of **public passenger transport infrastructure** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO24 – refer to Section 2.3 and Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.

Table 1.3 Network impacts

Performance outcomes	Acceptable outcomes	Response
PO25 Development does not compromise the safety of users of the **state-controlled road** network.	No acceptable outcome is prescribed.	Complies with PO25 – refer to Traffic Letter B23038TL003 – Item 2, Table 4, and the Traffic Impact Assessment - Section 4.9. The aggregate delay with mitigation measures is 3.8% (<5%).

Performance outcomes	Acceptable outcomes	Response
PO26 Development ensures **no net worsening** of the operating performance of the **state-controlled road** network.	No acceptable outcome is prescribed.	Complies with PO26 - refer to Traffic Letter 003 – Item 2, Table 4, and the Traffic Impact Assessment - Section 4.9. The aggregate delay with mitigation measures is 3.8% (<5%).
PO27 Traffic movements are not directed onto a **state-controlled road** where they can be accommodated on the **local road** network.	No acceptable outcome is prescribed.	Complies with PO27 – access to Giles Road is not achievable, refer to Traffic Letter B23038TL003, Item 1.
PO28 Development involving haulage exceeding 10,000 tonnes per year does not adversely impact the pavement of a **state-controlled road**.	No acceptable outcome is prescribed.	Not applicable.
PO29 Development does not impede delivery of **planned upgrades** of **state-controlled roads**.	No acceptable outcome is prescribed.	Complies with PO29 – refer to Section 2.5 of the Traffic Impact Assessment. The development does not impede delivery of planned upgrades.
PO30 Development does not impede delivery of **corridor improvements** located entirely within the **state-controlled road corridor**.	No acceptable outcome is prescribed.	Complies with PO30 – refer to Section 2.5 of the Traffic Impact Assessment. There are no planned infrastructure upgrades to the road transport network in the vicinity of the site.

Table 1.4 Filling, excavation, building foundations and retaining structures

Performance outcomes	Acceptable outcomes	Response
PO31 Development does not create a safety hazard for users of the **state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	To be addressed by others.
PO32 Development does not adversely impact the operating performance of the **state-controlled road**.	No acceptable outcome is prescribed.	To be addressed by others.
PO33 Development does not undermine, damage or cause subsidence of a **state-controlled road**.	No acceptable outcome is prescribed.	To be addressed by others.
PO34 Development does not cause ground water disturbance in a **state-controlled road**.	No acceptable outcome is prescribed.	To be addressed by others.
PO35 Excavation, boring, piling, blasting and fill compaction do not adversely impact the physical condition or **structural integrity** of a **state-**	No acceptable outcome is prescribed.	To be addressed by others.

Performance outcomes	Acceptable outcomes	Response
controlled road or **road transport infrastructure**.		
PO36 Filling and excavation associated with the construction of **new or changed access** do not compromise the operation or capacity of existing drainage infrastructure for a **state-controlled road.**	No acceptable outcome is prescribed.	To be addressed by others.

Table 1.5 Environmental emissions

Statutory note: Where a **state-controlled road** is co-located in the same transport corridor as a railway, the development should instead comply with Environmental emissions in State code 2: Development in a railway environment.

Performance outcomes	Acceptable outcomes	Response
Reconfiguring a lot		
Involving the creation of 5 or fewer new residential lots adjacent to a state-controlled road or type 1 multi-modal corridor		
PO37 Development minimises free field noise intrusion from a **state-controlled road.**	**AO37.1** Development provides a noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1); 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR	Not applicable.

Performance outcomes	Acceptable outcomes	Response
	AO37.2 Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound. OR **AO37.3** Development provides a **solid gap-free fence** or other **solid gap-free structure** along the full extent of the boundary closest to the **state-controlled road**.	
Involving the creation of 6 or more new residential lots adjacent to a state-controlled road or type 1 multi-modal corridor		
PO38 Reconfiguring a lot minimises free field noise intrusion from a **state-controlled road**.	**AO38.1** Development provides noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1); 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR **AO38.2** Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by **alternative noise attenuation measures**	Not applicable.

Performance outcomes	Acceptable outcomes	Response
	where it is not practical to provide a noise barrier or earth mound.	
Material change of use (accommodation activity)		
Ground floor level requirements adjacent to a state-controlled road or type 1 multi-modal corridor		
PO39 Development minimises noise intrusion from a **state-controlled road** in **private open space**.	**AO39.1** Development provides a noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.2) for **private open space** at the ground floor level; 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR **AO39.2** Development achieves the maximum free field acoustic level in reference table 2 (item 2.2) for **private open space** by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound.	Not applicable.
PO40 Development (excluding a **relevant residential building** or **relocated building)** minimises noise intrusion from a **state-controlled road** in **habitable rooms** at the facade.	**AO40.1** Development (excluding a **relevant residential building** or **relocated building**) provides a noise barrier or earth mound which is designed, sited and constructed:	Not applicable.

Performance outcomes	Acceptable outcomes	Response
	1. to achieve the maximum building façade acoustic level in reference table 1 (item 1.1) for **habitable rooms**; 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR **AO40.2** Development (excluding a **relevant residential building** or **relocated building**) achieves the maximum building façade acoustic level in reference table 1 (item 1.1) for **habitable rooms** by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound.	
PO41 Habitable rooms (excluding a **relevant residential building** or **relocated building**) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1).	No acceptable outcome is provided.	Not applicable.
Above ground floor level requirements (accommodation activity) adjacent to a state-controlled road or type 1 multi-modal corridor		
PO42 Balconies, podiums, and roof decks include: 1. a continuous **solid gap-free structure** or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia);	No acceptable outcome is provided.	Not applicable.

Performance outcomes	Acceptable outcomes	Response
2. highly acoustically absorbent material treatment for the total area of the soffit above balconies, podiums, and roof decks.		
PO43 Habitable rooms (excluding a **relevant residential building** or **relocated building**) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1).	No acceptable outcome is provided.	Not applicable.
Material change of use (other uses)		
Ground floor level requirements (childcare centre, educational establishment, hospital) adjacent to a state-controlled road or type 1 multi-modal corridor		
PO44 Development: 1. provides a noise barrier or earth mound that is designed, sited and constructed: a. to achieve the maximum free field acoustic level in reference table 2 (item 2.3) for all **outdoor education areas** and **outdoor play areas**; b. in accordance with: i. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; ii. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; iii. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020; or 2. achieves the maximum free field acoustic level in reference table 2 (item 2.3) for all **outdoor education areas** and **outdoor play areas** by **alternative noise attenuation measures** where it is not	No acceptable outcome is provided.	Not applicable.

Performance outcomes	Acceptable outcomes	Response
practical to provide a noise barrier or earth mound.		
PO45 Development involving a **childcare centre** or **educational establishment**: 1. provides a noise barrier or earth mound that is designed, sited and constructed: 2. to achieve the maximum building facade acoustic level in reference table 1 (item 1.2); 3. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020; or 4. achieves the maximum building facade acoustic level in reference table 1 (item 1.2) by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound.	No acceptable outcome is provided.	Not applicable.
PO46 Development involving: 1. **indoor education areas** and **indoor play areas**; or 2. sleeping rooms in a **childcare centre**; or 3. **patient care areas** in a **hospital** achieves the maximum internal acoustic level in reference table 3 (items 3.2-3.4).	No acceptable outcome is provided.	Not applicable.
Above ground floor level requirements (childcare centre, educational establishment, hospital) adjacent to a state-controlled road or type 1 multi-modal corridor		

Performance outcomes	Acceptable outcomes	Response
PO47 Development involving a **childcare centre** or **educational establishment** which have balconies, podiums or elevated **outdoor play areas** predicted to exceed the maximum free field acoustic level in reference table 2 (item 2.3) due to noise from a **state-controlled road** are provided with: 1. a continuous **solid gap-free structure** or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia); 2. highly acoustically absorbent material treatment for the total area of the soffit above balconies or elevated **outdoor play areas**.	No acceptable outcome is provided.	Not applicable.
PO48 Development including: 1. **indoor education areas** and **indoor play areas** in a **childcare centre** or **educational establishment**; or 2. sleeping rooms in a **childcare centre**; or 3. **patient care areas** in a **hospital** located above ground level, is designed and constructed to achieve the maximum internal acoustic level in reference table 3 (items 3.2-3.4).	No acceptable outcome is provided.	Not applicable.
Air, light and vibration		

Performance outcomes	Acceptable outcomes	Response
PO49 Private open space, **outdoor education areas** and **outdoor play areas** are protected from air quality impacts from a **state-controlled road**.	**AO49.1** Each dwelling or unit has access to a **private open space** which is shielded from a **state-controlled road** by a building, **solid gap-free fence**, or other **solid gap-free structure**. OR **AO49.2** Each **outdoor education area** and **outdoor play area** is shielded from a **state-controlled road** by a building, **solid gap-free fence,** or other **solid gap-free structure**.	Not applicable.
PO50 Patient care areas within **hospitals** are protected from vibration impacts from a **state-controlled road** or **type 1 multi-modal corridor**.	**AO50.1 Hospitals** are designed and constructed to ensure vibration in the patient treatment area does not exceed a vibration dose value of $0.1m/s^{1.75}$. AND **AO50.2 Hospitals** are designed and constructed to ensure vibration in the ward of a **patient care area** does not exceed a vibration dose value of $0.4m/s^{1.75}$.	Not applicable.
PO51 Development is designed and sited to ensure light from infrastructure within, and from users of, a **state-controlled road** or **type 1 multi-modal corridor**, does not: 1. intrude into buildings during night hours (10pm to 6am); 2. create unreasonable disturbance during evening hours (6pm to 10pm).	No acceptable outcomes are prescribed.	Not applicable.

Table 1.6: Development in a future state-controlled road environment

Performance outcomes	Acceptable outcomes	Response
PO52 Development does not impede delivery of a **future state-controlled road**.	**AO52.1** Development is not located in a **future state-controlled road**. OR ALL OF THE FOLLOWING APPLY: **AO52.2** Development does not involve filling and excavation of, or material changes to, a **future state-controlled road**. AND **AO52.3** The intensification of lots does not occur within a **future state-controlled road**. AND **AO52.4** Development does not result in the landlocking of parcels once a **future state-controlled road** is delivered.	Not applicable – Cleveland Redland Bay Road is already a state-controlled road.
PO53 The location and design of **new or changed access** does not create a safety hazard for users of a **future state-controlled road**.	**AO53.1** Development does not include **new or changed access** to a **future state-controlled road**.	Not applicable – Cleveland Redland Bay Road is already a state-controlled road.
PO54 Filling, excavation, building foundations and **retaining structures** do not undermine, damage or cause subsidence of a **future state-controlled road**.	No acceptable outcome is prescribed.	Not applicable – Cleveland Redland Bay Road is already a state-controlled road
PO55 Development does not result in a material worsening of stormwater, flooding, overland flow or drainage impacts in a **future state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	Not applicable – Cleveland Redland Bay Road is already a state-controlled road.
PO56 Development ensures that stormwater is lawfully discharged.	**AO56.1** Development does not create any new points of discharge to a **future state-controlled road**.	Not applicable – Cleveland Redland Bay Road is already a state-controlled road.

Performance outcomes	Acceptable outcomes	Response
	AND **AO56.2** Development does not concentrate flows to a **future state-controlled road**. AND **AO56.3** Stormwater run-off is discharged to a **lawful point of discharge**. AND **AO56.4** Development does not worsen the condition of an existing **lawful point of discharge** to the **future state-controlled road**.	

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

RESPONSE TO STATE CODE 6

State code 6: Protection of state transport networks

Table 6.2 Development in general

Performance outcomes	Acceptable outcomes	Response
Network impacts		
PO1 Development does not compromise the safety of users of the **state-controlled road** network.	No acceptable outcome is prescribed.	Complies with PO1 – refer to Traffic Report B23038TR001_RevB - Section 4.10. A new signalised intersection will introduce conflict points for turning traffic, however, these are mitigated through time separation of movements with appropriate signal phasing and coordination.
PO2 Development does not adversely impact the structural integrity or physical condition of a **state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	Not for traffic response
PO3 Development ensures **no net worsening** of the operating performance the **state-controlled road** network.	No acceptable outcome is prescribed.	Complies with PO3 – refer to Traffic Letter B23038TL003 – Item 2, Table 4 and the Traffic Impact Assessment - Section 4.9. The aggregate delay with mitigation measures is 3.8% (<5%).

Performance outcomes	Acceptable outcomes	Response
PO4 Traffic movements are not directed onto a **state-controlled road** where they can be accommodated on the **local road** network.	No acceptable outcome is prescribed.	Complies with PO4 - Access to Giles Road is not achievable, refer to Traffic Letter B23038TL003, Item 1.
PO5 Development involving haulage exceeding 10,000 tonnes per year does not damage the pavement of a **state-controlled road**.	No acceptable outcome is prescribed.	Not applicable
PO6 Development does not require a new **railway** level crossing.	No acceptable outcome is prescribed.	Not applicable
PO7 Development does not adversely impact the operating performance of an existing **railway crossing**.	No acceptable outcome is prescribed.	Not applicable
PO8 Development does not adversely impact on the safety of an existing **railway crossing**.	No acceptable outcome is prescribed.	Not applicable
PO9 Development is designed and constructed to allow for on-site circulation to ensure vehicles do not queue in a **railway crossing**.	No acceptable outcome is prescribed.	Not applicable
PO10 Development does not create a safety hazard within the **railway corridor**.	No acceptable outcome is prescribed.	Not applicable
PO11 Development does not adversely impact the operating performance of the **railway corridor**.	No acceptable outcome is prescribed.	Not applicable

Performance outcomes	Acceptable outcomes	Response
PO12 Development does not interfere with or obstruct the **railway transport infrastructure** or **other rail infrastructure**.	No acceptable outcome is prescribed.	Not applicable
PO13 Development does not adversely impact the structural integrity or physical condition of a **railway corridor** or **rail transport infrastructure**.	No acceptable outcome is prescribed.	Not applicable
Stormwater and overland flow		
PO14 Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard for users of a **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	Not for traffic response
PO15 Stormwater run-off or overland flow from the development site does not result in a material worsening of operating performance of a **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	Not for traffic response
PO16 Stormwater run-off or overland flow from the development site does not interfere with the structural integrity or physical condition of the **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	Not for traffic response
PO17 Development associated with a **state-controlled road** or **road transport infrastructure** ensures that stormwater is lawfully discharged.	**AO17.1** Development does not create any new points of discharge to a **state transport corridor** or **state transport infrastructure**. AND **AO17.2** Development does not concentrate flows to a **state transport corridor**. AND **AO17.3** Stormwater run-off is discharged to a **lawful point of discharge**. AND	Not for traffic response

Performance outcomes	Acceptable outcomes	Response
	AO17.4 Development does not worsen the condition of an existing **lawful point of discharge** to a **state transport corridor** or **state transport infrastructure**.	
Flooding		
PO18 Development does not result in a material worsening of flooding impacts within a **state transport corridor** or **state transport infrastructure**	*For a **state-controlled road** or **road transport infrastructure**, all of the following apply:* **AO18.1** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (within +/- 10mm) to existing flood levels within a **state transport corridor**. AND **AO18.2** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (up to a 10% increase) to existing peak velocities within a **state transport corridor**. AND **AO18.3** For all flood events up to 1% annual exceedance probability, development ensures there are negligible impacts (up to a 10% increase) to existing time of submergence of a **state transport corridor**. *No acceptable outcome is prescribed for a **railway corridor** or **rail transport infrastructure**.*	Not for traffic response
Drainage infrastructure		
PO19 Drainage infrastructure does not create a safety hazard in a **state transport corridor**.	*For a **state-controlled road** environment, both of the following apply:* **AO19.1** Drainage infrastructure associated with, or in a **state-controlled road** is wholly contained	Not for traffic response

Performance outcomes	Acceptable outcomes	Response
	within the development site, except at the **lawful point of discharge**. AND **AO19.2** Drainage infrastructure can be maintained without requiring access to a **state transport corridor**. *For a **railway** environment both of the following apply:* **AO19.3** Drainage infrastructure associated with a **railway corridor** or **rail transport infrastructure** is wholly contained within the development site. AND **AO19.4** Drainage infrastructure can be maintained without requiring access to a **state transport corridor**.	
PO20 Drainage infrastructure associated with, or in a **state-controlled road** or **road transport infrastructure** is constructed and designed to ensure the structural integrity and physical condition of existing drainage infrastructure and the surrounding drainage network is maintained.	No acceptable outcome is prescribed.	Not for traffic response
Planned upgrades		
PO21 Development does not impede delivery of **planned upgrades** of **state transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO21 – refer to Section 2.5 of the Traffic Impact Assessment. The development does not impede delivery of planned upgrades.

Table 6.3 Public passenger transport infrastructure and active transport

Performance outcomes	Acceptable outcomes	Response
PO22 Development does not damage or interfere with **public passenger transport infrastructure**, **active transport infrastructure** or **public passenger services**.	No acceptable outcome is prescribed.	Complies with PO22 – refer to Section 2.3 and Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.
PO23 Development does not compromise the safety of **public passenger transport infrastructure**, **public passenger services** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO23 – refer to Section 2.3 and Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.
PO24 Development does not adversely impact the operating performance of **public passenger transport infrastructure, public passenger services** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO24 – refer to Section 2.3 and Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.
PO25 Development does not adversely impact the structural integrity or physical condition of **public passenger transport infrastructure** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Not for traffic response.
PO26 Upgraded or new **public passenger transport infrastructure** and **active transport infrastructure** is provided to accommodate the demand for **public passenger transport** and **active transport** generated by the development.	No acceptable outcome is prescribed.	Not applicable.
PO27 Development is designed to ensure the location of **public passenger transport infrastructure** prioritises and enables efficient **public passenger services**.	No acceptable outcome is prescribed.	Not applicable.
PO28 Development enables the provision or extension of **public passenger services**, **public passenger transport infrastructure** and **active transport infrastructure** to the development and avoids creating indirect or inefficient routes for **public passenger services**.	No acceptable outcome is prescribed.	Not applicable.

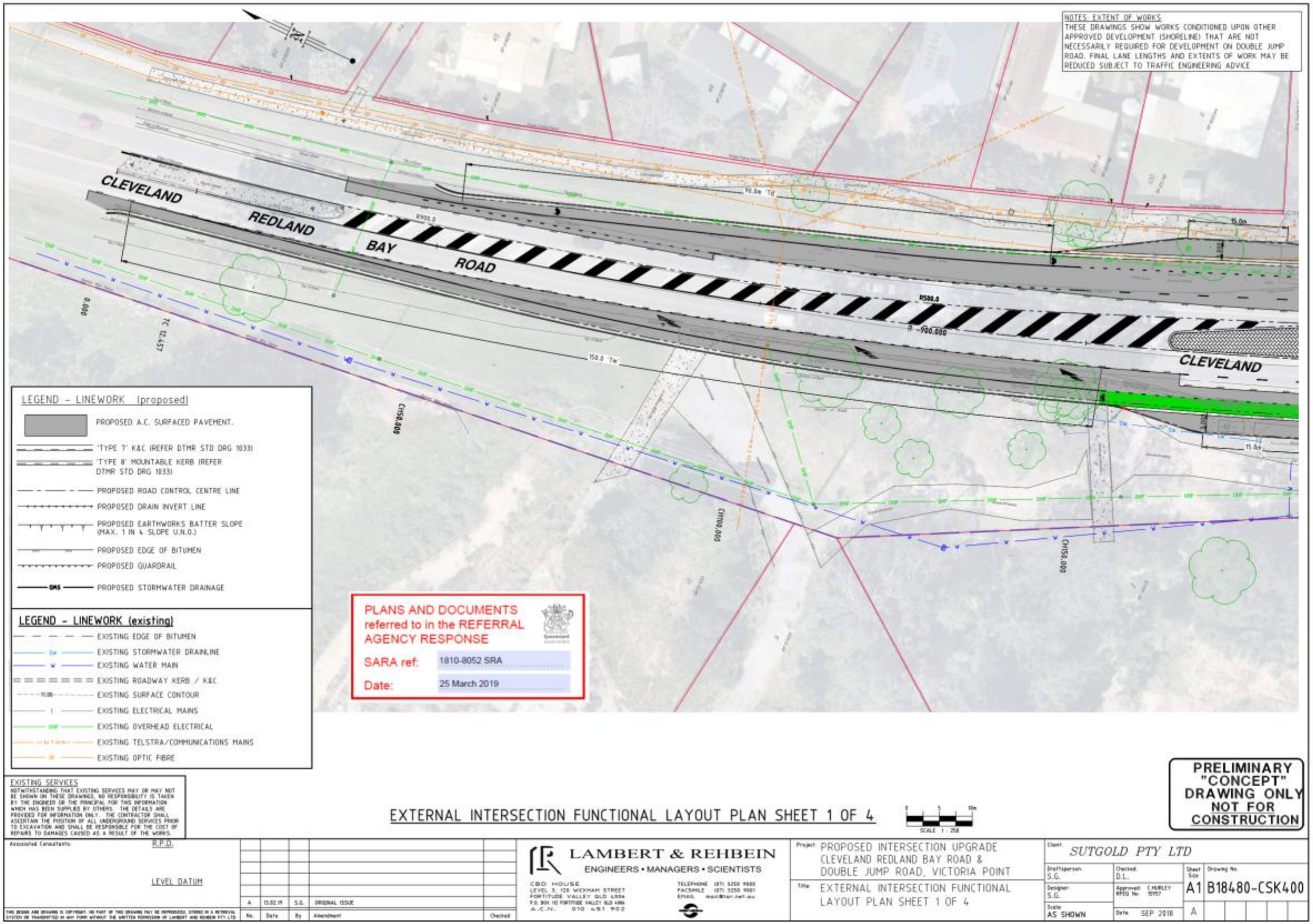
Performance outcomes	Acceptable outcomes	Response
PO29 New or modified road networks are designed to enable development to be serviced by **public passenger services**.	**AO29.1** Roads catering for buses are arterial or **sub-arterial roads**, collector or their equivalent. AND **AO29.2** Roads intended to accommodate buses are designed and constructed in accordance with: 1. Road Planning and Design Manual, 2nd Edition, Volume 3 – Guide to Road Design; Department of Transport and Main Roads; 2. Supplement to Austroads Guide to Road Design (Parts 3, 4-4C and 6), Department of Transport and Main Roads; 3. Austroads Guide to Road Design (Parts 3, 4-4C and 6); 4. Austroads Design Vehicles and Turning Path Templates; 5. Queensland Manual of Uniform Traffic Control Devices, Part 13: Local Area Traffic Management and AS 1742.13-2009 Manual of Uniform Traffic Control Devices – Local Area Traffic Management; AND **AO29.3** Traffic calming devices are not installed on roads used for buses in accordance with section 2.3.2 Bus Route Infrastructure, Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015.	Not applicable.
PO30 Development provides safe, direct and convenient access to existing and future **public passenger transport infrastructure** and **active transport infrastructure**.	No acceptable outcome is prescribed.	Complies with PO30 – refer to Section 2.4 of Traffic Impact Assessment. There will be no change to the existing provision of active and public transport infrastructure and services.

Performance outcomes	Acceptable outcomes	Response
PO31 On-site vehicular circulation ensures the safety of both **public passenger transport services** and pedestrians.	No acceptable outcome is prescribed.	Not applicable.
PO32 Taxi facilities are provided to accommodate the demand generated by the development.	No acceptable outcome is prescribed.	Not applicable.
PO33 Facilities are provided to accommodate the demand generated by the development for community transport services, courtesy transport services, and **booked hire services** other than taxis.	No acceptable outcome is prescribed.	Not applicable.
PO34 Taxi facilities are located and designed to provide convenient, safe and equitable access for passengers.	**AO34.1** A **taxi facility** is provided parallel to the kerb and adjacent to the main entrance. AND **AO34.2 Taxi facilities** are designed in accordance with: 1. AS2890.5–1993 Parking facilities – on-street parking and AS1428.1–2009 Design for access and mobility – general requirements for access – new building work; 2. AS1742.11–1999 Parking controls – manual of uniform traffic control devices 3. AS/NZS 2890.6–2009 Parking facilities – off street parking for people with disabilities; 4. Disability standards for accessible public 5. transport 2002 made under section 31(1) of the Disability Discrimination Act 1992; 6. AS/NZS 1158.3.1 – Lighting for roads and public spaces, Part 3.1: Pedestrian area (category P) lighting – Performance and design requirements; 7. Chapter 7 Taxi Facilities, Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015.	Not applicable.

Performance outcomes	Acceptable outcomes	Response
PO35 Educational establishments are designed to ensure the safe and efficient operation of **public passenger services**, pedestrian and cyclist access and **active transport infrastructure**.	**AO35.1** Educational establishments are designed in accordance with the provisions of the Planning for Safe Transport Infrastructure at Schools, Department of Transport and Main Roads, 2011.	Not applicable.

16 April 2024
Our File Ref: B23038TL004_RevA
Contact: Andrew Green

APPROVED CLEVELAND-REDLAND BAY ROAD/ DOUBLE JUMP ROAD INTERSECTION FUNCTIONAL LAYOUT PLAN


NOTES EXTENT OF WORKS
THESE DRAWINGS SHOW WORKS CONDITIONED UPON OTHER APPROVED DEVELOPMENT (SHORELINE) THAT ARE NOT NECESSARILY REQUIRED FOR DEVELOPMENT ON DOUBLE JUMP ROAD. FINAL LANE LENGTHS AND EXTENTS OF WORK MAY BE REDUCED SUBJECT TO TRAFFIC ENGINEERING ADVICE
CLEVELAND REDLAND BAY ROAD
CLEVELAND
R500.0
R=900.000
CH50.000
CH100.000
CH150.000
LEGEND - LINEWORK (proposed)
PROPOSED A.C. SURFACED PAVEMENT.
'TYPE 7' K&C (REFER DTMR STD DRG 1033)
'TYPE 8' MOUNTABLE KERB (REFER DTMR STD DRG 1033)
PROPOSED ROAD CONTROL CENTRE LINE
PROPOSED DRAIN INVERT LINE
PROPOSED EARTHWORKS BATTER SLOPE (MAX. 1 IN 4 SLOPE U.N.O.)
PROPOSED EDGE OF BITUMEN
PROPOSED GUARDRAIL
PROPOSED STORMWATER DRAINAGE
LEGEND - LINEWORK (existing)
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EXISTING OPTIC FIBRE
EXISTING SERVICES
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PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 1810-8052 SRA
Date: 25 March 2019
PRELIMINARY "CONCEPT" DRAWING ONLY NOT FOR CONSTRUCTION
EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 1 OF 4
SCALE 1 : 250
Associated Consultants: R.P.D.
LEVEL DATUM
A 13.02.19 S.G. ORIGINAL ISSUE
LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS
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Project: PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT
Title: EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 1 OF 4
Client: SUTGOLD PTY LTD
Draftsperson: S.G.
Designer: S.G.
Scale: AS SHOWN
Checked: D.L.
Approved: C.HURLEY RPEQ No: 15157
Date: SEP 2018
Sheet Size: A1
Drawing No. B18480-CSK400
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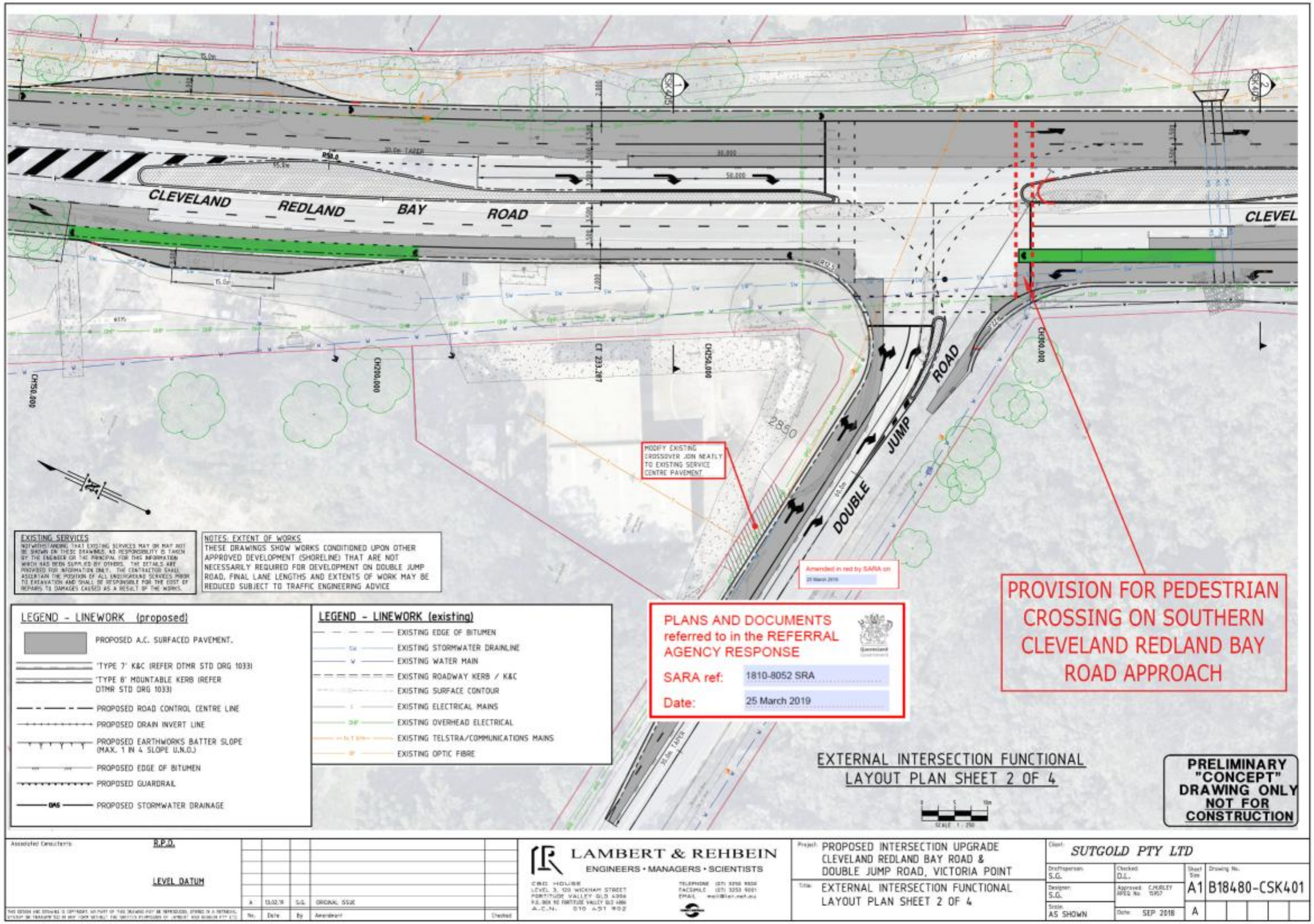
CLEVELAND REDLAND BAY ROAD
JUMP ROAD
DOUBLE
CH350.000
CH300.000
CH250.000
CH360.000
CT 233.287
2850
MODIFY EXISTING CROSSOVER JOIN NEATLY TO EXISTING SERVICE CENTRE PAVEMENT
EXISTING SERVICES
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LEGEND - LINEWORK (proposed)
PROPOSED A.C. SURFACED PAVEMENT.
'TYPE 7' K&C (REFER DTMR STD DRG 1033)
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PROPOSED ROAD CONTROL CENTRE LINE
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EXISTING SURFACE CONTOUR
EXISTING ELECTRICAL MAINS
EXISTING OVERHEAD ELECTRICAL
EXISTING TELSTRA/COMMUNICATIONS MAINS
EXISTING OPTIC FIBRE
Amended in red by SARA on 25 March 2019
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 1810-8052 SRA
Date: 25 March 2019
PROVISION FOR PEDESTRIAN CROSSING ON SOUTHERN CLEVELAND REDLAND BAY ROAD APPROACH
EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 2 OF 4
SCALE 1 : 250
PRELIMINARY "CONCEPT" DRAWING ONLY NOT FOR CONSTRUCTION
Associated Consultants: R.P.D.
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TELEPHONE (07) 3250 9000 FACSIMILE (07) 3250 9001 EMAIL mail@lambert.net.au
Project: PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT
Title: EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 2 OF 4
Client: SUTGOLD PTY LTD
Draftsperson: S.G.
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Approved: C.HURLEY RPEQ No. 15957
Scale: AS SHOWN
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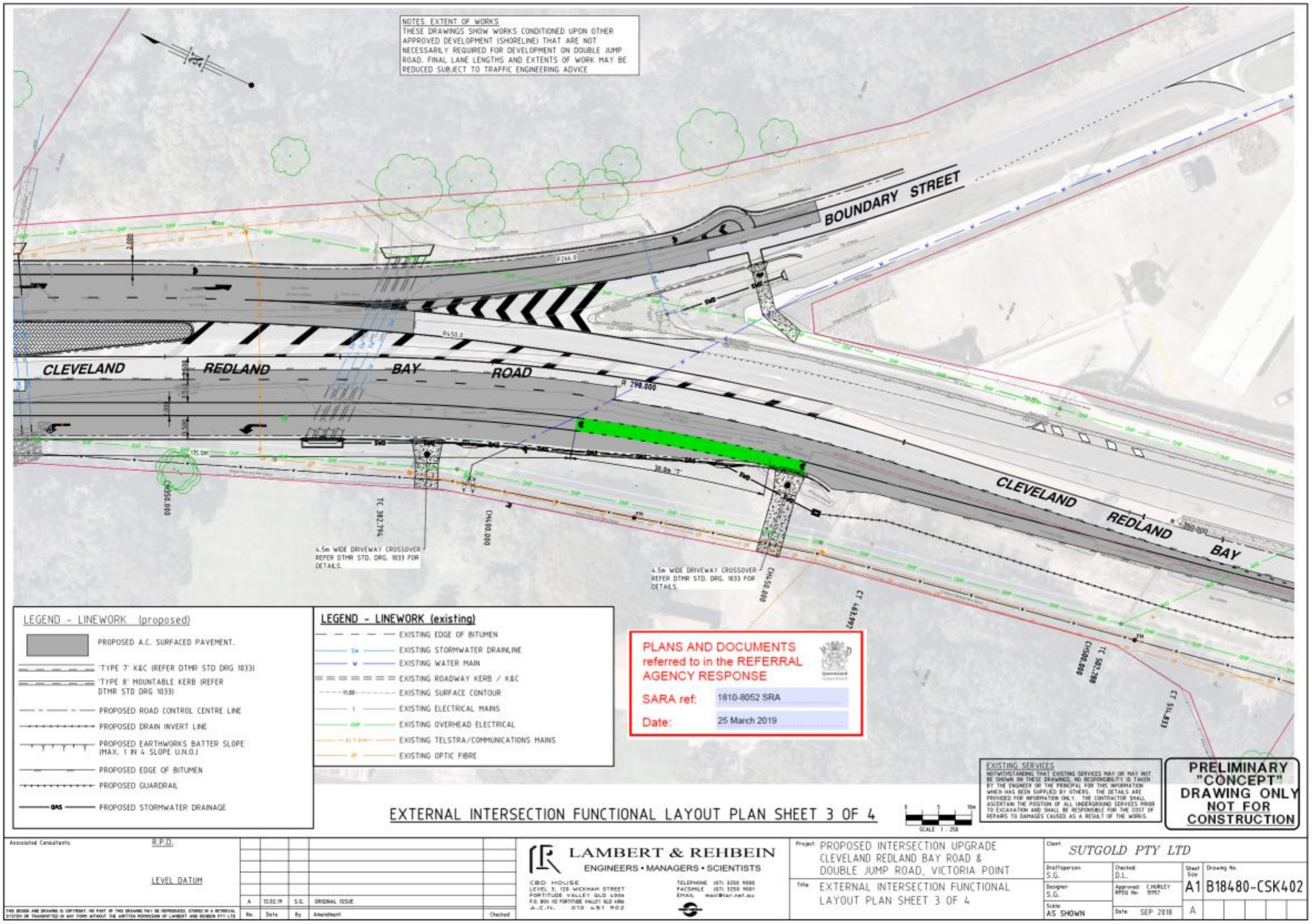
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BOUNDARY STREET
CLEVELAND REDLAND BAY ROAD
CLEVELAND REDLAND BAY
4.5m WIDE DRIVEWAY CROSSOVER REFER DTMR STD. DRG. 1033 FOR DETAILS.
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PRELIMINARY "CONCEPT" DRAWING ONLY NOT FOR CONSTRUCTION
EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 3 OF 4
SCALE 1:250
Associated Consultants: R.P.D.
LEVEL DATUM
A 13.02.19 S.G. ORIGINAL ISSUE
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Project: PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT
Title: EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 3 OF 4
Client: SUTGOLD PTY LTD
Draftsperson: S.G.
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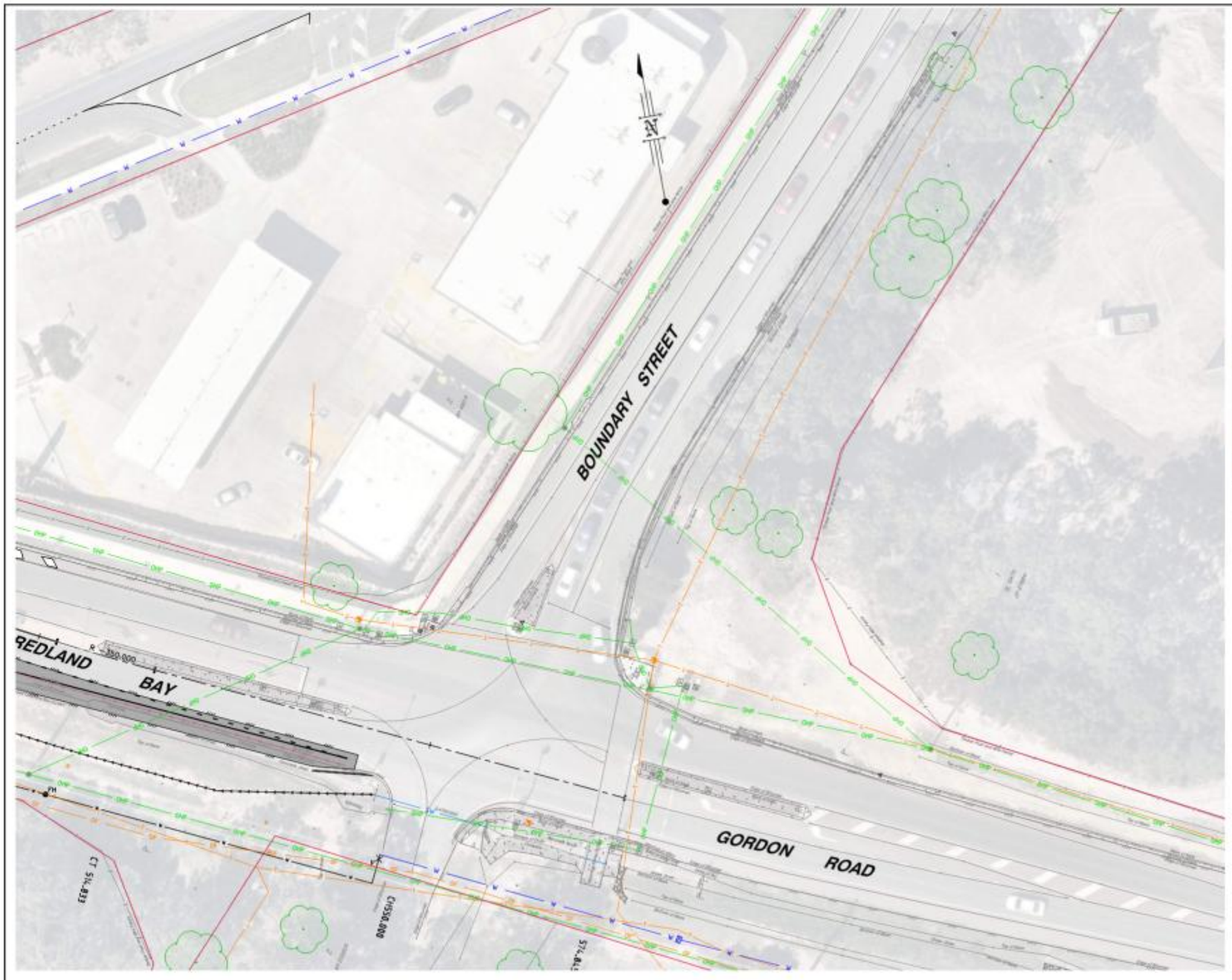
No. Date By Amendment Checked



LEGEND - LINEWORK (proposed)

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- PROPOSED GUARDRAIL
- PROPOSED STORMWATER DRAINAGE

LEGEND - LINEWORK (existing)

- EXISTING EDGE OF BITUMEN
- EXISTING STORMWATER DRAINLINE
- EXISTING WATER MAIN
- EXISTING ROADWAY KERB / K&C
- EXISTING SURFACE CONTOUR
- EXISTING ELECTRICAL MAINS
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PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 1810-8052 SRA
Date: 25 March 2019

EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 4 OF 4

SCALE 1 : 250

Associated Consultants: R.P.D.

LEVEL DATUM

No.	Date	By	Amendment	Checked
A	13.02.19	S.G.	ORIGINAL ISSUE	

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Project: PROPOSED INTERSECTION UPGRADE CLEVELAND REDLAND BAY ROAD & DOUBLE JUMP ROAD, VICTORIA POINT

Title: EXTERNAL INTERSECTION FUNCTIONAL LAYOUT PLAN SHEET 4 OF 4

Client: SUTGOLD PTY LTD

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Designer: S.G.	Approved: C.HURLEY RPEQ No: 15957		
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HCE Engineers

Ref. HCE 23238

INSPIRE TECHNOLOGY AND INNOVATION CENTRE
20 GILES ROAD, REDLAND BAY

STORMWATER MANAGEMENT PLAN
REVISION 2

Prepared For
CARNDALE PTY LTD

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REPORT CONTROL SHEET

HCE Ref. No.:	23238
Site:	**20 Giles Road, Redland Bay**
Report Title:	Stormwater Management Plan

Rev No.	Date	Written By	Reviewed By	Authorised By	Signed
Draft	19/03/24	MB	GH	MB	
0	21/03/24	MB	GH	MB	
1	17/10/24	ST	MB	MB	
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INDEX

1. Introduction
2. Existing Site and Catchment Description
   2.1 Existing Drainage Conditions
   2.2 External Catchments
3. Water Quantity Management
   3.1 Overview and Objectives
   3.2 Lawful Discharge
   3.3 Design Storms
   3.4 Hydrologic Modelling
      3.4.1 Losses
      3.4.2 Hydraulic Roughness
      3.4.3 Existing Conditions
      3.4.4 Proposed Mitigated Conditions
      3.4.5 External Catchment Management
4. Water Quality Management
   4.1 Construction Phase
      4.1.1 Pollutants of Concern
      4.1.2 Water Quality Treatment
   4.2 Operational Phase
      4.2.1 Pollutants of Concern
      4.2.2 Water Quality Treatment
   4.3 Pollutant Export Modelling
      4.3.1 Model Selection
      4.3.2 Model Setup
      4.3.3 Model Results
   4.4 Water Quality Monitoring
   4.5 Maintenance
      4.5.1 Bioretention Basin Maintenance
5. Conclusions

Engineering Drawings

Appendix A – Rational Method Calculations

Appendix B – XP Rafts Outputs

Appendix C – Music Modelling Results

Appendix D – Maintenance Guidelines

1. INTRODUCTION

HCE Engineers have been engaged to prepare a Stormwater Management Plan to accompany the application for Preliminary Approval for Material Change of Use at 20 Giles Road, Redland Bay.

This report has been updated to reflect changes in the proposed site layout.

This report identifies stormwater quality and quantity management measures proposed to be incorporated within the development, in order to satisfy the required outcomes of the Redland City Plan.

This report has been prepared expressly to provide commentary regarding compliance with Council requirements for the proposed development on the subject site. Information presented in this report should not be applied to properties or developments other than the subject development. No responsibility is accepted for use of any part of this report in any other context or for any other purposes or by any third party.

2. EXISTING SITE AND CATCHMENT DESCRIPTION

The site is located on Cleveland-Redland Bay Road and currently has access from a 20.0m wide handle to Giles Road. The site has a total area of 25.13ha including a 390m frontage to Cleveland-Redland Bay Road. The existing site is currently utilised for poultry farming and cattle grazing.

The site is bordered by Cleveland-Redland Bay Road to the east, rural land to the west and north, and the existing Redlands Business Park to the south. Refer to Image 1 below.

***Image 1** – Existing Site Conditions (Source Near Map)*

2.1 Existing Drainage Conditions

The existing site can be described to be a topographic saddle with stormwater runoff currently either discharging to the existing flow path to the central north of the subject site, or to the existing flow path traversing along the south west, through the adjoining Redland Business Park and then south east of the subject site. There are two existing dams on site, one located in the south west of the site, and another dam located in the central north of the site.

The site is encumbered by the Flood and Storm Tide Hazard Overlay within the Redland City Council Planning Scheme. Refer to Image 2 below.

Image 2: *Annotated Site Plan with Flood and Storm Tide Overlay (image from Council's Planning Scheme)*

2.2 External Catchments

An external catchment has been identified west of the subject site within No. 34 Giles Road. This catchment is approximately 3.82ha and will be collected and conveyed through the subject site. Further details are provided in Section 3.6 of this report

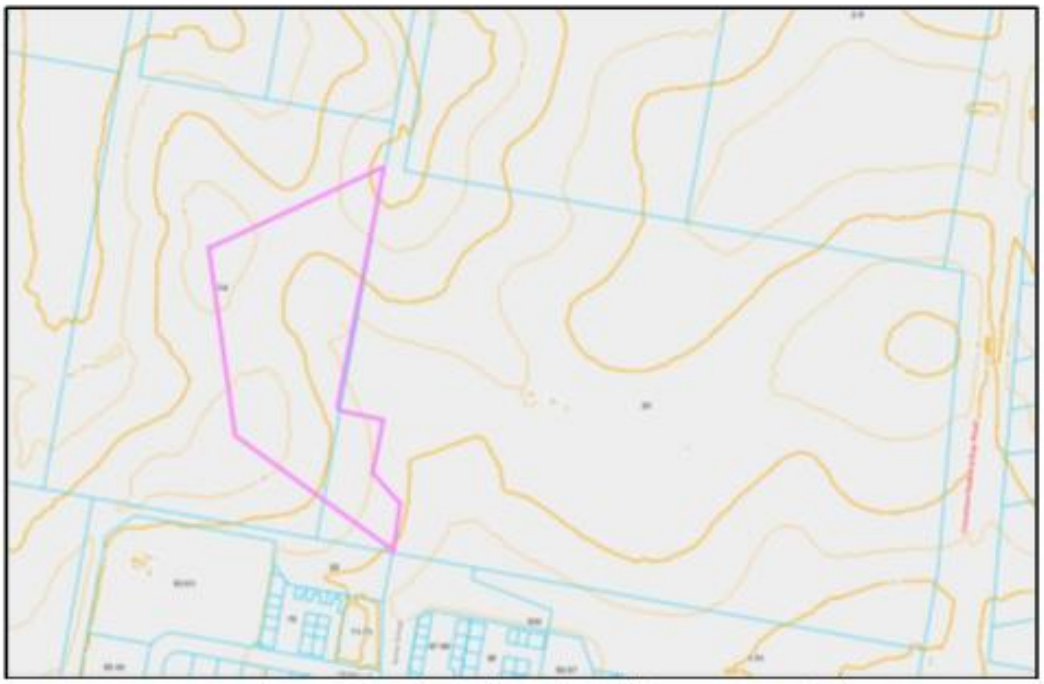

***Image 3** – External Catchments (Source Council's Community Mapping)*

3. WATER QUANTITY MANAGEMENT

3.1 Overview and Objectives

On site detention is proposed to meet the requirement of Performance Outcomes of Planning Scheme Policy 2 – Infrastructure Works Section 1.2.1.4

A model has been set up using XP-RAFTS software package in in order to determine existing site runoff hydrographs and to determine the effectiveness of the proposed detention basin.

Flow conditions at each of the three locations where runoff exits the development site have been examined to assess impacts. Refer to the accompanying drawings.

Concept design drawings for stormwater management have been prepared and appended.

Rational Method Calculations and XP-RAFTS outputs are found in Appendix A & B, respectively.

3.2 Lawful Discharge

Stormwater runoff will be discharged to the existing flow paths to the north and south–east of the development site. These are deemed lawful points of discharge.

3.3 Design Storms

Design Storms for the development have been determined in accordance with Table 7.3.1 of the Queensland Urban Drainage Manual.

***Table 1** – Design Storms*

Storm Event	AEP
Minor	10%
Major	1%

3.4 Hydrologic Modelling

Initial and continuing losses and hydraulic roughness are outlined in Sections 3.4.1 and 3.4.2 respectively.

3.4.1 Losses

***Table 2** – Losses*

	Initial Loss (mm/hr)	Continuing Loss (mm/hr)
Pervious	10	2
Impervious	2	0

3.4.2 Hydraulic Roughness

Manning's n values have been used to represent the pervious and impervious surface. The following values were adopted.

***Table 3** – Hydraulic Roughness*

	Manning's 'n'
Pervious	0.045
Impervious	0.025

3.4.3 Existing Conditions

XP-RAFTS computer software package was used to model the peak discharges immediately downstream of the subject site under existing conditions during the 39%, 18%, 10%, 5%, 2% and 1% AEP rainfall events.

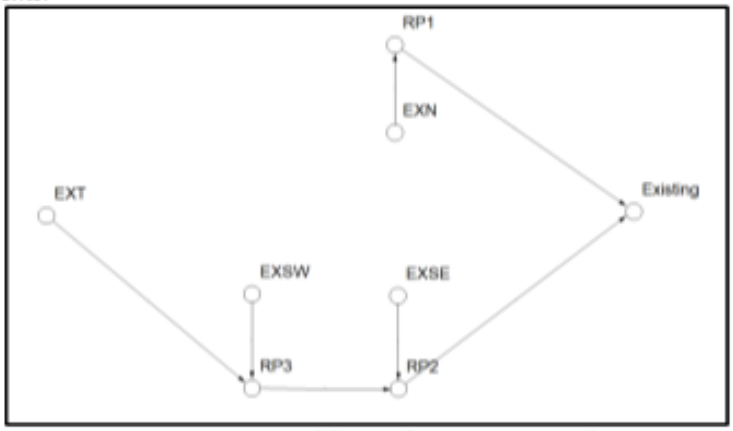

***Image 4** - XP-RAFTS model set up for existing site conditions*

The table below summarises the input parameters for the XP-RAFTS model for the existing scenario. Please see the catchment plan within the concept engineering drawings attached.

***Table 4** – XP-RAFTS Source Node Parameters for Existing Site Conditions*

Catchment ID	Area(ha)	Percentage Impervious (%)	Slope (%)
EXN	9.28	5	5
EXSE	6.89	5	5
EXSW	6.07	5	5
EXT1	3.82	5	5

Although the majority of the existing site is undeveloped, a 5% fraction impervious has been selected for the existing site node as per the recommendations of the user manual.

RAFTS is an empirical runoff routing model recognised as a suitable method to predict runoff hydrographs in the urban environments. The Rational Method is a simple hand calculation broadly accepted as being able to provide reasonable peak flow estimates in small urban catchments. The Rational Method calculation has been undertaken to verify the suitability of the RAFTS predicted flows.

Table 5 below displays the Rational Method inputs whilst, Table 6 summarises the flow rates based on the two methods used and as shown the flow rates predicted between the two methods are similar.

***Table 5**– Rational Method Inputs*

Catchment ID	C_{10}	Time of Concentration (min)	Area (ha)
EXN	0.7	20	9.28
EXSE	0.7	20	6.89
EXSW	0.7	20	6.07
EXT1	0.7	20	3.82

***Table 6** – Existing Peak Discharge Rates*

AEP	XP-RAFTS Existing Peak Discharge (m^3/s)	Rational Method Existing Peak Discharge (m^3/s)
39%	2.55	3.76
18%	4.53	5.25
10%	5.87	6.39
5%	7.63	7.66
2%	9.68	9.76
1%	11.57	11.25

A graphical representation of the Rational Method and XP-RAFTS values from Table 6 is included below.

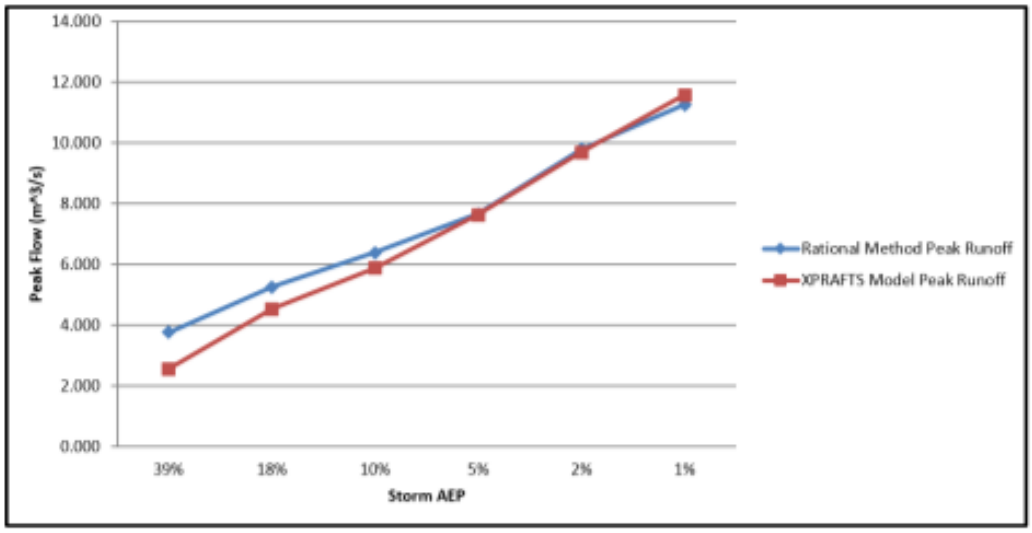

***Image 5** – Calibration for Rational Method and XP-RAFTS values*

The existing peak discharge for the reporting points has been outlined in Table 7 below.

Table 5 – *Existing Peak Discharge Rates*

XP-RAFTS Existing Peak Discharge (m^3/s)			
AEP	Reporting Point 1 (m^3/s)	Reporting Point 2 (m^3/s)	Reporting Point 3 (m^3/s)
39%	0.86	1.69	1.02
18%	1.53	3.01	1.82
10%	2.02	3.87	2.35
5%	2.62	5.03	3.03
2%	3.31	6.37	3.83
1%	3.96	7.61	4.56

3.4.4 Proposed Mitigated Conditions

Due to the proposed development layout, the majority of the site, including the proposed road network, will discharge stormwater towards the proposed detention basin. The undisturbed area towards the western boundary, and the lots towards the south-eastern corner of the site will bypass the proposed detention basin.

Input parameters for developed conditions are summarised below in Table 7 and the model setup is shown in Image 6. Please see the catchment plan within the concept engineering drawings attached.

Table 7 *– XP-RAFTS Source Node Parameters for Developed Site Conditions*

Catchment ID	Area(ha)	Percentage Impervious (%)	Slope (%)
DV1A	7.25	65	1
DV2A	13.66	65	1
EXTA	5.15	5	1

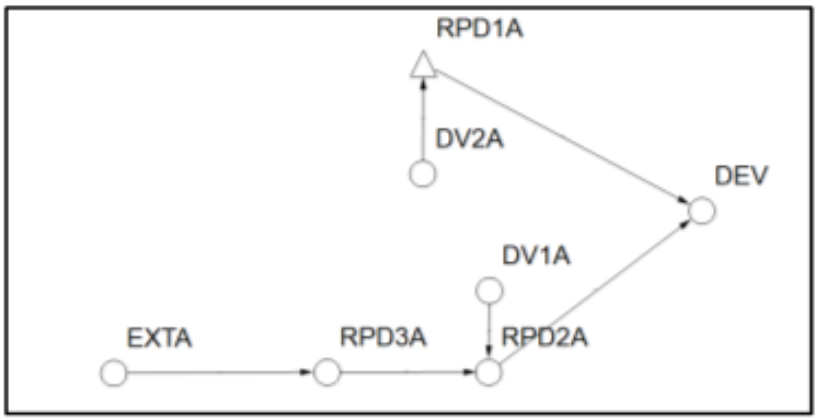

Image 6 *– XP-RAFTS Model Set Up for Developed Mitigated Site Conditions.*

The detention basin parameters including outlet control is shown in Table 8.

Table 8– *Detention Basin Parameters*

Detention ID	Base RL (m AHD)	Depth (m)	Total Volume (m^3)	Low Flow Outlet Control	High Flow Outlet Control
RPD1A	25.70	1.80	5310	1 x 600mm diameter pipe	3.5m wide weir RL 26.7m

Table 9 – *Detention Basin North (RPD1A) Performance (Developed Mitigated Conditions)*

AEP	XP-RAFTS Basin Peak Inflow Discharge (m^3/s)	XP-RAFTS Basin Peak Outflow Discharge (m^3/s)	Detention Basin Ponding Level (m)	Total Detention Basin Storage (m^3)
39%	3.10	0.76	26.75	1703
18%	4.45	1.40	26.92	2439
10%	5.31	1.91	27.02	2893
5%	6.41	2.56	27.13	3420
2%	7.11	3.23	27.23	3916
1%	8.18	3.93	27.33	4402

Table 9 above outlines the detention basin peak inflow and outflow discharge rates. While Table 10, 11 and 12 outlines the pre-development and post development peak discharge rates for the site at each reporting point.

Table 10– *Existing & Developed Peak Discharge Rates – Reporting Point 1 (RPD1A)*

AEP	XP-RAFTS Existing Peak Discharge (m^3/s)	XP-RAFTS Developed Peak Discharge (m^3/s)	Difference (m^3/s)
39%	0.86	0.76	-0.10
18%	1.53	1.4	-0.13
10%	2.02	1.91	-0.11
5%	2.62	2.56	-0.06
2%	3.31	3.23	-0.08
1%	3.96	3.93	-0.03

Table 11– *Existing & Developed Peak Discharge Rates – Reporting Point 2 (RPD2A)*

AEP	XP-RAFTS Existing Peak Discharge (m^3/s)	XP-RAFTS Developed Peak Discharge (m^3/s)	Difference (m^3/s)
39%	1.69	1.68	-0.01
18%	3.01	2.58	-0.43
10%	3.87	3.13	-0.74
5%	5.03	3.85	-1.18
2%	6.37	4.39	-1.98
1%	7.61	5.22	-2.39

Table 12– Existing & Developed Peak Discharge Rates – Reporting Point 3 (RPD3A)

AEP	XP-RAFTS Existing Peak Discharge (m^3/s)	XP-RAFTS Developed Peak Discharge (m^3/s)	Difference (m^3/s)
39%	1.02	0.53	-0.49
18%	1.82	0.95	-0.87
10%	2.35	1.22	-1.13
5%	3.03	1.57	-1.46
2%	3.83	1.99	-1.84
1%	4.56	2.39	-2.17

As it can be seen from Table 10, 11 and 12 above, the proposed detention basin will ensure the peak discharge rates leaving the site are less than existing for the 39%, 18%, 10%, 5%, 2% and 1% AEP rainfall events at Reporting Point 1, 2 & 3. Refer to concept design drawings attached.

3.4.5 External Catchment Management

Earthworks proposed on site to create near level allotments will impede the natural flow of runoff from the external catchment to the west. Earthworks will be offset from the site boundary, to prevent off site impacts. A new pipe, sized to convey major storm flow, will drain the surface depression created by the filling. The pipe will discharge to a constructed swale in the south-western portion of the land.

Refer to accompanying design drawings.

4. WATER QUALITY MANAGEMENT

4.1 Construction Phase

4.1.1 Pollutants of Concern

The construction phase stormwater quality design objectives which may be relevant to this subdivision as set by the *Urban Stormwater Quality Planning Guidelines 2010* are as follows.

***Table 13** - Design Objectives for Stormwater Quality Management - Construction Phase*

Objective	Measure
Drainage Control	• Design life and design storm of temporary drainage works in accordance with time the disturbed area is exposed <12 months - 1 in 2 ARI 12-24 months - 1 in 5 ARI >24 months - 1 in 10 ARI
Erosion Control	• Minimise exposure of disturbed soils at any time • Avoid or minimise large construction activities in the wet season • Divert water run-off from undisturbed areas around disturbed areas • Use erosion risk ratings to determine appropriate erosion control measures
Sediment Control	• Use soil loss rates to determine appropriate sediment control measures • Design storm for sediment control basins should be based on retaining the maximum sediment quantity for the maximum volume of water runoff
Water Quality Outcomes	• Coarse sediment is retained on site • Nitrogen and phosphorus are managed through sediment control • Prevent litter/waste entering the site, the stormwater or watercourses that discharge from the site. Also minimise or sufficiently contain on-site litter and waste production and regularly clear waste bins. • Hydrocarbons and other contaminants are prevented from entering the stormwater system or internal watercourses that discharge from the site. • Washdown water is prevented from entering the stormwater system or internal watercourses that discharge from the site • Cations and anions including aluminium, iron and sulfate are managed as required under an approved acid sulfate soil management plan
Stormwater Drainage/Flow Management	• Take all reasonable and practicable measures to minimise significant changes to the natural waterway hydraulics and hydrology from: o Peak flow for the one year and 100-year ARI event o Run-off frequency and volumes entering receiving waters o Uncontrolled release of contaminated stormwater

4.1.2 Water Quality Treatment

Appropriate erosion and sediment control measures can be prepared and implemented on site during construction activities to ensure 'best management practices' are achieved.

4.2 Operational Phase

4.2.1 Pollutants of Concern

As outlined in Section *1.3.1.1 of Planning Scheme Policy 2* – Infrastructure a development involving a site area of 2,500m^2 is required to demonstrate how it can achieve the load reduction requirements outlined in *AO9.1 of the Healthy Waters Code*. Table 14 below identifies the minimum reductions required.

***Table 14** – Water Quality Design Objectives for Southeast Queensland*

Pollutant	Minimum Reduction in Mean Annual Load
Total Suspended Solids (TSS)	80%
Total Phosphorus (TP)	60%
Total Nitrogen (TN)	45%
Gross Pollutants (>5mm)	90%

4.2.2 Water Quality Treatment

A bio-retention basin is proposed near the northern detention basin, and the south-eastern corner of the site to address stormwater quality improvement.

4.3 Pollutant Export Modelling

4.3.1 Model Selection

To determine the on-site pollutant generation, and the effectiveness of the proposed Stormwater Quality Improvement Devices, the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) version 6.3 was used.

4.3.2 Model Setup

The MUSIC model was set up in accordance with the Healthy Waterways, Water by Design's *MUSIC Modelling Guidelines Version 3.0 - 2018*. The rainfall runoff parameters and pollutant export parameters have been set up according to Table 3.8 for lumped of this guideline.

Runoff from each lot and the proposed road network will be conveyed towards the bio retention basins.

Refer to Image 7 for the schematic model setup and Table 15 for the rainfall data and modelling time step that were used.

***Table 15** – MUSIC Rainfall Data*

Rainfall Period	Rainfall Station	Modelling Time Step
January 1997 – December 2006	40265 - Redlands	6 Minutes

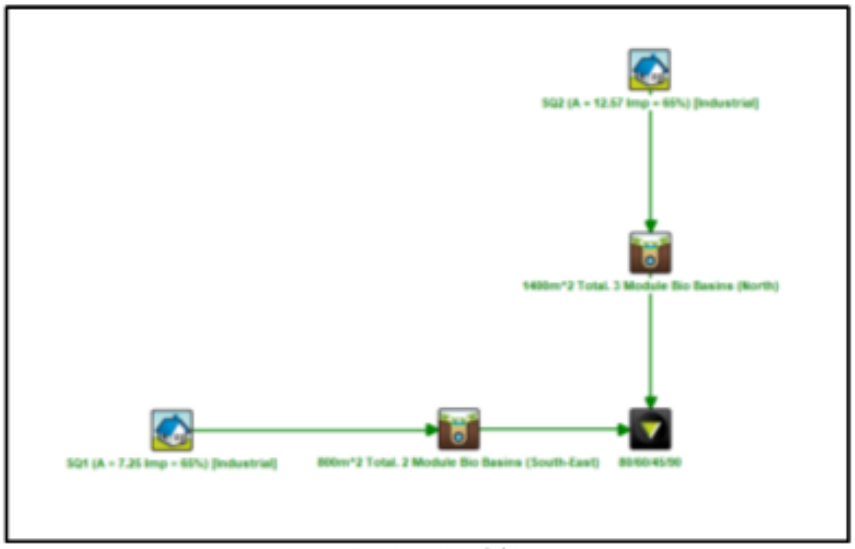

Image 7 - *MUSIC Model Set Up*

Source node catchment data is as per Table 16 below. Please see the catchment plan within the concept engineering drawings attached.

Table 16 – *MUSIC Model Source Nodes*

Node	Catchment Area (ha)	Impervious Percentage
SQ1	7.25	65%
SQ2	12.57	65%

Table 17 below sets out the bio retention basin parameters.

Table 17 - Bio-Retention Parameters

Parameter	Bio Retention Basin North	Bio Retention Basin South East
Surface Area (m^2)	1550	900
Proposed Filter Area of the Bio (m^2)	1400	800
Extended Detention Depth (m)	0.30	0.30
Filter Media Depth (m)	0.60	0.60
Saturated Hydraulic Conductivity (mm/hr)	200	200
TN Content of Filter Medea (mg/kg)	400	400
Orthophosphate Content of Filter Media (mg/kg)	30	30
Is the based lined?	Yes	Yes
Vegetated with effective nutrient removal?	Yes	Yes
Exfiltration Rate	0.00	0.00
Underdrain	Yes	Yes
Submerged Zone?	No	No
Submerged Zone Depth (m)	-	-
High Flow Bypass Flow (m^3/s)	-	-

4.3.3 Model Results

The above proposed treatment measures have been modelled using MUSIC version 6.3 and the following pollutant load-based reductions have been predicted for the site.

Table 18 – MUSIC Modelling Results

Target Pollutant	Required Load Based Reduction	Achieved Reduction
Total Suspended Solids (TSS)	80%	80%
Total Phosphorus (TP)	60%	73%
Total Nitrogen (TN)	45%	52%
Gross Pollutants (GP)	90%	100%

As Table 18 above demonstrates, the installation of the proposed stormwater treatment measures achieves the required reduction requirements for Total Suspended Solids, Total Phosphorus, Total Nitrogen and Gross Pollutants. Refer to Appendix C for the MUSIC results.

The proposed treatment measures are therefore compliant with the Acceptable Outcome AO9.1 of Council's Healthy Waters Code.

Trace and heavy metals are usually associated with fine sediment. The proposed treatment train removes very significant proportions of suspended solids therefore it is expected that the removal of trace and heavy metals will be acceptable to adequately protect downstream habitats and ecosystems from heavy metal contamination. No major sources of hydrocarbons are expected on site.

4.4 Water Quality Monitoring

No monitoring of water quality of the runoff from the site is proposed. Untrialled stormwater quality management measures are not proposed. Additionally, the level of treatment proposed is considered best practice and little improvement in the treatment train proposed could be provided.

4.5 Maintenance

4.5.1 Bioretention Basin Maintenance

To ensure that the bio-retention system operates at the desired efficiency it is necessary to perform regular inspection and perform various maintenance schedules.

Inspection frequency and maintenance varies depending on rainfall events and the life span of the system. The inspection frequency outlined below provides a summary of inspection requirements while a detailed maintenance checklist is provided in Appendix D and should be followed to ensure the efficiency and life span of the bio-retention system.
Inspection Frequency:

- Inspection after all significant rainfall events
- Monthly inspections during first 6 months of operation
- Bi-monthly inspections during 6 - 24 months of operation
- Bi-yearly inspections for the remainder of the operational phase
- Resetting (complete reconstruction) after 10 years of operation (or earlier if system starts failing to drain adequately)
- and after large rainfall events.

5. CONCLUSIONS

Stormwater runoff from the development is to discharge to existing points of discharge leaving the site. No new discharge locations are proposed.

It has been demonstrated that the development can achieve no increase in peak runoff off site, to each of the existing discharge locations, across the full range of design recurrence intervals, through the construction of a detention basin. As such lawful discharge has been demonstrated.

Bio-retention basins are proposed to provide water quality treatment for the site via multiple modules near the northern detention basin, and south-eastern corner of the site.

The proposed treatment devices achieve the water quality objectives compliant with the Acceptable Outcome AO9.1 of Council's Healthy Waters Code.

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ENGINEERING DRAWINGS

INSPIRE TECHNOLOGY AND INNOVATION CENTRE 20 GILES ROAD REDLAND BAY, QLD 4165

DRAWING INDEX	
DRAWING No.	DESCRIPTION
23238-SK10	LOCALITY PLAN AND DRAWING INDEX
23238-SK11	CONCEPT EARTHWORKS PLAN
23238-SK12	CONCEPT EARTHWORKS SECTIONS
23238-SK13	GENERAL ARRANGEMENT PLAN
23238-SK14	NEW ROAD LONGITUDINAL SECTIONS
23238-SK15	SOUTHWEST FLOW PATH MANAGEMENT PLAN
23238-SK16	NORTH BASIN LAYOUT PLAN AND DETAILS
23238-SK17	NORTH BASIN SECTIONS
23238-SK18	SOUTH BASIN LAYOUT PLAN AND DETAILS
23238-SK19	EXISTING STORMWATER CATCHMENT PLAN
23238-SK20	DEVELOPED STORMWATER CATCHMENT PLAN
23238-SK21	STORMWATER QUALITY CATCHMENT PLAN
23238-SK22	SEWERAGE AND WATER RETICULATION PLAN

LOCALITY PLAN
SCALE 1:5000

SCALE 1:5000 (A1) 0 100 200 300m
(SCALE BEFORE REDUCTION)

HCE Engineers Pty Ltd
ABN 42 664 382 610
mail@hce-engineers.com.au
07 3829 1399

PROJECT	TITLE	CLIENT	CERTIFICATION
20 GILES ROAD REDLAND BAY QLD 4165	LOCALITY PLAN, DRAWING INDEX	FOX AND BELL	

REVISION	AMENDMENT	DATE
A	RESPONSE TO INFORMATION REQUEST	18/03/24
B	LAYOUT AMENDED	15/10/24
C	LAYOUT AMENDED	30/10/25

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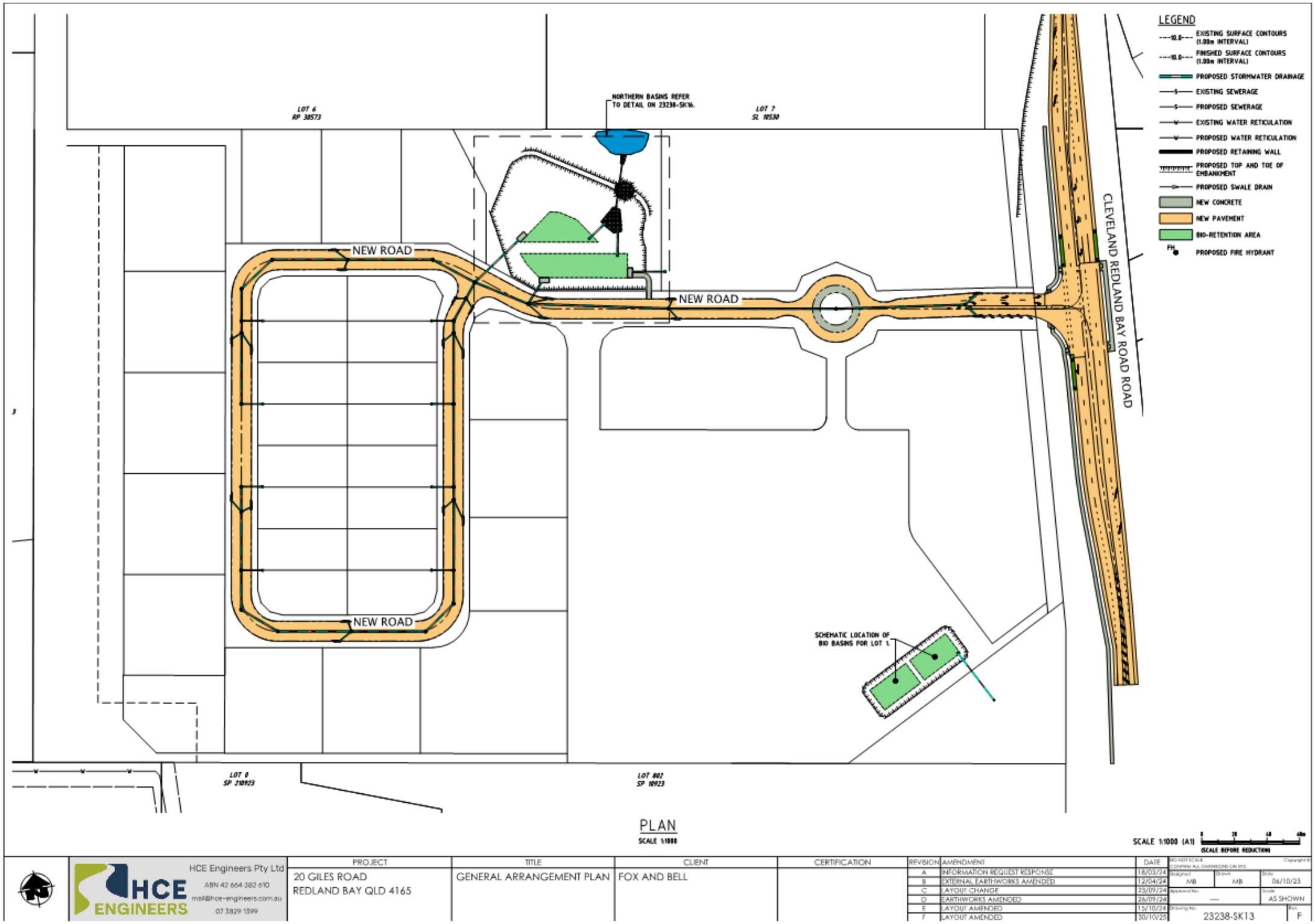
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NEW ROAD
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LEGEND
EXISTING SURFACE CONTOURS (1.00m INTERVAL)
FINISHED SURFACE CONTOURS (1.00m INTERVAL)
PROPOSED STORMWATER DRAINAGE
EXISTING SEWERAGE
PROPOSED SEWERAGE
EXISTING WATER RETICULATION
PROPOSED WATER RETICULATION
PROPOSED RETAINING WALL
PROPOSED TOP AND TOE OF EMBANKMENT
PROPOSED SWALE DRAIN
NEW CONCRETE
NEW PAVEMENT
BIO-RETENTION AREA
PROPOSED FIRE HYDRANT
SCHEMATIC LOCATION OF BIO BASINS FOR LOT 1
LOT 0
SP 218923
LOT 802
SP 10923
PLAN
SCALE 1:1000
SCALE 1:1000 (A1)
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B EXTERNAL EARTHWORKS AMENDED 12/04/24
C LAYOUT CHANGE 23/09/24
D EARTHWORKS AMENDED 26/09/24
E LAYOUT AMENDED 15/10/24
F LAYOUT AMENDED 30/10/25
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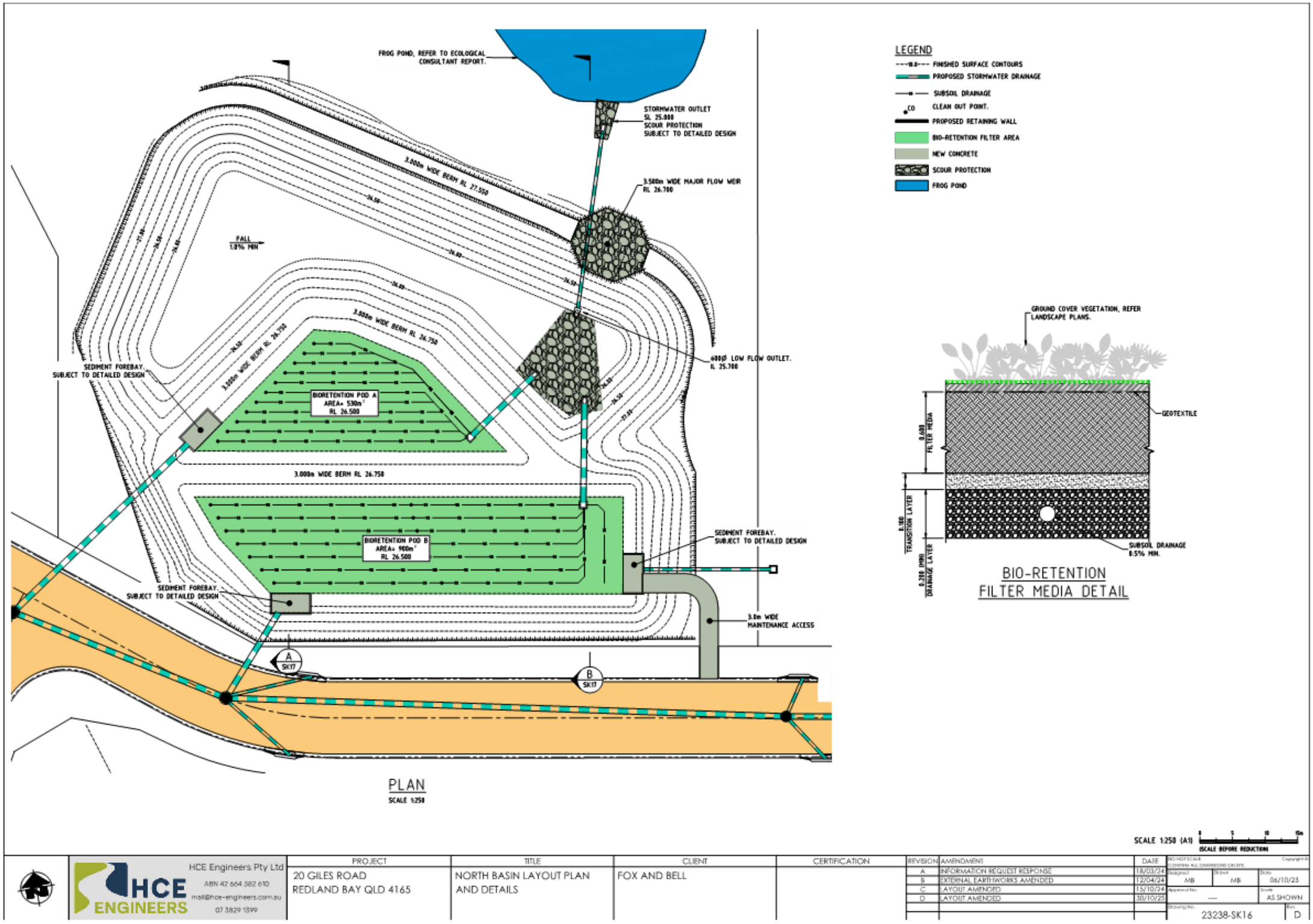
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3.500m WIDE MAJOR FLOW WEIR RL 26.700
FALL 1.0% MIN
3.000m WIDE BERM RL 26.750
600Ø LOW FLOW OUTLET. IL 25.700
SEDIMENT FOREBAY. SUBJECT TO DETAILED DESIGN
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3.000m WIDE BERM RL 26.750
BIORETENTION POD B AREA= 900m² RL 26.500
SEDIMENT FOREBAY. SUBJECT TO DETAILED DESIGN
SEDIMENT FOREBAY. SUBJECT TO DETAILED DESIGN
3.0m WIDE MAINTENANCE ACCESS
A SK17
B SK17
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SCALE 1:250
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FINISHED SURFACE CONTOURS
PROPOSED STORMWATER DRAINAGE
SUBSOIL DRAINAGE
CO CLEAN OUT POINT.
PROPOSED RETAINING WALL
BIO-RETENTION FILTER AREA
NEW CONCRETE
SCOUR PROTECTION
FROG POND
GROUND COVER VEGETATION, REFER LANDSCAPE PLANS.
GEOTEXTILE
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0.100 TRANSITION LAYER
0.200 (MIN) DRAINAGE LAYER
SUBSOIL DRAINAGE 0.5% MIN.
BIO-RETENTION FILTER MEDIA DETAIL
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(SCALE BEFORE REDUCTION)
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PROJECT: 20 GILES ROAD REDLAND BAY QLD 4165
TITLE: NORTH BASIN LAYOUT PLAN AND DETAILS
CLIENT: FOX AND BELL
CERTIFICATION
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REVISION C: LAYOUT AMENDED 15/10/24
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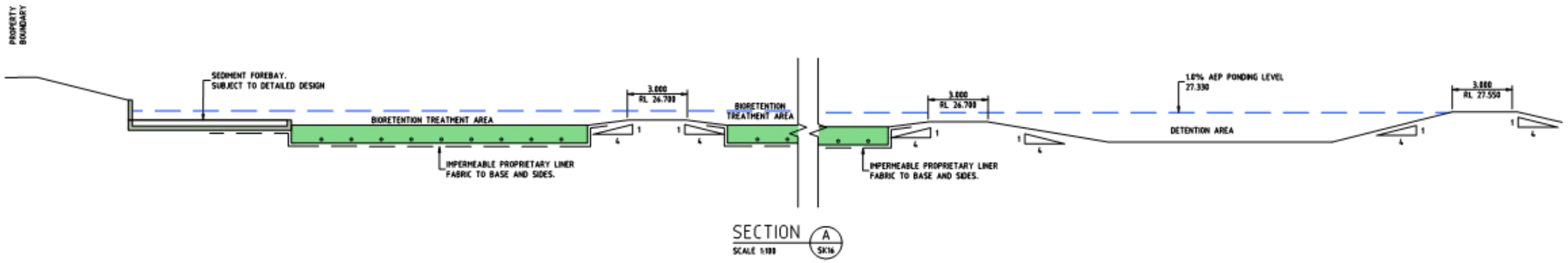

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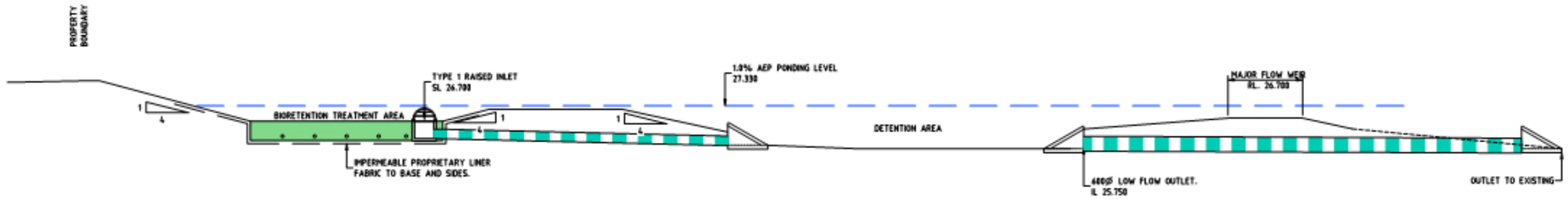

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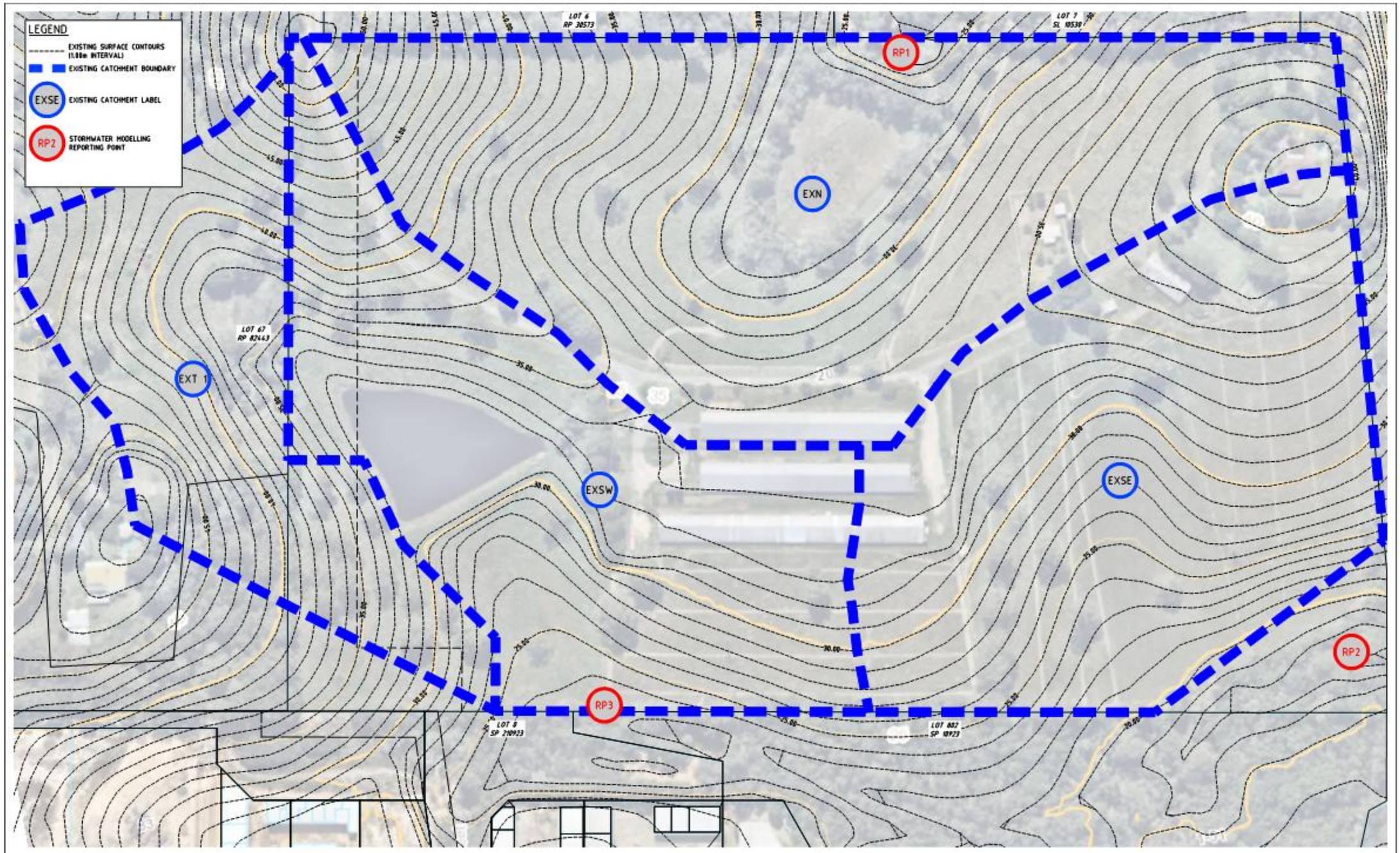

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B	LAYOUT AMENDED	15/10/24
C	LAYOUT AMENDED	30/10/25

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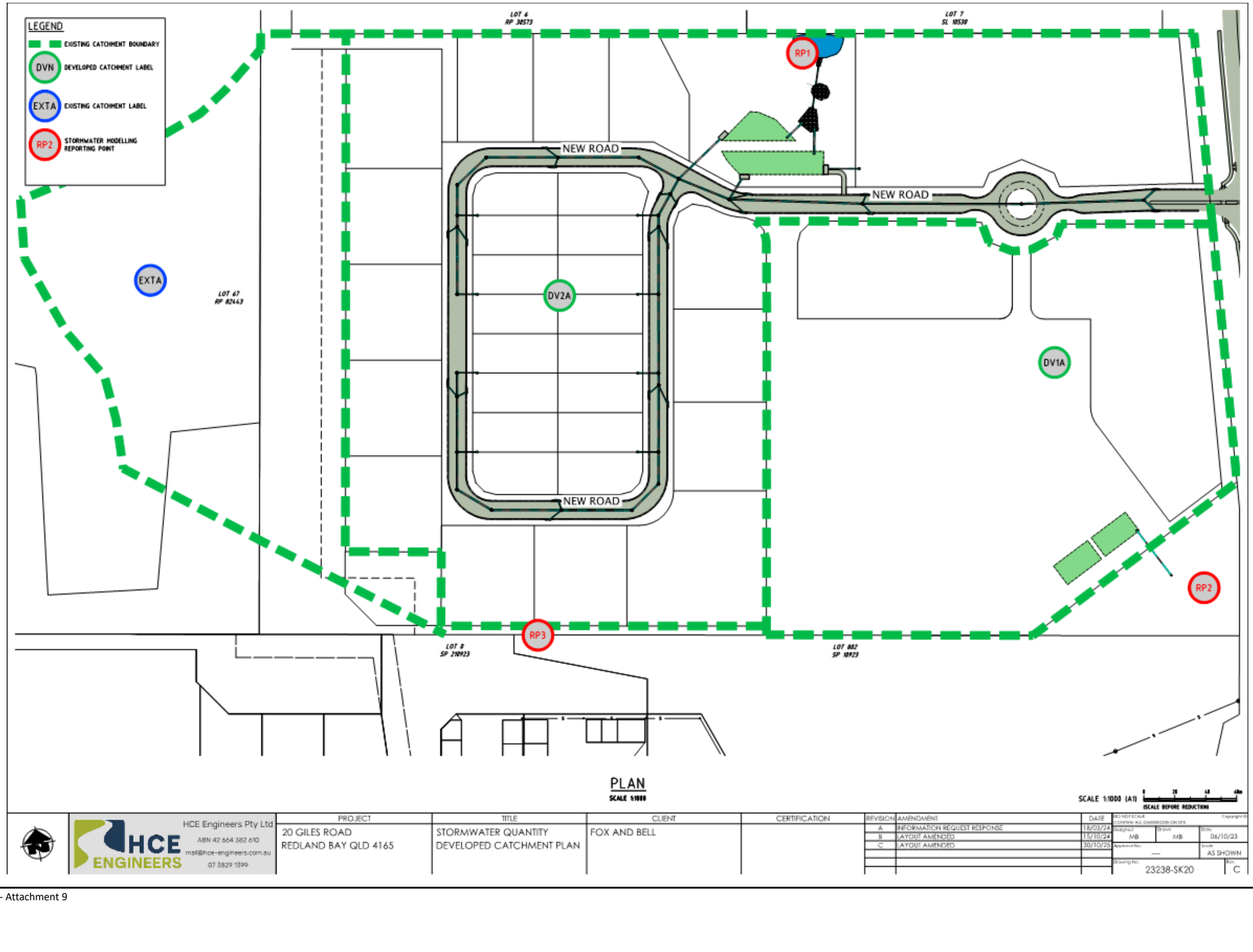
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EXTA EXISTING CATCHMENT LABEL
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LOT 7 SL 10530
RP1
NEW ROAD
NEW ROAD
NEW ROAD
DV2A
DV1A
EXTA
LOT 67 RP 82463
RP2
RP3
LOT 8 SP 210923
LOT 802 SP 10923
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07 3829 1399
PROJECT
20 GILES ROAD
REDLAND BAY QLD 4165
TITLE
STORMWATER QUANTITY
DEVELOPED CATCHMENT PLAN
CLIENT
FOX AND BELL
CERTIFICATION
REVISION AMENDMENT DATE
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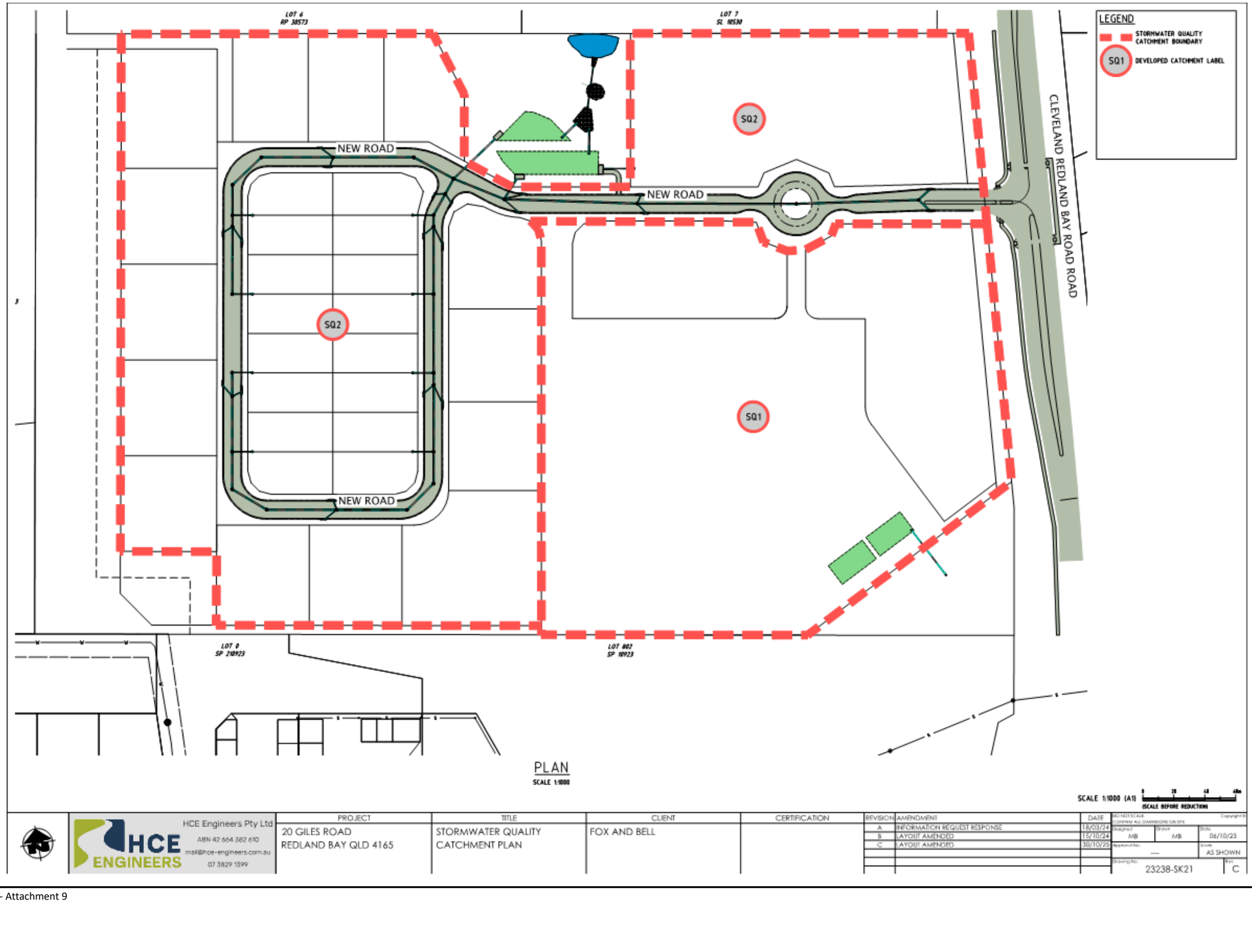
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LOT 7
SL 11530
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NEW ROAD
NEW ROAD
SQ2
SQ2
SQ1
CLEVELAND REDLAND BAY ROAD ROAD
LEGEND
STORMWATER QUALITY CATCHMENT BOUNDARY
SQ1 DEVELOPED CATCHMENT LABEL
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SP 210923
LOT 802
SP 10923
PLAN
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SCALE 1:1000 (A1)
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TITLE
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CATCHMENT PLAN
CLIENT
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Appendix A – Rational Method Calculations

RATIONAL METHOD CALCULATIONS - EXISTING SITE

Job Reference	20 Giles Road, Redland Bay
Site Address	20 Giles Road, Redland Bay
Council	Redland City Council

Number of Sub-Catchments	4	
Minor Storm Event	Q10	*(As per QUDM Table 7.02.1)*
Major Storm Event	Q100	*(As per QUDM Table 7.02.1)*

Subcatchment Summary Table

Number	Catchment Name	Catchment Description	C_{10}	tc
1	EXN	Fully Pervious Areas	0.70	20
2	EXSW	Fully Pervious Areas	0.70	20
3	EXSE	Fully Pervious Areas	0.70	20
4	EXT	Fully Pervious Areas	0.70	20

Catchment Calculations (Major and Minor Storm ARI's)

Number	Area	C10	I10	Q10	C100	I100	Q100
	ha		mm/hr	m³/s		mm/hr	m³/s
1	9.280	0.70	126	2.274	0.84	185	4.006
2	6.070	0.70	126	1.487	0.84	185	2.620
3	6.890	0.70	126	1.688	0.84	185	2.974
4	3.820	0.70	126	0.936	0.84	185	1.649

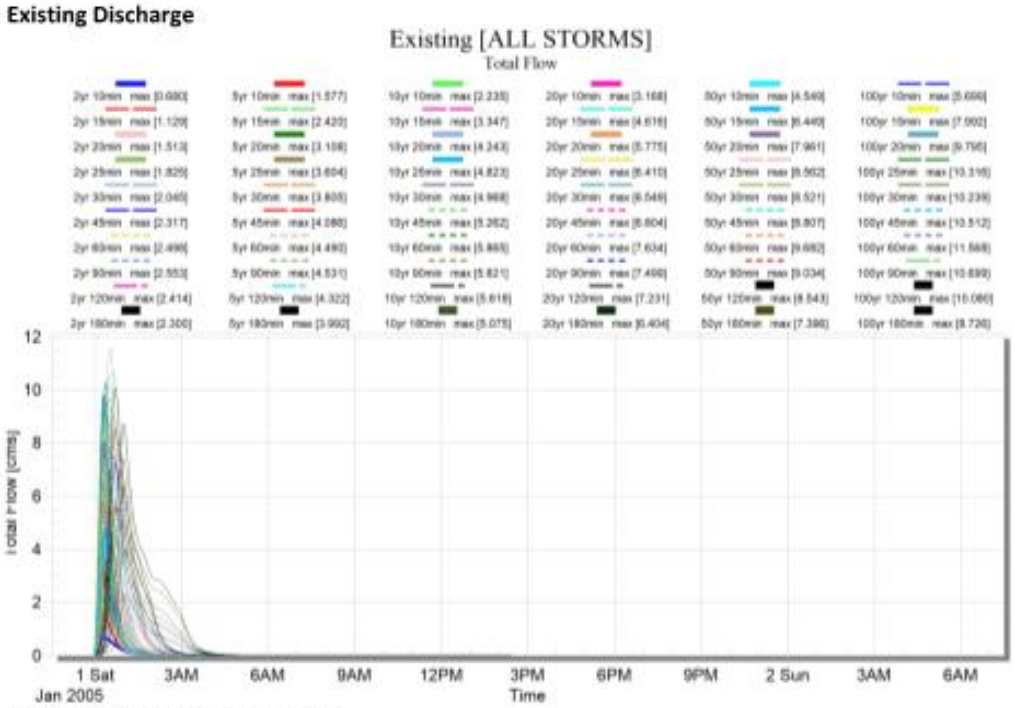
Total Runoff	Minor	6.385 m^3/s
	Major	11.249 m^3/s
Total Area		26.060 ha

Overland Flow Calculations	
Trunk SW Infrastructure	
Pipe Diameter	N/A m
Number of Pipes	0
Grade	0 m/m
mannings	0
Pipe Capacity	m^3/s
Pipe Velocity	m/s
Capacity @ 3m/s	m^3/s
Overland Flow	m^3/s

All Storm ARI's		
ARI	Peak Discharge	
3 Month	1.411	m^3/s
1	2.821	m^3/s
2	3.764	m^3/s
5	5.247	m^3/s
10	6.385	m^3/s
20	7.662	m^3/s
50	9.790	m^3/s
100	11.249	m^3/s

Appendix B – XP Rafts Outputs

Existing Discharge



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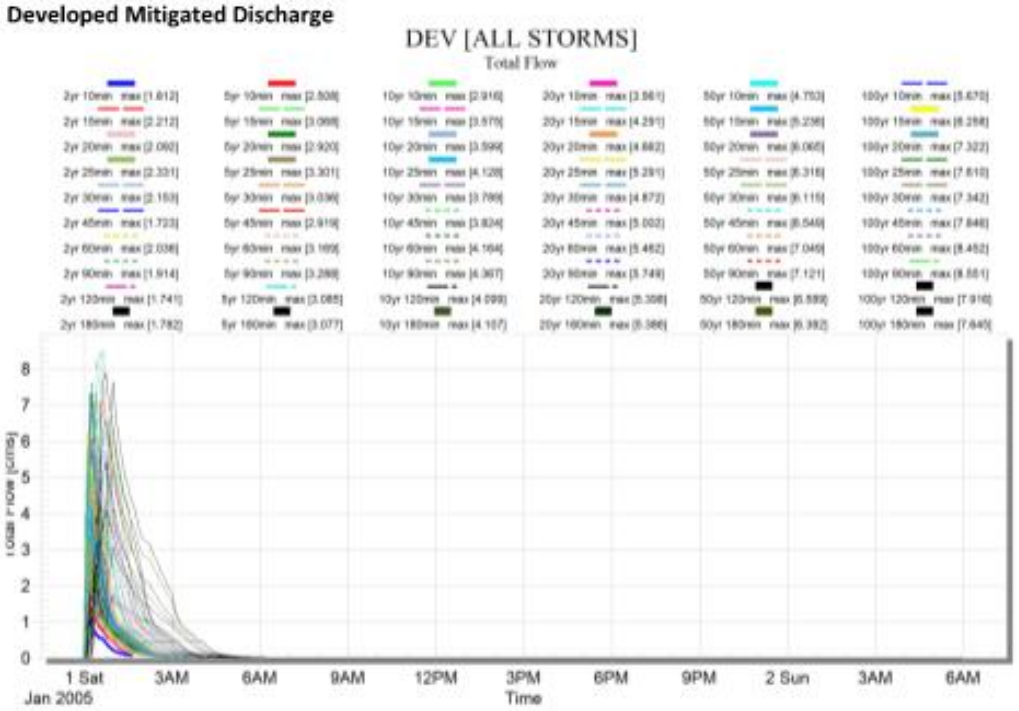
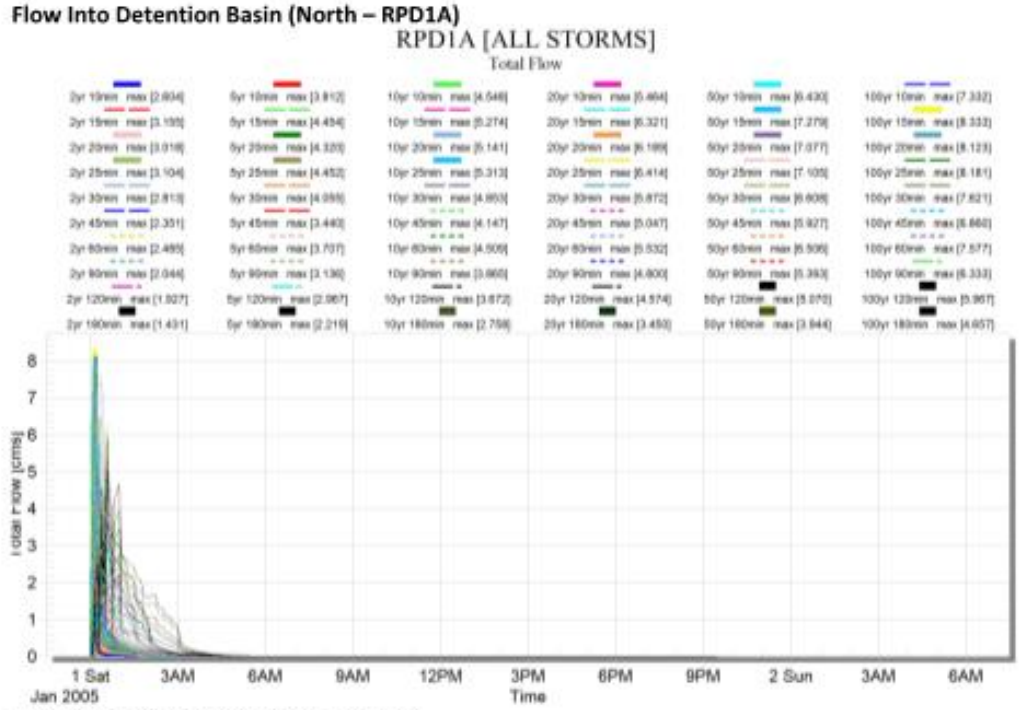
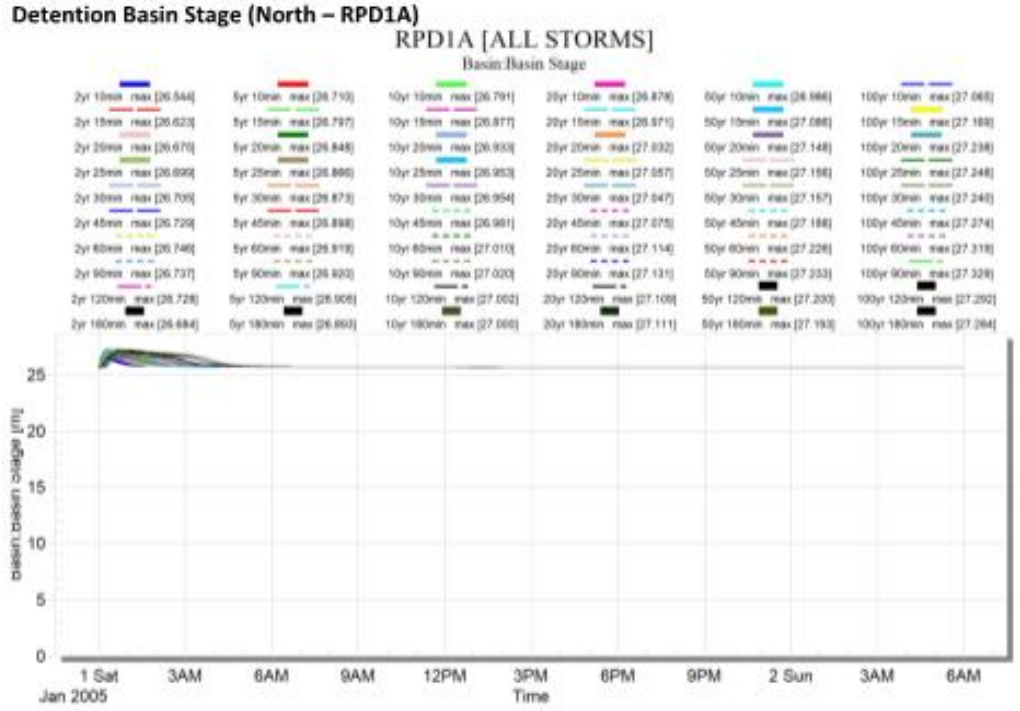


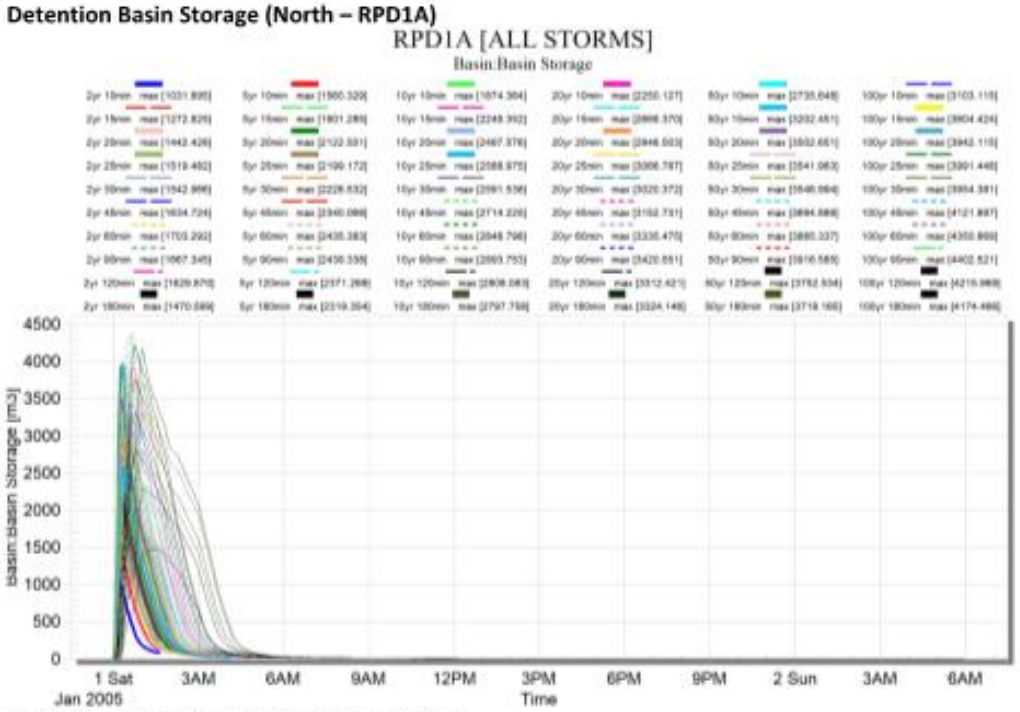
Flow Into Detention Basin (North – RPD1A)



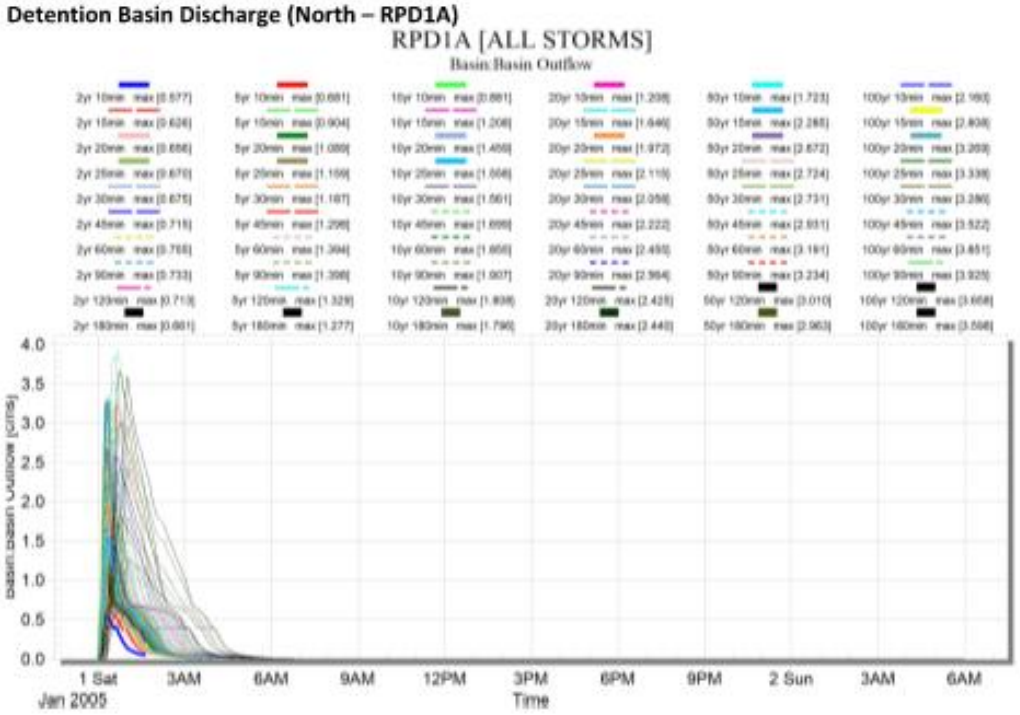
Detention Basin Stage (North – RPD1A)



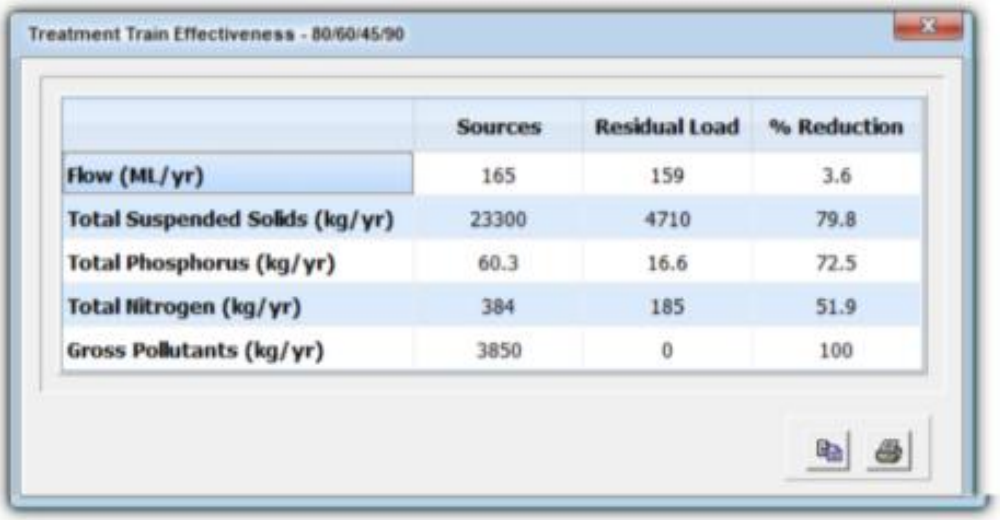
Detention Basin Storage (North – RPD1A)



Detention Basin Discharge (North – RPD1A)



Appendix C – Music Modelling Results



	Sources	Residual Load	% Reduction
Flow (ML/yr)	165	159	3.6
Total Suspended Solids (kg/yr)	23300	4710	79.8
Total Phosphorus (kg/yr)	60.3	16.6	72.5
Total Nitrogen (kg/yr)	384	185	51.9
Gross Pollutants (kg/yr)	3850	0	100

A copy of the MUSIC Model can be found in the below link:

https://files.hce-engineers.com.au/12dSynergy/Publishing/26d0c409-a297-4d80-b307-e53627e9bf1d

Appendix D – Maintenance Guidelines

Bio-retention System Maintenance Checklist **(Source: Brisbane City Council's Water Sensitive Urban Design Engineering Guidelines)**

Inspection Frequency:

- Monthly inspections during first 6 months of operation
- Bi-monthly inspections during 6 - 24 months of operation
- Bi-yearly inspections for the remainder of the operational phase
- Resetting (complete reconstruction) after 10 years of operation (or earlier if system starts failing to drain adequately)
- AND after large rainfall events

Inspection Check Items (All inspections)	Event	Action Required
All inlet/inflow points and side batters	• Sediment deposition at inflow point • Erosion and scouring at inflow points • Scouring and rill erosion of batters	• Remove deposited sediment for off-site disposal • Reshape if required and protect affected areas with erosion protection measures (i.e. dumped rock, erosion mats, sturdy vegetation) • Reshape (reduce batter slopes) if required and protect affected areas with erosion protection measures (i.e. dumped rock, erosion mats, sturdy vegetation)
Litter/debris within basin	• Litter at outflow point • Litter dispersed within the basin • Dumping of solid material or building waste	• Remove built up litter for off-site disposal • Collect dispersed litter for off-site disposal • Remove dumped material for off-site disposal and report incident to Council's Call Centre.
Vehicular or pedestrian damage	• Disturbance/exposure of batters • Disturbance/exposure of bio-retention vegetation	• Re-establish disturbed soil areas and provide fencing or bollards if required. • Re-establish disturbed areas, replace damaged vegetation and provide fencing if required.
Vegetation condition	• Poor vegetation establishment (during first 2 years of operation) • Dead/poor health of vegetation • Reduced density of vegetation • Weed proliferation • Disturbance of vegetation at inflow points • Dry vegetation condition	• Undertake replanting throughout affected areas to densities equal to initial planting regime and provide any corrective measures to prevent obvious causes of poor vegetation establishment. • Remove and replace dead vegetation. Replant as required. • Replant and supplement sparsely vegetated areas. • Remove weeds for off-site disposal. Do not use herbicides. • Provide additional vegetation protection (i.e. dumped rock or velocity reduction measures), re-establish disturbed vegetation. • Water or irrigate as required
Drainage points (outlets)	• Clogged outlet points with debris or litter • Sediment/debris build up within outlet pit • Ponding on surface of basin well after rainfall event	• Remove built up litter or debris for off-site disposal • Remove built up sediment or debris for off-site disposal • Check for surface clogging of system. Basin may require tilling, removal of surface layer or resetting (complete reconstruction).
Vandalism of structures	• Damage to/ or removal of grates, vegetation, inlet and outlet structures	• Fix damage and investigate simple measures to prevent recurrence.

Bio-retention System Maintenance Checklist

Responsibilities	Event	Action Required
Stormwater quality treatment device/asset remains owned by the Property Owner, General Manager, Manger, and or Body Corporate.	• The responsible persons will remain the owner of the treatment device and responsibility falls to that/those persons for the continual maintenance and upkeep of the treatment device.	• Inspections may be allocated to a designated person/persons, all inspection and maintenance reports to be submitted to the Property Owner, General Manager, Manager, and or Body Corporate for filing and reference. • Suitably qualified landscapers to replant dead or under nourished vegetation within the basin. • Suitably qualified contractors to undertake resetting (complete reconstruction) after 10 years of operation (or earlier if system starts failing to drain adequately)
Stormwater quality treatment device/asset to undergo asset handover to Council.	• The stormwater treatment device/asset becomes the property of Council.	• Council becomes responsible for the maintenance and inspection of the treatment device, provided Council's relevant development approval conditions and asset hand over requirements are met. • Refer to local Council requirements as asset hand over may vary between Council's.

TERRESTRIAL ECOLOGY ASSESSMENT INSPIRE TECHNOLOGY PARK

20 GILES ROAD, REDLAND BAY

Prepared for
Fox and Bell

Biodiversity Assessment and Management Pty Ltd
PO Box 1376
CLEVELAND 4163

BAAM ECOLOGICAL CONSULTANTS

Specialised ecological knowledge that reduces your risk

Document Control Sheet

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Project Manager/s: Paulette Jones

Client: Fox and Bell

Project Title: Ecological Assessment – Inspire Technology Park, Redland Bay

Project Author/s: Adrian Caneris, Conor O'Brien, Emma Green, Paulette Jones

Project Summary: An ecological assessment of the site of the proposed Inspire Technology Park at 20 Giles Road, Redland Bay.

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Biodiversity Assessment and Management Pty Ltd has produced this report in its capacity as {consultants} for and on the request of Fox and Bell (the "Client") for the sole purpose of providing an ecological assessment of the site of the proposed Inspire Technology Park development at 20 Giles Road, Redland Bay (the "Specified Purpose"). This information and any recommendations in this report are particular to the Specified Purpose and are based on facts, matters and circumstances particular to the subject matter of the report and the Specified Purpose at the time of production. This report is not to be used, nor is it suitable, for any purpose other than the Specified Purpose. Biodiversity Assessment and Management Pty Ltd disclaims all liability for any loss and/or damage whatsoever arising either directly or indirectly as a result of any application, use or reliance upon the report for any purpose other than the Specified Purpose.

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Signed on behalf of
Biodiversity Assessment and Management Pty Ltd

Date: 29/06/2023

Managing Director

Ecological Assessment

Inspire Technology Park
Redland Bay

Table of Contents

1.0 INTRODUCTION 1
1.1 Background and Study Area Description 1
1.2 Study Aims 1

2.0 METHODOLOGY 4
2.1 Desktop Review 4
2.2 Field Assessment 4

3.0 GENERAL ECOLOGICAL VALUES 5
3.1 Terrestrial Habitats 5
3.2 Aquatic Habitats 9
3.3 Existing Corridors and Connectivity 10

4.0 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE 11
4.1 Listed Threatened Ecological Communities 11
4.2 Listed Threatened Terrestrial Species 13
4.2.1 Koala Phascolarctos cinereus (EPBC Act Endangered) 13
4.2.2 Grey-headed Flying-fox Pteropus poliocephalus (EPBC Act Vulnerable) 19
4.3 Wetlands of International Importance 19
4.4 Weeds of National Significance 20

5.0 STATE MATTERS 20
5.1 Matters of State Environmental Significance 20
5.1.1 Koala Habitat Area – Core (SEQ) 20
5.1.2 Regulated Vegetation/Essential Habitat 23
5.1.3 Regulated Vegetation – intersecting a watercourse 23
5.1.4 Regulated vegetation – within 100 m of a Vegetation Management Wetland 25
5.2 Flora 25
5.3 Fauna 25
5.4 Animal Breeding Places 26
5.5 Weeds of State Significance 26

6.0 MATTERS OF LOCAL ENVIRONMENTAL SIGNIFICANCE 26
6.1 Identified MLES 26
6.2 Environmental Significance Overlay 28
6.3 Environmental Significance Overlay Code 28
6.4 Locally Significant Species 32
6.5 Waterway Corridors and Wetlands Overlay 33
6.6 Redland City Wildlife Connections 33

7.0 PROPOSED GREENSPACE REPLANTING 34

8.0 SUMMARY OF PROPOSED ACTIONS TO PROTECT AND MAINTAIN ECOLOGICAL VALUES 35

9.0 SUMMARY AND CONCLUSIONS 37
9.1 Matters of National Environmental Significance 37
9.2 Matters of State Environmental Significance 37
9.3 Matters of Local Environmental Significance 37

10.0 REFERENCES 38

List of Figures

Figure 1.1: Study Area Location
Figure 1.2: Plan of Development
Figure 3.1: Tree Plots
Figure 4.1: Coastal Swamp Sclerophyll Forest TEC of New South Wales and South East Queensland intersecting the study area
Figure 4.2: Local Koala Records
Figure 5.1: Matters of State Environmental Significance
Figure 5.2: Regional Ecosystem Map
Figure 6.1: Matters of Local Environmental Significance

Table of Appendices

Appendix A: RCC Land Use Plan for the Site and Surrounds (Redland City Plan 2018)
Appendix B: EPBC Act Protected Matters Search Tool (PMST) Results
Appendix C: Wildlife Online Database Results
Appendix D: Matters of State Environmental Significance (MSES) Report
Appendix E: RCC Environmental Overlays
Appendix F: State, Regional and Local Biodiversity Corridors
Appendix G: Tree plot details
Appendix H: Fauna Species List
Appendix I: Likelihood of occurrence of threatened flora and fauna species listed from PMST and Wildlife Online results and Field Assessment
Appendix J: EPBC Act Significant Impact Assessments for Koala and Grey-headed Flying-fox

Table of Abbreviations

BAAM	Biodiversity Assessment and Management Pty Ltd
DES	Queensland Department of Environment and Science
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
CEEVNT	critically endangered, endangered, vulnerable or near threatened
MLES	Matters of Local Environmental Significance
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NC Act	Queensland *Nature Conservation Act 1992*
RCC	Redland City Council
RE	Regional Ecosystem
TEC	Threatened Ecological Community
VM Act	Queensland *Vegetation Management Act 1999*

1.0 INTRODUCTION

1.1 BACKGROUND AND STUDY AREA DESCRIPTION

Biodiversity Assessment and Management (BAAM) has prepared this ecological assessment to inform a development application for a Material Change of Use for 'other Urban Activity' to facilitate the proposed Inspire Technology Park at 20 Giles Road, Redland Bay, described as Lot 1 on RP199206 (the 'study area'), as shown on **Figure 1.1**.

The 25 ha study area is zoned as 'Rural' under the Redland City Plan 2018 (**Appendix A**) and currently supports an operational poultry farm. As shown in **Figure 1.1**, the gently sloping lot is predominantly covered by slashed pasture grasses with occasional paddock trees. There are two approximately 0.5 ha farm dams situated along a stream order 1 tributary of Moogurrapum Creek. A dwelling and associated outbuildings are located in the eastern portion of the property and a narrow and mostly tree-lined 500 m long bitumen driveway connects the property to Giles Road.

Surrounding land uses are:

- Cleveland-Redland Bay Road to the east, with a mostly treed Road Reserve bounding the study area.
- A Redland City Council Reserve following a tributary of Moogurrapum Creek along the majority of the southern boundary, situated between the study area and the Redland Business Park to the south. A 0.5 ha area of native vegetation adjacent to this tributary is present within the south-eastern corner of the study area.
- A portion of Stage 3 of the Redland Business Park on the south-western boundary.
- A Rural allotment with mixed native vegetation and pasture to the west.
- A mostly forested allotment along the north-western boundary zoned as an ecological area for 'Conservation' under the Redland City Plan and supporting a community facility in its north-western portion.
- A predominantly forested Rural allotment adjoining the north-eastern boundary of the study area, supporting a dwelling and hardstand for parking in the cleared northern portion.

While the site is predominantly cleared, the landscape is known to support Koalas, and formulation of a Plan of Development for the technology park (**Figure 1.2**) has incorporated preliminary ecological input resulting in the inclusion of approximately 4.65 ha of 'greenspace' designed to include core Koala habitat and a threatened ecological community, incorporate Redland City environmental overlays where possible, retain paddock trees where possible, retain and buffer the tributary of Moogurrapum Creek in the south-eastern corner of the study area, connect habitats north and south of the study area through a central greenspace corridor, and directly connect the reserve along the southern boundary to the native vegetation present in the rural allotment to the west.

1.2 STUDY AIMS

The aims of this assessment are to:

- Describe currently recognised ecological values based on initial desktop assessment;
- Report field assessment results and describe existing ecological values of the study area, highlighting any significant values that present opportunities and/or constraints for future land use options, contributing further to an ecologically responsive site layout;
- Undertake an assessment of the potential ecological impacts of the development based on the Plan of Development; and
- Provide strategies for the management of identified ecological values.

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2.0 METHODOLOGY

2.1 DESKTOP REVIEW

The desktop review comprised a search of online databases and mapping and an analysis of information for conservation significant vegetation communities, flora and fauna species in the local area. For the purposes of this report, conservation significant vegetation communities and flora and fauna species include:

- Ecological communities listed as threatened ecological communities under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- Flora and fauna species listed under the EPBC Act as critically endangered, endangered, vulnerable or migratory;
- Flora and fauna species listed as critically endangered, endangered, vulnerable or near threatened (CEEVNT) or Special Least Concern under the Queensland *Nature Conservation Act 1992* (NC Act); and
- Regulated Vegetation and Essential Habitat under the Queensland *Vegetation Management Act 1999* (VM Act).

Reviewed information included:

- Commonwealth EPBC Protected Matters Search Tool results (**Appendix B**);
- Queensland Wildlife Online database flagging NC Act listed species recorded in the local area (**Appendix C**);
- State mapping of Matters of State environmental significance (MSES), including regulated vegetation, essential habitat, wetlands, waterways and Koala habitat (**Appendix D**);
- Redland City Council environmental overlays mapping (**Appendix E**);
- State Biodiversity Corridors and RCC Wildlife Connections Plan (RCC 2018a) (**Appendix F**); and
- Proposed Plan of Development (**Figure 1.2**).

2.2 FIELD ASSESSMENT

The information presented in this report is informed through the desktop research and site investigations undertaken by Adrian Caneris and Conor O'Brien on 2nd May 2023.

The focus of the site investigations was to assess the overall ecological values, plot and identify native vegetation and ground truth the ecological values identified in the desktop assessment. Survey methods included ground-truthing mapped regional ecosystems, assessment of habitat suitability for CEEVNT species, active searching for individuals and signs of the presence of CEEVNT species, as well as taking records of incidental fauna observations.

All work was performed in accordance with BAAM's Scientific Purposes Permit and Animal Ethics Approval.

To inform potential Koala habitat loss and impact assessment, all non-juvenile Koala habitat trees observed within the proposed development footprint have been plotted (**Appendix G**). A non-juvenile Koala habitat tree (NJKHT) is defined under the *Planning Regulation 2017* as:

- a food tree of the *Corymbia, Melaleuca*, *Lophostemon* or *Eucalyptus* genera, or a shelter tree species such as *Angophora;* and
- a height of more than four metres; or has a trunk circumference of >31.5 cm at 1.3 m above the ground.

3.0 GENERAL ECOLOGICAL VALUES

3.1 TERRESTRIAL HABITATS

The study area supports a mix of habitat values, with individual, scattered, older trees, patches of regrowth vegetation, gardens including planted trees, and grassy/weedy pastures (**Photo 1**). Within the property the regrowth native vegetation is restricted to the central northern boundary and the south-eastern and south-western corners (**Photo 2**). These regrowth vegetation areas provide the highest value fauna habitat and are identified for retention in the Plan of Development.

Photo 1: Mix of retained native trees, grassy pasture and planted garden trees.

Photo 2: Transition from pasture to regrowth vegetation along the southern site boundary

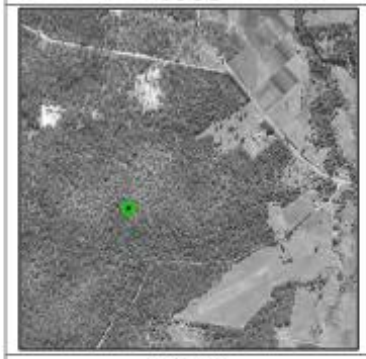
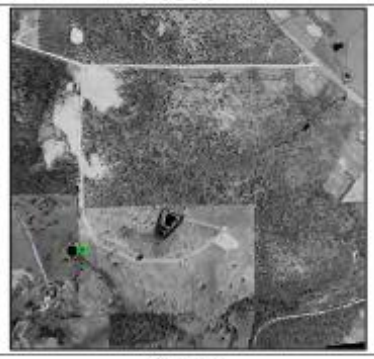
A shallow dam in the central northern portion of the study area is edged by a narrow band of young Blue Gum *Eucalyptus tereticornis*, Broad-leaved Paperbark *Melaleuca quinquenervia and* Swamp Box *Lophostemon suaveolens* (**Photo 3**), and individual paddock trees, mostly Blue Gums, are scattered throughout the property (**Photo 4**). North of the dam, the regrowth vegetation is dominated by Broad-leaved Paperbark with Blue Gum, Narrow-leaved Scribbly Gum *E. racemosa* and Pink Bloodwood *Corymbia intermedia*, with occasional Grey Ironbark *E. siderophloia* and Swamp Box.

Photo 3: Vegetation surrounding a shallow dam in the central-northern portion of the study area.

Photo 4: Paddock trees.

Outside of the regrowth vegetation areas and northern dam surrounds, individual paddock trees (primarily Blue Gum, White Stringybark *Eucalyptus tindaliae*, Grey Ironbark and Narrow-leaved Scribbly Gum) and the grassy paddocks provide suitable foraging, roosting and breeding resources for a range of fauna species, although a lack of native mid and ground storey species significantly reduces the complexity of habitat available. While most of the paddock trees are younger trees (<16-33 years), 11 older growth trees were left standing when the property was cleared at some time between 1968 and 1977 (see historical aerial photos at **Table 3.1**). The locations of these trees are shown on **Figure 3.3**, and are:

Table 3.1: Historical aerial imagery of the study area showing changes in vegetation cover from 1955-2022 (source: QImagery 2023)

1955	1968	1977	1978
			
1985	**1990**	**2007**	**2022**

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- 5 X Narrow-leaved Ironbark *E. siderophloia* – 80 cm, 100 cm, 80 cm, 50 cm and 70 cm dbh.
- 2 X Brown Bloodwood *C. trachyphloia* – 100 cm and 54 cm dbh.
- Pink Bloodwood *C. intermedia* – 100 cm dbh.
- Narrow-leaved Scribbly Gum *E. racemosa* – 80 cm dbh.
- Blue Gum *E. tereticornis* – 50 cm dbh.
- Tallowwood *Eucalyptus microcorys* - 200 cm dbh.

A list of the fauna species recorded from the study area and immediate surrounds during the field assessment is provided at **Appendix H**.

Native mammals recorded were Red-necked Wallaby *Notamacropus rufogriseus*, Swamp Wallaby *Wallabia bicolor* and Common Brushtail Possum *Trichosurus vulpecula*. Mown pasture provides foraging resources for Red-necked Wallaby and Swamp Wallaby, with adjacent remnant and regrowth vegetation providing daytime shelter. The characteristic diggings of Northern Brown Bandicoot *Isoodon macrourus* were also recorded.

The tree species present represent foraging and breeding resources for Koala *Phascolarctos cinereus* (EPBC Act and NC Act Endangered), which is known from the local landscape and is expected to utilise the study area on occasion for foraging, breeding and dispersal. Despite inspecting all trees on site during the field investigation, no Koalas were recorded and there was no evidence of Koala presence in the form of scats and tree scratches at paddock trees or within the regrowth vegetation. Koala is discussed in detail in **Section 4.2.1**.

Flowering eucalypts and melaleucas would provide forage for flying-foxes, and insectivorous bats are likely to forage over the study area, although suitable roosting locations for these smaller bats are few. Grey-headed Flying-fox *Pteropus poliocephalus* (EPBC Act Vulnerable) is known from the local landscape and is discussed in detail in **Section 4.2.2**.

Other native mammals that may occur based on the habitats present are Short-beaked Echinda *Tachyglossus aculeatus* (traversing) and Ringtail Possum *Pseudocheirus peregrinus* (around the house only). No tree hollows were present within the paddock trees or vegetated areas, with only one tree noted as 'starting to form small hollows'; therefore, the presence of mammals such as Greater Glider *Petauroides volans*, Sugar Glider *Petaurus breviceps* and Squirrel Glider *Petaurus norfolcensis*, that rely on hollows for shelter and breeding, is unlikely. The distances between paddock trees would restrict movement opportunities for gliders throughout the property.

Red Fox is common in the local area and evidence of its presence in the form of scats was recorded in the study area, as were the scats of European Brown Hare *Lepus europaeus*.

Paddock trees in rural landscapes have significance for a range of biological and ecological values, including for invertebrate biodiversity (Oliver et al. 2006), the provision of resources for birds (Fischer and Lindenmayer 2002), an important component of conservation values of agricultural landscapes for Koalas (Barth *et al.* 2019), contributing to the viability of wildlife populations by maintaining connectivity between larger patches of remnant vegetation (Gibbons and Boak 2000), and as a potential source of seed to contribute to genetically diverse woodland restoration plantings (Ottewell *et al.* 2010). 30% of the approximately 70 paddock trees are Blue Gums, which is a favoured Koala forage species in Redland City.

There is no fallen timber to shelter reptiles outside of the regrowth vegetation, and it is likely that reptile populations of the paddock areas would be limited to small skinks, Goannas and larger elapid snake species, such as Red-bellied Black Snake *Pseudechis porphyriacus*, which would occur around the dams where frogs are present in wet conditions. Eastern Water Dragon *Intellagama lesueurii* was recorded from the habitats surrounding the dams.

Diurnal bird species over much of the site are restricted to species of forest edges and open country, including predatory birds such as Australian Magpie *Gymnorhina tibicen*, Torresian Crow

Corvus orru, Laughing Kookaburra *Dacelo novaeguineae* and butcherbirds, and nectivorous species (when trees are in flower) such as Rainbow Lorikeet *Trichoglossus moluccanus* and a range of honeyeaters. Granivores such as Galah *Eolophus roseicapilla* and Little Corella *Cacatua sanguinea* feed on grass seeds in open areas, and water birds frequent the dams when water is present. Birds commonly found in paddocks, such as Cattle Egret *Bubulcus ibis* and Australian White Ibis *Threskiornis molucca*, are likely to frequent the site, particularly when conditions are wet. Raptors would hunt over the open pastures and there are nesting opportunities for these species in the larger trees, although no nests were recorded during the field assessment. There are no tree hollows present for parrot or owl breeding, or to support prey species for owls. Small woodland birds such as fairy-wrens, fantails, finches and spinebills, would be largely restricted to the margins of the study area where there is native vegetation with a shrubby understorey to provide cover from predators.

Patches of bushland habitat in the south-east corner and on the northern boundary at the dam would be retained as shown in **Figure 1.2**. Additionally, a central greenspace corridor would be established that incorporates the patch of trees on the northern and eastern edges of the dam, and 23 of the existing paddock trees that are non-juvenile Koala habitat trees (NJKHTs), including five of the old growth trees. Two additional NJKHTs would be retained within the bushfire buffers, one of them an old growth tree.

The central corridor would be planted with Koala forage species, eventually with overlapping canopies, over maintained native grasses, to facilitate Koala feeding, breeding and movement, and provide forage for wallabies. As the central corridor is <50 m wide, there are no bushfire hazard restrictions for planting.

Slow points and wildlife warning signage would be installed where internal roads cross the greenspace. With very little night-time traffic within the development area, the central corridor would provide forage and safe movement/dispersal opportunities for Koalas, small gliders, and ground mammals.

Collecting seed from the old growth trees from the study area prior to site development for later planting into the retained areas would ensure the endemicity of the resources these trees would provide for local native fauna species.

Forty-seven paddock trees that are non-juvenile Koala habitat trees (including four old growth trees), 0.26 ha of MLES mapped regrowth Koala habitat and five other native trees would be removed to facilitate the development.

The trees must be inspected in advance of the clearing to identify the presence of active breeding places (most likely bird nests), to determine if a permit to interfere with animal breeding places is required under the *Nature Conservation Act 1992*.

3.2 AQUATIC HABITATS

Two small (0.5 ha) dams occur within the study area, one in the central-northern portion of the site, and one in the central-western portion that overflows northward to a stream order 1 tributary of Moogurrapum Creek.

The northern dam is shallow and surrounded by native trees, predominantly *Melaleuca quinquenervia*, and supports native and exotic wetland vegetation that provides habitat for native fauna species, including breeding habitat for Eastern Sedgefrog *Litoria fallax*, Ruddy Treefrog *Litoria rubella*, Striped Marshfrog *Limnodynastes peronii* and Clicking Froglet *Crinia signifera*, which were recorded during the field assessment. There is potential for the presence of Tusked Frog *Adelotus brevis*, which is listed as Vulnerable under NC Act (refer **Section 5.5**). Historical aerial imagery suggests this dam dries completely in periods of low rainfall.

The western dam is deeper and appears to be utilised in the poultry farming operation. It has no surrounding tree or shrub vegetation and is likely used to capture wastewater. Water quality in this dam would be poor, particularly during times of low rainfall.

Both dams would be removed for the purposes of the development, although the location of the northern dam is likely to be where a stormwater treatment basin (bio-basin) would be established, performing a similar water filtering function as the existing, shallow dam. The bio-basin would be appropriately vegetated with native species and provide habitats similar to those currently occurring in this location. Loss of the western dam is not considered to represent a significant ecological impact as it has limited habitat value and there are many, similar farm dams in the surrounding landscape.

A fauna spotter must be present to relocate terrestrial and aquatic fauna from the dams prior to and during their emptying.

3.3 Existing Corridors and Connectivity

The study area is bounded by properties with the following habitat values:

- Cleveland-Redland Bay Road to the east, with a mostly treed Road Reserve approximately 30 m in width and comprised of a mixture of native species and introduced weeds. Canopy gaps and weeds are most prevalent in the northern portion of the Road Reserve adjacent to the existing residence.
- A Redland City Council Reserve following a tributary of Moogarrapum Creek along the majority of the southern boundary, situated between the study area and the Redland Business Park to the south (see **Figure 1.1**). A 0.5 ha area of native vegetation adjacent to this tributary is present within the south-eastern corner of the study area. Establishment of the reserve on the southern boundary was a component of the Redland Business Park development, and historical aerial imagery indicates this area was predominantly clear of vegetation prior to 2007 (see **Table 3.1**).
- A Rural allotment with mixed native vegetation and pasture to the west.
- A mostly forested allotment along the north-western boundary zoned as an ecological area for 'Conservation' under the Redland City Plan and supporting a community facility in its north-western portion (see **Appendix A**), adjoining Giles Road Conservation Area to the north of Giles Road.
- A predominantly forested Rural allotment adjoining the north-eastern boundary of the study area, supporting a dwelling and hardstand for parking in the cleared northern portion, and zoned for rural purposes.

More broadly, State-wide mapping of Terrestrial and Riparian biodiversity corridors relevant to the study area (**Appendix F**) shows the buffer of a Regionally significant terrestrial corridor 400 m to the south of the study area. The habitat within the corridor buffer is connected to the study area by habitat within the Council Reserve that was created as part of the Redland Business Park development, commencing restoration activities in 2008.

The study area itself does not provide continuous habitat connectivity with the exception of the vegetation in the south-east corner, which contributes to the reserve/corridor that adjoins the southern property boundary. The study area does provide open paddocks with occasional paddock trees and, under its current use, does not present a barrier to movement for ground and arboreal fauna species that are capable of traversing or inhabiting such environments.

4.0 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

The results from the EPBC Protected Matters Search completed for the study area are provided in **Appendix B** and the relevant matters of national environmental significance are discussed in **Sections 4.1 - 4.4**.

Any actions that are likely to have a significant impact on a Matter of National Environmental Significance (MNES) are subject to assessment under the Commonwealth's EPBC Act approval process.

4.1 LISTED THREATENED ECOLOGICAL COMMUNITIES

Initial desktop assessment found five EPBC Act listed Threatened Ecological Communities (TECs) could potentially occur on site (**Appendix B**):

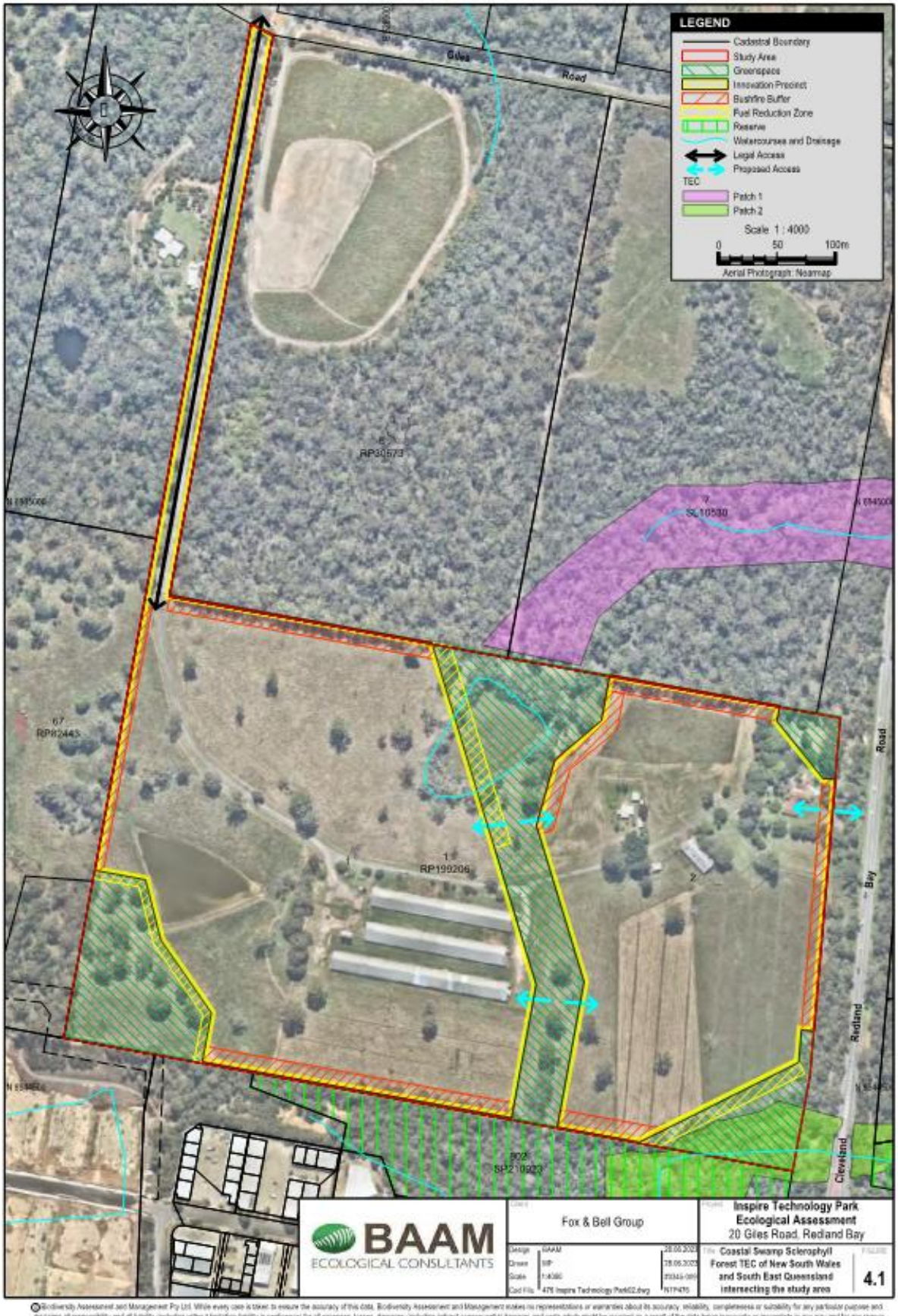
- Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland (Endangered);
- Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland (Endangered);
- Lowland Rainforest of Subtropical Australia (Critically Endangered);
- Subtropical and Temperate Coastal Saltmarsh (Vulnerable); and
- Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions (Endangered).

A regional ecosystem (RE) analogous to the Coastal Swamp Sclerophyll Forest TEC (RE 12.3.6) is mapped by the State of Queensland as occurring within the south-eastern and central-northern sections of the study area and extending outside of the study area. None of the other potential TECs are represented within the study area.

Field assessment determined that vegetation in the south-east corner of the site and vegetation extending from outside the northern extent of the central northern dam meet the diagnostic criteria for the Coastal Swamp Sclerophyll Forest TEC set out in the conservation advice (DAWE 2021); however, the mapped patch of RE 12.3.6 occurring within the northern boundary of the site, while meeting RE criteria, did not meet TEC criteria as the vegetation is established on a mounded earthen dam wall and has not established on hydric (permanently or seasonally saturated) soils that are occasionally to episodically inundated. At 0.26 ha, the adjoining regrowth on the western edge small dam is not of sufficient size to represent a TEC, and has greater than 50% non-native groundcover.

The ecological community includes the plants, animals and other organisms typically associated with these palustrine wetlands, or seasonally inundated swamp forests. In the study area, the canopy is dominated by Broad-leaved Paperbark, occurring with Blue Gum, Narrow-leaved Scribbly Gum, Pink Bloodwood, occasional Grey Ironbark and Swamp Box near the northern dam, and occurring with Blue Gum, Pink Bloodwood and Tallowwood in the south-east corner of the property.

Patches of the TEC are defined by DAWE (2021a) as incorporating gaps <30 m in width between occurrences of the ecological community. Shown in **Figure 4.1**, TEC patch 2 is a 12 ha patch associated with a stream order 1 tributary of Moogurrapum Creek. The patch intersects the south-eastern corner of the study area and extends eastwards for approximately 900 m and westwards for approximately 1200 m before >30 m gaps occur. 0.39 ha of the patch occurs within the study area boundary. TEC patch 2 would be retained within the greenspace area shown in the Plan of Development (**Figure 1.2**).



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The patch of TEC outside of the northern boundary is 6.1 ha in size, extending from outside the northern extent of the central northern dam on the property and following a stream order 1 tributary of Moogurrapum Creek north-easterly for approximately 1200 m before a >30 m gap occurs.

Works adjacent to the TECs must be undertaken in a way that ensures the adjacent vegetation is not damaged. The requirements for protection and buffering of these ecological communities are to be set out in a Vegetation Management Plan. Additionally, the hydrological regime at both locations should be replicated by the development to ensure downstream ecological communities are subject to comparable water flow conditions and water quality from the site.

4.2 LISTED THREATENED TERRESTRIAL SPECIES

An assessment of the likelihood of occurrence of EPBC Act and other listed species has been undertaken and is provided at **Appendix I**.

Those listed species from the likelihood of occurrence assessment that are known or are considered likely to occur or have potential to occur, are listed and their preferred habitat characteristics described in **Table 4.1.**

No EPBC Act listed flora species were recorded during the survey and, based on the habitat present and the results of targeted searches, none are considered likely to occur and to have the potential to occur.

From the likelihood of occurrence assessment, two EPBC Act listed threatened fauna species of relevance are known from the local area and are considered likely to occur within the study area: Koala (EPBC Act and Queensland *Nature Conservation Act 1992* [NC Act]: Endangered) and Grey-headed Flying-fox (EPBC Act: Vulnerable).

4.2.1 Koala Phascolarctos cinereus (EPBC Act Endangered)

Koalas and evidence of Koalas were the subject of targeted searches of the study area. All potential forage and shelter trees were searched during the site survey, and no Koalas or evidence of their presence was found; however, the species is well-known from the local area and is expected to occasionally occupy and traverse the site. **Figure 4.2** shows Koala records from the local area between 2002-2022; data sources are from the Atlas of Living Australia (less Moggill Koala hospital records) and the Queensland Government Data portal for Moggill Koala Hospital records - which provides the locations of Koalas that died, were injured, sick/diseased, orphaned, under threat or attended and no action taken (recorded as sightings). While there are no verified records from the study area in the past 20 years, there have been 12 records of Koala adjacent to the site, including five records that were the result of vehicle hits at or near the intersection of Cleveland-Redland Bay and German Church Roads. More broadly, there are many Koala records associated with major roadways (from vehicle hit events), and from residential areas, rather than from within the rural land pocket within which the study site is located. This is almost certainly a reflection of the higher visibility of Koalas to humans (and therefore increased reporting) on roads and in residential areas.

Table 4.1: Conservation significant terrestrial fauna species that are known, are likely, or have potential to occur within or immediately adjoining the subject site

Abbreviations: EPBC = status under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth); **NCA** = status under the *Nature Conservation Act 1992* (Queensland); **RCC** = Locally significant species (Planning Scheme Policy 1); **PM** = EPBC Protected Matters Search Tool database search for the study area; **WN** = Queensland Department of Environment and Science WildNet database search within a 5 km radius of the study area; E = Endangered; V = Vulnerable; NT = Near Threatened; M = Migratory; S = Special Least Concern (Migratory or culturally significant); LC = Least Concern; LS = Local significance; X = species has been recorded within the database search area (WildNet) or occurrence is predicted by Protected Matters Search Tool if suitable habitat is present (PM).

Likelihood of occurrence categories: Known - from other surveys (BAAM, other consultancies, databases), species recorded onsite; **Likely to occur** – species not known to occur onsite but the site is within the known range of the species, potentially suitable habitat is present and there are either database records for the local region or knowledge of the species occurrence suggests it may occur as a resident or visitor; means 'high potential' or good habitat is present but no species were observed onsite; **Potential to occur** – the site is within the known range of the species and potentially suitable habitat is present but there are no database records for the local region and/or it is a rare, erratic or poorly known species; means 'low potential' or habitat for species is not definitive; **Unlikely to occur** – no suitable habitat present and/or the site is outside of the known range of the species.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Birds								
Accipiter novaehollandiae	Grey Goshawk		LC	LS		X	Wooded habitats, sparse in region - concentrated on Mt Cotton – Sheldon (RCC Scheme Policy 1).	**Potential.** There are few wooded habitats on site suitable for the species, though the species may rarely visit the study area. There are two local records within 5 km of the study area.
Hirundapus caudacutus	White-Throated Needletail	V, M	V		X	X	In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. Probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland. Has been recorded roosting in trees in forests and woodlands, both among dense foliage in the canopy or in hollows (DotE 2023d).	**Potential:** This aerial species may occur as a flyover while foraging. No suitable roosting habitat present.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Ninox strenua	Powerful Owl		V	LS		X	Open forests and woodlands and sheltered gullies in wet forests with dense understoreys, especially along watercourses. Sometimes found in open areas near forests such as farmland, parks and suburban areas. Needs old growth trees to nest (Australian Museum 2023).	**Potential.** This species is expected to occur within the nearby bushland habitats. The Study area does not hold any suitable breeding habitats for Powerful Owl or its prey species, and any occurrence would be occasional in search of prey.
Frogs								
Adelotus brevis	Tusked Frog		V	LS		X	Found through a broad range of habitats covering open grasslands, large swamps, low woodlands, dry and wet sclerophyll forests and rainforest, in close proximity to slow-moving creeks. Rarely occur above 400m asl. Also recorded in disturbed habitat (ALA 2023).	**Potential.** This species can persist in highly modified environments and the dams provide potential breeding habitats. There are records of this species within the wider landscape. The species would be more likely to occur within the adjoining lands where suitable waterway habitats have been retained or restored.
Mammals								
Phascolarctos cinereus (SEQ Bioregion)	Koala (SEQ Bioregion)	E	E		X	X	Eucalypt forest and woodland, feeding mostly on eucalypts (DAWE 2022b), but also known to feed on *Melaleuca, Lophostemon* and *Angophora* species.	**Likely.** The species is known to occur in the local landscape and across the region. The site retains suitable feeding resources, and this species has potential to occasion the site. No evidence of visitation was recorded during the survey.
Pteropus poliocephalus	Grey-headed Flying-fox	V	C		X	X	A canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feeds on commercial fruit crops and on introduced tree species in urban areas. The primary food source is blossom from Eucalyptus and related genera but in some areas, it also utilises a wide range of rainforest fruits (DotE 2023h).	**Likely.** This species is expected to occasion the site in response to canopy tree flowering events. There is no flying-fox camp currently on or close to the study area.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Non-threatened Terrestrial migratory species								
Cuculus optatus	Oriental Cuckoo	M			X		This species is a relatively sparse migrant to south-east Queensland in areas of suitable, open habitat, including wet sclerophyll forest, open woodlands and quite often along edges of forests, or ecotones between forest types (DotE 2023l).	**Potential.** May be an occasional, rare, visitor to the study area.
Monarcha melanopsis	Black-faced Monarch	M			X	X	Mainly occurs in rainforest ecosystems, including semi-deciduous vine-thickets, complex notophyll vine-forest, tropical (mesophyll) rainforest, subtropical (notophyll) rainforest, mesophyll (broadleaf) thicket/shrubland, warm temperate rainforest, dry (monsoon) rainforest and (occasionally) cool temperate rainforest. Also occurs in wet-sclerophyll forests, especially in gullies with a dense, shrubby understorey, as well as in dry sclerophyll forests and woodlands, often with a patchy understorey (DotE 2023m).	**Potential.** Potential to occur as a summer visitor to forested habitats in the study area, particularly the more densely vegetated areas.
Rhipidura rufifrons	Rufous Fantail	M			X	X	Occurs mainly in moist habitats, including mangroves, coastal scrubs, and wet sclerophyll forests, often along watercourses and in gullies dominated by eucalypts, usually with a dense shrubby understorey often including ferns. They also occur in subtropical and temperate rainforests. Occasionally occur in secondary regrowth, following logging or disturbance in forests or rainforests. When on passage, they are sometimes recorded in drier sclerophyll forests and woodlands (DotE 2023p).	**Potential.** Potential summer visitor within the more vegetated portions of the study area, though visitation would be occasional, with their occurrence based on suitable proximate vegetation on adjoining lands.

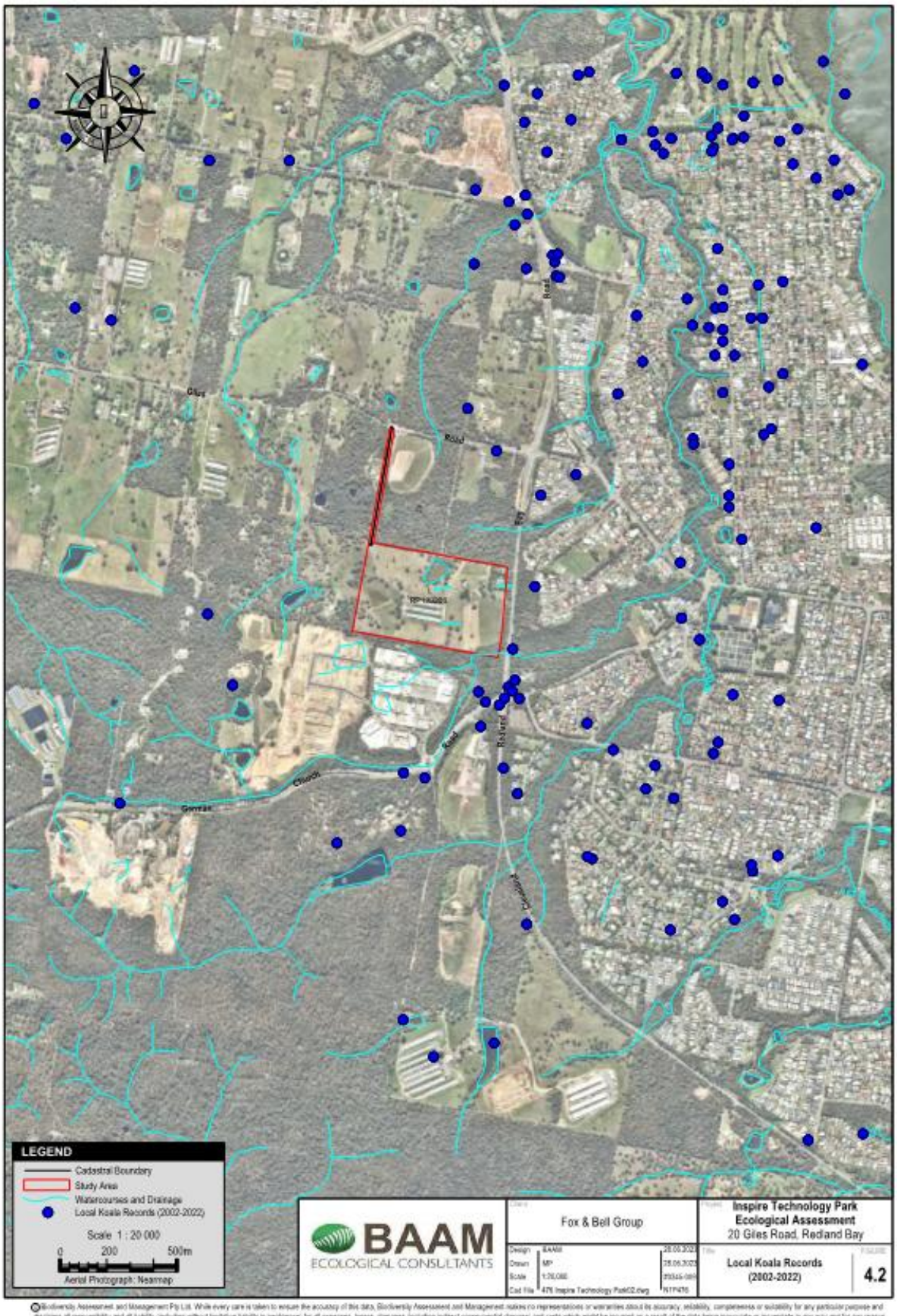

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Figure 3.1 shows the locations of individual paddock trees and mapped regrowth vegetation within the study area, overlain by the proposed Plan of Development. Koala habitat associated with the mapped regrowth vegetation occurs north of the central dam, and a portion of bushland that forms part of the vegetated corridor associated with a stream order 1 tributary of Moogurrapum Creek in the south-east corner of the property. These habitats are directly connected to adjacent bushland and support close canopies of Koala forage species. Both areas are intended to be retained and protected within greenspace.

Individual paddock trees and vegetated areas provide foraging and breeding habitat for Koalas, and the grassed paddocks provide dispersal habitat through which individuals can move between trees and through the property to surrounding habitats. In a study of the significance of paddock trees and roadside trees for Koalas in an agricultural landscape dominated by cattle grazing in the Somerset Region of south-east Queensland, Barth *et al*. (2019) found that scattered trees [and roadside vegetation] can support important resources for Koalas in the rural landscape.

Increasing habitat connectivity is considered an important strategy for the conservation and management of Koala populations (Barth *et al*. 2019). Rhodes *et al*. (2015) explain that Koalas move across the ground (rather than through the canopy) to forage, find mates, or disperse, but this is also when they are risk of mortality from threats such as dog attacks and vehicle collisions, and, therefore, habitat loss and fragmentation may have the combined effect of reducing the amount of habitat, but also increasing the amount of time Koalas must spend moving on the ground at risk from a range of threats.

The development would require the removal of 47 NJKHTs as scattered paddock trees and, additionally, 0.26 ha of MLES mapped as RCC Koala habitat. To mitigate potential impacts on Koalas it is proposed to (i) provide safe movement opportunities, (ii) ensure the continued provision of habitat connectivity for Koala dispersal, and (iii) maintain Koala forage and breeding habitat available within the study area by:

- Incorporating 4.62 ha (18.3%) of the site into greenspace for conservation and biodiversity purposes.
- Incorporating all mapped regulated vegetation within greenspace.
- Retaining 25 existing paddock trees within greenspace and bushfire setbacks (including seven of the old growth trees).
- Planting approximately 690 Koala forage and shelter trees of local provenance into the 2.25 ha central, linear greenspace to provide a vegetated link between bushland areas to the north and south of the property.
- Undertake supplementary planting of approximately 390 Koala forage and shelter trees within the 1.28 ha south-west corner greenspace to better connect existing habitats present outside of the southern and western site boundaries.

Slow points and warning signage are required on the internal access roads where they cross the central linear greenspace. With limited night-time traffic within the development area, this linear greenspace would provide safe movement/dispersal opportunities for Koalas and other fauna species.

The current vehicular and legal access to the site from Giles Road is bordered by Koala habitat. It is not proposed to clear any vegetation within the easement. The prime access to the site is proposed from Cleveland Redland Bay Road with the Giles Road access to be utilised for emergency access and/or a services corridor. If alternative access to the site is not feasible, effective Koala-sensitive road design measures must be implemented/installed to limit the risk of Koala/vehicle interactions. Subject to design potential, this would include a low-speed limit, traffic calming devices and electronic signage, with fauna-proof fencing installed to direct fauna to safe crossing points if necessary.

It is understood sewer services need to enter the development through the vegetation at the south-east corner of the property. Services through this area would be installed underground, via horizonal directional drilling to avoid disturbance to surface vegetation.

Any tree-clearing on the site would be undertaken under the supervision of an experienced and appropriately licenced fauna spotter-catcher to minimise the potential for injury to native fauna, and to ensure no Koalas are present when clearing occurs.

Table J.1 in **Appendix J** provides an assessment of the potential impacts of the proposed development on Koalas against the Matters of National Environmental Significance: Significant Impact Guidelines 1.1 (DotE 2013). The assessment concludes that the Project will not cause a significant residual impact to critical Koala habitats or cause decline in the Koala Coast Koala population and, with implementation of the stated measures for maintaining habitat connectivity (including installation of effective Koala-sensitive road design measures along the proposed access road) and planting of over 1000 Koala forage species into greenspace (see **Section 7.0**), the Project is unlikely to have a significant impact on the local or broader Koala population. As such, it is not considered that referral of the project to the Commonwealth for assessment under the EPBC Act is warranted for impacts on Koala.

4.2.2 Grey-headed Flying-fox Pteropus poliocephalus (EPBC Act Vulnerable)

No flying-fox camps were found to occur within or immediately adjoining the study area, although Grey-headed Flying-fox is likely to occur as a seasonal visitor in response to forage tree flowering events.

At night, Grey-headed Flying-foxes typically feed on blossoms and fleshy fruits within 20 km of their roosts (although they can travel as much as 50 km), feeding in remnant forest, patches of vegetation on cleared land and urbanised areas (Roberts *et al.,* 2012). The Australian Government Department of Environment National Flying-fox monitoring viewer and Queensland Government Flying-fox monitoring data indicate there are 52 flying-fox camps from which Grey-headed Flying-fox has been recorded within 20 km of the project area. None of these camps are flagged as a Nationally Important Flying-fox Camp on the National Flying-fox Monitoring Viewer. The nearest Nationally Important Flying-fox Camp is at Emerald Street, Regents Park – 25 km south-west of the study area.

Potential impacts to Grey-headed Flying-fox resulting from the loss of 47 paddock trees and 0.19 ha of habitat at the northern dam as a result of the proposed development will be mitigated by the planting of 1075 native trees within the greenspace areas, of which 632 are winter-spring flowering trees that are important for Grey-headed Flying-fox.

Table J.2 in **Appendix J** provides an assessment of the potential impacts of the proposed development on Grey-headed Flying-fox against the Matters of National Environmental Significance: Significant Impact Guidelines 1.1 (DotE 2013). The assessment concludes that the Project will not cause a significant residual impact to the Grey-headed Flying-fox population. As such, it is not considered that a referral of the project to the Commonwealth for assessment under the EPBC Act is warranted for impacts on Grey-headed Flying-fox.

4.3 WETLANDS OF INTERNATIONAL IMPORTANCE

The results from the EPBC Protected Matters Search completed for the study area indicate the study area is within 10 km of the Moreton Bay Ramsar site.

Erosion and Sediment control and stormwater runoff will need to be managed appropriately to ensure no significant impacts on the ecological function of Moreton Bay occur as a result of the construction or operation of the proposed development. Assuming this will occur, no impact on the wetland is predicted.

4.4 WEEDS OF NATIONAL SIGNIFICANCE

Weeds of national significance (WONS) recorded were Asparagus fern *Asparagus aethiopicus* (located around the residence) and Fire Weed *Senecio madagascariensis* (in grassy paddocks).

Appropriate management of these species by the landholder is legally required.

5.0 STATE MATTERS

5.1 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE

There are Matters of State Environmental Significance (MSES) identified within the study area, as shown on **Figure 5.1** and highlighted in the MNES Report for the property at **Appendix D**.

Relevant MSES are:

- Koala habitat area – core (SEQ) - 1.8 ha within property boundary
- Regulated Vegetation – Endangered /Of Concern in Category C (regrowth) - 1.07 ha within property boundary
- Regulated vegetation – Essential habitat – 1.79 ha within property boundary
- Regulated vegetation – intersecting a watercourse – 0.2 km
- Regulated vegetation – within 100 m of a Vegetation Management Wetland – 1 ha within property boundary.

The State Planning Policy (SPP) defines the Queensland Government's policies for matters of state interest in land use planning and development. The SPP specifies that MSES are valued and protected, and the health and resilience of biodiversity is maintained or enhanced to support ecological integrity.

5.1.1 Koala Habitat Area – Core (SEQ)

The entire property is within a Koala Priority Area under the south-east Queensland Koala Planning Framework. All the mapped Regional Ecosystems on the site are mapped as Core Koala Habitat Area and are proposed to be retained in greenspace and, in the case of the access road, avoided by road upgrade.

As *the premises on which the development is carried out includes an area that is both – (i) a Koala Priority Area and (ii) a Koala Habitat Area* but does not involve interfering with Koala habitat in a Koala habitat area, it is assessed under schedule 11 of the *Planning Regulation 2017*.

The assessment benchmarks are listed, and responses are provided, in **Table 5.1**.

All mapped regulated vegetation is confined to the edges of the property and the access road, and all mapped vegetation is identified as essential habitat for Koala. The mapped regional ecosystems and their extents were ground-truthed in the field as mostly accurate, and are:

- Category C – high value regrowth: Endangered RE 12.11.27 *Eucalyptus racemosa* subsp. *racemosa* and/or *E. seeana* and *Corymbia intermedia* woodland on metamorphics +/- interbedded volcanics, occurring in patches on the northern and eastern boundaries of the property. The extent of the mapping includes the canopies of vegetation in the adjacent property along the northern boundary. A 10 m setback from the fence line is proposed for bushfire hazard reduction purposes, which will also ensure that no mapped vegetation will be cleared or damaged. The occurrence of this RE at the south-eastern boundary is approximately 500 sqm in size and is incorporated into greenspace on the plan of development.

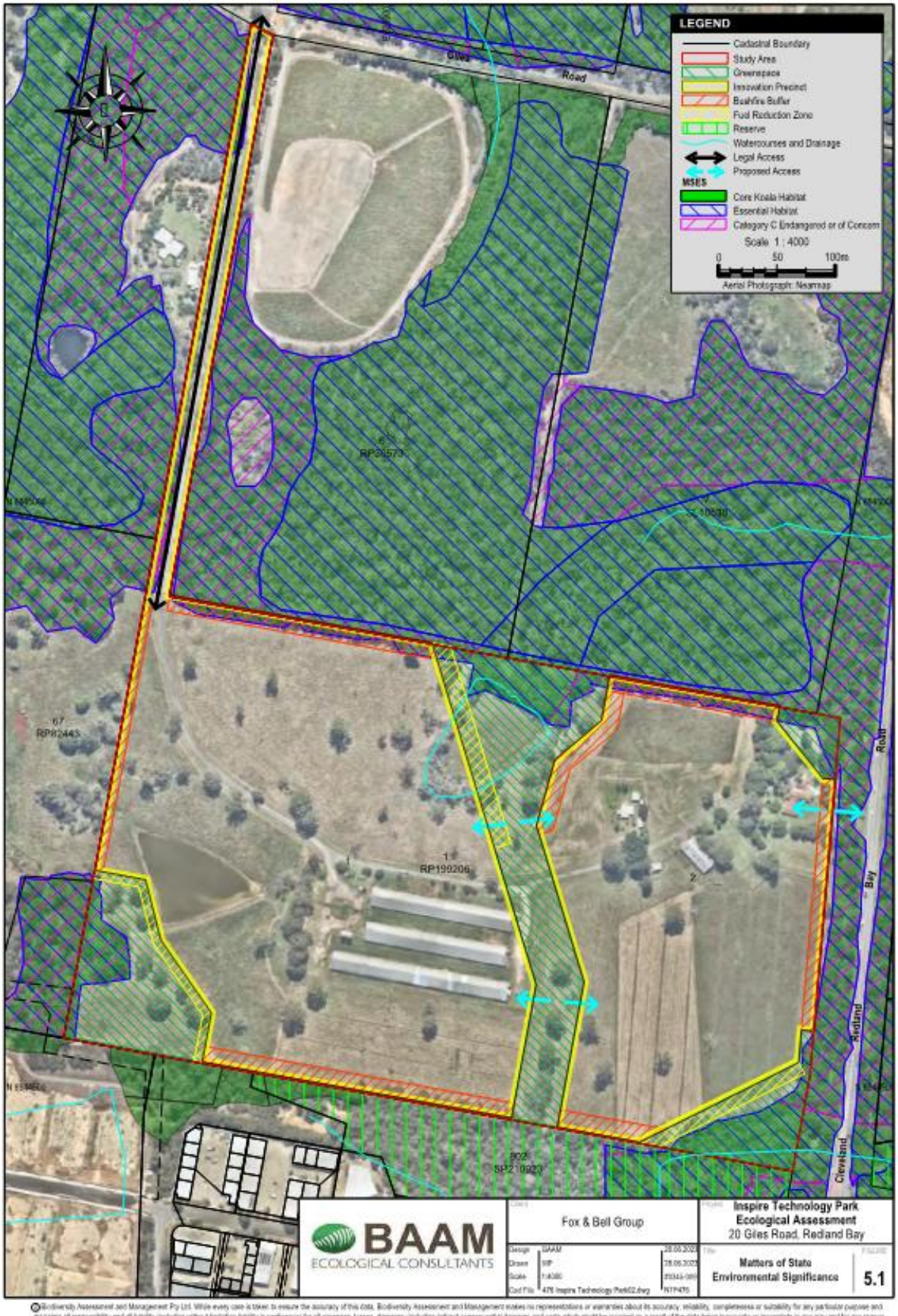

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Table 5.1. Responses to Schedule 11 benchmarks

Schedule 11 Assessment Benchmark	Response
(1) The following matters are assessment benchmarks for the development -	
(a) The development provides, on the premises, the safe Koala movement measures necessary to maximise the safe movement of Koalas -	
(i) within a Koala habitat area on the premises	No aspect of the proposed development interferes with Koala movement within the core Koala habitat areas as these areas are incorporated into greenspace within the development footprint and are avoided by the access road.
(ii) between a Koala habitat area on the premises (the first area) and a Koala habitat area or ecological corridor within 200 m of the first area:	The proposed access road from Giles Road has mapped core koala habitat partially within the easement and core Koala habitat at locations on both sides. The development will not require any clearing of core Koala habitat; however, vehicles accessing the site will present a potential vehicle strike hazard to Koalas without mitigation measures. Unless there is a feasible alternative to accessing the site, effective Koala-sensitive road design measures must be implemented/installed to limit the risk of Koala/vehicle interactions. Subject to design potential, this would include a low speed limit, traffic calming devices and electronic signage, with fauna-proof fencing installed to direct fauna to safe crossing points if necessary. As a minimum, it is understood the access road will have a 40 km/hr speed limit and electronic Koala awareness/speed displaying signage, with traffic calming to ensure speed limit compliance. Risks to Koalas are significantly reduced at night time when there will be little to no traffic to or from the development both during construction and operation.
(b) either -	
(i) each building, structure or works associated with the development is at least 50 m from a Koala habitat area; or	n/a
(ii) the development complies with each of the criteria stated in subsection (2).	See below
(2) For subsection (1)(b)(ii), the criteria are as follows:	
(a) any change to the condition of soil as a result of the development does not adversely affect a Koala habitat area;	The majority of core Koala habitat mapped along the edges of the property is to the edge of the canopies of adjacent vegetation. No construction works, including earthworks, will occur within 10 m of any tree stem within the mapped core Koala habitat, except for the existing access road where the upgrade will remain within the currently paved footprint. A 10 m set back will ensure there is no compaction of the root zones of the Koala trees within the core habitat areas. The development will not add nutrients to the adjacent vegetation. Erosion and sedimentation control will be in place during construction and post construction to prevent erosion of exposed soil.
(b) any alteration of hydrological flows as a result of the development does not adversely affect Koala habitat;	Bio-basins will be constructed at three locations on the property at the current natural drainage points, to capture and clean runoff from the development. The quantity and velocity of runoff to existing drainage lines will not be altered.
(c) any landscaping associated with the development that involves planting non-native vegetation	No invasive exotic species will be planted in the landscaped components of the development.

Schedule 11 Assessment Benchmark	Response
does not adversely affect a Koala habitat area;	
(d) the development does not adversely affect a Koala habitat area by resulting in the increased growth or spread of weeds in the Koala habitat area;	Retained native vegetation and greenspace areas will be maintained through the implementation of a Vegetation Management Plan to ensure there is no introduction or spread of weeds on site or into the adjacent habitat.
(e) a building, structure or works associated with the development is located to minimise the amount of vegetation required to be cleared for safety purposes.	The layout of the proposed development has been formulated to retain and buffer all existing core Koala habitat, and greenspaces have been designed to incorporate as many of the locally mapped habitat and paddock trees as possible. The design takes into account required bushfire hazard setbacks and there will be no requirement for clearing for infrastructure protection beyond that proposed to establish the development.

5.1.2 Regulated Vegetation/Essential Habitat

Figure 5.2 shows the State Vegetation Management Regional Ecosystem mapping. The site contains:

- Category C – high value regrowth: Endangered RE 12.11.23 *Eucalyptus pilularis* open forest on coastal metamorphics and interbedded volcanics, occurring in a mixed polygon with RE 12.11.27 in the south-western corner of the property. The mapped occurrence of this RE in the property is approximately 2,500 sqm in size and is comprised of *E. tereticornis* over slashed exotic grasses. The mapped area of this vegetation is incorporated into greenspace on the master plan.
- Category C – high value regrowth: Least Concern RE 12.3.6 *Melaleuca quinquenervia +/- Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia intermedia* open forest on coastal alluvial plains. This RE is associated with the drainage line leading from the northern dam, and with the drainage line that intersects the south-eastern boundary of the property. Both areas are incorporated into green space in the master plan.

The State Development assessment provisions – State Code 16: Native vegetation clearing under the *Planning Act 2016*, for a *material change of use and/or reconfiguring a lot for which there will be no clearing* [of regulated vegetation] *as a result of the material change of use or reconfiguring a lot* require that the use is subject to provisions set out in Table 16.9. The performance outcome is that 'clearing as a result of a material change of use or clearing as a result of reconfiguring a lot does not occur'.

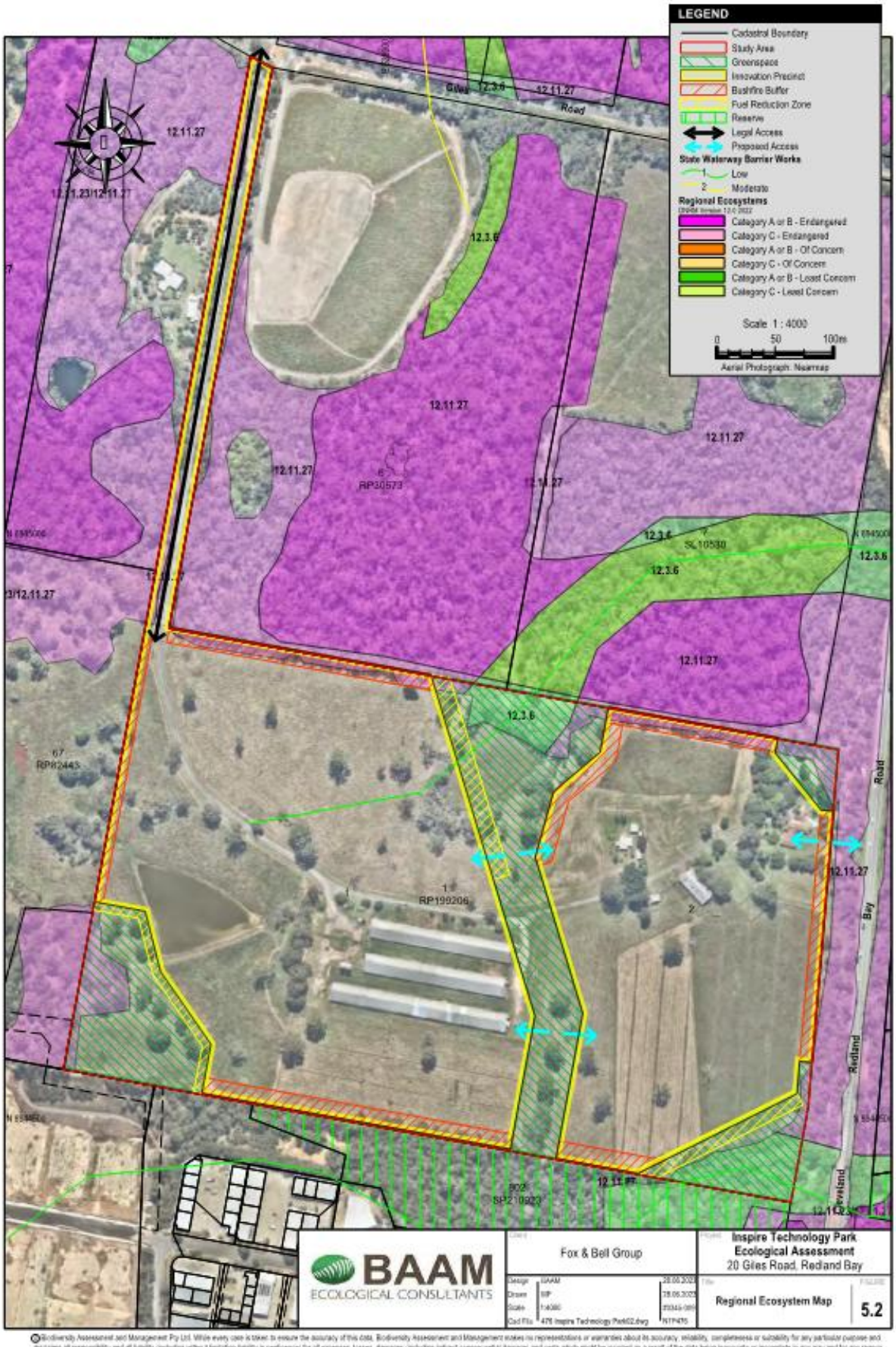
The proposed development does not impact any regulated vegetation. As such, there is no applicable purpose or code to be assessed in respect to the Queensland *Vegetation Management Act 1999*.

5.1.3 Regulated Vegetation – intersecting a watercourse

There are two stream order 1 watercourses mapped as occurring within the study area boundary (**Figure 5.2**). Both are within regrowth vegetation.

The State Development assessment provisions – State Code 16: Native vegetation clearing under the *Planning Act 2016*, for a *material change of use and/or reconfiguring a lot for all other purposes* require that the use is subject to provisions set out in Table 16.8. The performance outcome for clearing associated with watercourses and drainage features is for no clearing within 10 m of the defining bank of a watercourse or drainage feature for stream order 1 watercourses.

The proposed development does not impact any regulated vegetation, and no clearing is proposed within 10 m of the mapped watercourses.



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5.1.4 Regulated vegetation – within 100 m of a Vegetation Management Wetland

There are two patches of vegetation within the property that are mapped as occurring 100 m from a wetland (see **Appendix D**). These are the regrowth patches in the central north and south-east of the property.

The State Development assessment provisions – State Code 16: Native vegetation clearing under the *Planning Act 2016*, for a *material change of use and/or reconfiguring a lot for all other purposes* require that the use is subject to provisions set out in Table 16.8. The performance outcome for clearing associated with wetlands is for no clearing of regulated vegetation within 100 m of a wetland.

The proposed development does not impact any regulated vegetation within 100 m of a wetland.

5.2 FLORA

Results of the Wildlife online search (**Appendix C**) for historical threatened flora species records within a 5 km radius of the study area form the target species list for the likelihood of occurrence assessment (**Appendix I**). The assessment considered known habitat requirements for each species, the results of field searches, and the availability and quality of habitats of the study area to determine the likelihood of each species occurring. Many of the historical records are associated with habitats that do not occur within the study area and are relevant to habitats associated with forested slopes of Mount Cotton and surrounds or the unique sandy coastal habitats of the Redland Coast. The assessment determined that no CEEVNT flora species are present, or are likely to be present, within the study area.

The study area does not occur within a high-risk area on the State's Protected Plants Flora Survey Trigger Map (**Appendix D**) and no protected plants were detected during field investigation; therefore, an application to clear native vegetation will not be required under the NC Act.

5.3 FAUNA

A search of the Wildlife Online database provided a list of NC Act CEEVNT fauna species that have previously been recorded within a 5 km radius of the study area (**Appendix C**). Each of the relevant species (excluding those associated with marine environments) has been addressed in the likelihood of occurrence assessment provided in **Appendix I**.

Desktop assessment determined a number of species considered likely, or with potential, to occur in habitats of the study area. Field assessment subsequently focused on detecting their presence, signs of their presence and occurrence and quality of potential habitat and the results were used to update the assessment. The following NC Act CEEVNT species are considered likely to occur, or to have potential to occur, within habitats of the study area:

- White-Throated Needletail *Hirundapus caudacutus* (vulnerable): **Potential** - May occur as a flyover and the project would not be of relevance to its future presence. No significant impact is predicted as a result of the development.
- Powerful Owl *Ninox strenua*: **Potential** - Expected to occur within the nearby bushland habitats. The study area does not hold any suitable breeding habitats for Powerful Owl and any occurrence in or over the study area would be occasional. No significant impact is predicted as a result of the development.
- Tusked Frog *Adelotus brevis*: **Potential** - Tusked frog can persist in highly modified environments and the dams provide potential breeding habitats, although it is more likely to occur in the adjoining lands where suitable waterway habitats have been retained or restored. Construction and operation of the development must protect downstream habitats and water quality. While there is potential for Tusked Frog to occur, effects of the development would not

represent a significant impact on the species and the stormwater management bio-basins would replicate lost habitat.

- Koala *Phascolarctos cinereus*: **Likely** – The species is known to occur in the local area and across the region. The site retains suitable feeding resources, and this species has potential to occasion the site. No evidence of visitation was recorded during the survey. **Section 4.2.1** describes Koala habitat in the study area and surrounds, and the potential impacts of the proposed development. **Section 5.5.1** addresses the South East Queensland Koala Planning Framework.

5.4 ANIMAL BREEDING PLACES

Under the NC Act, activities that require tampering with a native animal breeding place must be undertaken in accordance with an approved Species Management Program (SMP).

As the time and season of proposed works commencing is unknown, prior to any vegetation clearing being undertaken, an ecologist or qualified fauna spotter/catcher should inspect all vegetation immediately prior to clearing and if any confirmed active breeding places are recorded and need to be removed an SMP application must to be submitted to the Department of Environment and Science for approval.

5.5 WEEDS OF STATE SIGNIFICANCE

Weed species listed as restricted, invasive plants under the Queensland *Biosecurity Act 2014* recorded on site were restricted to Asparagus Fern *Asparagus aethiopicus*. This Category 3 restricted invasive plant is a species that is already established in Queensland and is defined as seriously threatening Queensland's primary industries, natural environment, livestock, human health and/or people's livelihoods.

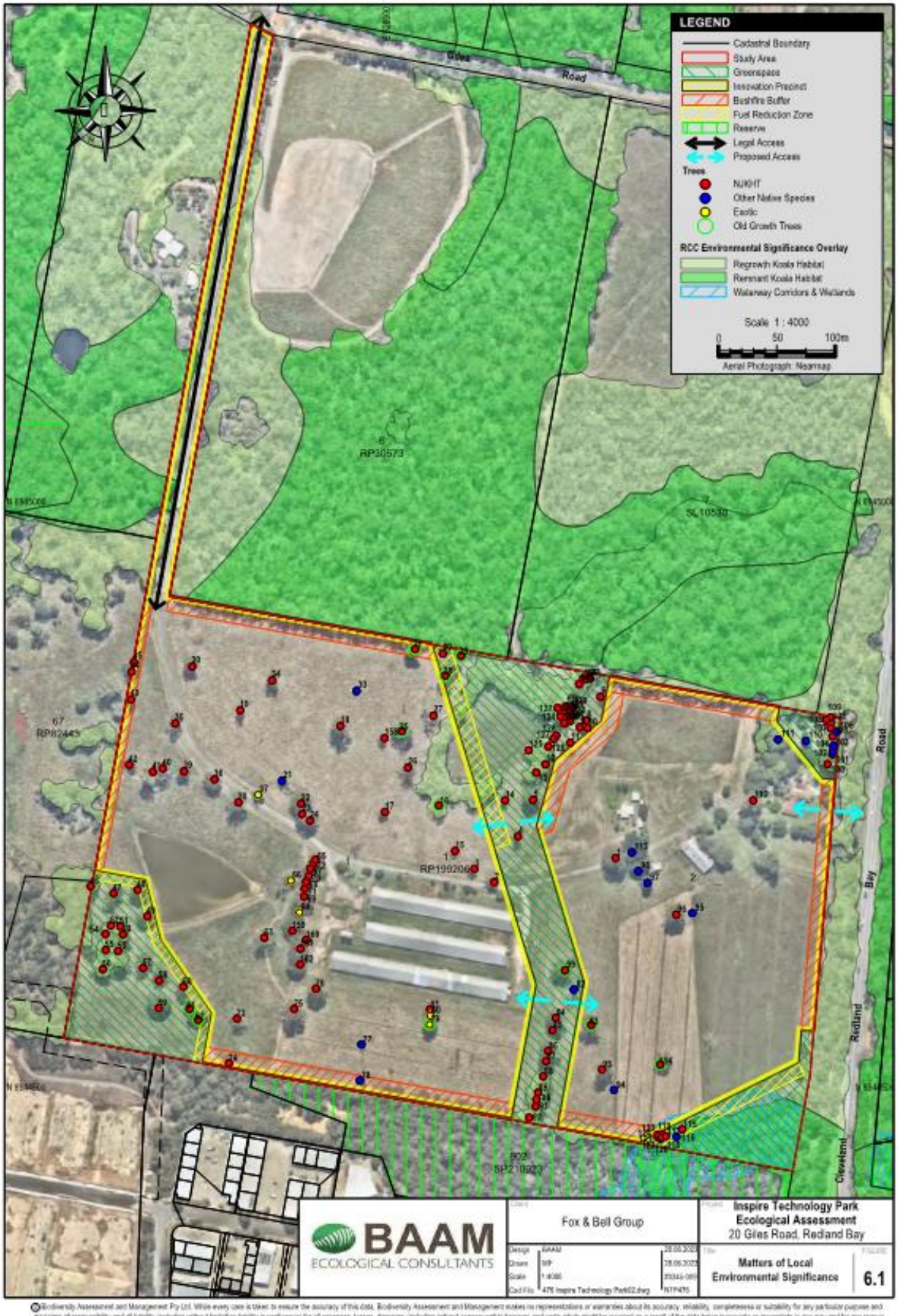
In accordance with the *Biosecurity Act 2014*, Category 3 restricted matters must not be distributed (i.e. released into the environment) unless the distribution or disposal is authorised in a regulation or under a permit. More generally, landowners are responsible for taking all reasonable and practical steps to minimise the risks associated with invasive plants under their control. Contractors appointed to the project will also need to implement management controls and disposal in accordance with the *Biosecurity Act 2014*.

6.0 MATTERS OF LOCAL ENVIRONMENTAL SIGNIFICANCE

6.1 IDENTIFIED MLES

The proposed use for the Rural zoned property requires impact assessment under Redland City Council City Plan 2018 (RCC 2018b). Those matters that are MLES are shown in **Figure 6.1**, these are:

- Environmental Significance Overlay, and
- Waterway Corridors and Wetlands Overlay.



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6.2 ENVIRONMENTAL SIGNIFICANCE OVERLAY

The Environmental Significance Overlay is associated with RCC Koala habitat (including RE Remnant Koala habitat and RE Regrowth Koala Habitat). As shown in **Figure 6.1** most patches will be included in the proposed greenspace or within the bushfire setback and will be retained. There are two locations where the development footprint requires the removal of 0.26 ha of mapped MLES (RE Regrowth Koala Habitat), although the MLES mapping in the north east corner of the property within the development footprint is comprised only of exotic vegetation.

6.3 ENVIRONMENTAL SIGNIFICANCE OVERLAY CODE

The City Plan provides *Planning Scheme Policy 1 - Environmental Significance* which identifies the relevant values of Environmental Significance that are matters of Local Environmental Significance (MLES). For any material change of use the assessment benchmarks for assessable development for the Environmental Significance overlay is the Environmental Significance overlay code.

The stated purpose of the Environmental Significance Overlay Code is to manage development to avoid or minimise and mitigate significant impacts on Matters of National, State and Local environmental significance.

The purpose of the code is achieved through the following overall outcomes:

a) areas of high biodiversity or environmental significance are retained and protected;

b) development maximises the retention of native vegetation and significant habitat features;

c) development minimises the loss of koala habitat trees;

d) impacts on matters of state or local environmental significance are minimised and mitigated;

e) development does not cause substantial fragmentation of habitat areas;

f) opportunities for safe and viable wildlife movement within and between habitat areas are facilitated;

g) landscaping and planting is undertaken in a manner that contributes to the ecological values of the site; and

h) where they occur, significant residual impacts on matters of local environmental significance or another prescribed environmental matter in accordance with section 15(4) of the Environmental Offsets Act 2014, may need to be offset.

Those outcomes relating to matters of National and State environmental significance are addressed in **Sections 4.0 and 5.0** respectively. The specific benchmarks for assessable development within the Environmental Significance Overlay Code are addressed in **Table 6.1.**

A tree plot showing all native trees proposed to be removed or retained and associated tree information is provided as **Appendix G** and shown on **Figure 6.1.** The tree plot does not identify all exotic trees that were present around the residence.

Table 6.1. Benchmarks for development that is accepted subject to requirements and assessable development.

Performance Outcomes	Acceptable Outcomes	Response
For development that is accepted subject to requirements		
PO1 Development does not result in a significant reduction in the level or condition of biodiversity and ecological functions and processes in the locality.	**AO1.1** Compensatory planting is undertaken on-site that is equal in area to the area of the vegetation cleared.	N/A – the application is assessable development.
For assessable development		
Values to be protected		
PO2 Development does not result in a significant reduction in the level or condition of biodiversity and ecological functions and processes in the locality.	No acceptable outcome is nominated.	The site design has, through design, sought to retain the higher value habitat. There will be a loss of 0.26 ha of mapped MLES within the proposed urbanised portion of the study area due to the required civil works. It is proposed that the native vegetation removed (47 NJKHTs as paddock trees and 0.26 ha of mapped MLES that includes Melaleuca regrowth) will be offset at the rate of 3:1 in accordance with the Environmental Offset Policy (the same ratio as for MLES) to provide a net gain in Koala habitat within the local area. Planting of approximately 832 trees within the currently cleared locations within proposed greenspace and retained regrowth vegetation areas in the central north and south-eastern corner of the site will provide an overall improvement in habitat connections, which will have a net benefit for overall biodiversity and ecological functions and processes in the locality.
PO3 Development does not cause substantial fragmentation of habitat areas.	No acceptable outcome is nominated.	No substantial fragmentation is proposed. The provision of the designated linkages will provide an overall increase in vegetated habitat connections.
PO4 Connections between habitat areas are retained, so that movement of key species and normal gene flow between populations is not inhibited or made less safe. Connections may include both continuous corridors and "stepping stone" patches and refuges.	No acceptable outcome is nominated.	Connections between existing/proposed retained habitats are provided within the design and will provide suitable fauna movement opportunities to, through and from the study area. The development design will not form a barrier to any species movement or persistence in the local landscape.
Minimising and mitigating impacts		
PO5 Edge effects on retained habitat areas are minimised by providing the smallest possible perimeter to area ratio.	No acceptable outcome is nominated.	The areas to be retained are already the subject of edge effects and prior disturbances. The proposed layout provides setbacks to buffer retained habitats. The existing perimeter to area ratio of the retained areas will be improved.

Performance Outcomes	Acceptable Outcomes	Response
		The proposed central corridor will be exposed to edge effects though these will be at a level lower than any current existing movement option. This central corridor is specifically designed to allow for movement of Koala and macropods.
PO6 The design, scale and intensity of development minimises impacts on retained habitat.	No acceptable outcome is nominated.	The proposed layout is designed to provide an overall increase in retained habitats. The scale and intensity of development has been determined in consideration of other design constraints and provision of setbacks from retained habitats.
PO7 Retained habitat is protected to ensure its on- going health and resilience, and to avoid degradation as a result of edge effects.	No acceptable outcome is nominated.	It is understood that the retained vegetation and central corridor are to be subjected to restoration activities under a rehabilitation management plan.
PO8 Barriers restricting the movement and dispersal of wildlife are removed, except where they are necessary for the safety of people or animals.	No acceptable outcome is nominated. Editor's note—Guidance on fencing design, fauna movement structure and the like is provided in Planning Scheme Policy 1 – Environmental significance.	Site design has been developed to minimise road crossings with maximum of two roads intersecting the proposed central linear greenspace.
PO9 Development does not result in the introduction of pest species (plant or animal), that pose a risk to ecological integrity or disturbance to native fauna.	No acceptable outcome is nominated. Editor's note—Weed species are identified in Council's Pest Management Plan 2012 – 2016, Part B.	The weeds present on site and surrounding lands are all common in the local landscape. No new introduction of pest species (plant or animal) is expected or is likely to pose a risk to the area's ecological integrity. The rehabilitation plan will address weed removal within retained habitats.
PO10 Development minimises alterations to natural landforms, flow regimes, groundwater recharge and surface water drainage patterns.	No acceptable outcome is nominated.	There will be changes to the landform to accommodate the proposed uses. These changes have been designed to ensure the maintenance of flow regimes. Drainage has been designed to ultimately result in the outflows entering waterways in the same locations. Water from the site will be treated through bio-basins and discharged into the waterways. Ecological flows will be maintained.
PO11 Development minimises potential for disturbance of wildlife as a result of noise, light, vibration or other source.	No acceptable outcome is nominated.	There will be some disturbances during the construction phase, though these are unlikely to result in any long-term displacement. The proposed development will operate during standard business hours and disturbances after hours will be minimal.
PO12 Roads and public access within and adjacent to areas of ecological significance are located and designed to avoid	No acceptable outcome is nominated.	The proposed access roadway already exists and provides for direct connection to the proposed facility. The proposed access road from Giles Road

Performance Outcomes	Acceptable Outcomes	Response
disturbance of ecological values or danger to wildlife.		has mapped core koala habitat partially within the road reserve and core Koala habitat at locations on both sides. The development will not require any clearing of core Koala habitat; however, vehicles accessing the site will present a potential vehicle strike hazard to Koalas without mitigation measures. The access road will have a 40 km/hr speed limit and electronic Koala awareness/speed displaying signage, with traffic calming to ensure speed limit compliance. Risks to Koalas are significantly reduced after hours as when there will be little to no traffic to or from the development both during construction and operational stages.
Corridors and enhancement planting		
PO13 Development contributes to the restoration of waterway or land based ecological corridors, where they would significantly enhance the health and resilience of habitat and wildlife on and near the site.	No acceptable outcome is nominated.	The site design has retained the core habitat values. The proposed development and associated actions will result in an overall increase in connected habitats. Restoration actions will further contribute to an overall improved habitat connection network.
PO14 Corridors have sufficient width to maintain viable wildlife or habitat linkages.	**AO14.1** Ecological corridors have a minimum width of 100m.	The proposed layout design provides direct connections to and through the site. The proposed central greenspace will be designed to specifically provide habitat linkage for Koalas. Greenspace proposed for the south-west corner of the property will connect habitat along the southern boundary to habitat is the adjacent property to the west. The proposed habitat connections will accommodate the species expected to traverse through the study area and as a result the development will not pose a barrier to fauna movement.
PO15 Development incorporates opportunities for revegetation to enhance habitat condition, biodiversity and wildlife movement.	No acceptable outcome is nominated.	There will be provision of native plantings to provide revegetation to enhance habitat condition, biodiversity, and wildlife movement options. The greenspace areas outside of mapped MLES and MSES vegetation will be revegetated under the guidance of a rehabilitation plan. As set out in Section 7.0 it is proposed to plant approximately 815 high-medium utility rating Koala food trees and 17 Koala shelter trees that are endemic to the local area within the greenspace. These planted areas are intended to be 'parkland' with appropriately-spaced food trees over a maintained understorey of native grasses, and can include walking paths and picnic benches for workers and visitors.

Performance Outcomes	Acceptable Outcomes	Response
		These areas should be regularly mown/maintained to avoid weed infestation that can inhibit Koala movement in urban bushland fragments. The proposed actions will maintain current biodiversity values and wildlife movement options and enhance habitat connections for Koalas and glider species in particular, while retaining a portion of the current feeding resources for macropods residing in adjacent bushland.
PO16 Enhancement plantings and landscaping utilise endemic native species which replicate or complement the composition of the habitat it is connected to, unless this would increase bushfire risk.	No acceptable outcome is nominated. Editor's note—Guidance to assist applicants is contained within the Queensland Government's Regional Ecosystem Mapping	All revegetation will incorporate appropriate endemic native species to complement the composition of the habitat values of the landscape. All plantings will be reflective of the species that are endemic to the local area, as described in **Section 7.0**.
PO17 Where clearing occurs, it is sequenced and undertaken in a manner that provides opportunities for fauna to vacate affected land.	No acceptable outcome is nominated. Editor's note—It is likely that a wildlife habitat management plan, prepared by an ecologist with suitable experience may be needed to address survival and ongoing access to habitat trees during construction and operation of the development.	All clearing will be conducted in accordance with the Qld Planning Regulation Schedule 11 benchmarks. All clearing will be progress towards retained and adjacent habitats to facilitate fauna movement into retained areas. All clearing will be conducted under the guidance of an appropriately experienced fauna spotter-catcher.
Offsets		
PO18 Where development results in, or is likely to result in, a significant residual impact on matters of local environmental significance, despite all reasonable on-site mitigation measures, the impact will be offset.	**AO18.1** Offsets are provided in accordance with offset arrangements set out in Planning Scheme Policy 1 – Environmental significance.	The proposed development will require removal of 0.26 ha of mapped MLES, specifically regrowth Koala habitat. Due to the proposed mitigation action of providing replacement plantings within retained habitats and based on a review of the locally significant species listed in Appendix A of RCC City Plan 2018 Policy 1, there is no potential for any significant residual impacts on MLES.

6.4 LOCALLY SIGNIFICANT SPECIES

Locally significant species are listed in Appendix A of the RCC Planning Scheme Policy 1. **Appendix I** provides the results of a likelihood of occurrence assessment, including the species listed in Planning Scheme Policy 1. Only one locally significant species that does not overlap with EPBC Act and NC Act listed species, Grey Goshawk *Accipiter novaehollandiae*, is found to have potential to occur, though rarely (see **Table 4.1**). Since 1980 there have been two records of the species within 5 km of the study area. The ALA species profile for Grey Goshawk describes habitat for the species as rainforest, forests, open forest and thickly wooded watercourses. Its prey are primarily small bird species, which it hunts through trees and dense vegetation, and it will also take

small mammals, reptiles and insects. A territorial pair will construct a stick nest lined with leaves high in a tree fork, and often re-use the same nest.

There is no rainforest, forest or open forest within the study area; however; there is a thickly wooded watercourse that intersects the south-eastern corner of the property, although no stick nests were present on site during the site survey. This south-eastern habitat is proposed to be retained and maintained within greenspace, with planting at the interface between the regrowth vegetation and the development to provide a buffer.

Scheme Policy 1 provides criteria for determining the significant residual impact for MLES, which are addressed in **Table 6.2** for Grey Goshawk.

Table 6.2. MLES Significant Residual Impact Assessment for Grey Goshawk

Significant Residual Impact Criteria	Response
An action will have a significant residual impact on MLES if the action is likely to:	
(a) reduce the extent of the occurrence of a locally significant species;	The suitable habitat for Grey Goshawk in the study area is to be retained and maintained within Greenspace.
(b) lead to a decrease in the size of the local population of a locally significant species;	As the only suitable habitat for the species on-site would be retained and maintained within greenspace, the proposed development will not result in a decrease in the size of the local population of Grey Goshawk.
(c) fragment an existing population for a locally significant species;	The proposed development would not fragment any existing habitat.
(d) result in genetically distinct populations forming as a result of habitat isolation;	The proposed development would not fragment habitat for the species, and therefore would not cause any part of the local population to become isolated.
(e) result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species habitat;	Grey Goshawk is not listed as endangered or vulnerable under State or Commonwealth legislation.
(f) introduce disease that may cause a locally significant species population to decline;	There is no mechanism by which the development would introduce disease that would affect Grey Goshawk.
(g) interfere with the recovery of a locally significant species; or	There is no recovery plan in place for Grey Goshawk. The proposed development would not interfere with any future species recovery actions.
(h) cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a locally significant species.	
CONCLUSION: The proposed development would not result in a significant residual impact on Grey Goshawk.	

6.5 WATERWAY CORRIDORS AND WETLANDS OVERLAY

A Waterway Corridor is mapped at the south-eastern corner of the property (**Figure 6.1**), which represents a buffer to a stream order 1 tributary of Moogarrapum Creek. The waterway portion is incorporated into retained vegetation and greenspace and, with the exception of an approximately 55 square meter portion of cleared land, the buffer is also within retained greenspace.

6.6 REDLAND CITY WILDLIFE CONNECTIONS

The Redland City Council Wildlife Connections Plan 2018-2028 (RCC 2018a) provides the results of spatial modelling to identify areas of key terrestrial wildlife corridor values that occur between core vegetation areas throughout Redland City. **Appendix F** shows the wildlife corridors identified in the Plan that are relevant to the study area. These are:

- Moogurrapum Creek to Kindilan/Days Road – Established Corridor; and
- Giles Road Conservation Area to Giles Road – Stepping Stone Corridor.

The Moogurrapum Creek corridor is located along the northern and eastern boundaries of the study area. This corridor links nine core habitat patches, with a minimum distance between patches of approximately 1000 m. The corridor includes the Cleveland-Redland Bay Road Reserve and adjacent habitat to the east of the roadway. Cleveland-Redland Bay Road is identified as a threat/barrier to fauna movement. Safe fauna passage across Cleveland-Redland Bay Road is a priority outcome for the corridor, as well as the management of urban impacts such as garden escape weeds and domestic animal control. At present, the section of Cleveland-Redland Bay Road adjacent to the study area has Koala-proof fencing, which extends on both sides of the road between its intersection with German Church Road to the south of the study area and to within 100 m of its intersection with Giles Road to the north.

The Giles Road Stepping Stone corridor links around four core habitat patches, adjoining the Moogurrapum Creek corridor outside of the north-eastern boundary of the study area and then mapped eastwards, across the sealed driveway accessing the study area from Giles road, and through rural properties to join with another Established Corridor approximately 800 m to the west. Threats and barriers within this corridor were considered to be poor rural and peri-urban land management (e.g. uncontrolled domestic animals, garden escape weeds, noise and light disturbance, vehicles, grazing pressure and vegetation clearing). The priority outcome for the corridor is rehabilitation of a gap across cleared Rural Non-Urban zoned land.

The proposed development would not interfere with any recognised State corridors; however, the proposed access road intersects the RCC Giles Road Stepping Stone corridor. Accordingly, the road must be designed in accordance with fauna-sensitive road design principals.

It is proposed to contribute to local habitat connectivity via a central greenspace corridor (feature '4' on **Figure 1.2**) that would retain a link to the reserve on the southern boundary to bushland habitats to the north of the study area for the range of species present.

Greenspace proposed for the south-western boundary will maintain and improve (through rehabilitation) the link between habitat on the southern property boundary with habitat to the west.

7.0 PROPOSED GREENSPACE REPLANTING

To determine the mix of species for planting within the open greenspace with species specifically important to Koala and Grey-headed Flying-fox, the proposed planting palate has been developed by drawing from the regional ecosystem present prior to clearing, the tree species recorded on site, the spatial modelling species utility ratings for each preferred Koala tree (Redland) species (DES 2022), and those species that flower during winter-spring.

The majority of the open greenspace areas are mapped as preclear RE 12.11.27, described as: *Eucalyptus racemosa subsp. racemosa* and/or *E. seeana* and *Corymbia intermedia* woodland. Other characteristic species include *E. siderophloia, Angophora leiocarpa,* C. *trachyphloia subsp. trachyphloia* and rarely *E. pilularis*. *Melaleuca quinquenervia* may be present and at times becomes locally co-dominant. When this ecosystem occurs on toe slopes or gentle rises within alluvial plains, *E. tereticornis, C. intermedia and E. siderophloia* tend to dominate the canopy and neither *E. racemosa* subsp. *racemosa* or *E. seeana* may be present. The RE occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics, typically at low altitude (<60 metres) in near coastal situations.

Table 7.1 sets out proposed species composition of replanting within the greenspace, the density and number of each species to be planted per hectare within the 2.7 ha of open area within the greenspace that is available for planting, and those trees that flower winter-spring. Spacing

between trees is recommended at approximately 33 m apart. Planting would occur in groups of 5,7 and 9 to create more natural "landscape" as trees tend to grow in groups of the same species rather that 1 of each individual species alternating.

A detailed Rehabilitation Plan will be prepared that sets out the rehabilitation process and requirements, including seed collection from the old growth trees on site for generating tube stock, groundcover species palate and density of planting to favour macropods, and the required planting methods, maintenance, monitoring and reporting schedules.

Table 7.1. Proposed canopy tree species and densities within greenspace.

Common Name	Scientific Name	% Abundance	No. per ha	Total no. (within 2.7ha)*	Winter flowering
Pink Bloodwood	*Corymbia intermedia*	15	45	122	
Grey Ironbark	*Eucalyptus siderophloia*	5	15	41	41
Tallowwood	*Eucalyptus microcorys*	5	15	41	41
Blackbutt	*Eucalyptus pilularis*	5	15	41	
Small-fruited Grey Gum	*Eucalyptus propinqua*	5	15	41	
Narrow-leaved Scribbly Gum	*Eucalyptus racemosa*	15	45	122	122
Narrow-leaved Red Gum	*Eucalyptus seeana*	5	15	41	
Blue Gum	*Eucalyptus tereticornis*	30	90	243	243
White Stringybark	*Eucalyptus tindaliae*	10	30	81	
Swamp Box	*Lophostemon confertus*	2	6	17	17
Broad-leaved Paperbark	*Melaleuca quinquenervia*	3	9	25	25
Shelter trees	Mixed species	2	6	17	
Total			**306**	**832**	**489**

* decimals rounded up

The planting would result in the provision of 832 Koala forage trees and 17 Koala shelter trees (native trees with dense canopies) in the 2.7 ha of greenspace outside of existing mapped regrowth vegetation. Of these, 489 trees will provide winter-spring flowering resources for Grey-headed Flying-fox.

8.0 SUMMARY OF PROPOSED ACTIONS TO PROTECT AND MAINTAIN ECOLOGICAL VALUES

The layout of the proposed development has been formulated to retain and buffer all existing core Koala habitat, and greenspaces have been designed to incorporate as many of the locally mapped habitat and paddock trees as possible. The design takes into account required bushfire hazard setbacks and there will be no requirement for clearing for infrastructure protection beyond that proposed to establish the development.

Habitat condition and fauna movement opportunities are proposed to be maintained within and through the proposed development area through (i) retaining and managing the existing regrowth vegetation on site, and (ii) establishment of a central corridor and other greenspaces that are adjacent to regrowth vegetation and designed to support Koala forage and shelter trees with an understorey of native grasses.

The development would require the removal of 47 NJKHTs as scattered paddock trees and, additionally, 0.26 ha of MLES mapped as RCC Koala habitat. To mitigate potential impacts on Koalas it is proposed to (i) provide safe movement opportunities, (ii) ensure the continued provision of habitat connectivity for Koala dispersal, and (iii) maintain Koala forage and breeding habitat available within the study area by:

- Incorporating 4.65 ha (18.5%) of the site into greenspace for conservation and biodiversity purposes.
- Incorporating all mapped regulated vegetation within greenspace.
- Retaining 25 existing paddock trees within greenspace and bushfire setbacks (including seven of the old growth trees).
- Planting approximately 520 Koala forage and shelter trees of local provenance into the 2.45 ha central linear greenspace to provide a vegetated link between bushland areas to the north and south of the property.
- Supplementary planting of approximately 280 Koala forage and shelter trees within the 1.28 ha south-west corner greenspace to better connect existing habitats present outside of the southern and western site boundaries.
- Supplementary planting of approximately 28 Koala forage and shelter trees within the 0.2 ha greenspace in the north-west corner of the property.

Of the approximately 832 trees proposed to be planted, approximately 489 will be winter-spring flowering species that are an important resource for Grey-headed Flying-fox.

A slow point at the internal access road is required where it crosses the central linear greenspace, and with limited night-time traffic within the development area, this linear greenspace would provide safe movement/dispersal opportunities for Koalas and other fauna species.

The proposed access road from Giles Road is bordered by Koala habitat, although it is not proposed to clear any vegetation within the easement. If alternative access to the site is not feasible, effective Koala-sensitive road design measures must be implemented/installed to limit the risk of Koala/vehicle interactions. Subject to design potential, this would include a low speed limit, traffic calming devices and electronic signage, with fauna-proof fencing installed to direct fauna to safe crossing points if necessary.

It is understood sewer services may need to enter the development through the vegetation at the south-east corner of the property. Services through this area would be installed underground, via horizonal directional drilling to avoid disturbance to surface vegetation.

The proposed central corridor and retained habitats will be revegetated under the guidance of an approved Rehabilitation Plan. As set out in **Section 7.0**, it is proposed to plant over 800 high-medium utility rating Koala food trees that are endemic to the local area within the central and south western greenspace, in a form that is preferred for Koala movement, specifically appropriately-spaced food trees over a maintained understorey of native grasses and other native groundcovers that imitate a grassy woodland and which will be regularly mown/maintained to avoid weed infestation that can inhibit Koala movement in urban bushland fragments.

Management of vegetation on site during the removal of paddock trees and pasture grasses will be undertaken in accordance with a Fauna and Vegetation Management Plan that will ensure the protection of retained vegetation and manage the risk of harm to native fauna.

Ongoing maintenance of natural and replanted areas would be in accordance with an approved Environmental Management Plan for the development.

The proposed layout design provides direct connections to and through the site. The proposed central greenspace will be designed to specifically provide habitat linkage for Koalas. Greenspace proposed for the south-west corner of the property will connect habitat along the southern boundary to habitat in the adjacent property to the west. The design will maintain current biodiversity values and wildlife movement options and enhance habitat connections for Koalas and glider species, while retaining a portion of the current foraging resources for macropods residing in adjacent bushland. Resources for macropods will also include mown bushfire setback areas adjoining adjacent bushland.

Works adjacent to the TECs must be undertaken in a way that ensures the adjacent vegetation is not damaged. The requirements for protection and buffering of these ecological communities are to be set out in the Vegetation Management Plan. Additionally, the hydrological regime at both locations should be replicated by the development to ensure downstream ecological communities are subject to comparable water flow conditions and water quality from the site.

9.0 SUMMARY AND CONCLUSIONS

9.1 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

There are no matters of national environmental significance for which a significant residual impact is predicted and, consequently, a referral to the Commonwealth for assessment under the EPBC Act is not warranted.

9.2 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE

All matters of State environmental Significance are retained with the proposed greenspace.

As *the premises on which the development is carried out includes an area that is both – (i) a Koala Priority Area and (ii) a Koala Habitat Area* but does not involve interfering with Koala habitat in a Koala habitat area, it is assessed under schedule 11 of the Planning Regulation 2017.

The development is generally compliant with schedule 11; however, the proposed access road from Giles Road has mapped core Koala habitat partially within the easement and core Koala habitat at locations on both sides. This access is proposed only for emergency use as the prime access is preferred from Cleveland Redland Bay Road. The development will not require any clearing of core Koala habitat, but vehicles accessing the site from Giles Road will present a potential vehicle strike hazard to Koalas without mitigation measures. The Giles Road access will have a 40 km/hr speed limit and electronic Koala awareness/speed displaying signage, with traffic calming to ensure speed limit compliance. Further mitigation measures should be investigated during road design, such as fencing to direct Koalas and other fauna to safe crossing points.

9.3 MATTERS OF LOCAL ENVIRONMENTAL SIGNIFICANCE

The development would require the removal of 0.25 ha of MLES mapped as RCC Koala habitat, and the development footprint intersects an approximately 55 sqm portion of cleared land that is within the mapped water buffer.

The stated purpose of the Environmental Significance Overlay Code is to manage development to avoid or minimise and mitigate significant impacts on Matters of National, State and Local environmental significance. Responses are provided to the specific benchmarks for assessable development within the Environmental Significance Overlay Code, and the avoidance, minimisation, mitigation, management and rehabilitation actions proposed are considered to meet the stated purpose of the code.

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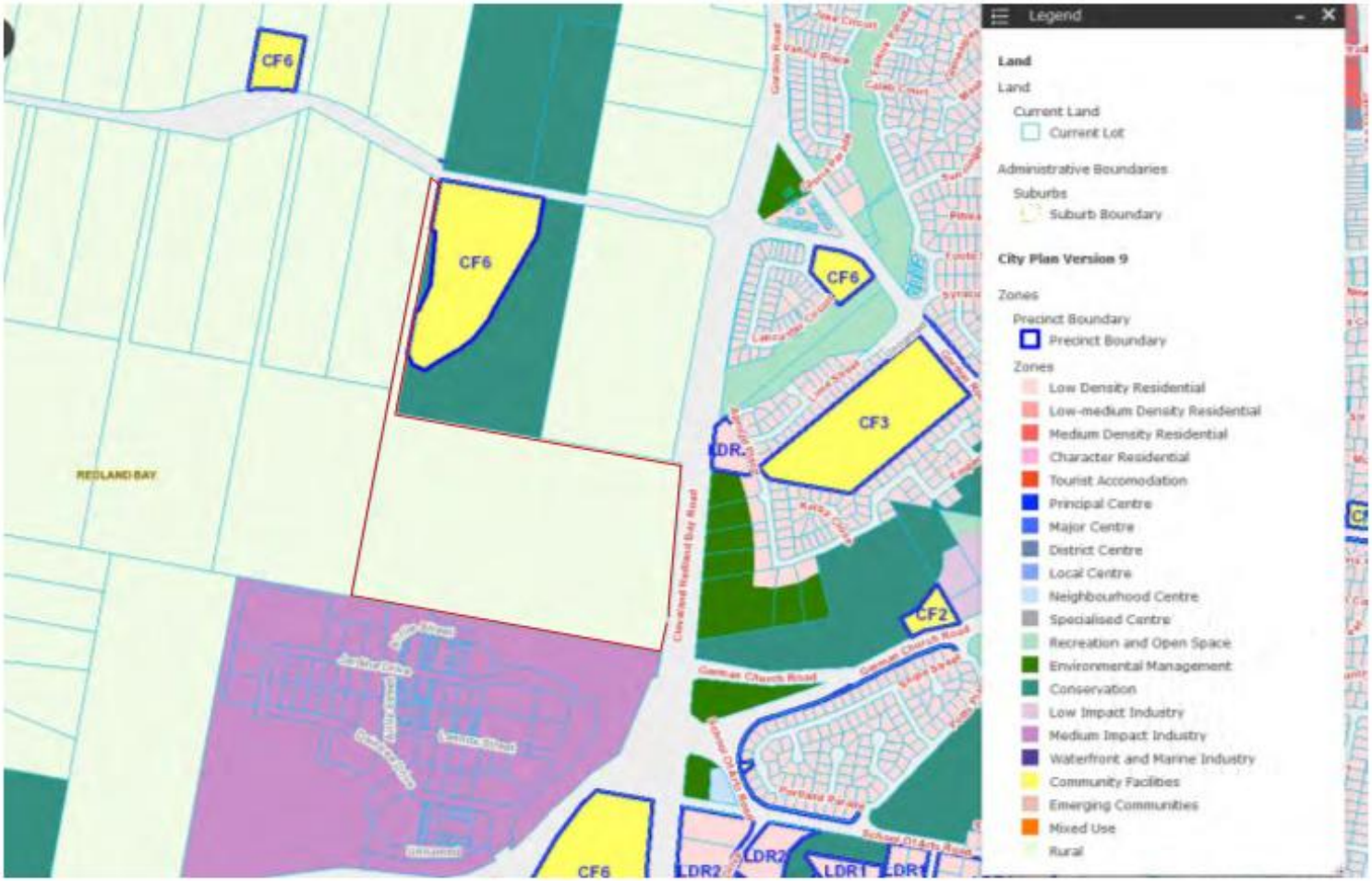
APPENDIX A
RCC Land Use Plan for the Site and Surrounds (Redland City Plan 2018)

APPENDIX A

RCC LAND USE PLAN FOR THE SITE AND SURROUNDS (REDLAND CITY PLAN 2018)

Source: Red-e-map (accessed 16/05/2023)



APPENDIX B
EPBC Act Protected Matters Search Tool (PMST) Results

Australian Government
Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Apr-2023

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	82
Listed Migratory Species:	64

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	92
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	2
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	19
Key Ecological Features (Marine):	None
Biologically Important Areas:	6
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Moreton bay	Within Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area	In feature area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community likely to occur within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area	In feature area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area	In buffer area only
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat may occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In buffer area only
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area	In feature area
FISH			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Epinephelus daemelii Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Seriolella brama Blue Warehou [69374]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
Thunnus maccoyii Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
INSECT			
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Petaurus australis australis			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus			
Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat may occur within area	In feature area
Pteropus poliocephalus			
Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area	In feature area
Xeromys myoides			
Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat known to occur within area	In feature area
PLANT			
Acronychia littoralis			
Scented Acronychia [8582]	Endangered	Species or species habitat may occur within area	In feature area
Arthraxon hispidus			
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Baloghia marmorata			
Marbled Balogia, Jointed Baloghia [8463]	Vulnerable	Species or species habitat may occur within area	In feature area
Bosistoa transversa			
Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat may occur within area	In feature area
Corchorus cunninghamii			
Native Jute [14659]	Endangered	Species or species habitat likely to occur within area	In feature area
Cryptocarya foetida			
Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area	In feature area
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Endiandra floydii Floyd's Walnut, Crystal Creek Walnut [52955]	Endangered	Species or species habitat likely to occur within area	In feature area
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Macadamia tetraphylla Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area	In feature area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area	In feature area
Planchonella eerwah Shiny-leaved Condoo, Black Plum, Wild Apple [17340]	Endangered	Species or species habitat likely to occur within area	In feature area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
REPTILE			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Coeranoscincus reticulatus Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat may occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
SHARK			
Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding may occur within area	In buffer area only
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In buffer area only
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area	In buffer area only
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat may occur within area	In buffer area only
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area	In buffer area only
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Migratory Marine Species			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In buffer area only
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Dugong dugon Dugong [28]		Species or species habitat known to occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area	In buffer area only
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In buffer area only
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In buffer area only
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In buffer area only
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding may occur within area	In buffer area only
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]		Breeding known to occur within area	In buffer area only
Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat likely to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area	In feature area
Arenaria interpres Ruddy Turnstone [872]		Species or species habitat likely to occur within area	In buffer area only
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]		Species or species habitat may occur within area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius phaeopus Whimbrel [849]		Species or species habitat likely to occur within area	In buffer area only
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Pluvialis fulva Pacific Golden Plover [25545]		Species or species habitat likely to occur within area	In buffer area only
Tringa brevipes Grey-tailed Tattler [851]		Species or species habitat likely to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Xenus cinereus			
Terek Sandpiper [59300]		Species or species habitat likely to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat likely to occur within area	In feature area
Anous stolidus			
Common Noddy [825]		Species or species habitat likely to occur within area	In buffer area only
Anseranas semipalmata			
Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Ardenna carneipes as Puffinus carneipes			
Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area	In buffer area only
Ardenna grisea as Puffinus griseus			
Sooty Shearwater [82651]		Species or species habitat may occur within area	In buffer area only
Arenaria interpres			
Ruddy Turnstone [872]		Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]		Species or species habitat may occur within area overfly marine area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius phaeopus Whimbrel [849]		Species or species habitat likely to occur within area	In buffer area only
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area	In buffer area only
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
Pluvialis fulva Pacific Golden Plover [25545]		Species or species habitat likely to occur within area	In buffer area only
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis as Rostratula benghalensis (sensu lato)			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Sternula albifrons as Sterna albifrons			
Little Tern [82849]		Species or species habitat may occur within area	In buffer area only
Symposiachrus trivirgatus as Monarcha trivirgatus			
Spectacled Monarch [83946]		Species or species habitat likely to occur within area overfly marine area	In feature area
Thalassarche carteri			
Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche cauta			
Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche impavida			
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche melanophris			
Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche salvini			
Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thalassarche steadi			
White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Tringa brevipes as Heteroscelus brevipes			
Grey-tailed Tattler [851]		Species or species habitat likely to occur within area	In buffer area only
Tringa nebularia			
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Xenus cinereus Terek Sandpiper [59300]		Species or species habitat likely to occur within area overfly marine area	In buffer area only
Fish			
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In buffer area only
Campichthys tryoni Tryon's Pipefish [66193]		Species or species habitat may occur within area	In buffer area only
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area	In buffer area only
Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area	In buffer area only
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area	In buffer area only
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In buffer area only
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area	In buffer area only
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area	In buffer area only
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area	In buffer area only
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus kelloggi Kellogg's Seahorse, Great Seahorse [66723]		Species or species habitat may occur within area	In buffer area only
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area	In buffer area only
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area	In buffer area only
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area	In buffer area only
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In buffer area only
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In buffer area only
Micrognathus andersonii Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area	In buffer area only
Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area	In buffer area only
Microphis manadensis Manado Pipefish, Manado River Pipefish [66258]		Species or species habitat may occur within area	In buffer area only
Solegnathus dunckeri Duncker's Pipehorse [66271]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area	In buffer area only
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In buffer area only
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In buffer area only
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In buffer area only
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In buffer area only
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In buffer area only
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In buffer area only
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In buffer area only
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In buffer area only
Mammal			
Dugong dugon Dugong [28]		Species or species habitat known to occur within area	In buffer area only
Reptile			
Aipysurus laevis Olive Seasnake [1120]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Astrotia stokesii Stokes' Seasnake [1122]		Species or species habitat may occur within area	In buffer area only
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In buffer area only
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Hydrophis elegans Elegant Seasnake [1104]		Species or species habitat may occur within area	In buffer area only
Laticauda laticaudata a sea krait [1093]		Species or species habitat may occur within area	In buffer area only
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area	In buffer area only
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area	In buffer area only

Whales and Other Cetaceans			[Resource Information]
Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			

Current Scientific Name	Status	Type of Presence	Buffer Status
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area	In buffer area only
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In buffer area only
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In buffer area only
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In buffer area only
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In buffer area only
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In buffer area only
Orcaella heinsohni as Orcaella brevirostris Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In buffer area only
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In buffer area only
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]		Breeding known to occur within area	In buffer area only
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In buffer area only

Current Scientific Name	Status	Type of Presence	Buffer Status
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In buffer area only
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In buffer area only

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State	Buffer Status
Bayview	Conservation Park	QLD	In buffer area only
Moreton Bay	Marine Park	QLD	In buffer area only

Nationally Important Wetlands [Resource Information]

Wetland Name	State	Buffer Status
Moreton Bay	QLD	In buffer area only

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Clay Gully Road residential development, Victoria Point, QLD	2017/7984	Not Controlled Action	Completed	In buffer area only
Clearance of approx 152ha of open forest vegetation for residential development at Mt Cotton Villag	2004/1592	Not Controlled Action	Completed	In feature area
development of a single storey house for residential purposes	2012/6302	Not Controlled Action	Completed	In buffer area only
Development of Leisure Life Retirement Community	2004/1746	Not Controlled Action	Completed	In feature area
Eprapah Heights Bushland Residential Subdivision	2001/286	Not Controlled Action	Completed	In feature area
establishment of a car wash and service station facility on Lot 12 RP 57455	2005/2077	Not Controlled Action	Completed	In feature area
Extension of existing hard rock quarry	2004/1713	Not Controlled Action	Completed	In buffer area only
GCCC Northern Wastewater Strategy and associated Reclaimed Water Scheme - Stage	2001/282	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Gordon Road Residential Development	2002/854	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Orchard Beach residential subdivision	2002/603	Not Controlled Action	Completed	In buffer area only
Prawn Aquaculture Enterprise Expansion	2001/294	Not Controlled Action	Completed	In feature area
Prawn Aquaculture Expansion	2001/322	Not Controlled Action	Completed	In buffer area only
Queen Street Residential Development	2001/132	Not Controlled Action	Completed	In buffer area only
Residential estate Bunker Rd	2005/2130	Not Controlled Action	Completed	In feature area
Residential subdivision, Redland Bay Road	2002/739	Not Controlled Action	Completed	In buffer area only
Urban Subdivision	2001/493	Not Controlled Action	Completed	In buffer area only
works within the Black Swamp	2005/2334	Not Controlled Action	Completed	In feature area
Referral decision				
Breeding program for Grey Nurse Sharks	2007/3245	Referral Decision	Completed	In buffer area only

Biologically Important Areas			
Scientific Name	Behaviour	Presence	Buffer Status
Dolphins			
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Breeding	Known to occur	In buffer area only
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Breeding	Known to occur	In buffer area only
Marine Turtles			
Caretta caretta Loggerhead Turtle [1763]	Nesting	Known to occur	In buffer area only
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur	In buffer area only

Scientific Name	Behaviour	Presence	Buffer Status
Sharks			
Carcharias taurus			
Grey Nurse Shark [64469]	Foraging	Known to occur	In buffer area only
Whales			
Megaptera novaeangliae			
Humpback Whale [38]	Resting on migration (southbound)	Known to occur	In buffer area only

Bioregional Assessments			
SubRegion	BioRegion	Website	Buffer Status
Clarence-Moreton	Clarence-Moreton	BA website	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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APPENDIX C
Wildlife Online Database Results

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: Plants (including other non-animals such as fungi and protists)
Type: Native
Queensland status: Rare and threatened species
Records: Confirmed
Date: Since 1980
Latitude: -27.6214
Longitude: 153.2844
Distance: 5
Email: conor@baamecology.com
Date submitted: Friday 12 May 2023 14:41:40
Date extracted: Friday 12 May 2023 14:50:05

There were no records retrieved for your selection

Disclaimer
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Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.
The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (https://www.qld.gov.au/environment/plants-animals/species-information/wildnet) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.qld.gov.au.

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: Animals
Type: Native
Queensland status: All
Records: Confirmed
Date: Since 1980
Latitude: -27.6217
Longitude: 153.2843
Distance: 5
Email: emma@baamecology.com
Date submitted: Thursday 27 Apr 2023 14:20:12
Date extracted: Thursday 27 Apr 2023 14:30:06

The number of records retrieved = 247

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Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	*Litoria balatus*	slender bleating treefrog		C		1
animals	amphibians	Hylidae	*Litoria caerulea*	common green treefrog		C		10
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		51
animals	amphibians	Hylidae	*Litoria gracilenta*	graceful treefrog		C		23
animals	amphibians	Hylidae	*Litoria latopalmata*	broad palmed rocketfrog		C		3
animals	amphibians	Hylidae	*Litoria nasuta*	striped rocketfrog		C		3
animals	amphibians	Hylidae	*Litoria peronii*	emerald spotted treefrog		C		1
animals	amphibians	Hylidae	*Litoria tyleri*	southern laughing treefrog		C		3
animals	amphibians	Limnodynastidae	*Adelotus brevis*	tusked frog		V		6
animals	amphibians	Limnodynastidae	*Limnodynastes peronii*	striped marshfrog		C		29
animals	amphibians	Limnodynastidae	*Limnodynastes tasmaniensis*	spotted grassfrog		C		1
animals	amphibians	Limnodynastidae	*Limnodynastes terraereginae*	scarlet sided pobblebonk		C		1
animals	amphibians	Myobatrachidae	*Crinia parinsignifera*	beeping froglet		C		5
animals	amphibians	Myobatrachidae	*Crinia signifera*	clicking froglet		C		4
animals	amphibians	Myobatrachidae	*Crinia tinnula*	wallum froglet		V		5
animals	amphibians	Myobatrachidae	*Mixophyes fasciolatus*	great barred frog		C		2
animals	amphibians	Myobatrachidae	*Pseudophryne raveni*	copper backed broodfrog		C		6
animals	birds	Acanthizidae	*Acanthiza lineata*	striated thornbill		C		2
animals	birds	Acanthizidae	*Acanthiza pusilla*	brown thornbill		C		10
animals	birds	Acanthizidae	*Acanthiza reguloides*	buff-rumped thornbill		C		1
animals	birds	Acanthizidae	*Gerygone levigaster*	mangrove gerygone		C		1
animals	birds	Acanthizidae	*Gerygone olivacea*	white-throated gerygone		C		9
animals	birds	Acanthizidae	*Pyrrholaemus sagittatus*	speckled warbler		C		2
animals	birds	Acanthizidae	*Sericornis frontalis*	white-browed scrubwren		C		8
animals	birds	Acanthizidae	*Smicrornis brevirostris*	weebill		C		2
animals	birds	Accipitridae	*Accipiter fasciatus*	brown goshawk		C		4
animals	birds	Accipitridae	*Accipiter novaehollandiae*	grey goshawk		C		2
animals	birds	Accipitridae	*Aquila audax*	wedge-tailed eagle		C		1
animals	birds	Accipitridae	*Aviceda subcristata*	Pacific baza		C		4
animals	birds	Accipitridae	*Elanus axillaris*	black-shouldered kite		C		1
animals	birds	Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle		C		5
animals	birds	Accipitridae	*Haliastur indus*	brahminy kite		C		2
animals	birds	Accipitridae	*Haliastur sphenurus*	whistling kite		C		9
animals	birds	Aegothelidae	*Aegotheles cristatus*	Australian owlet-nightjar		C		1
animals	birds	Alcedinidae	*Ceyx azureus*	azure kingfisher		C		1
animals	birds	Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra		C		18
animals	birds	Alcedinidae	*Todiramphus macleayii*	forest kingfisher		C		10
animals	birds	Alcedinidae	*Todiramphus sanctus*	sacred kingfisher		C		11
animals	birds	Alcedinidae	*Todiramphus sordidus*	Torresian kingfisher		C		4
animals	birds	Anatidae	*Anas castanea*	chestnut teal		C		4
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		16
animals	birds	Anatidae	*Aythya australis*	hardhead		C		7
animals	birds	Anatidae	*Chenonetta jubata*	Australian wood duck		C		14
animals	birds	Anatidae	*Cygnus atratus*	black swan		C		5
animals	birds	Anatidae	*Dendrocygna arcuata*	wandering whistling-duck		C		2
animals	birds	Anhingidae	*Anhinga novaehollandiae*	Australasian darter		C		9

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Anseranatidae	*Anseranas semipalmata*	magpie goose		C		2
animals	birds	Apodidae	*Hirundapus caudacutus*	white-throated needletail		V	V	4
animals	birds	Ardeidae	*Ardea alba modesta*	eastern great egret		C		6
animals	birds	Ardeidae	*Ardea intermedia*	intermediate egret		C		8
animals	birds	Ardeidae	*Bubulcus ibis*	cattle egret		C		8
animals	birds	Ardeidae	*Butorides striata*	striated heron		C		3
animals	birds	Ardeidae	*Egretta garzetta*	little egret		C		19
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		15
animals	birds	Ardeidae	*Nycticorax caledonicus*	nankeen night-heron		C		3
animals	birds	Artamidae	*Artamus cyanopterus*	dusky woodswallow		C		1
animals	birds	Artamidae	*Artamus leucorynchus*	white-breasted woodswallow		C		9
animals	birds	Artamidae	*Cracticus nigrogularis*	pied butcherbird		C		17
animals	birds	Artamidae	*Cracticus sp.*			C		1
animals	birds	Artamidae	*Cracticus torquatus*	grey butcherbird		C		10
animals	birds	Artamidae	*Gymnorhina tibicen*	Australian magpie		C		13
animals	birds	Burhinidae	*Burhinus grallarius*	bush stone-curlew		C		5
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		8
animals	birds	Cacatuidae	*Cacatua sanguinea*	little corella		C		4
animals	birds	Cacatuidae	*Calyptorhynchus lathami lathami*	glossy black-cockatoo (eastern)		V	V	3
animals	birds	Cacatuidae	*Eolophus roseicapilla*	galah		C		11
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		17
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		2
animals	birds	Campephagidae	*Edolisoma tenuirostre*	common cicadabird		C		3
animals	birds	Campephagidae	*Lalage leucomela*	varied triller		C		8
animals	birds	Charadriidae	*Charadrius ruficapillus*	red-capped plover		C		2
animals	birds	Charadriidae	*Vanellus miles*	masked lapwing		C		27
animals	birds	Charadriidae	*Vanellus miles novaehollandiae*	masked lapwing (southern subspecies)		C		8
animals	birds	Cisticolidae	*Cisticola exilis*	golden-headed cisticola		C		9
animals	birds	Climacteridae	*Climacteris affinis*	white-browed treecreeper		C		3
animals	birds	Climacteridae	*Climacteris picumnus*	brown treecreeper		C		1
animals	birds	Climacteridae	*Cormobates leucophaea*	white-throated treecreeper		C		1
animals	birds	Climacteridae	*Cormobates leucophaea metastasis*	white-throated treecreeper (southern)		C		9
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		5
animals	birds	Columbidae	*Geopelia placida*	peaceful dove		C		12
animals	birds	Columbidae	*Ocyphaps lophotes*	crested pigeon		C		9
animals	birds	Columbidae	*Phaps chalcoptera*	common bronzewing		C		3
animals	birds	Coraciidae	*Eurystomus orientalis*	dollarbird		C		8
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		15
animals	birds	Cuculidae	*Cacomantis flabelliformis*	fan-tailed cuckoo		C		7
animals	birds	Cuculidae	*Cacomantis variolosus*	brush cuckoo		C		1
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		5
animals	birds	Cuculidae	*Chalcites basalis*	Horsfield's bronze-cuckoo		C		2
animals	birds	Cuculidae	*Chalcites lucidus*	shining bronze-cuckoo		C		9
animals	birds	Cuculidae	*Chalcites minutillus barnardi*	Eastern little bronze-cuckoo		C		1
animals	birds	Cuculidae	*Eudynamys orientalis*	eastern koel		C		5
animals	birds	Cuculidae	*Scythrops novaehollandiae*	channel-billed cuckoo		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Dicaeidae	*Dicaeum hirundinaceum*	mistletoebird		C		9
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		9
animals	birds	Dicruridae	*Dicrurus bracteatus bracteatus*	spangled drongo (eastern Australia)		C		1
animals	birds	Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin		C		4
animals	birds	Estrildidae	*Neochmia temporalis*	red-browed finch		C		7
animals	birds	Estrildidae	*Taeniopygia bichenovii*	double-barred finch		C		12
animals	birds	Eurostopodidae	*Eurostopodus mystacalis*	white-throated nightjar		C		4
animals	birds	Haematopodidae	*Haematopus longirostris*	Australian pied oystercatcher		C		10
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		12
animals	birds	Hirundinidae	*Petrochelidon ariel*	fairy martin		C		3
animals	birds	Hirundinidae	*Petrochelidon nigricans*	tree martin		C		2
animals	birds	Jacanidae	*Irediparra gallinacea*	comb-crested jacana		C		2
animals	birds	Laridae	*Chroicocephalus novaehollandiae*	silver gull		C		14
animals	birds	Laridae	*Gelochelidon nilotica*	gull-billed tern		SL		10
animals	birds	Laridae	*Gygis alba*	white tern		C		1/1
animals	birds	Laridae	*Hydroprogne caspia*	Caspian tern		SL		6
animals	birds	Laridae	*Sternula albifrons*	little tern		SL		1
animals	birds	Laridae	*Thalasseus bergii*	crested tern		SL		4
animals	birds	Locustellidae	*Cincloramphus timoriensis*	tawny grassbird		C		5
animals	birds	Maluridae	*Malurus cyaneus*	superb fairy-wren		C		2
animals	birds	Maluridae	*Malurus lamberti*	variegated fairy-wren		C		13
animals	birds	Maluridae	*Malurus melanocephalus*	red-backed fairy-wren		C		13
animals	birds	Megapodiidae	*Alectura lathami*	Australian brush-turkey		C		2
animals	birds	Meliphagidae	*Acanthorhynchus tenuirostris*	eastern spinebill		C		1
animals	birds	Meliphagidae	*Anthochaera chrysoptera*	little wattlebird		C		3
animals	birds	Meliphagidae	*Caligavis chrysops*	yellow-faced honeyeater		C		8
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		7
animals	birds	Meliphagidae	*Gavicalis fasciogularis*	mangrove honeyeater		C		1
animals	birds	Meliphagidae	*Lichmera indistincta*	brown honeyeater		C		12
animals	birds	Meliphagidae	*Manorina melanocephala*	noisy miner		C		13
animals	birds	Meliphagidae	*Meliphaga lewinii*	Lewin's honeyeater		C		12
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		12
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		12
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		14
animals	birds	Meliphagidae	*Plectorhyncha lanceolata*	striped honeyeater		C		2
animals	birds	Meliphagidae	*Ptilotula fusca*	fuscous honeyeater		C		1
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		10
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		16
animals	birds	Monarchidae	*Monarcha melanopsis*	black-faced monarch		SL		4
animals	birds	Monarchidae	*Myiagra inquieta*	restless flycatcher		C		1
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		11
animals	birds	Monarchidae	*Symposiachrus trivirgatus*	spectacled monarch		SL		1
animals	birds	Motacillidae	*Anthus novaeseelandiae*	Australasian pipit		C		2
animals	birds	Neosittidae	*Daphoenositta chrysoptera*	varied sittella		C		2
animals	birds	Oriolidae	*Oriolus sagittatus*	olive-backed oriole		C		7
animals	birds	Oriolidae	*Sphecotheres vieilloti*	Australasian figbird		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		14
animals	birds	Pachycephalidae	*Colluricincla megarhyncha*	little shrike-thrush		C		2
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		6
animals	birds	Pachycephalidae	*Pachycephala pectoralis youngi*	golden whistler (south-eastern Australia)		C		1
animals	birds	Pachycephalidae	*Pachycephala rufiventris*	rufous whistler		C		16
animals	birds	Pandionidae	*Pandion haliaetus cristatus*	eastern osprey		SL		1
animals	birds	Pardalotidae	*Pardalotus punctatus*	spotted pardalote		C		3
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		14
animals	birds	Pelecanidae	*Pelecanus conspicillatus*	Australian pelican		C		8
animals	birds	Petroicidae	*Eopsaltria australis*	eastern yellow robin		C		15
animals	birds	Petroicidae	*Microeca fascinans*	jacky winter		C		2
animals	birds	Petroicidae	*Petroica rosea*	rose robin		C		3
animals	birds	Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant		C		7
animals	birds	Phalacrocoracidae	*Phalacrocorax sulcirostris*	little black cormorant		C		4
animals	birds	Phalacrocoracidae	*Phalacrocorax varius*	pied cormorant		C		1
animals	birds	Phasianidae	*Synoicus ypsilophorus*	brown quail		C		7
animals	birds	Podargidae	*Podargus strigoides*	tawny frogmouth		C		14
animals	birds	Podicipedidae	*Tachybaptus novaehollandiae*	Australasian grebe		C		6
animals	birds	Pomatostomidae	*Pomatostomus temporalis*	grey-crowned babbler		C		1
animals	birds	Psittaculidae	*Parvipsitta pusilla*	little lorikeet		C		5
animals	birds	Psittaculidae	*Platycercus adscitus*	pale-headed rosella		C		11
animals	birds	Psittaculidae	*Platycercus adscitus palliceps*	pale-headed rosella (southern form)		C		4
animals	birds	Psittaculidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		7
animals	birds	Psittaculidae	*Trichoglossus moluccanus*	rainbow lorikeet		C		16
animals	birds	Psophodidae	*Psophodes olivaceus*	eastern whipbird		C		8
animals	birds	Rallidae	*Fulica atra*	Eurasian coot		C		2
animals	birds	Rallidae	*Gallinula tenebrosa*	dusky moorhen		C		11
animals	birds	Rallidae	*Porphyrio melanotus*	purple swamphen		C		10
animals	birds	Recurvirostridae	*Himantopus leucocephalus*	pied stilt		C		58
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		14
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		13
animals	birds	Rhipiduridae	*Rhipidura rufifrons*	rufous fantail		SL		2
animals	birds	Scolopacidae	*Calidris canutus*	red knot		E	E	1
animals	birds	Scolopacidae	*Limosa lapponica baueri*	Western Alaskan bar-tailed godwit		V	V	72
animals	birds	Scolopacidae	*Limosa limosa*	black-tailed godwit		SL		4
animals	birds	Scolopacidae	*Numenius madagascariensis*	eastern curlew		E	CE	75
animals	birds	Scolopacidae	*Numenius phaeopus*	whimbrel		SL		18
animals	birds	Scolopacidae	*Tringa brevipes*	grey-tailed tattler		SL		9
animals	birds	Scolopacidae	*Tringa nebularia*	common greenshank		SL		7
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		5
animals	birds	Strigidae	*Ninox strenua*	powerful owl		V		3
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		6
animals	birds	Threskiornithidae	*Plegadis falcinellus*	glossy ibis		SL		1
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		24
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Turnicidae	*Turnix pyrrhothorax*	red-chested button-quail		C		1
animals	birds	Turnicidae	*Turnix varius*	painted button-quail		C		2
animals	birds	Zosteropidae	*Zosterops lateralis*	silvereye		C		16
animals	insects	Nymphalidae	*Melanitis leda bankia*	evening brown				1
animals	malacostracans	Parastacidae	*Cherax depressus*					1
animals	mammals	Dasyuridae	*Antechinus flavipes flavipes*	yellow-footed antechinus (south-east Queensland)		C		3
animals	mammals	Dasyuridae	*Planigale maculata*	common planigale		C		2
animals	mammals	Dasyuridae	*Sminthopsis murina*	common dunnart		C		2
animals	mammals	Dugongidae	*Dugong dugon*	dugong		V		1
animals	mammals	Macropodidae	*Notamacropus rufogriseus*	red-necked wallaby		C		9
animals	mammals	Macropodidae	*Wallabia bicolor*	swamp wallaby		C		7
animals	mammals	Molossidae	*Austronomus australis*	white-striped freetail bat		C		4
animals	mammals	Molossidae	*Mormopterus norfolkensis*	east coast freetail bat		C		2
animals	mammals	Muridae	*Hydromys chrysogaster*	water rat		C		4
animals	mammals	Muridae	*Rattus lutreolus*	swamp rat		C		2
animals	mammals	Peramelidae	*Isoodon macrourus*	northern brown bandicoot		C		8
animals	mammals	Petauridae	*Petaurus breviceps*	sugar glider		C		3
animals	mammals	Petauridae	*Petaurus breviceps sensu lato*	sugar glider		C		2
animals	mammals	Petauridae	*Petaurus norfolcensis*	squirrel glider		C		2
animals	mammals	Phalangeridae	*Trichosurus vulpecula*	common brushtail possum		C		13
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		E	E	1531
animals	mammals	Pseudocheiridae	*Petauroides armillatus*	central greater glider		E	E	6
animals	mammals	Pseudocheiridae	*Pseudocheirus peregrinus*	common ringtail possum		C		7
animals	mammals	Pteropodidae	*Pteropus alecto*	black flying-fox		C		58
animals	mammals	Pteropodidae	*Pteropus poliocephalus*	grey-headed flying-fox		C	V	35
animals	mammals	Pteropodidae	*Pteropus scapulatus*	little red flying-fox		C		3
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		SL		3
animals	mammals	Vespertilionidae	*Myotis macropus*	large-footed myotis		C		1
animals	ray-finned fishes	Anguillidae	*Anguilla australis*	southern shortfin eel				37
animals	ray-finned fishes	Anguillidae	*Anguilla reinhardtii*	longfin eel				51
animals	ray-finned fishes	Eleotridae	*Gobiomorphus australis*	striped gudgeon				50
animals	ray-finned fishes	Eleotridae	*Hypseleotris compressa*	empire gudgeon				67
animals	ray-finned fishes	Eleotridae	*Hypseleotris galii*	firetail gudgeon				73
animals	ray-finned fishes	Hemiramphidae	*Arrhamphus sclerolepis*	snubnose garfish				1
animals	ray-finned fishes	Kuhliidae	*Kuhlia rupestris*	jungle perch				1
animals	ray-finned fishes	Megalopidae	*Megalops cyprinoides*	oxeye herring				1
animals	ray-finned fishes	Melanotaeniidae	*Melanotaenia duboulayi*	crimsonspotted rainbowfish				13
animals	ray-finned fishes	Melanotaeniidae	*Rhadinocentrus ornatus*	ornate rainbowfish				42
animals	ray-finned fishes	Mugilidae	*Mugil cephalus*	sea mullet				3
animals	ray-finned fishes	Percichthyidae	*Macquaria novemaculeata*	Australian bass				3
animals	ray-finned fishes	Plotosidae	*Tandanus tandanus*	freshwater catfish				12
animals	ray-finned fishes	Synbranchidae	*Ophisternon gutturale*	swamp eel				2
animals	reptiles	Agamidae	*Diporiphora australis*	tommy roundhead		C		1
animals	reptiles	Agamidae	*Intellagama lesueurii*	eastern water dragon		C		7
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	reptiles	Boidae	*Morelia spilota*	carpet python		C		1
animals	reptiles	Chelidae	*Chelodina longicollis*	eastern snake-necked turtle		C		2
animals	reptiles	Chelidae	*Emydura macquarii macquarii*	Murray turtle		C		1
animals	reptiles	Chelidae	*Wollumbinia latisternum*	saw-shelled turtle		C		3
animals	reptiles	Colubridae	*Tropidonophis mairii*	freshwater snake		C		1
animals	reptiles	Elapidae	*Cryptophis nigrescens*	eastern small-eyed snake		C		3
animals	reptiles	Elapidae	*Demansia psammophis*	yellow-faced whipsnake		C		5
animals	reptiles	Scincidae	*Anomalopus verreauxii*	three-clawed worm-skink		C		4
animals	reptiles	Scincidae	*Calyptotis scutirostrum*	scute-snouted calyptotis		C		7
animals	reptiles	Scincidae	*Carlia vivax*	tussock rainbow-skink		C		4
animals	reptiles	Scincidae	*Cryptoblepharus pulcher pulcher*	elegant snake-eyed skink		C		6
animals	reptiles	Scincidae	*Ctenotus spaldingi*	straight-browed ctenotus		C		3
animals	reptiles	Scincidae	*Cyclodomorphus gerrardii*	pink-tongued lizard		C		1
animals	reptiles	Scincidae	*Eulamprus quoyii*	eastern water skink		C		4
animals	reptiles	Scincidae	*Lampropholis amicula*	friendly sunskink		C		1
animals	reptiles	Scincidae	*Lampropholis delicata*	dark-flecked garden sunskink		C		8
animals	reptiles	Scincidae	*Tiliqua scincoides scincoides*	eastern bluetongue		C		4
animals	reptiles	Varanidae	*Varanus varius*	lace monitor		C		5
animals	uncertain	Indeterminate	*Indeterminate*	Unknown or Code Pending				10

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.
The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.
The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).
This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

APPENDIX D
Matters of State Environmental Significance (MSES) Report

Queensland Government

Department of Environment and Science

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest
Lot: 1 Plan: RP199206

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@des.qld.gov.au

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.

Table of Contents

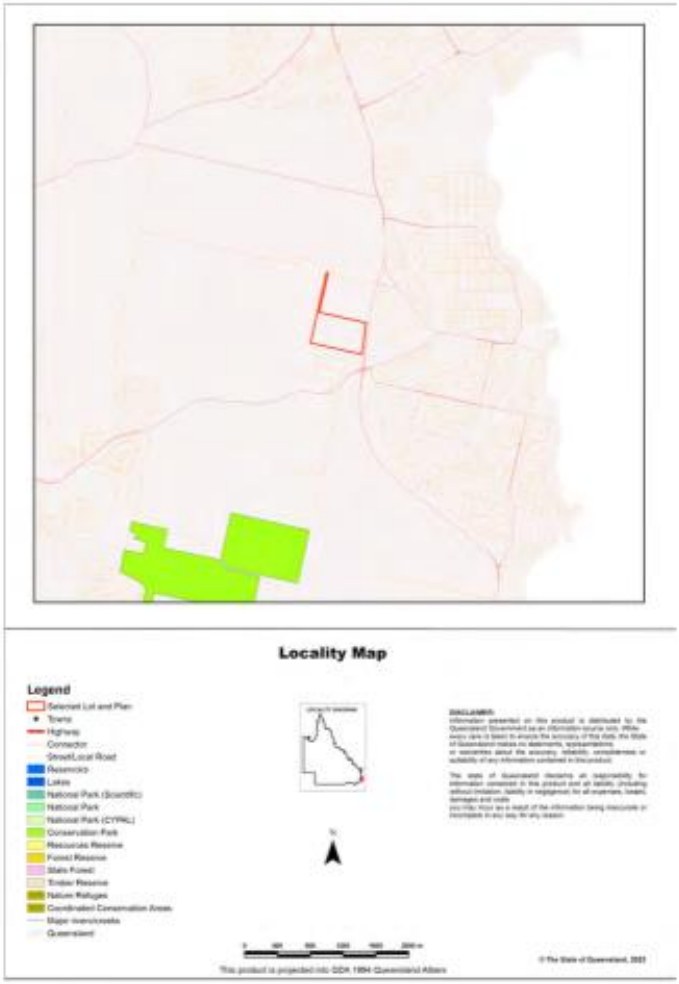
Assessment Area Details . . . 4
Matters of State Environmental Significance (MSES) . . . 5
MSES Categories . . . 5
MSES Values Present . . . 6
Additional Information with Respect to MSES Values Present . . . 7
MSES - State Conservation Areas . . . 7
MSES - Wetlands and Waterways . . . 7
MSES - Species . . . 7
MSES - Regulated Vegetation . . . 9
Map 1 - MSES - State Conservation Areas . . . 11
Map 2 - MSES - Wetlands and Waterways . . . 12
Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals . . . 13
Map 3b - MSES - Species - Koala habitat area (SEQ) . . . 14
Map 3c - MSES - Wildlife habitat (sea turtle nesting areas) . . . 15
Map 4 - MSES - Regulated Vegetation . . . 16
Map 5 - MSES - Offset Areas . . . 17
Appendices . . . 18
Appendix 1 - Matters of State Environmental Significance (MSES) methodology . . . 18
Appendix 2 - Source Data . . . 19
Appendix 3 - Acronyms and Abbreviations . . . 20

Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

Table 1: Summary table, details for AOI Lot: 1 Plan: RP199206

Size (ha)	25.19
Local Government(s)	Redland City
Bioregion(s)	Southeast Queensland
Subregion(s)	Burringbar - Conondale Ranges
Catchment(s)	Logan-Albert



Matters of State Environmental Significance (MSES)

MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992* ;

- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the *Marine Parks Act 2004* ;

- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;

- Threatened wildlife under the *Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;

- Regulated vegetation under the *Vegetation Management Act 1999* that is:

    • Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;

    • Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;

    • Category R areas on the regulated vegetation management map;

    • Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;

    • Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;

- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;

- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;

- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;

- Legally secured offset areas.

MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

Table 2: Summary of MSES present within the AOI

1a Protected Areas- estates	0.0 ha	0.0 %
1b Protected Areas- nature refuges	0.0 ha	0.0 %
1c Protected Areas- special wildlife reserves	0.0 ha	0.0 %
2 State Marine Parks- highly protected zones	0.0 ha	0.0 %
3 Fish habitat areas (A and B areas)	0.0 ha	0.0 %
4 Strategic Environmental Areas (SEA)	0.0 ha	0.0 %
5 High Ecological Significance wetlands on the map of Referable Wetlands	0.0 ha	0.0 %
6a High Ecological Value (HEV) wetlands	0.0 ha	0.0 %
6b High Ecological Value (HEV) waterways	0.0 km	Not applicable
7a Threatened (endangered or vulnerable) wildlife	0.0 ha	0.0 %
7b Special least concern animals	0.0 ha	0.0 %
7c i Koala habitat area - core (SEQ)	1.8 ha	7.1%
7c ii Koala habitat area - locally refined (SEQ)	0.0 ha	0.0 %
7d Sea turtle nesting areas	0.0 km	Not applicable
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	0.0 ha	0.0 %
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	1.07 ha	4.2%
8c Regulated Vegetation - Category R (GBR riverine regrowth)	0.0 ha	0.0 %
8d Regulated Vegetation - Essential habitat	1.79 ha	7.1%
8e Regulated Vegetation - intersecting a watercourse	0.2 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	1.0 ha	4.0%
9a Legally secured offset areas- offset register areas	0.0 ha	0.0 %
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	0.0 ha	0.0 %

Additional Information with Respect to MSES Values Present

MSES - State Conservation Areas

1a. Protected Areas - estates

(no results)

1b. Protected Areas - nature refuges

(no results)

1c. Protected Areas - special wildlife reserves

(no results)

2. State Marine Parks - highly protected zones

(no results)

3. Fish habitat areas (A and B areas)

(no results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

MSES - Wetlands and Waterways

4. Strategic Environmental Areas (SEA)

(no results)

5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values

(no results)

6a. Wetlands in High Ecological Value (HEV) waters

(no results)

6b. Waterways in High Ecological Value (HEV) waters

(no results)

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

MSES - Species

7a. Threatened (endangered or vulnerable) wildlife

Not applicable

7b. Special least concern animals

Not applicable

7c i. Koala habitat area - core (SEQ)

Values are present

7c ii. Koala habitat area - locally refined (SEQ)

Not applicable

7d. Wildlife habitat (sea turtle nesting areas)

Not applicable

Threatened (endangered or vulnerable) wildlife habitat suitability models

Species	Common name	NCA status	Presence
Boronia keysii		V	None
Calyptorhynchus lathami	Glossy black cockatoo	V	None
Casuarius casuarius johnsonii	Sthn population cassowary	E	None
Crinia tinnula	Wallum froglet	V	None
Denisonia maculata	Ornamental snake	V	None
Litoria freycineti	Wallum rocketfrog	V	None
Litoria olongburensis	Wallum sedgefrog	V	None
Macadamia integrifolia		V	None
Macadamia ternifolia		V	None
Macadamia tetraphylla		V	None
Melaleuca irbyana		E	None
Petaurus gracilis	Mahogany Glider	E	None
Petrogale persephone	Proserpine rock-wallaby	E	None
Pezoporus wallicus wallicus	Eastern ground parrot	V	None
Phascolarctos cinereus	Koala - outside SEQ*	E	None
Taudactylus pleione	Kroombit tinkerfrog	E	None
Xeromys myoides	Water Mouse	V	None

**For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.*

Threatened (endangered or vulnerable) wildlife species records

(no results)

Special least concern animal species records

(no results)

Shorebird habitat (critically endangered/endangered/vulnerable)

Not applicable

Shorebird habitat (special least concern)

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)*

Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)

To request a species list for an area, or search for a species profile, access Wildlife Online at:
https://www.qld.gov.au/environment/plants-animals/species-list/

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals, Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:
https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/
For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:
https://environment.ehp.qld.gov.au/regional-ecosystems/

8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)

Not applicable

8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)

Regional ecosystem	Vegetation management polygon	Vegetation management status
12.11.27	E-dom	hvr_end
12.11.23/12.11.27	E-dom	hvr_end

8c. Regulated Vegetation - Category R (GBR riverine regrowth)

Not applicable

8d. Regulated Vegetation - Essential habitat

Values are present

8e. Regulated Vegetation - intersecting a watercourse**

A vegetation management watercourse is mapped as present

8f. Regulated Vegetation - within 100m of a Vegetation Management wetland

Regulated vegetation map category	Map number
C	9542

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

MSES - Offsets

9a. Legally secured offset areas - offset register areas

(no results)

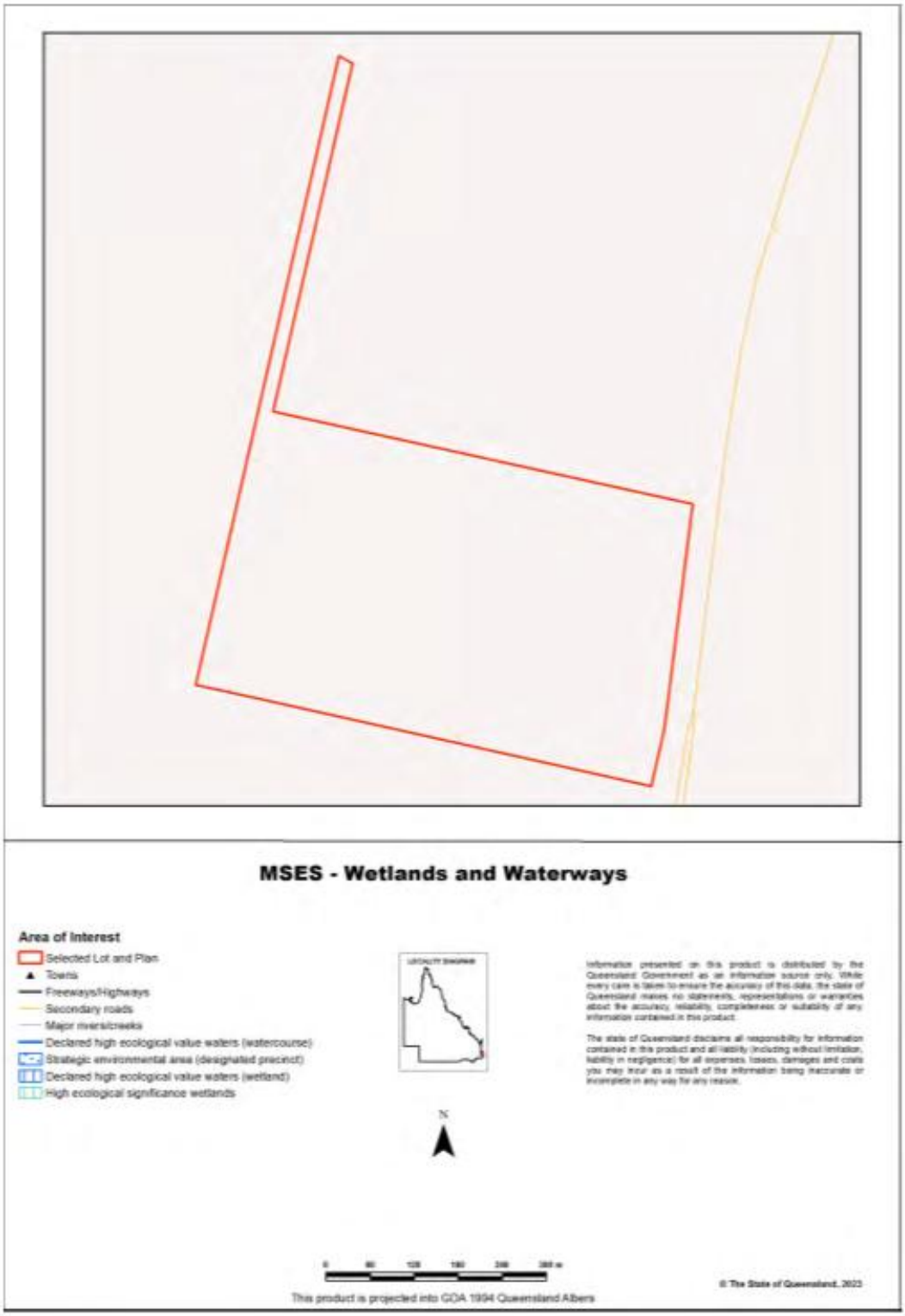
9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation

(no results)

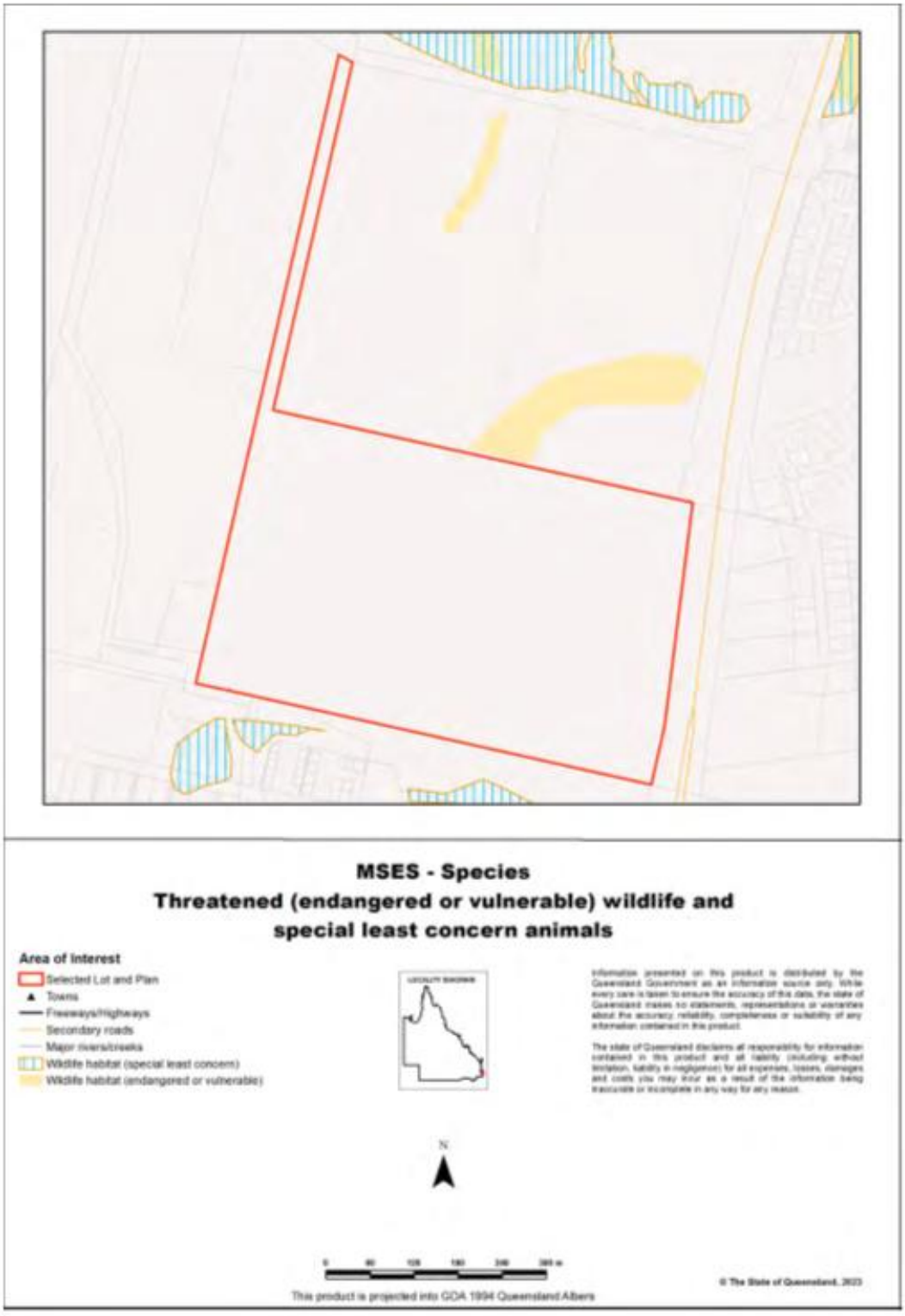
Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

Map 1 - MSES - State Conservation Areas

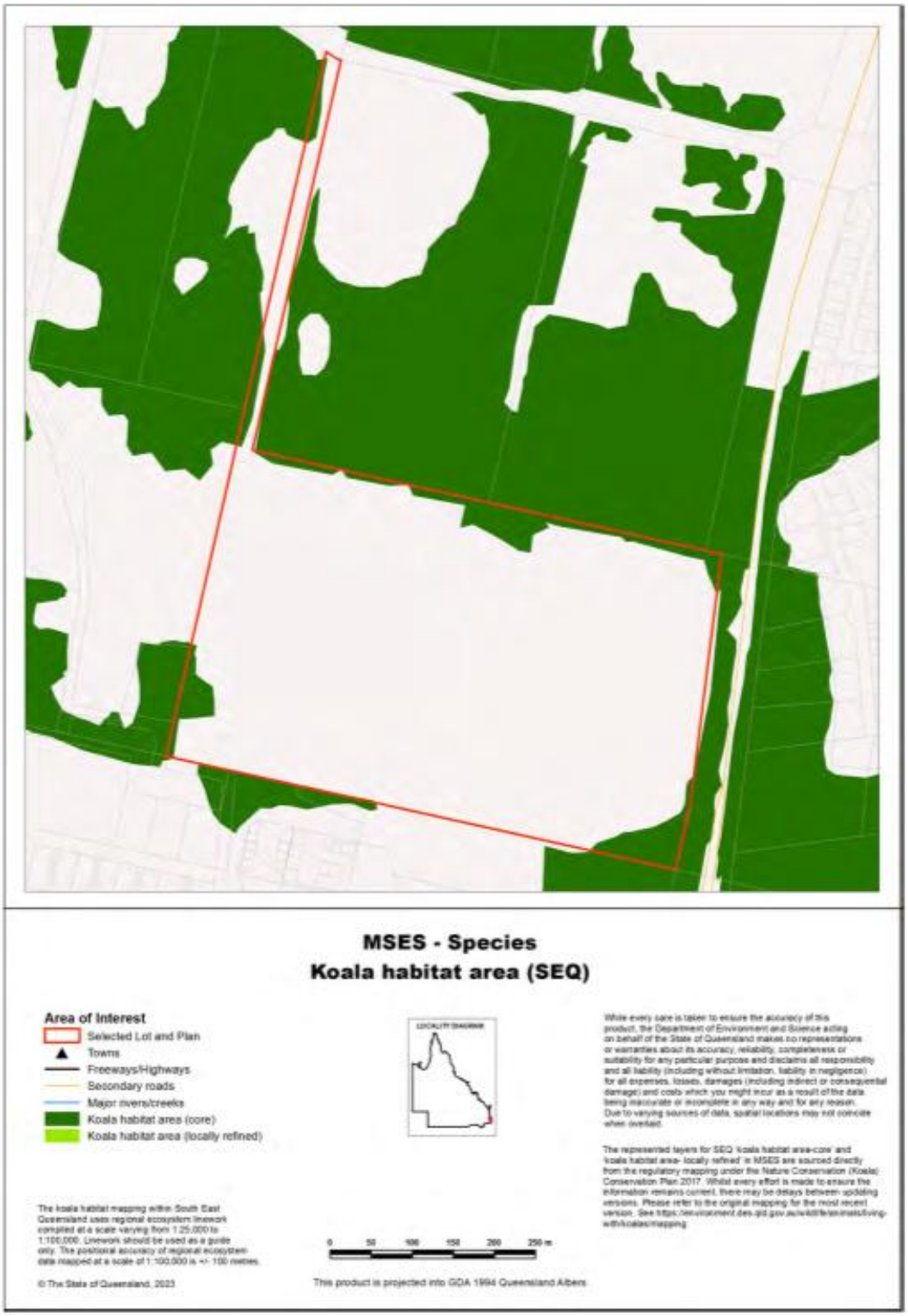
Map 2 - MSES - Wetlands and Waterways



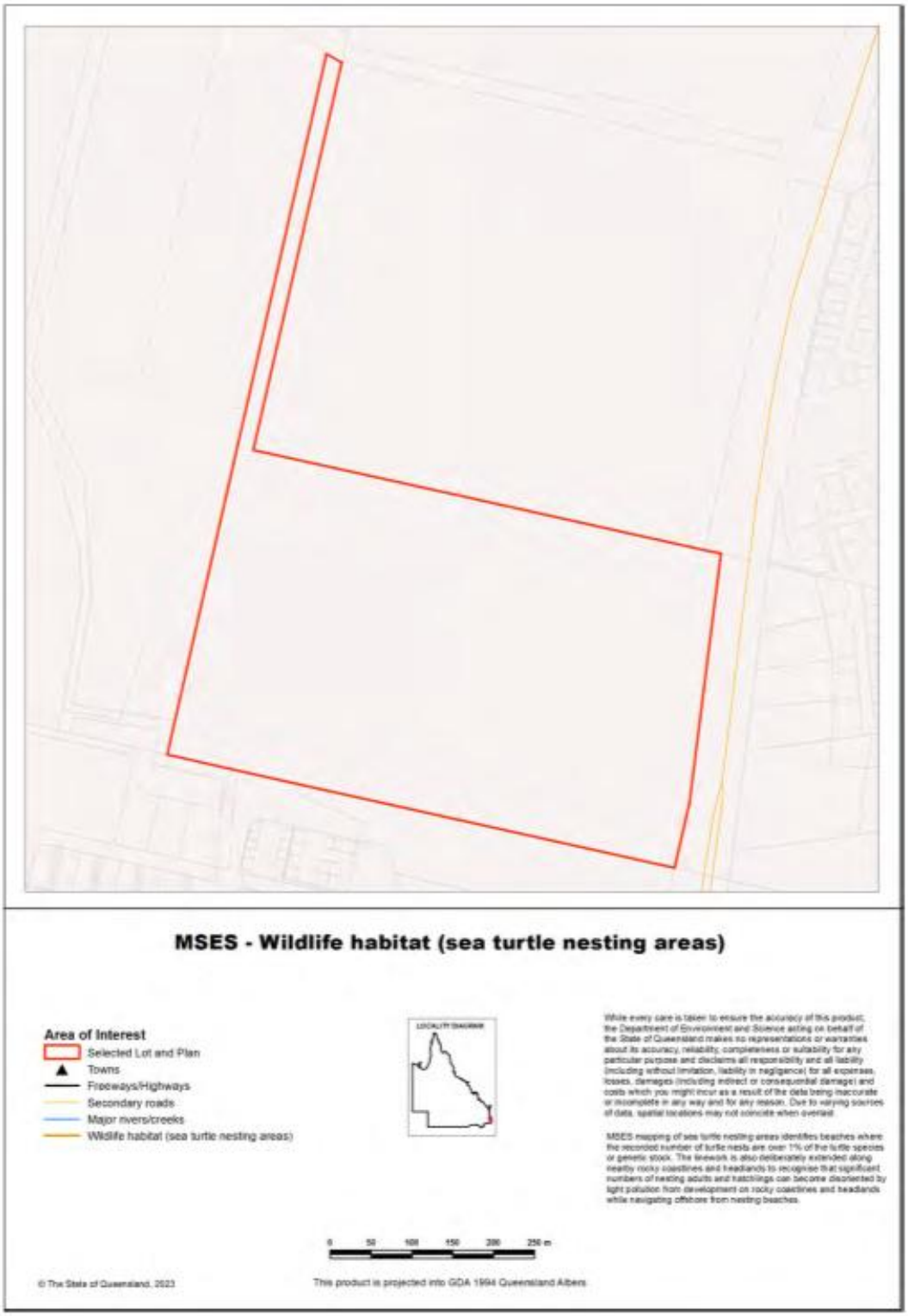
Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals



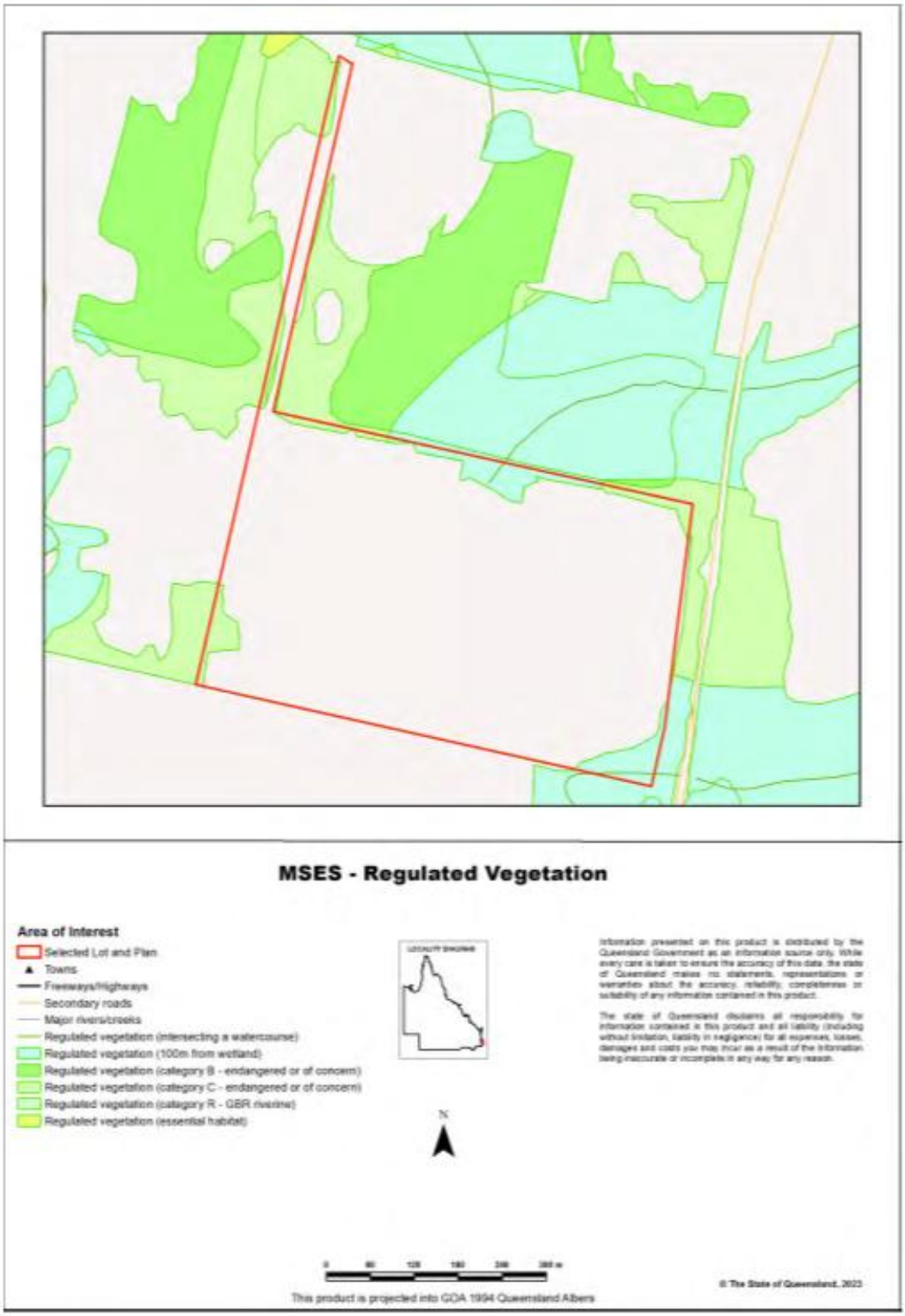
Map 3b - MSES - Species - Koala habitat area (SEQ)



Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)



Map 4 - MSES - Regulated Vegetation



Map 5 - MSES - Offset Areas

Appendices

Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). The compiled MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The Queensland Government's "Method for mapping - matters of state environmental significance for use in land use planning and development assessment" can be downloaded from:

http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html .

Appendix 2 - Source Data

The datasets listed below are available on request from:

http://qldspatial.information.qld.gov.au/catalogue/custom/index.page

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

MSES layers	**current QSpatial data (http://qspatial.information.qld.gov.au)**
Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves	- Protected areas of Queensland - Nature Refuges - Queensland - Special Wildlife Reserves- Queensland
Marine Park-Highly Protected Zones	Moreton Bay marine park zoning 2008
Fish Habitat Areas	Queensland fish habitat areas
Strategic Environmental Areas-designated	Regional Planning Interests Act - Strategic Environmental Areas
HES wetlands	Map of Queensland Wetland Environmental Values
Wetlands in HEV waters	HEV waters: - EPP Water intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 5) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000)
Wildlife habitat (threatened and special least concern)	- WildNet database species records - habitat suitability models (various) - SEQ koala habitat areas under the Koala Conservation Plan 2019 - Sea Turtle Nesting Areas records
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map
VMA Essential Habitat	Vegetation management - essential habitat map
VMA Wetlands	Vegetation management wetlands map
Legally secured offsets	Vegetation Management Act property maps of assessable vegetation. For offset register data-contact DES
Regulated Vegetation Map	Vegetation management - regulated vegetation management map

Appendix 3 - Acronyms and Abbreviations

AOI	- Area of Interest
DES	- Department of Environment and Science
EP Act	- *Environmental Protection Act 1994*
EPP	- Environmental Protection Policy
GDA94	- Geocentric Datum of Australia 1994
GEM	- General Environmental Matters
GIS	- Geographic Information System
MSES	- Matters of State Environmental Significance
NCA	- *Nature Conservation Act 1992*
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- *Vegetation Management Act 1999*

Vegetation management report

For Lot: 1 Plan: RP199206

25/05/2023

Queensland Government

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Recent changes

Updated mapping

Updated vegetation mapping was released on 8 September 2022 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their protected plant and koala protection mapping to align with the Queensland Herbarium scientific updates.

Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

Property details - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

Vegetation management framework - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

Vegetation management framework details for the specified Lot on Plan including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

Protected plant framework - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

Koala protection framework - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

Koala protection framework details for the specified Lot on Plan including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:
  - exempt clearing work;
  - accepted development vegetation clearing code;
  - an area management plan;
  - a development approval;

- the protected plant framework, which may include:
  - the need to undertake a flora survey;
  - exempt clearing;
  - a protected plant clearing permit;

- the koala protection framework, which may include:
  - exempted development;
  - a development approval;
  - the need to undertake clearing sequentially and in the presence of a koala spotter.

Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

Table of Contents

1. Property details . . . 6
1.1 Tenure and title area . . . 6
1.2 Property location . . . 6
2. Vegetation management framework (administered by the Department of Resources) . . . 7
2.1 Exempt clearing work . . . 7
2.2 Accepted development vegetation clearing codes . . . 7
2.3 Area management plans . . . 8
2.4 Development approvals . . . 8
2.5. Contact information for the Department of Resources . . . 8
3. Vegetation management framework for Lot: 1 Plan: RP199206 . . . 9
3.1 Vegetation categories . . . 9
3.2 Regional ecosystems . . . 10
3.3 Watercourses . . . 10
3.4 Wetlands . . . 10
3.5 Essential habitat . . . 10
3.6 Area Management Plan(s) . . . 12
3.7 Coastal or non-coastal . . . 12
3.8 Agricultural Land Class A or B . . . 12
4. Vegetation management framework maps . . . 13
4.1 Regulated vegetation management map . . . 14
4.2 Vegetation management supporting map . . . 15
4.3 Coastal/non-coastal map . . . 16
4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture . . . 17
5. Protected plants framework (administered by the Department of Environment and Science (DES)) . . . 18
5.1 Clearing in high risk areas on the flora survey trigger map . . . 18
5.2 Clearing outside high risk areas on the flora survey trigger map . . . 18
5.3 Exemptions . . . 18
5.4 Contact information for DES . . . 18
5.5 Protected plants flora survey trigger map . . . 19
6. Koala protection framework (administered by the Department of Environment and Science (DES)) . . . 21
6.1 Koala mapping . . . 21
6.2 Koala habitat planning controls . . . 22
6.3 Koala Conservation Plan clearing requirements . . . 23
6.4 Contact information for DES . . . 23
7. Koala protection framework details for Lot: 1 Plan: RP199206 . . . 23
7.1 Koala districts . . . 23
7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map . . . 24
7.3 Koala habitat regional ecosystems for core koala habitat areas . . . 25
8. Other relevant legislation contacts list . . . 26

1. Property details

1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 1 Plan: RP199206, are listed in Table 1.

Table 1: Lot, plan, tenure and title area information for the property

Lot	Plan	Tenure	Property title area (sq metres)
1	RP199206	Freehold	251,386

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

Does this property have a freehold tenure and is in the Wet Tropics of Queensland World Heritage Area?

No, this property is not located in the Wet Tropics of Queensland World Heritage Area.

1.2 Property location

Table 2 provides a summary of the locations for property Lot: 1 Plan: RP199206, in relation to natural and administrative boundaries.

Table 2: Property location details

Local Government(s)
Redland City

Bioregion(s)	Subregion(s)
Southeast Queensland	Burringbar - Conondale Ranges

Catchment(s)
Logan-Albert

2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the Vegetation Management Regulation 2012, the *Planning Act 2016* and the Planning Regulation 2017, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the Vegetation Management Regulation 2012; and
- a mangrove.

2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at
https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at
https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at
https://apps.dnrm.qld.gov.au/vegetation/

2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.
https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans

2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval. Information on how to apply for a development approval is available at
https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development

2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:
Phone 135VEG (135 834)
Email vegetation@resources.qld.gov.au
Visit https://www.resources.qld.gov.au/?contact=vegetation to submit an online enquiry.

3. Vegetation management framework for Lot: 1 Plan: RP199206

3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

Table 3: Vegetation categories for subject property. Total area: 25.2ha

Vegetation category	Area (ha)
Category C	1.8
Category X	23.4

Table 4: Description of vegetation categories

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

Property Map of Assessable Vegetation (PMAV)

There is no Property Map of Assessable Vegetation (PMAV) present on this property.

3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at
https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/

Table 5: Regional ecosystems present on subject property

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
12.11.23	Endangered	C	0.34	Eucalyptus pilularis open forest on coastal metamorphics and interbedded volcanics	Mid-dense
12.11.27	Endangered	C	0.73	Eucalyptus racemosa subsp. racemosa and/or E. seeana and Corymbia intermedia woodland on metamorphics +/- interbedded volcanics	Sparse
12.3.6	Least concern	C	0.72	Melaleuca quinquenervia +/- Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia intermedia open forest on coastal alluvial plains	Mid-dense
non-rem	None	X	23.41	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.
2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

3.4 Wetlands

Vegetation management wetlands are present on this property and are shown on the vegetation management supporting map in section 4.2 of this report.

3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or

2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

Category A and/or Category B and/or Category C

Table 6: Essential habitat in Category A and/or Category B and/or Category C

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
580	Phascolarctos cinereus	koala	E	Open forests and woodlands containing Eucalyptus, Corymbia, Lophostemon or Melaleuca trees having a trunk of a diameter of more than 10cm at 1.3m above the ground. Tree species used for food and habitat varies across the state and can include: Corymbia citriodora, Corymbia henryi, Corymbia intermedia, Eucalyptus acmenoides, Eucalyptus bancroftii, Eucalyptus biturbinata, Eucalyptus blakelyi, Eucalyptus brownii, Eucalyptus camaldulensis, Eucalyptus carnea, Eucalyptus chloroclada, Eucalyptus coolabah, Eucalyptus crebra, Eucalyptus dealbata, Eucalyptus drepanophylla, Eucalyptus dunnii, Eucalyptus eugenioides, Eucalyptus exserta, Eucalyptus fibrosa, Eucalyptus grandis, Eucalyptus helidonica, Eucalyptus latisinensis, Eucalyptus longirostrata, Eucalyptus major, Eucalyptus melanophloia, Eucalyptus melliodora, Eucalyptus microcarpa, Eucalyptus microcorys, Eucalyptus microtheca, Eucalyptus moluccana, Eucalyptus montivaga, Eucalyptus orgadophila, Eucalyptus papuana, Eucalyptus pilularis, Eucalyptus platyphylla, Eucalyptus populnea, Eucalyptus portuensis, Eucalyptus propinqua, Eucalyptus racemosa, Eucalyptus resinifera, Eucalyptus robusta, Eucalyptus saligna, Eucalyptus seeana, Eucalyptus siderophloia, Eucalyptus sideroxylon, Eucalyptus tereticornis, Eucalyptus thozetiana, Eucalyptus tindaliae, Eucalyptus umbra, Lophostemon confertus, Melaleuca leucadendra, Melaleuca quinquenervia.	Sea level to 1000m.	None	Riparian areas, plains and hill/escarpment slopes.

Label	Regional Ecosystem (mandatory unless otherwise specified)
RE	4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.8, 4.3.10, 4.3.11, 4.9.2, 4.9.3, 4.9.4, 4.9.6, 4.9.8, 4.9.9, 4.11.1, 4.11.7, 4.11.8, 4.9.5, 4.9.10, 4.9.11, 4.9.17, 5.3.1, 5.3.3, 5.3.5, 5.3.6, 5.3.9, 5.3.7, 5.3.8, 5.3.11, 5.3.12, 5.3.17, 5.3.18, 5.3.22, 5.3.24, 5.3.25, 5.4.1, 5.4.2, 5.4.3, 5.4.4, 5.5.1, 5.5.2, 5.5.3, 5.5.5, 5.5.6, 5.5.7, 5.5.8, 5.5.9, 5.5.10, 5.5.11, 5.5.13, 5.5.14, 5.5.15, 5.5.16, 5.5.17, 5.5.18, 5.5.19, 5.6.2, 5.7.1, 5.7.2, 5.7.5, 5.7.6, 5.7.7, 5.7.9, 5.7.11, 5.7.12, 5.7.13, 5.7.14, 5.7.17, 5.9.2, 7.2.3, 7.2.4, 7.2.7, 7.2.11, 7.2.7, 7.2.8, 7.2.9, 7.2.13, 7.2.12, 7.2.14, 7.2.15, 7.2.19, 7.2.20, 7.2.21, 7.2.29, 7.3.29, 7.3.28, 7.3.45, 7.3.40, 7.3.42, 7.3.44, 7.3.49, 7.3.47, 7.3.48, 7.3.50, 7.5.1, 7.5.2, 7.5.3, 7.5.4, 7.8.7, 7.8.8, 7.8.18, 7.8.15, 7.8.16, 7.8.17, 7.8.18, 7.8.19, 7.11.5, 7.11.6, 7.11.15, 7.11.14, 7.11.16, 7.11.18, 7.11.19, 7.11.20, 7.11.21, 7.11.31, 7.11.33, 7.11.35, 7.11.34, 7.11.38, 7.11.37, 7.11.41, 7.11.42, 7.11.43, 7.11.44, 7.11.45, 7.11.46, 7.11.47, 7.11.48, 7.11.49, 7.11.50, 7.11.51, 7.12.4, 7.12.5, 7.12.11, 7.12.21, 7.12.22, 7.12.23, 7.12.24, 7.12.26, 7.12.26, 7.12.27, 7.12.28, 7.12.29, 7.12.30, 7.12.33, 7.12.34, 7.12.36, 7.12.37, 7.12.55, 7.12.54, 7.12.56, 7.12.56, 7.12.57, 7.12.58, 7.12.58, 7.12.59, 7.12.60, 7.12.62, 7.12.63, 7.12.66, 7.12.66, 7.12.66, 7.12.69, 8.1.5, 8.2.5, 8.2.6, 8.2.7, 8.2.8, 8.2.11, 8.2.12, 8.2.13, 8.2.14, 8.3.1, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.8, 8.3.10, 8.3.11, 8.3.12, 8.9.1, 8.9.3, 8.9.2, 8.9.9, 8.9.6, 8.9.7, 8.10.1, 8.11.1, 8.11.2, 8.11.4, 8.11.5, 8.11.6, 8.11.7, 8.11.8, 8.11.9, 8.11.10, 8.11.11, 8.11.12, 8.11.13, 8.11.14, 8.11.15, 8.11.16, 8.11.17, 8.11.18, 8.11.19, 8.11.20, 8.11.21, 8.11.22, 8.11.23, 8.11.24, 8.11.25, 8.11.26, 8.11.27, 8.11.28, 8.11.29, 8.11.30, 8.11.31, 8.11.32, 8.12.1, 8.12.2, 8.12.3, 8.12.4, 8.12.5, 8.12.6, 8.12.7, 8.12.8, 8.12.9, 8.12.10, 8.12.11, 8.12.12, 8.12.13, 8.12.14, 8.12.15, 8.12.16, 8.12.17, 8.12.18, 8.12.19, 8.12.20, 8.12.21, 8.12.22, 8.12.23, 8.12.24, 8.12.25, 8.12.26, 8.12.27, 8.12.28, 8.12.29, 8.12.30, 8.12.31, 8.12.32, 8.12.33, 8.12.34, 8.12.35, 8.12.36, 8.12.37, 8.12.38, 8.12.39, 8.12.40, 8.12.41, 8.12.42, 8.12.43, 8.12.44, 10.3.2, 10.3.3, 10.3.5, 10.3.6, 10.3.8, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.17, 10.3.28, 10.3.27, 10.3.28, 10.4.3, 10.4.9, 10.9.1, 10.9.2, 10.9.4, 10.9.5, 10.9.7, 10.9.8, 10.9.9, 10.9.10, 10.9.11, 10.9.13, 10.7.1, 10.7.2, 10.7.3, 10.7.2, 10.7.4, 10.7.5, 10.7.9, 10.7.10, 10.7.11, 10.7.12, 10.9.3, 10.9.9, 10.10.1, 10.10.2, 10.10.4, 10.10.5, 10.10.6, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.5.4, 11.5.5, 11.5.6, 11.3.7, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.21, 11.3.23, 11.3.25, 11.3.26, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.32, 11.3.33, 11.3.29, 11.3.36, 11.3.37, 11.3.38, 11.4.3, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.4.13, 11.4.14, 11.9.1, 11.9.3, 11.9.2, 11.9.4, 11.9.5, 11.9.7, 11.9.8, 11.9.9, 11.9.12, 11.9.14, 11.5.17, 11.5.18, 11.5.28, 11.5.21, 11.7.1, 11.7.2, 11.7.3, 11.7.4, 11.7.5, 11.7.7, 11.8.1, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.6, 11.9.7, 11.9.8, 11.9.10, 11.8.11, 11.8.13, 11.8.14, 11.10.1, 11.10.3, 11.10.3, 11.10.4, 11.10.6, 11.10.8, 11.10.7, 11.10.9, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.2, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.12, 11.11.13, 11.11.14, 11.11.15, 11.11.17, 11.11.18, 11.11.19, 11.11.20, 11.11.21, 11.11.22, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.13, 11.12.14, 11.12.15, 11.12.16, 11.12.17, 11.12.18, 11.12.19, 11.12.20, 12.3.5, 12.3.6, 12.3.7, 12.3.8, 12.3.10, 12.3.2, 12.3.3, 12.3.4, 12.3.5, 12.3.6, 12.3.7, 12.3.9, 12.3.10, 12.3.11, 12.3.14, 12.3.15, 12.3.16, 12.3.18, 12.3.20, 12.3.1, 12.3.2, 12.3.3, 12.3.4, 12.9.6, 12.9.7, 12.9.10, 12.9.15, 12.8.1, 12.8.2, 12.8.5, 12.8.11, 12.8.12, 12.8.14, 12.8.16, 12.8.17, 12.8.20, 12.8.24, 12.8.26, 12.9-10.1, 12.9-10.2, 12.9-10.3, 12.9-10.4, 12.9-10.5, 12.8-10.6, 12.8-10.7, 12.8-10.8, 12.8-8.11, 12.9-10.12, 12.9-10.14, 12.9-10.17, 12.8-12.15, 12.9-10.31, 12.9-10.29, 12.9-10.29, 12.9-10.27, 12.9-10.28, 12.9-10.28, 12.11.2, 12.11.3, 12.11.5, 12.11.6, 12.11.7, 12.11.8, 12.11.9, 12.11.11, 12.11.14, 12.11.15, 12.11.16, 12.11.17, 12.11.18, 12.11.20, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.2, 12.12.5, 12.12.4, 12.12.5, 12.12.6, 12.12.7, 12.12.8, 12.12.9, 12.12.11, 12.12.12, 12.12.14, 12.12.15, 12.12.16, 12.12.25, 12.12.24, 12.12.25, 12.12.26, 13.3.1, 13.3.2, 13.3.3, 13.3.4, 13.3.5, 10.3.7, 13.9.2, 13.11.1, 13.11.2, 13.11.3, 13.11.4, 13.11.5, 13.11.6, 13.11.8, 13.11.8, 13.12.1, 13.12.2, 13.12.3, 13.12.4, 13.12.5, 13.12.6, 13.12.8, 13.12.10.

3.6 Area Management Plan(s)

Nil

3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as*

Coastal

*See also Map 4.3

3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 1 Plan: RP199206.

4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:
https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form

Regulated vegetation management map

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new property maps of assessable vegetation (PMAV).

Vegetation management supporting map

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

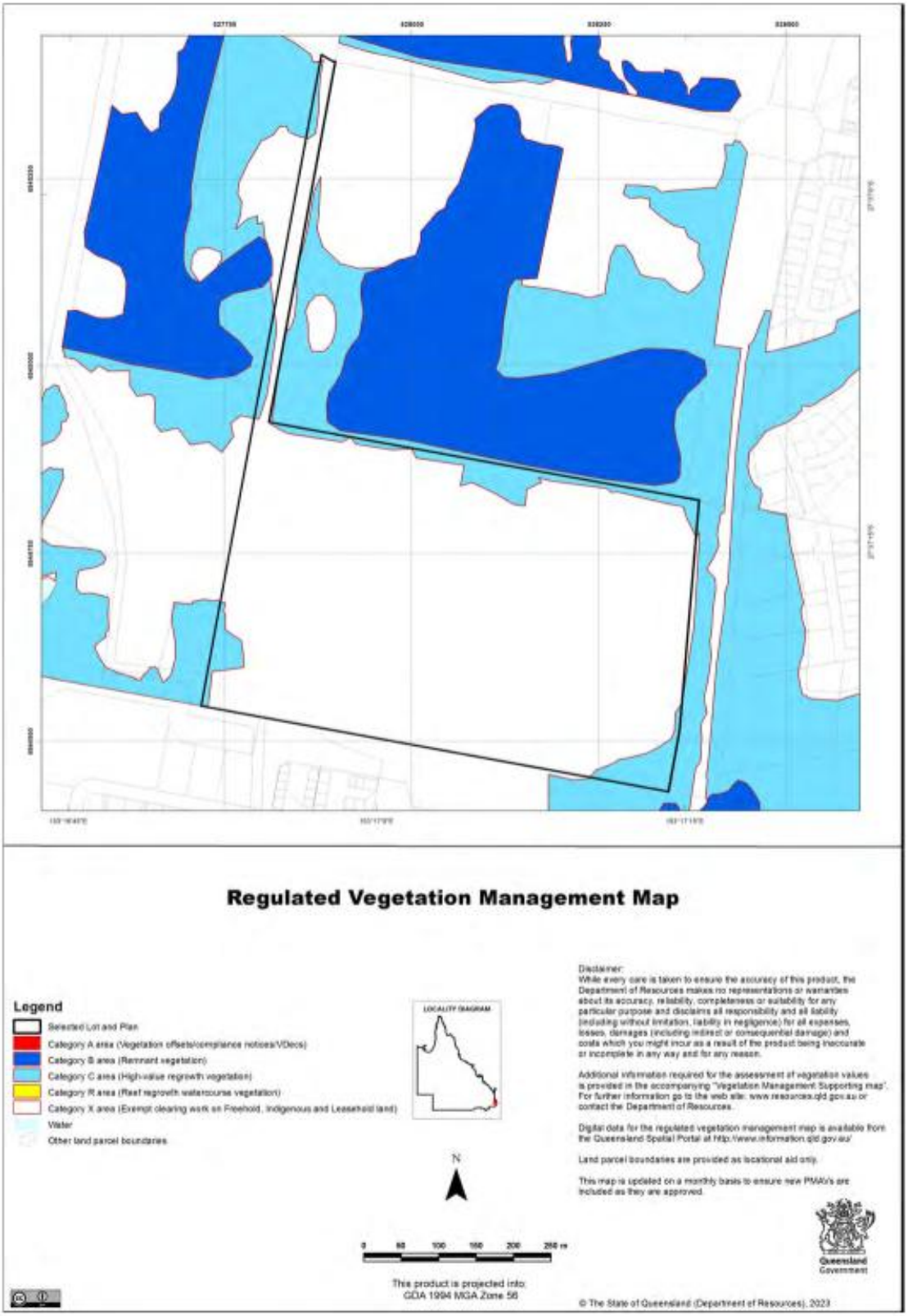
Coastal/non-coastal map

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture

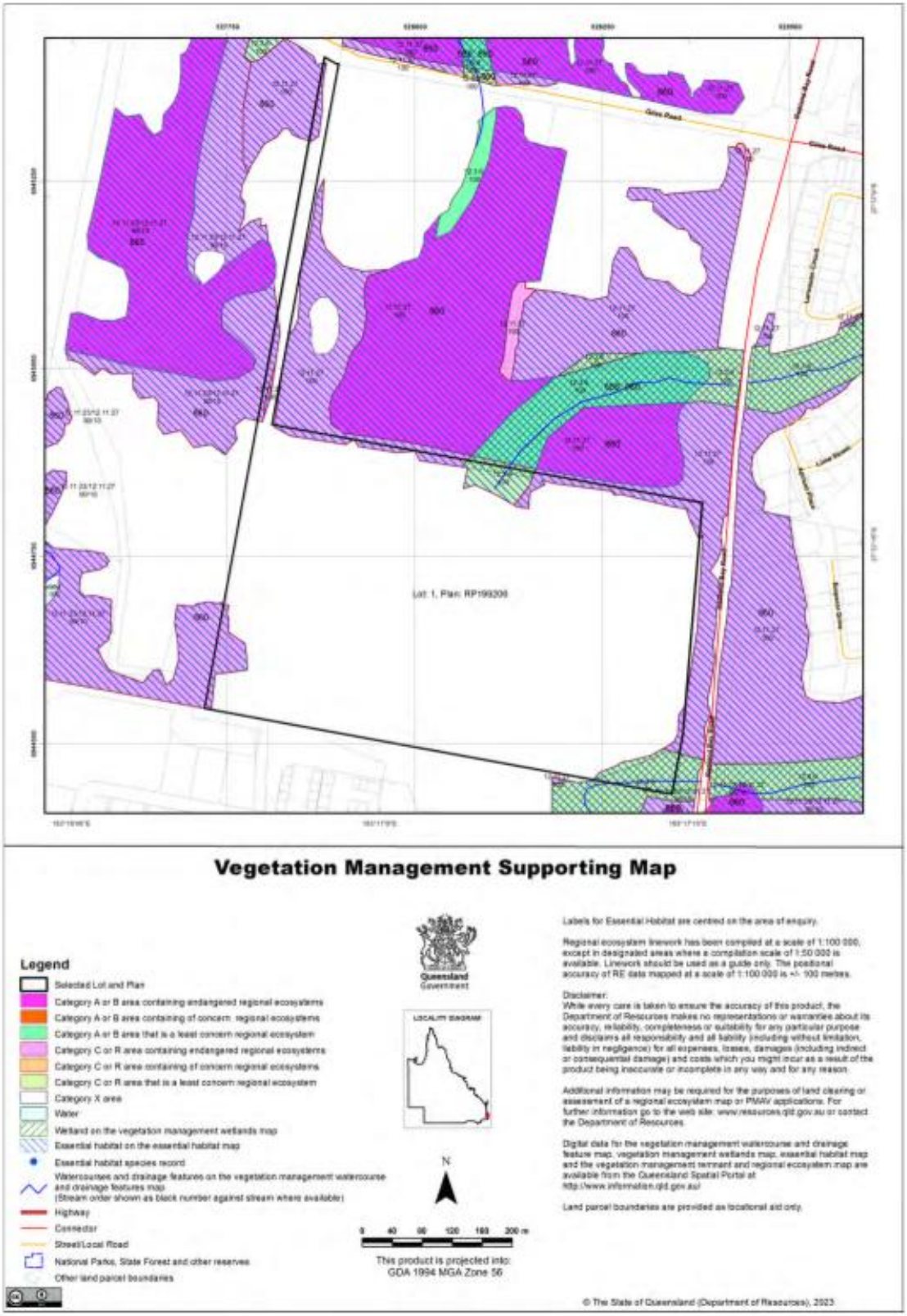
The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

4.1 Regulated vegetation management map



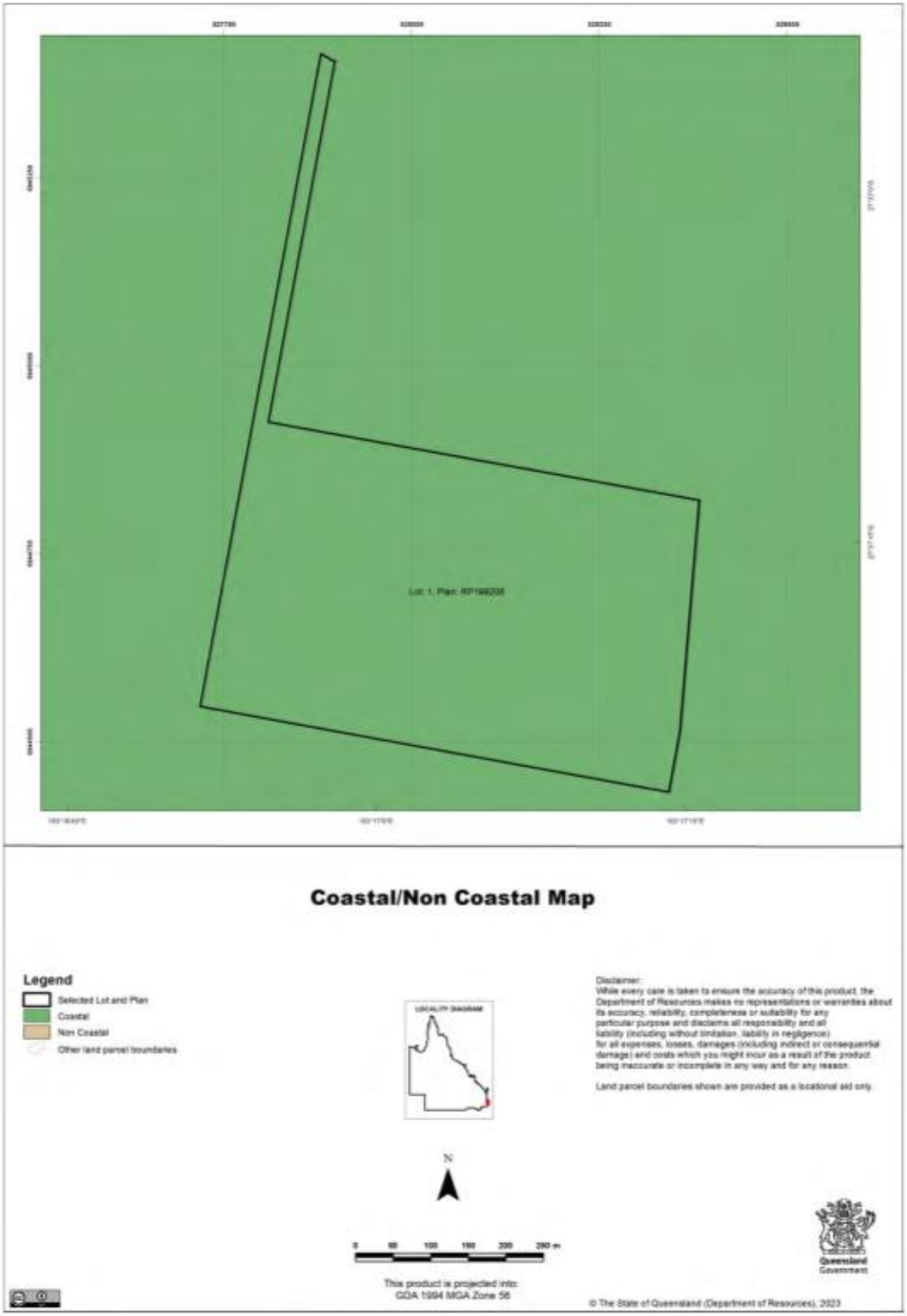
Vegetation management report, Department of Resources, 2023 Page 14

4.2 Vegetation management supporting map



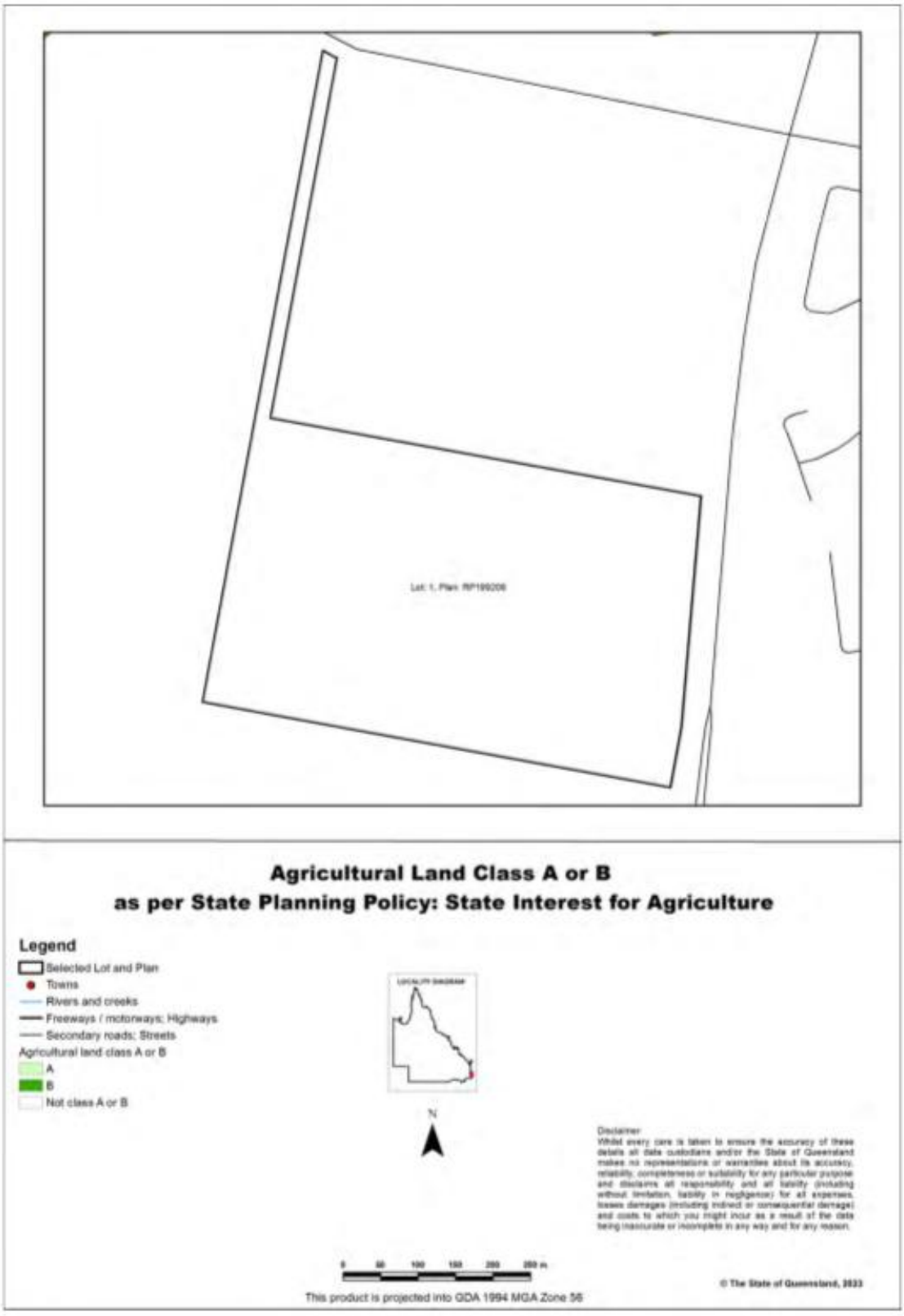
Vegetation management report, Department of Resources, 2023 Page 15

4.3 Coastal/non-coastal map



Vegetation management report, Department of Resources, 2023 Page 16

4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



Vegetation management report, Department of Resources, 2023 Page 17

5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the *Nature Conservation Act 1992* (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see Operational policy: When a protected plant in Queensland is considered to be 'in the wild') that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for threatened and near threatened plants. These are areas where threatened or near threatened plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the Flora survey guidelines. The main objective of a flora survey is to locate any threatened or near threatened plants that may be present in the clearing impact area.

If the flora survey identifies that threatened or near threatened plants are not present within the clearing impact area or clearing within 100m of a threatened or near threatened plant can be avoided, the clearing activity is exempt from a permit. An exempt clearing notification form must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that threatened or near threatened plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the clearing permit application form.

5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that threatened or near threatened plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

5.4 Contact information for DES

For further information on the protected plants framework:
Phone 1300 130 372 (and select option four)
Email palm@des.qld.gov.au
Visit https://www.qld.gov.au/environment/plants-animals/plants/protected-plants

5.5 Protected plants flora survey trigger map

This map included may also be requested individually at: https://apps.des.qld.gov.au/map-request/flora-survey-trigger/.

Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

Species information

Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the Queensland Spatial Catalogue, the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the clearing of protected plants for more information.

Protected Plants Flora Survey Trigger Map

Legend

- Selected Lot and Plan
- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets

N

This product is projected into: GDA 1994 MGA Zone 56

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at palm@des.qld.gov.au

Disclaimer:
While every care is taken to ensure the accuracy of the data used to generate this product, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damages) and costs which might be incurred as a consequence of reliance on the data, or as a result of the data being inaccurate or incomplete in any way and for any reason.

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Vegetation management report, Department of Resources, 2023 Page 20

6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as endangered by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

6.1 Koala mapping

6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document Spatial modelling in South East Queensland.

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document Guideline - Requests to make, amend or revoke a koala habitat area determination.

The koala habitat area map will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:
https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

Interfering with koala habitat means:

1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the Planning Regulation 2017. More information on exempted development can be found here:
https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the Nature Conservation (Koala) Conservation Plan 2017 prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

6.4 Contact information for DES

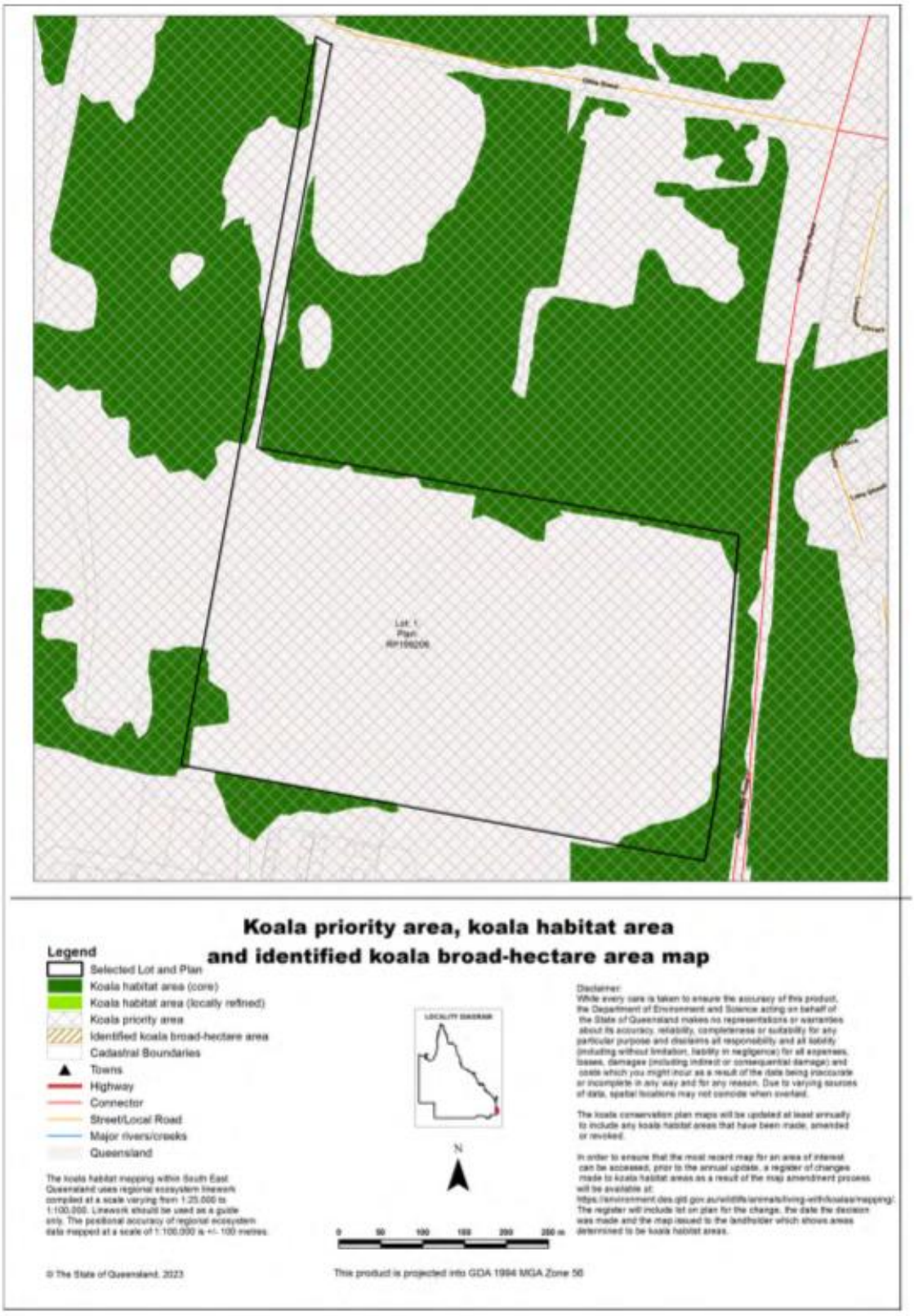
For further information on the koala protection framework:
Phone 13 QGOV (13 74 68)
Email koala.assessment@des.qld.gov.au
Visit https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping

7. Koala protection framework details for Lot: 1 Plan: RP199206

7.1 Koala districts

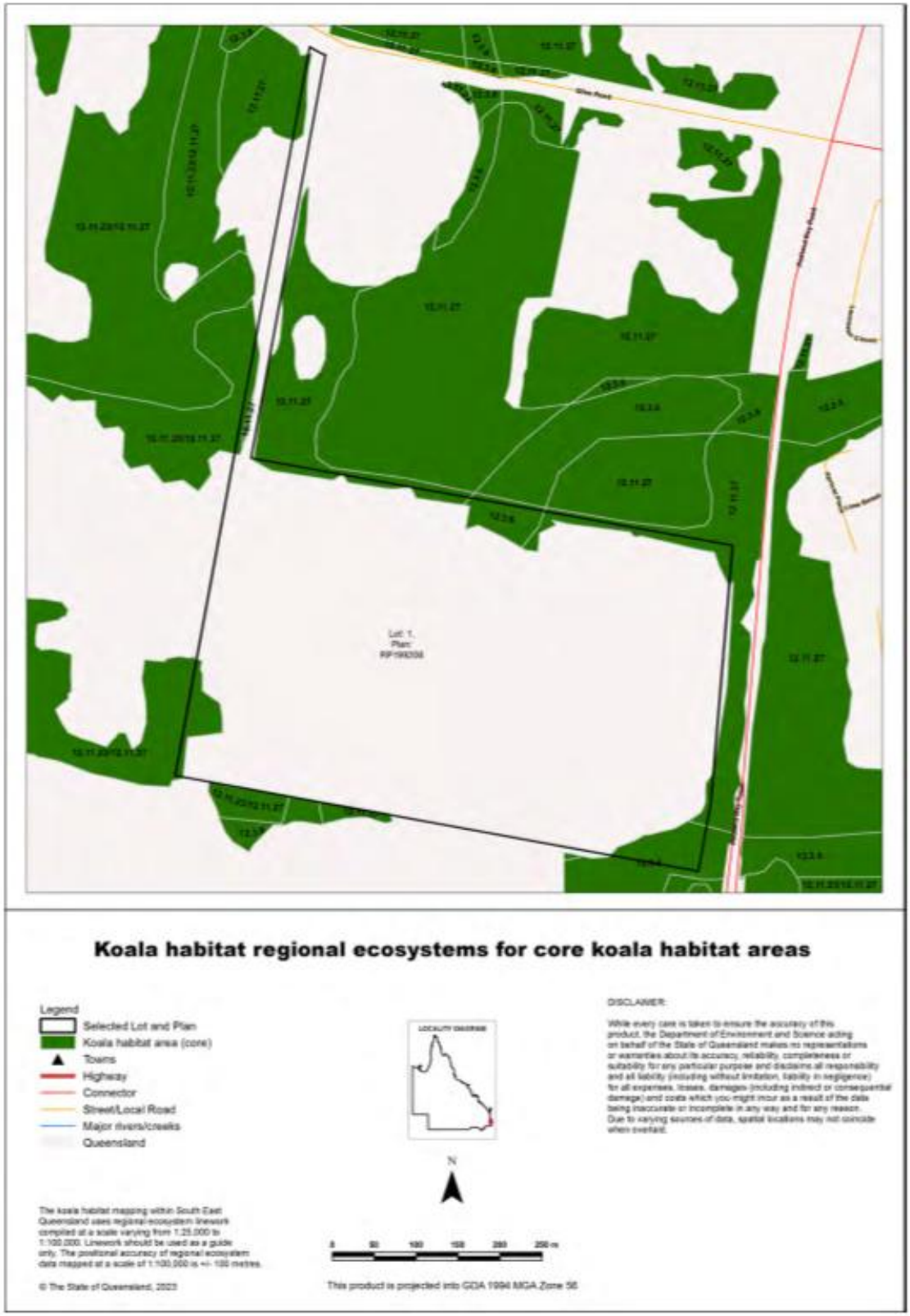
Koala District A

7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map



Vegetation management report, Department of Resources, 2023 Page 24

7.3 Koala habitat regional ecosystems for core koala habitat areas



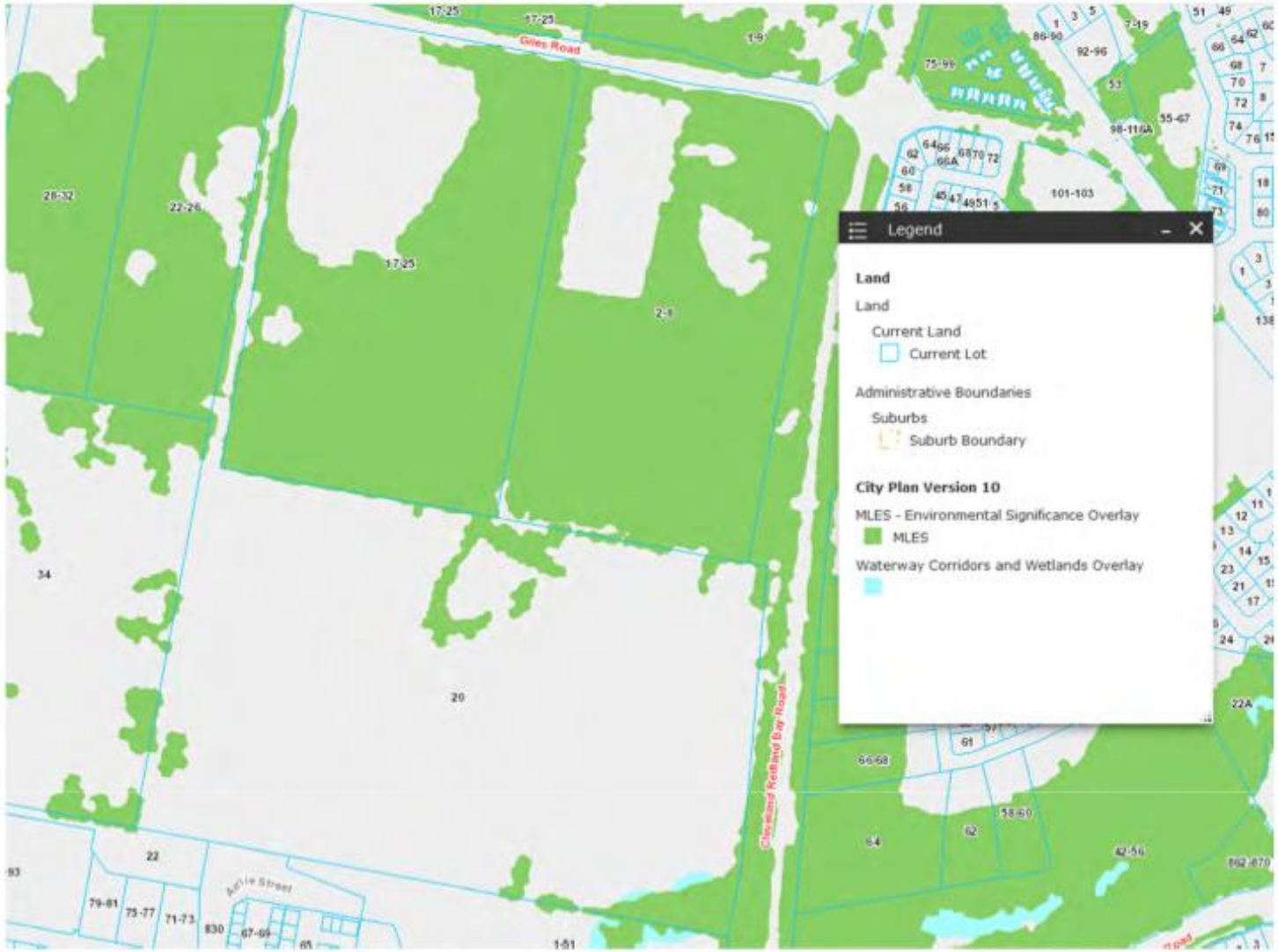
8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
• Interference with overland flow • Earthworks, significant disturbance	*Water Act 2000* *Soil Conservation Act 1986*	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) www.rdmw.qld.gov.au www.resources.qld.gov.au
• Indigenous Cultural Heritage	*Aboriginal Cultural Heritage Act 2003* *Torres Strait Islander Cultural Heritage Act 2003*	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) www.datsip.qld.gov.au
• Mining and environmentally relevant activities • Infrastructure development (coastal) • Heritage issues	*Environmental Protection Act 1994* *Coastal Protection and Management Act 1995* *Queensland Heritage Act 1992*	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) www.des.qld.gov.au
• Protected plants and protected areas	*Nature Conservation Act 1992*	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) palm@des.qld.gov.au www.des.qld.gov.au
• Koala mapping and regulations	*Nature Conservation Act 1992*	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) Koala.assessment@des.qld.gov.au
• Interference with fish passage in a watercourse, mangroves • Forestry activities on State land tenures	*Fisheries Act 1994* *Forestry Act 1959*	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) www.daf.qld.gov.au
• Matters of National Environmental Significance including listed threatened species and ecological communities	*Environment Protection and Biodiversity Conservation Act 1999*	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 www.environment.gov.au
• Development and planning processes	*Planning Act 2016* *State Development and Public Works Organisation Act 1971*	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) www.dsdmip.qld.gov.au
• Local government requirements	*Local Government Act 2009* *Planning Act 2016*	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
• Harvesting timber in the Wet Tropics of Qld World Heritage area	*Wet Tropics World Heritage Protection and Management Act 1993*	Wet Tropics Management Authority	Ph: (07) 4241 0500 www.wettropics.gov.au

Vegetation management report, Department of Resources, 2023 Page 26

APPENDIX E
RCC Environmental Overlays

APPENDIX E – MLES (source: Red-e-map, 2023)



APPENDIX F
State, Regional and Local Corridors: State and Regional Corridor Mapping & Redland City Wildlife Connections Plan for the Study Area and Surrounds

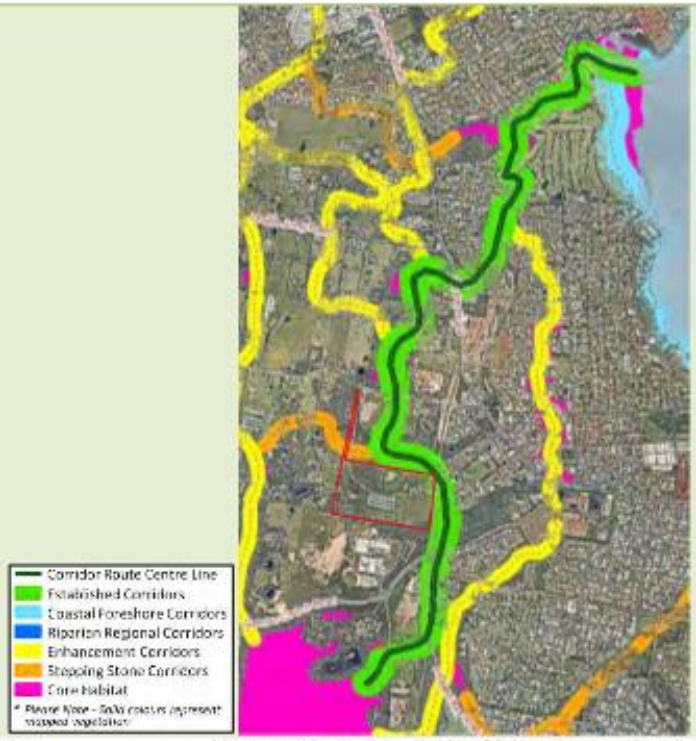
APPENDIX F: STATE, REGIONAL AND LOCAL CORRIDORS

State and Regional Biodiversity Corridors
Source: Qld Globe (accessed 16/05/2023)

APPENDIX F: STATE, REGIONAL AND LOCAL CORRIDORS

REDLAND CITY PLAN 2018 - Version 9 Source: Red-e-map (accessed 16/05/2023)

Moogurrapum Creek to Kindilan/Days Road - Established Corridor



Description	North south corridor linking Moogurrapum Creek Corridor to Kindilan/Days Road Conservation Area, via Giles Road Conservation Area and Carolyn Place Bushland Refuge.
Environmental Values	Linking coastal foreshore vegetation (12.1.2 saltpan and 12.1.3 mangrove) at lower reach of Moogurrapum Creek to coastal spotted gum forests (12.11.5j), via coastal riparian vegetation in Redland Bay area (12.3.6). Links to blackbutt forest at Kindilian and Days Road (12.11.23). Wader bird habitat along coastal foreshore/intertidal zone. Aquatic species values in Moogurrapum Creek. Multiple corridor and waterway dependent bird species recorded at south end of corridor (including Glossy Black-Cockatoo). Numerous koala records along corridor. Contains High Ecological Values waters under State Environmental Protection (Water) Policy 2009 covering ~15 per cent of corridor length.
Core Habitat Linkages	Links ≈9 core habitat patches. Maximum distance between patches is ≈1000m.
Land Uses / Tenure	Trunk of northern section of corridor made up of Moogurrapum Creek Corridor reserves, surrounded by urban residential development the north and west and a golf course to the east. Mid-section of corridor made up Conservation, Environmental Protection and Community Purposes zoned land, with urban development to the east and rural areas to the west. South section of corridor includes Park Residential zoning and the German Church Road Landfill Site.
Community Use	Recreational uses in Conservation areas. Waterway recreation and access along Moogurrapum Creek. Charlie Buckler Sports field.
Threats & Barriers	Poor urban land management (e.g. uncontrolled domestic animals, garden escapee weeds, noise and light disturbance). Crossings of Redland Bay Road, Gordon Road and Boundary Street. Golf course and landfill impacts.
Gaps & Pinch Points	Pinch point at Charlie Buckler Sports Field.
Priority Outcomes	Safe fauna passage across Redland Bay Road, Gordon Road and Boundary Street. Management of impacts from urban area (e.g. garden escapee weeds, domestic animal control, etc).

APPENDIX F: STATE, REGIONAL & LOCAL CORRIDORS

REDLAND CITY PLAN 2018 - Version 9 Source: Red-e-map (accessed 16/05/2023)

Giles Road Conservation Area to Giles Road – Stepping Stone Corridor

Description	East to west linkage of Giles Road Conservation to Giles Road.
Environmental Values	Linking blackbutt open forest/open spotted gum dominated forest complex (12.11.23/12.11.5j) of south of Giles Road to open spotted gum dominated forest complex of Giles Road Conservation Area.
Core Habitat Linkages	Links ≈4 core habitat patches. Maximum distance between patches is ≈950m.
Land Uses / Tenure	Primarily Conservation zoned land with relatively large cleared area zoned as Rural Non Urban land.
Community Use	Recreational use of Giles Road Conservation Area.
Threats & Barriers	Poor rural and peri-urban land management (e.g. uncontrolled domestic animals, garden escapee weeds, noise and light disturbance, vehicles, grazing pressure, vegetation clearing).
Gaps & Pinch Points	Gap across cleared Rural Non Urban zoned land.
Priority Outcomes	Rehabilitation of gap across cleared Rural Non Urban zoned land.

APPENDIX G
Tree Plot Details

Appendix 5. Summary of combined tree plot data

DBH: Diameter at Breast Height (measured at 130cm above the ground)
TPZ: Tree Protection Zone
Trees highlight in green are old-growth paddock trees
*Exotic species

Tree ID	Species	DBH (cm)	TPZ (metres)	Notes
1	*Eucalyptus pilularis*	100	12.0	
2	*Eucalyptus tindaliae*	60	7.2	
3	*Eucalyptus tindaliae*	40	4.8	
4	*Eucalyptus tindaliae*	40	4.8	
5	*Eucalyptus siderophloia*	50	6.0	
6	*Eucalyptus siderophloia*	80	9.6	
7	*Eucalyptus racemosa*	60	7.2	
8	*Eucalyptus siderophloia*	40	4.8	
9	*Eucalyptus siderophloia*	30	3.6	
10	*Eucalyptus racemosa*	50	6.0	
11	*Eucalyptus tereticornis*	70	8.4	
12	*Eucalyptus racemosa*	100	12.0	
13	*Eucalyptus tereticornis*	100	12.0	
14	*Eucalyptus tindaliae*	50	6.0	
15	*Eucalyptus tindaliae*	40	4.8	
16	*Corymbia intermedia*	100	12.0	Old growth
17	*Eucalyptus tindaliae*	50	6.0	
18	*Eucalyptus siderophloia*	80	9.6	
19	*Eucalyptus pilularis*	60	7.2	
20	*Eucalyptus tindaliae*	60	7.2	
21	*Acacia disparrima*	40	4.8	
22	*Eucalyptus pilularis*	90	10.8	
23	*Eucalyptus pilularis*	40	4.8	
24	*Eucalyptus pilularis*	100	12.0	
25	*Eucalyptus siderophloia*	80	9.6	Old growth
26	*Eucalyptus tereticornis*	110	13.2	
27	*Eucalyptus siderophloia*	80	9.6	
28	*Eucalyptus racemosa*	80	9.6	Old growth
29	*Eucalyptus siderophloia*	100	12.0	Old growth
30	*Eucalyptus siderophloia*	40	4.8	
31	*Eucalyptus siderophloia*	80	9.6	Old growth
32	DEAD	50	6.0	
33	DEAD	40	4.8	
34	*Eucalyptus racemosa*	80	9.6	
35	*Eucalyptus racemosa*	130	15.6	
36	*Corymbia intermedia*	50	6.0	
37	*Cinnamomum camphora**	80	9.6	
38	*Eucalyptus pilularis*	50	6.0	
39	*Eucalyptus tindaliae*	50	6.0	
40	*Eucalyptus racemosa*	100	12.0	
41	*Eucalyptus racemosa*	80	9.6	
42	*Eucalyptus racemosa*	80	9.6	
43	*Eucalyptus tindaliae*	40	4.8	

Tree ID	Species	DBH (cm)	TPZ (metres)	Notes
44	*Eucalyptus racemosa*	70	8.4	
45	*Eucalyptus racemosa*	70	8.4	
46	*Eucalyptus sp.*	90	10.8	
47	*Eucalyptus tereticornis*	100	12.0	
48	*Corymbia trachyphloia*	70	8.4	
49	*Eucalyptus tindaliae*	40	4.8	
50	*Eucalyptus tereticornis*	100	12.0	
51	*Corymbia intermedia*	20	2.4	
52	*Eucalyptus tereticornis*	30	3.6	
53	*Eucalyptus tereticornis*	30	3.6	
54	*Eucalyptus tereticornis*	50	6.0	
55	*Eucalyptus tereticornis*	60	7.2	
56	*Eucalyptus tereticornis*	90	10.8	
57	*Eucalyptus tereticornis*	80	9.6	
58	*Corymbia trachyphloia*	60	7.2	
59	*Eucalyptus tereticornis*	70	8.4	
60	*Eucalyptus tereticornis*	50	6.0	
61	*Eucalyptus tereticornis*	50	6.0	Old growth
62	*Corymbia trachyphloia*	100	12.0	Old growth
63	*Eucalyptus tereticornis*	80	9.6	
64	*Cinnamomum camphora**	70	8.4	
65	*Eucalyptus siderophloia*	40	4.8	
66	*Cinnamomum camphora**	40	4.8	
67	*Eucalyptus pilularis*	40	4.8	
68	*Eucalyptus pilularis*	50	6.0	
69	*Eucalyptus pilularis*	40	4.8	
70	*Eucalyptus pilularis*	40	4.8	
71	*Corymbia torelliana*	40	4.8	
72	*Eucalyptus siderophloia*	40	4.8	
73	*Eucalyptus tereticornis*	50	6.0	
74	*Eucalyptus tereticornis*	80	9.6	
75	*Eucalyptus tereticornis*	120	14.4	
76	*Eucalyptus tereticornis*	120	14.4	
77	DEAD	50	6.0	
78	DEAD	50	6.0	
79	*Eucalyptus siderophloia*	50	6.0	Old growth
80	*Corymbia intermedia*	50	6.0	
81	*Eucalyptus tindaliae*	50	6.0	
82	DEAD	80	9.6	
83	*Eucalyptus microcorys*	200	24.0	Old growth
84	*Eucalyptus tereticornis*	90	10.8	
85	*Corymbia intermedia*	30	3.6	
86	*Eucalyptus tereticornis*	80	9.6	
87	*Eucalyptus tindaliae*	30	3.6	
88	*Eucalyptus tereticornis*	80	9.6	
89	*Eucalyptus tereticornis*	80	9.6	
90	*Eucalyptus tereticornis*	40	4.8	

Tree ID	Species	DBH (cm)	TPZ (metres)	Notes
91	*Eucalyptus tindaliae*	5	0.6	
92	*Eucalyptus tereticornis*	5	0.6	
93	*Eucalyptus tereticornis*	80	9.6	
94	DEAD	40	4.8	
95	DEAD	50	6.0	
96	*Eucalyptus tereticornis*	100	12.0	
97	*Grevillea robusta*		0.0	
98	*Grevillea robusta*		0.0	
99	*Eucalyptus siderophloia*	70	0.0	Old growth
100	*Eucalyptus pilularis*	74	8.9	
101	*Eucalyptus pilularis*	89	10.7	
102	*Grevillea robusta*	10	1.2	
103	*Eucalyptus pilularis*	77	9.3	
104	*Grevillea robusta*	16	1.9	
105	*Eucalyptus pilularis*	73	8.8	
106	*Grevillea robusta*	11	1.3	
107	*Eucalyptus pilularis*	55	6.6	
108	*Eucalyptus racemosa*	61	7.3	
109	*Corymbia intermedia*	35	4.2	
110	*Grevillea robusta*	38	4.6	
111	*Ficus sp.*	124	14.9	
112	*Eucalyptus pilularis*	156	18.7	
113	*Ficus sp.*	148	17.8	Scratches present on trunk
114	*Corymbia trachyphloia*	54	6.5	Large tree, no hollows; Old growth
115	*Eucalyptus tereticornis*	45	5.4	
116	*Acacia disparrima*	33	4.0	
117	*Corymbia intermedia*	21	2.5	Leaning
118	*Eucalyptus tereticornis*	31	3.7	
119	*Corymbia intermedia*	20	2.4	
120	*Eucalyptus microcorys*	25	3.0	Main trunk lost
121	*Eucalyptus tereticornis*	48	5.8	
122	*Eucalyptus tereticornis*	18	2.2	
123	*Corymbia intermedia*	37	4.4	
124	*Corymbia intermedia*	16	1.9	
125	*Melaleuca quinquenervia*	55	6.5	
126	*Eucalyptus siderophloia*	84	10.1	Starting to form small hollows
127	*Melaleuca quinquenervia*	46	5.5	
128	*Melaleuca quinquenervia*	44	5.3	
129	*Melaleuca quinquenervia*	23	2.8	
130	*Melaleuca quinquenervia*	36	4.3	
131	*Melaleuca quinquenervia*	34	4.0	
132	*Eucalyptus tereticornis*	26	3.1	
133	*Eucalyptus racemosa*	32	3.8	
134	*Eucalyptus tereticornis*	44	5.3	
135	*Eucalyptus siderophloia*	15	1.8	
136	*Eucalyptus siderophloia*	20	2.4	
137	*Eucalyptus racemosa*	65	7.8	

Tree ID	Species	DBH (cm)	TPZ (metres)	Notes
138	*Corymbia intermedia*	25	3.0	
139	*Corymbia intermedia*	52	6.2	
140	*Corymbia intermedia*	24	2.9	Top removed by fallen adjoining tree
141	*Corymbia intermedia*	41	4.9	
142	*Lophostemon suaveolens*	17	2.0	
143	*Eucalyptus propinqua*	26	3.1	
144	*Eucalyptus racemosa*	35	4.2	
145	*Melaleuca quinquenervia*	38	4.6	
146	*Melaleuca quinquenervia*	45	5.4	
147	*Melaleuca quinquenervia*	26	3.1	
148	*Melaleuca quinquenervia*	26	3.1	
149	*Corymbia intermedia*	67	8.1	One trunk not living
150	*Melaleuca quinquenervia*	29	3.5	
151	*Corymbia intermedia*	38	4.6	
152	*Eucalyptus tereticornis*	24	2.9	
153	*Melaleuca quinquenervia*	25	3.0	
154	*Corymbia intermedia*	45	5.4	
155	*Melaleuca quinquenervia*	35	4.2	
156	*Melaleuca quinquenervia*	25	3.0	
157	*Melaleuca quinquenervia*	27	3.2	
158	*Eucalyptus tereticornis*	34	4.1	
159	*Eucalyptus moluccana*			
160	*Eucalyptus moluccana*			
161	*Eucalyptus moluccana*			
162	*Corymbia torelliana*			

APPENDIX H
State, Regional and Local Biodiversity Corridors

List of fauna species recorded from the study area and immediate surrounds on 2 May 2023

Scientific Name	Common Name	Status	
		NC Act	EPBC Act
Amphibians			
Rhinella marina	Cane Toad		
Litoria fallax	Eastern Sedgefrog	C	
Litoria rubella	Ruddy Treefrog	C	
Limnodynastes peronii	Striped Marshfrog	C	
Crinia signifera	Clicking Froglet	C	
Birds			
Acanthiza chrysorrhoa	Yellow-rumped Thornbill	C	
Acanthiza lineata	Striated Thornbill	C	
Acanthiza pusilla	Brown Thornbill	C	
Gerygone olivacea	White-throated Gerygone	C	
Sericornis frontalis	White-browed Scrubwren	C	
Accipiter fasciatus	Brown Goshawk	C	
Haliaeetus leucogaster	White-bellied Sea-eagle	C	
Haliastur sphenurus	Whistling Kite	C	
Dacelo novaeguineae	Laughing Kookaburra	C	
Todiramphus macleayii	Forest Kingfisher	C	
Anas gracilis	Grey Teal	C	
Anas superciliosa	Pacific Black Duck	C	
Chenonetta jubata	Australian Wood Duck	C	
Ardea intermedia	Intermediate Egret	C	
Bubulcus ibis	Cattle Egret	C	
Egretta novaehollandiae	White-faced Heron	C	
Artamus leucorynchus	White-breasted Woodswallow	C	
Cracticus nigrogularis	Pied Butcherbird	C	
Cracticus torquatus	Grey Butcherbird	C	
Gymnorhina tibicen	Australian Magpie	C	
Strepera graculina	Pied Currawong	C	
Cacatua sanguinea	Little Corella	C	
Eolophus roseicapilla	Galah	C	
Coracina novaehollandiae	Black-faced Cuckoo-shrike	C	
Lalage leucomela	Varied Triller	C	
Elseyornis melanops	Black-fronted Dotterel	C	
Vanellus miles	Masked Lapwing	C	
Cormobates leucophaea metastasis	White-throated Treecreeper (southern)	C	
Columba livia	Rock Dove		
Geopelia humeralis	Bar-shouldered Dove	C	
Geopelia placida	Peaceful Dove	C	
Ocyphaps lophotes	Crested Pigeon	C	
Corvus orru	Torresian Crow	C	
Centropus phasianinus	Pheasant Coucal	C	
Dicaeum hirundinaceum	Mistletoebird	C	
Dicrurus bracteatus	Spangled Drongo	C	

Scientific Name	Common Name	Status	
		NC Act	EPBC Act
Lonchura castaneothorax	Chestnut-breasted Mannikin	C	
Neochmia temporalis	Red-browed Finch	C	
Taeniopygia bichenovii	Double-barred Finch	C	
Falco cenchroides	Nankeen Kestrel	C	
Hirundo neoxena	Welcome Swallow	C	
Petrochelidon ariel	Fairy Martin	C	
Petrochelidon nigricans	Tree Martin	C	
Malurus lamberti	Variegated Fairy-wren	C	
Malurus melanocephalus	Red-backed Fairy-wren	C	
Entomyzon cyanotis	Blue-faced Honeyeater	C	
Lichmera indistincta	Brown Honeyeater	C	
Manorina melanocephala	Noisy Miner	C	
Meliphaga lewinii	Lewin's Honeyeater	C	
Melithreptus albogularis	White-throated Honeyeater	C	
Myzomela sanguinolenta	Scarlet Honeyeater	C	
Philemon corniculatus	Noisy Friarbird	C	
Plectorhyncha lanceolata	Striped Honeyeater	C	
Merops ornatus	Rainbow Bee-eater	C	
Grallina cyanoleuca	Magpie-lark	C	
Myiagra rubecula	Leaden Flycatcher	C	
Sphecotheres vieilloti	Australasian Figbird	C	
Colluricincla harmonica	Grey Shrike-thrush	C	
Pachycephala rufiventris	Rufous Whistler	C	
Pardalotus striatus	Striated Pardalote	C	
Microcarbo melanoleucos	Little Pied Cormorant	C	
Alisterus scapularis	Australian King-Parrot	C	
Platycercus adscitus	Pale-headed Rosella	C	
Trichoglossus moluccanus	Rainbow Lorikeet	C	
Gallinula tenebrosa	Dusky Moorhen	C	
Rhipidura albiscapa	Grey Fantail	C	
Rhipidura leucophrys	Willie Wagtail	C	
Acridotheres tristis	Common Myna		
Threskiornis molucca	Australian White Ibis	C	
Zosterops lateralis	Silvereye	C	
Mammals			
Vulpes vulpes	Red Fox		
Lepus europaeus	European brown hare		
Notamacropus rufogriseus	Red-necked Wallaby	C	
Wallabia bicolor	Swamp Wallaby	C	
Isoodon macrourus	Northern Brown Bandicoot	C	
Trichosurus vulpecula	Common Brushtail Possum	C	
Reptiles			
Intellagama lesueurii	Eastern Water Dragon	C	
Lampropholis delicata	Dark-flecked Garden Sunskink	C	

APPENDIX I
Likelihood of occurrence of threatened flora and fauna species listed from PMST and Wildlife Online results and Field Assessment

Conservation significant terrestrial flora and vertebrate fauna species recorded or predicted to occur within a 5 km radius of the study area and their likelihood of occurrence (known, likely, potential, unlikely) within or immediately adjoining the study area.

Abbreviations: EPBC = status under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth); **NCA** = status under the *Nature Conservation Act 1992* (Queensland); **RCC** = Locally significant species; **PM** = EPBC Protected Matters Search Tool database search for the study area; **WN** = Queensland Department of Environment and Science WildNet database search within a 5 km radius of the study area; E = Endangered; V = Vulnerable; NT = Near Threatened; M = Migratory; Ma = Marine, SL = Special Least Concern (Migratory or culturally significant); LC = Least Concern; LS = Locally significant; X = species has been recorded within the database search area (Wildnet) or occurrence is predicted by Protected Matters Search Tool if suitable habitat is present (PM).

Likelihood of occurrence categories: Known - from other surveys (BAAM, other consultancies, databases), species recorded onsite; **Likely to occur** – species not known to occur onsite but the site is within the known range of the species, potentially suitable habitat is present and there are either database records for the local region or knowledge of the species occurrence suggests it may occur as a resident or visitor; means 'high potential' or good habitat is present but no species were observed onsite; **Potential to occur** – the site is within the known range of the species and potentially suitable habitat is present but there are no database records for the local region and/or it is a rare, erratic or poorly known species; means 'low potential' or habitat for species is not definitive; **Unlikely to occur** – no suitable habitat present and/or the site is outside of the known range of the species.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Birds								
Accipiter novaehollandiae	Grey Goshawk		LC	LS		X	Wooded habitats, sparse in region - concentrated on Mt Cotton – Sheldon (RCC Planning Scheme Policy 1).	**Potential.** There are few wooded habitats on site suitable for the species, though the species may rarely visit the study area. There are two local records within 5 km of the study area.
Anthochaera phrygia	Regent Honeyeater	CE	CE		X		Most commonly associated with box-ironbark eucalypt woodland and dry sclerophyll forest, but also inhabits riparian vegetation and lowland coastal forest. In addition it can be found in a range of other habitats including remnant trees in farmland, roadside reserves and travelling stock routes, and in planted vegetation in parks and gardens. Principally a canopy bird, it is reliant on select species of eucalypt and mistletoe which provide rich nectar flows (Commonwealth of Australia 2016).	**Unlikely**. The study area holds low value feeding habitats for the species and there are no local records.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Botaurus poiciloptilus	Australasian Bittern	E	E		X		Preferred habitat comprises wetlands with dense vegetation, especially where there is a mosaic of cover, where they forage in still, shallow water up to 0.3 m deep, often at the edges of pools or waterways, or from platforms or mats of vegetation over deep water. They favour permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and/or reeds or *Gahnia* sp. (Commonwealth of Australia 2022a).	**Unlikely**. There is no suitable dense swampy habitat present within the study area and there are no local records.
Calidrus canutus	Red Knot	E	E		X	X	Intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours. They rarely use inland lakes or swamps (DotE 2023a).	**Unlikely.** No suitable habitat present.
Calyptorhynchus lathami lathami	South-eastern Glossy-Black Cockatoo	V	V	LS	X	X	Occupies coastal woodlands and drier forest areas, open inland woodlands or timbered watercourses where its main food trees (Sheoaks) are common. Requires large hollows for nesting (DCCEEW 2022a)	**Unlikely.** Although known in the wider landscape, the vegetated portions of the study area do not hold any feeding resources and no suitable breeding habitats are present. No birds or feeding evidence (orts) were observed during the survey.
Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)	V	V		X		Occupies dry open eucalypt forests and woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey (DCCEEW 2023a).	**Unlikely.** Preferred habitat is not present and there are no local records.
Cyclopsitta diophthalma coxeni	Coxen's Fig-Parrot	CE	CE		X		Rainforest habitats including subtropical rainforest, dry rainforest, littoral and developing littoral rainforest, and vine forest (DCCEEW 2023b).	**Unlikely.** No suitable habitat and the there are no local records.
Ephippiorhynchus asiaticus	Black-necked Stork		LC	LS			Wetlands, rare visitor (RCC Planning Scheme Policy 1).	**Unlikely.** The western dam lacks suitable foraging habitat and the close proximity of forested edges to central dam is not preferred by the species. No records within 5km.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Erythrotriorchis radiatus	Red Goshawk	E	E		X		Prefers forest and woodland of intermediate density with a mosaic of vegetation types, large prey populations (birds), and permanent water. The vegetation types include eucalypt woodland, open forest, tall open forest, gallery rainforest, swamp sclerophyll forest, and rainforest margins. Nests in large trees 1 km from water (DotE 2023b)	**Unlikely**. No past records within 5km and the species was not observed during the field survey. No evidence of the characteristic stick nests of the species was recorded on site.
Esacus magnirostris	Beach Stone Curlew	CE	V	LS			Dunes, beaches (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present and no local records.
Falco hypoleucos	Grey Falcon	V	V		X		Frequents timbered lowland plains in arid and semi-arid Australia and mainly found where annual rainfall is less than 500 mm (TSSC 2020a).	**Unlikely.** The species appears to be absent in areas east of the Great Dividing Range in Queensland.
Geophaps scripta scripta	Squatter Pigeon	V	V		X		Dry grassy eucalypt woodlands and open forests, also *Callitris* and *Acacia* woodlands. Most birds live in sandy sites near permanent water. Natural foraging habitat is any remnant or regrowth open-forest to sparse, open-woodland or scrub. Breeding habitat occurs on stony rises occurring on sandy or gravelly soils, within 1 km of a suitable, permanent waterbody. (DotE 2023c)	**Unlikely.** Not known in local landscape.
Grantiella picta	Painted Honeyeater	V	V		X		Dry, open forests and woodlands (box, ironbark, yellow gum, melaleuca, casuarina, callitris, acacia), more common west of the Great Dividing Range (DES 2022a).	**Unlikely.** Not known in local landscape.
Hirundapus caudacutus	White-Throated Needletail	V, M	V		X	X	In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. Probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland. Has been recorded roosting in trees in forests and woodlands, both among dense foliage in the canopy or in hollows (DotE 2023d).	**Potential:** This aerial species may occur as a flyover while foraging. No suitable roosting habitat present.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Haematopus fuliginosus	Sooty Oyster-catchcer		LC	LS			Rocky coasts, coarse beaches (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present.
Lathamus discolor	Swift Parrot	CE	E		X		Summer breeder in Tasmania, over-winters in mainland Australia including Queensland. Key foraging tree species in Queensland are Grey Box *E. macrocarpa, Yellow Box E. melliodora, Swamp Mahogany E. robusta, Blue Gum E. tereticornis.* Priority sites are sites used for nesting, used by large proportions of the population, used repeatedly between seasons, used for long periods of time (TSSC 2016a).	**Unlikely.** A rare visitor to flowering eucalypts. There are no local records. The extant habitats hold very low potential for the species to occur.
Lewinia pectoralis	Lewin's Rail		LC	LS			Riparian – with cover (RCC Planning Scheme Policy 1).	**Unlikely.** Both dams lack suitable cover.
Limosa lapponica baueri	Western Alaskan bar-tailed godwit	V	V		X	X	Occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays (TSSC 2016b).	**Unlikely**. No suitable habitat present.
Lophoictinia isura	Square-tailed Kite		LC	LS			Eucalypt woodland and open forest, rare (RCC Planning Scheme Policy 1).	**Unlikely.** The site has minor woodland present and there are no local records.
Melithreptus gularis	Black-chinned Honeyeater		LC	LS			Eucalypt woodland and open forest, occasional visitor (RCC Planning Scheme Policy 1). A water-lily specialist.	**Unlikely.** No suitable forested habitat present – some potential in adjacent land. No local records.
Nettapus coromandelianus	Cotton Pigmy Goose		LC	LS			Wetlands, occasional (RCC Planning Scheme Policy 1).	**Unlikely.** Western dam has not suitable aquatic vegetation and the central dam lacks sufficient water to support water-lilies. No local records.
Ninox strenua	Powerful Owl		V	LS		X	Open forests and woodlands and sheltered gullies in wet forests with dense understoreys, especially along watercourses. Sometimes found in open areas near forests such as farmland, parks and suburban areas. Needs old growth trees to nest (Australian Museum 2023).	**Potential.** This species is expected to occur within the nearby bushland habitats. The Study area does not hold any suitable breeding habitats for Powerful Owl or its prey species, and any occurrence would be occasional in search of prey.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Numenius madagascariensis	Eastern Curlew	CE	E	LS	X	X	Sheltered coasts, especially estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass (DotE 2015).	**Unlikely**. No suitable habitat present.
Rostratula australis	Australian Painted Snipe	E	E	LS	X	X	Generally inhabits shallow terrestrial freshwater wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of lignum or canegrass or sometimes tea-tree (Commonwealth of Australia 2022b).	**Unlikely**. The existing land uses do not provide suitable vegetative cover within or nearby the wetter portions of the site. No suitable habitat present.
Stictonetta naevosa	Freckled Duck		LC	LS			Wetlands, rare visitor (RCC Planning Scheme Policy 1).	**Unlikely.** Dams do not provide suitable habitat and no local records.
Stagonopleura guttata	Diamond Firetail	V	V		X		Eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees (DCCEEW 2023c).	**Unlikely**. Although there are some potential habitat values for feeding, this species is not known in the local landscape.
Sternula albifrons	Little Tern		SL	LS		X	Sandbanks (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present. One record within 5 km of the study area.
Turnix melanogaster	Black-breasted Button-quail	V	V		X		Restricted to rainforests and forests, preferring drier low closed forests, particularly semi-evergreen vine thicket, low microphyll vine forest, araucarian microphyll vine forest and araucarian notophyll vine forest. They may also be found in low, dense acacia thickets and, in littoral area, in vegetation behind sand dunes (DotE 2023e).	**Unlikely**. No suitable habitat present.
Tyto tenebricosa	Greater Sooty Owl		LC	LS			Closed forests (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present and no local records.
Terrestrial Invertebrates								
Argynnis hyperbius inconstans	Australian Fritillary	CE	E		X		Usually occurs around river estuaries or open, swampy coastal regions in areas where its larval food plant, the arrowhead violet, occurs (TSSC 2017).	**Unlikely**. No suitable habitat present.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Acrodipsas illidgei	Illidge's ant-blue butterfly		V	LS			Casuarina glauca and adjacent mangrove areas (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present.
Charopid BR38	A land snail			LS			Eucalypt forest to Woodland containing *Eucalyptus racemosa* on Coastal Sands (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present.
Gyrocochlea myora	Myora Springs Snail			LS			Moist Coastal Forests including Littoral Rainforest (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present.
Ornithoptera richmondia	Richmond Birdwing Butterfly		V	LS			Rainforest associated with *Pararistolochia praevenosa* (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present and no local records.
Frogs								
Adelotus brevis	Tusked Frog		V	LS		X	Found through a broad range of habitats covering open grasslands, large swamps, low woodlands, dry and wet sclerophyll forests and rainforest, in close proximity to slow-moving creeks. Rarely occur above 400m asl. Also recorded in disturbed habitat (ALA 2023)	**Potential.** This species can persist in highly modified environments and the dams provide potential breeding habitats. There are records of this species within the wider landscape. The is species would be more likely to occur within the adjoining lands where suitable waterway habitats have been retained or restored.
Crinia tinnula	Wallum Froglet		V	LS		X	Found in acidic wetlands (pH 4.3-5.2) within *Melaleuca* swamps, sedgeland, wet or dry heathland and wallum/woodland areas in the sandy coastal lowlands (<100m asl) of south-east Queensland (DES 2022b).	**Unlikely**. The study are does not hold suitable habitat wallum habitats or low pH water required for this species breeding.
Litoria cooloolensis	Cooloola Sedgefrog		NT	LS			Sandy coastal freshwater lakes and stream – North Stradbroke Island	**Unlikely.** No suitable habitat present and no local records.
Litoria freycineti	Freycinet's Frog		V	LS			Open, vegetated coastal swamps and depressions (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat and no local records.
Litoria olongburensis	Wallum Sedge Frog	V	V	LS			Wallum sedgelands subject to inundation (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable wallum habitats present and no local records.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Mammals								
Chalinolobus dwyeri	Large Pied Bat	V	V		X		Close association with sandstone escarpment (for roosts) and valleys (for foraging). Recorded foraging in a range of vegetation types, including dry and wet sclerophyll forest, grassy woodland, Callitris dominated forest, tall open eucalypt forest with a rainforest sub-canopy, subtropical rainforest and small clearings adjacent to rainforest, sub-alpine woodland and sandstone outcrop country (DAWE 2021)	**Unlikely**. No suitable habitat present and not known in the local landscape.
Dasyurus maculatus maculatus (SE mainland population)	Spotted-tail Quoll	E	E		X		Historical locations include the D'Aguilar Range west of Brisbane and coastal areas from Coolangatta to Bundaberg. The species is now believed to be extinct in these regions (DotE 2023f).	**Unlikely.** No local records and no suitable habitat for this species.
Macroderma gigas	Ghost Bat	V	E		X		Occupy habitats ranging from the arid Pilbara to tropical savanna woodlands and rainforests. During the daytime they roost in caves, rock crevices and old mines (TSSC 2016c).	**Unlikely.** No local records and no suitable roosting habitat for this species.
Petauroides volans	Greater Glider	E	E		X	X	Large, contiguous areas of eucalypt open forest containing mature hollow-bearing trees and a diverse range of preferred food species; smaller or fragmented habitat patches connected to larger patches that can facilitate dispersal and/or that enable recolonisation; cool microclimate forest/woodland (DCCEEW 2022b).	**Unlikely.** This species is unlikely to persist or move through the highly fragmented habitat.
Petaurus australis australis	Yellow-bellied Glider	V	V		X		Eucalypt-dominated woodlands and forests with a preference for large patches of mature old growth forest that provide suitable trees for foraging and shelter (DAWE 2022a).	**Unlikely.** This species is unlikely to persist or move through the highly fragmented environment. No suitable hollows present and no evidence of the characteristic feeding scars on the retained vegetation.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Phascolarctos cinereus (SEQ Bioregion)	Koala (SEQ Bioregion)	E	E		X	X	Eucalypt forest and woodland, feeding mostly on eucalypts (DAWE 2022b)	**Likely.** The species is known to occur in the local landscape and across the region. The site retains suitable feeding resources, and this species has potential to occasion the site. No evidence of visitation was recorded during the survey.
Potorous tridactylus tridactylus (SE Mainland)	Long-nosed Potoroo	V	V		X		There is no consistent pattern to the habitat of the Long-nosed Potoroo; it can be found in wet eucalypt forests to coastal heaths and scrubs. The main factors would appear to be access to some form of dense vegetation for shelter and the presence of an abundant supply of fungi for food (DotE 2023g).	**Unlikely.** Due to past and ongoing land uses, that have resulted in a highly disturbed environment, there is no suitable dense vegetation present for this species.
Pteropus poliocephalus	Grey-headed Flying-fox	V	C		X	X	A canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps and Banksia woodlands. It also feeds on commercial fruit crops and on introduced tree species in urban areas. The primary food source is blossom from Eucalyptus and related genera but in some areas it also utilises a wide range of rainforest fruits (DotE 2023h).	**Likely.** This species is expected to occasion the site in response to canopy tree flowering events. There is no flying-fox camp currently on or close to the study area.
Xeromys myoides	Water Mouse, False Water Rat, Yirrkoo	V	V	LS	X		Occurs in mangroves and the associated saltmarsh, sedgelands, clay pans, heathlands and freshwater wetlands. They require relatively large areas of intertidal flats over which to forage, together with suitable adjacent areas for nest sites (DotE 2023i)	**Unlikely**. The species will not occur within the study area. There are no suitable habitats present.
Reptiles								
Coeranoscincus reticulatus	Three-toed Snake-toothed Skink	V	C		X		Recorded in dry rainforest, northern warm temperate rainforest, subtropical rainforest, grassy wet sclerophyll forest and shrubby sclerophyll forest. Has been found in loose, well mulched friable soil, in and under rotting logs, in forest litter, under fallen hoop pine bark and under decomposing cane mulch (DotE 2023j).	**Unlikely.** No suitable habitat present and not known from the local landscape.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Delma torquata	Collared Delma	V	V		X		Normally inhabits eucalypt dominated woodland and open forest where it is associated with suitable micro-habitats (exposed rocky outcrops). Shelters in soil cracks, leaf litter and under loose surface rocks in open eucalypt forest with a shrub and tussock grass understorey (DotE 2023k).	**Unlikely.** No suitable habitat present and not known from the local landscape.
Hemiaspis damelii	Grey Snake	E	E		X		Brigalow (Acacia harpophylla) and Belah (Casuarina cristata) woodlands on heavy, dark brown to black cracking clay soils, particularly in association with woder bodies, areas with small gullies and ditches, and floodplain environments where the species shelters beneath logs, rocks and soil cracks. Habitat in Queensland also includes Queensland Bluegrass (Dichanthium sericeum) and/or Mitchell Grass (Astrebla spp.) grassland on alluvial plains with cracking clay soils. Key attributes of Grey Snake habitat are the floodplains and ephemeral wetlands which provide breeding habitat for the frog species that are it's main prey, the presence of the frog species themselves, and the heavy clay soils which provide cracks and crevices that the species uses in its hunting strategy and for shelter. (DCEEW 2022c)	**Unlikely.** No suitable habitat present and not known in the region.
Fish								
Nannoperca oxleyana	Oxleyan Pygmy Perch	E	V	LS			Pristine watercourses in wallum.	**Unlikely.** No suitable habitat present and no local records.
Non-Threatened Terrestrial migratory species								
Cuculus optatus	Oriental Cuckoo	M			X		This species is a relatively sparse migrant to south-east Queensland in areas of suitable, open habitat, including wet sclerophyll forest, open woodlands and quite often along edges of forests, or ecotones between forest types (DotE 2023l).	**Potential.** May be an occasional, rare, visitor to the study area.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Monarcha melanopsis	Black-faced Monarch	M, Ma			X	X	Mainly occurs in rainforest ecosystems, including semi-deciduous vine-thickets, complex notophyll vine-forest, tropical (mesophyll) rainforest, subtropical (notophyll) rainforest, mesophyll (broadleaf) thicket/shrubland, warm temperate rainforest, dry (monsoon) rainforest and (occasionally) cool temperate rainforest. Also occurs in wet-sclerophyll forests, especially in gullies with a dense, shrubby understorey, as well as in dry sclerophyll forests and woodlands, often with a patchy understorey (DotE 2023m).	**Potential.** Potential to occur as a summer visitor to forested habitats in the study area, particularly the more densely vegetated areas.
Monarcha trivirgatus	Spectacled Monarch	M, Ma			X	X	Spectacled Monarchs are mostly found singly or in pairs in low dense vegetation, mainly in rainforests, but also in wet sclerophyll forests and other dense vegetation such as mangroves, drier sclerophyll forests, woodlands, parks and gardens.(DotE 2023n)	**Unlikely.** No suitable habitat present.
Myiagra cyanoleuca	Satin Flycatcher	M, Ma			X		Mostly found in eucalypt forest, favouring wet forests, moist gullies and watercourses. They also occur in eucalypt woodlands with open understorey and grass ground cover, are generally absent from rainforest, and feed on arthropods (mainly insects) and, occasionally, seeds. Generally, the Satin Flycatcher forages singly or in pairs high in the canopy and sub-canopy (DotE 2023o)	**Unlikely.** No local records. The study area lacks suitable remnant vegetation on site.
Rhipidura rufifrons	Rufous Fantail	M			X	X	Occurs mainly in moist habitats, including mangroves, coastal scrubs, and wet sclerophyll forests, often along watercourses and in gullies dominated by eucalypts, usually with a dense shrubby understorey often including ferns. They also occur in subtropical and temperate rainforests. Occasionally occur in secondary regrowth, following logging or disturbance in forests or rainforests. When on passage, they are sometimes recorded in drier sclerophyll forests and woodlands (DotE 2023p).	**Potential.** Potential summer visitor within the more vegetated portions of the study area though visitation would be occasional with their occurrence based on suitable proximate vegetation on adjoining lands.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Wetland migratory species								
Gallinago hardwickii	Latham's Snipe	M			X		Open, freshwater wetlands with low, dense vegetation e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies (DotE 2023q)	**Unlikely.** Although there is potential for suitable habitat the current land uses prevent suitable vegetative cover. There are no local records.
Pandion haliaetus cristatus	Eastern Osprey	M			X	X	Occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They require extensive areas of open fresh, brackish or saline water for foraging (DotE 2023r).	**Unlikely.** No suitable habitat on site and the study area is not proximate to major waterbodies.
Plants								
Acacia baueri subsp. *baueri*	Tiny Wattle		V	LS			Low dry to moist wallum heath (RCC Planning Scheme Policy 1), and on infertile and often seasonally waterlogged sands in coastal heath (wallum) habitat and adjacent plateaus and low open woodland (DES Species Profile)	**Unlikely.** This species was not detected and there is no suitable habitat. There are no local records.
Acronychia littoralis	Scented Acronychia	E	E				Found on sand in humid, high rainfall zones (greater than 1600 mm), within 2 km of the ocean. The species occurs in transition zones between littoral rainforest and swamp sclerophyll forest; between littoral and coastal cypress pine communities; and margins of littoral forest and cleared land. Occurs from Fraser Island in QLD to Port Macquarie in NSW (DotE 2023s).	**Unlikely.** This species was not detected and there is no suitable habitat.
Arthraxon hispidus	Hairy-joint Grass	V	V		X		Wetlands and moist grasslands between Northern NSW and SE Asia, typically associated with basalt. In south-east Queensland, Hairy-joint Grass has also been recorded growing around freshwater springs on coastal foreshore dunes, in shaded small gullies, on creek banks, and on sandy alluvium in creek beds in open forests and also with bog mosses in mound springs (DotE 2023t).	**Unlikely.** This species was not detected. Whilst some suitable habitat is on site, the ground stratum is highly disturbed and there are no historical records within or surrounding the study area.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Baloghia marmorata	Marbled Baloghia	V	V		X		Marbled Baloghia is found in subtropical rainforest/notophyll vine forest and wet sclerophyll forest (brush box woodland) with rainforest understorey between 150 and 550 m above sea level, with associated soil type being rich black or dark brown clay and loam derived from basalt (TSSC 2008b).	**Unlikely.** This species was not detected. Whilst some suitable habitat is on site, the ground stratum is highly disturbed and there are no historical records within or surrounding the study area.
Blandfordia grandiflora	Large Christmas Bells		E	LS			Moist to Wet Wallum Heath (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present.
Bosistoa transversa	Three-leaved Bosistoa	V	LC				Grows in wet sclerophyll forest, dry sclerophyll forest and rainforest up to 300 m in altitude, usually on steep slopes. Known from the Richmond River, NSW, to Mt. Larcom near Gladstone, QLD (DotE 2023u).	**Unlikely.** This species was not detected. Whilst some suitable habitat is on site, the ground stratum is highly disturbed and there are no historical records within or surrounding the study area.
Corchorus cunninghamii	Native Jute	E	E	LS	X		Occurs in the ecotone of wet sclerophyll forest and dry to dry-subtropical rainforest (e.g. araucarian microphyll vine forest), and in Hoop Pine (Araucaria cunninghamii) plantations. It often occurs on hill crests, exposed slopes, ridges or upper slopes of hilly terrain on south or south-east aspect. It also occurs on sheltered slopes, gullies and on lower slopes, depending on the topographic position of the sclerophyll-rainforest margin (DotE 2023v)	**Unlikely**. This species was not detected. Whilst a population of this endangered species occurs in a rainforest edge habitat on Mt Cotton, the species is unlikely to compete with weed species that are currently dominating the ground layer in addition to inappropriate fire regime for the species.
Cryptocarya foetida	Stinking Cryptocarya	V	V		X		Restricted to coastal sands, or if not, then close to the coast, occurring in littoral rainforest on old sand dunes and subtropical rainforests over slate and occasionally on basalt to an altitude of 150m (DotE 2023w).	**Unlikely**. This species was not detected, and there is no suitable habitat.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Cryptostylis hunteriana	Leafless Tongue-orchid	V	S		X		Reported to occur in a wide variety of habitats including heathlands, heathy woodlands, sedgelands, *Xanthorrheoa* spp. plains, dry sclerophyll forests (shrub/grass sub-formation and shrubby sub-formation), forested wetlands, freshwater wetlands, grasslands, grassy woodlands, rainforests and wet sclerophyll forests (grassy sub-formation). Soils are generally considered to be moist and sandy, however, this species is also known to grow in dry or peaty soils (DotE 2023x).	**Unlikely**. This species is easily identified if present and was not detected in the study area.
Cupaniopsis shirleyana	Wedge-leaf Tuckeroo	V	V		X		Occurs in a variety of dry rainforest vegetation types, including vine thicket communities on hillsides, stream beds and along riverbanks at altitudes up to 550 m above sea level (DotE 2023y).	**Unlikely.** This species was not detected and there is no suitable habitat present.
Durringtonia paludosa	Durringtonia		NT	LS			Wet Wallum Heath and on Margins of Swamp Sclerophyll Forest *E. robusta* (RCC Planning Scheme Policy 1).	**Unlikely.** Species was not detected, habitats are unsuitable and there are no local records.
Eleocharis difformis	Submerged Spikerush		E	LS			Submerged aquatic plant in Perched and Window Lakes restricted to Lacustrene wetlands 12.2.15a and 12.2.15f (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present and no local records.
Endiandra wongawallanensis (previously *E. floydii*)	Floyd's Walnut	E	E		X		Warm temperate, subtropical rainforest or wet sclerophyll forest with Brush Box overstorey, and in Camphor Laurel forest. Usually along watercourses and edges of rainforests in Gold Coast area (Leiper et al. 2008).	**Unlikely.** This species was not detected and there are no suitable habitats present.
Genoplesium sp. (Raby Bay J.Elsol AQ462423)							Eucalypt forest to Woodland containing Eucalyptus racemosa (RCC Planning Scheme Policy 1).	**Unlikely.** Species was not detected, habitats are unsuitable and there are no local records.
Leichhardtia longiloba (previously Marsdenia longiloba)	Clear Milkvine	V	V	LS		X	Clear Milkvine grows in open eucalypt forest, or margins of subtropical and warm temperate rainforest, and in areas of rocky outcrops (TSSC 2008a).	**Unlikely.** This species was not detected and there is no suitable habitat, due to past and ongoing agricultural activities and weed invasions.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Leichhardtia coronata (previously Marsdenia coronata)	Slender Milkvine		V	LS		X	Commonly found in open eucalypt forest and woodland communities on hillslopes and ridge tops at altitudes of 40–780 m above sea level. Also known from rocky outcrops along cliff lines. Most commonly recorded with Eucalyptus, E. carnea, Corymbia citriodora, C. henryi, Eucalyptus acmenoides and E. propinqua. (TSSC 2013).	**Unlikely.** This species was not detected and there is no suitable habitat, due to past and ongoing agricultural activities and weed invasions.
Macadamia integrifolia and *Macadamia tetraphylla*	Macadamia Nut	V	V	LS	X	X	These species often occupy ecotonal habitat, particularly between rainforest and sclerophyll forests, preferring well-drained fertile soil and open areas, such as rainforest edges (DotE 2023z; 2023aa).	**Unlikely.** This species was not detected and there is no suitable habitat due to past and ongoing agricultural activities.
Maundia triglochinoides	Maundia			LS			Wetlands including Paperbark Swamps Found at Karawatha and Woodforde in high quality habitat (RCC Planning Scheme Policy 1).	**Unlikely.** No high quality wetland habitat present and no local records.
Melaleuca irbyana	Swamp Tea-tree			LS			Woodland to Open forests on plains to riparian areas particularly on sedimentary soils LZ 10 (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present and no local records.
Persicaria elatior	Glandular Knotweed	V	V	LS			Wetlands and Swamp Forests (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable wetlands present and no local records.
Phaius australis	Lesser Swamp-orchid	E	E	LS	X		Commonly associated with coastal wet heath/sedgeland wetlands, swampy grassland or swampy forest and often where Broad-leaved Paperbark or Swamp Mahogany are found. Typically restricted to the swamp-forest margins, where it occurs in swamp sclerophyll forest (Broad-leaved Paperbark/Swamp Mahogany/Swamp Box (Lophostemon suaveolens)), swampy rainforest (often with sclerophyll emergents), or fringing open forest. It is often associated with rainforest elements such as Bangalow Palm (Archontophoenix cunninghamiana) or Cabbage Tree Palm (Livistona australis) (DotE 2023ab).	**Unlikely.** This species was not detected. Whilst some suitable habitat is on site, the ground stratum is highly disturbed and there are no historical records within or surrounding the study area.
Phaius bernaysii	Yellow Swamp Orchid	E	E	LS			Swamp Forests especially those with rainforest elements in understorey where fires are less intense (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable wetlands present and no local records.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Prasophyllum exilis	Thin Leek Orchid	E	E	LS			Swamp Forests especially those with rainforest elements in understorey where fires are less intense (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable wetlands present and no local records.
Planchonella eerwah	Shiny-leaved Condoo	E	E		X		Grows in subtropical rainforest, dry rainforest and Hoop Pine (Araucaria cunninghamii) vine scrub. All known areas in which the Shiny-leaved Condoo occurs are warm and subtropical with an annual rainfall of between 650–1000 mm. Found from the Sunshine Coast hinterland south to Pimpama and west to Beaudesert (DotE, 2023ac)	**Unlikely**. This species was not detected and there is no suitable habitat.
Pterostylis chaetophora	Bug Lipped Greenhood Orchid		E	LS			Grassy and shrubby areas in open forest and woodland known from Cedar Ck Falls Near Mt Tamborine and Coochiemudlo Is (RCC Planning Scheme Policy 1).	**Unlikely.** No suitable habitat present and no local records.
Rhodamnia rubescens	Scrub Turpentine	CE	CE		X		Commonly occurs in all rain forest subforms except cool temperate rainforest. The species occupies a range of volcanically derived and sedimentary soils and is a common pioneer species in eucalypt forests. Often found in wet sclerophyll associations in rainforest transition zones and Creekside riparian associations (TSSC 2020b)	**Unlikely**. This species was not detected and there is no suitable habitat.
Rhodomyrtus psidioides	Native Guava	CE	CE		X		Habitat is likely to include the following vegetation types: Subtropical Rainforests, Warm Temperate Rainforests, Littoral Rainforest, and Wet Sclerophyll Forests). The species may be found in the adjoining margins of sclerophyll vegetation associated with any of these rainforest formations. Known to occur from Gosford in NSW to Maryborough in QLD (TSSC 2020c).	**Unlikely**. This species was not detected and there is no suitable habitat.
Schoenus scabripes	Rough Bog Sedge		LC	LS			Wallum Heath to Woodland and Wet Wallum (RCC Planning Scheme Policy 1).	**Unlikely**. No suitable habitat present and no local records.

Species	Common name	EPBC	NCA	RCC	PM	WN	Preferred habitat characteristics	Likelihood of occurrence
Samadera bidwillii	Quassia	V	V		X		Commonly occurs in lowland rainforest or on rainforest margins but it can also be found in other forest types, such as open forest and woodland. Commonly found in areas adjacent to both temporary and permanent watercourses in locations up to 510 m altitude. The species occurs on lithosols, skeletal soils, loam soils, sands, silts and sands with clay subsoils (DotE 2023ad)	**Unlikely:** The study area is outside of the known range for this species.
Thelypteris confluens	Marsh Fern		V	LS			Swamps and Wetlands in Coastal Dunes (RCC Planning Scheme Policy 1).	**Unlikely**. No suitable habitat present and no local records.
Thesium australe	Toadflax	V	V	LS	X		Semi-parasitic on roots of a range of grass species, notably Kangaroo Grass (Themeda triandra). occurs in subtropical, temperate and subalpine climates over a wide range of altitudes. It occurs on soils derived from sedimentary, igneous and metamorphic geology on a range of soils including black clay loams to yellow podzolics and peaty loams. Occurs in shrubland, grassland or woodland, often on damp sites (DotE 2023ae).	**Unlikely.** This species was not detected. Whilst some suitable habitat is on site, the ground stratum is highly disturbed and there are no historical records within or surrounding the study area.

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APPENDIX J
EPBC Act Significant Impact Assessments

Table I.1 Koala Significant Impact Assessment

Significant impact criteria for an Endangered species	Assessment
Will the action lead to a long-term decrease in the size of a population?	The study area provides foraging, breeding and dispersal habitat for Koalas that are a component of the broader 'Koala Coast' population, described as inhabiting the mainland area of the Redlands Coast, the eastern area of Logan City and the south-east area of Brisbane City (Biolink 2019). The study area has connection, albeit intersected by German Church Road, to over 3000 ha of core bushland Koala habitat to the south and west and is also connected to over 70 ha of mostly continuous Koala habitat to the north. Further west, Heineman Road, Mount Cotton Road and Double Jump Road interrupt safe habitat connection between the study area and bushland that forms the main body of the 'Koala Coast' habitat. To counter the impacts of removing 47 paddock trees that are non-juvenile Koala habitat trees (>10 cm dbh), a 0.19 ha patch of Melaleuca regrowth at the northern dam, and open space through which Koalas are currently able to access those trees and habitat beyond the site, the development must facilitate north-south and east-west habitat connectivity and replace forage, shade and breeding trees. Greenspace totalling 4.65 ha (18.5% of the site) has been designed to incorporate regrowth habitat and 23 of the existing paddock trees, and to maintain connectivity to habitat outside of the property. The greenspace will be planted with 832 additional Koala forage and shelter trees. The location of the greenspace and supplementary planting will ensure that there is no long-term decrease in forage and breeding trees available for Koalas that may inhabit and/or move through the site. While the proposed access road from Giles Road is bordered by Koala habitat, it is not proposed to clear any vegetation within the easement. If alternative access to the site is not feasible, effective Koala-sensitive road design measures must be implemented/installed to limit the risk of Koala/vehicle interactions. Subject to design potential, this would include a low speed limit, traffic calming devices and electronic signage, with fauna-proof fencing installed to direct fauna to safe crossing points if necessary. With implementation of the stated measures for maintaining habitat connectivity and planting of preferred Koala forage species into greenspace, the action is not expected to lead to a long-term decrease in the size of the Koala population.
Will the action reduce the area of occupancy of the species?	The subject property is 25.2 ha in area, of which 4 ha is poultry farm sheds, farm dams, the driveway easement from Giles Road, a residence, and out-buildings. It is proposed to instate greenspace totalling 4.65 ha. In all, a total of 16.68 ha of open paddock with occasional paddock trees would be within the development footprint. To counter the impacts of removing 47 paddock trees that are non-juvenile Koala habitat trees (>10 cm dbh), a 0.19 ha patch of Melaleuca regrowth at the northern dam, and open paddocks through which Koalas are currently able to access isolated trees and habitat beyond the site, the development must facilitate north-south and east-west habitat connectivity and replace forage and breeding trees. Greenspace totalling 4.65 ha (18.5% of the site) has been designed to incorporate regrowth habitat and 23 of the existing paddock trees, and to maintain connectivity to habitat outside of the property. The currently mostly cleared 2.7 ha component of greenspace will be planted with 832 additional Koala forage and shelter trees. The location of the greenspace and supplementary planting will ensure that there is no long-term decrease in forage and breeding trees available for Koalas that may inhabit and/or move through the site. There will be no reduction in the area of occupancy of Koalas as a result of the Project.

Significant impact criteria for an Endangered species	Assessment
Will the action fragment an existing population into two or more populations?	The study area is not in a location where its development would fragment a population of Koalas into two or more populations. Greenspace has been designed to maintain east-west and north-south Koala habitat connectivity.
Will the action adversely affect habitat critical to the survival of a species?	The MNES Significant Impact Guidelines 1.1 refers to habitat critical to the survival of a species as areas that are necessary: • for activities such as foraging, breeding, roosting, or dispersal • for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators) • to maintain genetic diversity and long-term evolutionary development, or • for the reintroduction of populations or recovery of the species or ecological community. The site in its current form is not critical to the long-term maintenance of the species, of significance to the maintenance of genetic diversity, or of significance for species recovery. To counter the impacts of removing 47 paddock trees that are non-juvenile Koala habitat trees (>10 cm dbh), a 0.19 ha patch of Melaleuca regrowth at the northern dam, and open space through which Koalas are currently able to access paddock trees and habitat beyond the site, the development must facilitate north-south and east-west habitat connectivity and replace forage and breeding trees. Greenspace totalling 4.65 ha (18.5% of the site) has been designed to incorporate regrowth habitat and 23 of the existing paddock trees, and to maintain connectivity to habitat outside of the property. The greenspace will be planted with 832 additional Koala forage and shelter trees. The location of the greenspace and supplementary planting will ensure that there is no long-term decrease in forage and breeding trees available for Koalas that may inhabit and/or move through the site. The proposed development would not adversely affect habitat critical to the survival of Koala.
Will the action disrupt the breeding cycle of a population?	Habitat within the project area is not of particular significance for breeding in the context of the Koala Coast Koala population. The action will not disrupt the breeding cycle of the population.
Will the action modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	The proposal requires removal of 47 paddock trees that are non-juvenile Koala habitat trees (>10 cm dbh) and a 0.19 ha patch of Melaleuca regrowth at the northern dam, from the development footprint. The availability and quality of foraging and breeding habitat will be supplemented within the proposed greenspace areas by planting 832 Koala forage and shelter trees that link with habitats outside the property. The proposed development will not result in the decline of the species.
Will the action result in invasive species that are harmful to an endangered species becoming established in the endangered species' habitat?	The property is rural in nature with the Koala habitat present occurring within and adjacent to slashed paddocks of non-native grasses. It is proposed to replant greenspace areas with native tree and grass species. Greenspace will be regularly maintained and there will be no opportunity for establishment of invasive plants.
Will the action introduce disease that may cause the species to decline?	The action will not introduce disease that may cause the species to decline.
Will the action interfere with the recovery of the species?	The proposed development does not affect Koala habitat mapped by the State of Queensland, or any State or local biodiversity corridors. The action will not interfere with the recovery of the species.

Significant impact criteria for an Endangered species	Assessment
Conclusion:	The Project will not cause a significant residual impact to critical Koala habitats or cause decline in the Koala Coast Koala population. With implementation of the stated measures for maintaining habitat connectivity and planting of preferred Koala forage species into greenspace, the Project is unlikely to have a significant impact on the local or broader Koala population.

Table I.2 Grey-headed Flying-fox Significant Impact Assessment

Significant impact criteria for a Vulnerable species	Assessment
Will the action lead to a long-term decrease in the size of an important population of a species?	An 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are: • key source populations either for breeding or dispersal, • populations that are necessary for maintaining genetic diversity, and/or • populations that are near the limit of the species range. There are currently no criteria available to define an 'important population' of Grey-headed Flying-fox. It is likely that 'Nationally important Flying-fox camps' support important populations of the species and foraging resources within 20 km of nationally important Grey-headed Flying-fox camps are considered to represent critical resources for the species. There are no flying-fox camps present within the project area, and the project area is not within 20 km of a nationally important camp or at the limit of the species range. The action will not lead to a decrease in the size of an important population of Grey-headed Flying-fox.
Will the action reduce the area of occupancy of an important population?	Within the development footprint, the following trees would be removed that provide foraging resources for Grey-headed Flying-fox: • 47 paddock trees that are eucalypt species, • two mature fig trees, • two Silky-Oaks (*Grevillea robusta*), and • a 0.19 ha patch of Melaleuca regrowth at the northern dam. A proposal to plant approximately 832 Koala forage and shelter trees within the greenspace, or which 439 will be winter-spring flowering species, will ensure the continued value of the location for Grey-headed Flying-fox as trees that flower over winter-spring provide foraging resources during months when flowering and fruiting trees are most scarce. No long-term decrease in the number of Grey-headed Flying-fox that may use the project area is expected because of the development.
Will the action fragment an existing important population into two or more populations?	No habitat fragmentation will result from the proposed development.
Will the action adversely affect habitat critical to the survival of a species?	The National Recovery Plan (DAWE, 2021b) describes habitat supporting winter and spring flowering vegetation communities as habitat critical to the survival of the species. 47 paddock trees and a 0.19 ha patch of regrowth Melaleuca quinquenervia that provide Grey-headed Flying-fox foraging resources occur within the Project footprint and would need to be removed for the development. A proposal to plant approximately 832 Koala forage and shelter trees within the greenspace, or which 439 will be winter-spring flowering species, will ensure the continued value of the location for Grey-headed Flying-fox as trees that flower over winter-spring provide foraging resources during months when flowering and fruiting trees are most scarce. No long-term decrease in the number of Grey-headed Flying-fox that may use the project area is expected because of the development. Additionally, the

Significant impact criteria for a Vulnerable species	Assessment
	Recovery Plan includes habitat containing native species used for foraging within 20 km of a nationally important camp as critical habitat. The nearest 'Nationally Important Flying-fox Camp' as identified in the National Flying-fox Monitoring Viewer is at Emerald Drive, Regents Park, approximately 25 km south-west of the project area. The action will not adversely affect habitat critical to the survival of Grey-headed Flying-fox.
Will the action disrupt the breeding cycle of an important population?	There are no flying-fox camps/roosts within or adjacent to the project area. The Recovery Plan states that few diet plants flower in winter, and those that flower reliably in winter occur on coastal lowlands in northern New South Wales and southern Queensland (Eby and Lunney 2002), and there is also evidence that spring forage is currently inadequate to provide reliable resources during critical periods in the reproductive cycle of Grey-headed Flying-foxes (Eby and Law 2008). 47 paddock trees and a 0.19 ha patch of regrowth Melaleuca quinquenervia that provide Grey-headed Flying-fox foraging resources occur within the project footprint and would need to be removed for the development. A proposal to plant approximately 832 Koala forage and shelter trees within the greenspace, or which 439 will be winter-spring flowering species, will ensure the continued value of the location for Grey-headed Flying-fox as trees that flower over winter-spring provide foraging resources during months when flowering and fruiting trees are most scarce. The time lag between loss of forage trees and the establishment of new plantings is not significant in the local context and the location of the site, which is distant from nationally important flying-fox camps. The action will not disrupt the breeding cycle of an important Grey-headed Flying-fox population.
Will the action modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline?	47 paddock trees and a 0.19 ha patch of regrowth *Melaleuca quinquenervia* that provide Grey-headed Flying-fox foraging resources occur within the project footprint and would need to be removed for the development. The availability and quality of foraging and breeding habitat will be supplemented within the proposed greenspace areas by planting 832 Koala forage and shelter trees, including 632 that are winter-spring flowering, that will provide Grey-headed Flying-fox. The proposed development will not result in the decline of the species.
Will the action result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat?	The property is rural in nature with the habitat present occurring within and adjacent to slashed paddocks of non-native grasses. It is proposed to replant greenspace areas with native tree and grass species. Greenspace will be regularly maintained and there will be no opportunity for establishment of invasive plants.
Will the action introduce disease that may cause the species to decline?	The action will not introduce disease that may cause the species to decline.
Will the action interfere substantially with the recovery of the species?	The proposed development does not affect conservation areas or any State or local biodiversity corridors. The action will not interfere with the recovery of the species.
Conclusion:	The Project will not cause a significant residual impact to Grey-headed Flying-fox habitats or cause decline in the Grey-headed Flying-fox population. With implementation of the stated measures for planting forage species into greenspace the Project is unlikely to have a significant impact on the local or broader Grey-headed Flying-fox population.

BAAM ECOLOGICAL CONSULTANTS

specialised ecological knowledge that reduces your risk

9 May 2024

Mr Garry Hargrave
Principal
Fox and Bell Group
Garry@foxandbell.com.au

Dear Mr Hargrave

RE: Technical Memorandum - Response to RCC Information Request items 9, 10 and 11 Inspire Technology Park Material Change of Use Application number: MCU23/0085

Please find following a technical memorandum reporting the results of additional desktop and field assessment undertaken to inform responses to RCC IR items 9, 10 and 11 for the Inspire Technology Park MCU.

Yours faithfully

Paulette Jones
Managing Director
Biodiversity Assessment and Management Pty Ltd

File No	Author	Reviewer
0345-009T1		

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1.0 INTRODUCTION

Redland City Council has requested the following additional information in relation to stormwater and ecological values to inform their assessment of the MCU application:

9. The proposed northern bioretention basin (1,672m² proposed treatment area) appears to occupy a significant portion of the proposed ITIC2 Greenspace Precinct area, which is acknowledged to be intended for ecological functions. Further information is requested to comply with PO7 of the healthy waters code to demonstrate that the location and sizing of this basin will not reduce the utility of corridor space for its intended ecological functions. This is to also demonstrate compliance with PO3, PO4 and PO14 of the environmental significance overlay code, to demonstrate that a functioning ecological corridor can be achieved, noting that the Greenspace Precinct should consider incorporating further ESO (MLES) vegetation at the south-west extent of the existing dam.

10. Further information is requested to demonstrate compliance with PO2 of the healthy waters code with regards to the northern dam in the proposed ITIC2 Greenspace Precinct area, as to why it cannot be retained for stormwater management and instead transformed into a bioretention basin. This dam is acknowledged to support native wetland vegetation and significant ecological value to native amphibian species, including potentially providing habitat for the Tusked Frog (*Adelotus brevis*; a Matter of Local Environmental Significance). Additionally, the dam is sited in a key ecological area, being immediately adjacent to retained bushland habitat and is likely to support further habitat for other fauna utilising the bushland.

11. Provide further information on the habitat features of trees identified as 'old growth' (e.g. hollows, scats, nests) to inform ecological impact management in accordance with the environmental significance overlay code. *Note: Additional ecological information may be required, for instance, if access arrangements change as a response to Council or SARA's information request, resulting in additional impacts to vegetation not identified by current reporting.*

These matters are addressed in the following sections.

2.0 NORTHERN BIORETENTION BASIN

2.1 LOCATION AND FUNCTION

BAAM is advised that the location of the northern bioretention basin (shown on **Figure 1**) has been positioned to capture stormwater from the Technology Park for treatment prior to its release to the downstream waterway, and that the existing dam cannot properly fulfil the water cleaning function and must therefore be replaced with a bioretention basin of appropriate design.

It is proposed to construct the bioretention basin in accordance with the Bioretention Technical Guidelines (Water by Design 2014), aiming to emulate the 'bushland planting style' shown in **Image 1**, which will be densely planted with native vegetation community comprising groundcovers, shrubs and trees occurring locally, replicating the structure and composition of existing local bushland and riparian vegetation communities. As described in the guideline, such an approach increases local biodiversity, provides fauna habitat and is low maintenance. As this would have been an ephemeral creek prior to the farm dam being in place, the waterway conditions will be returned to a more 'normal' configuration and function.

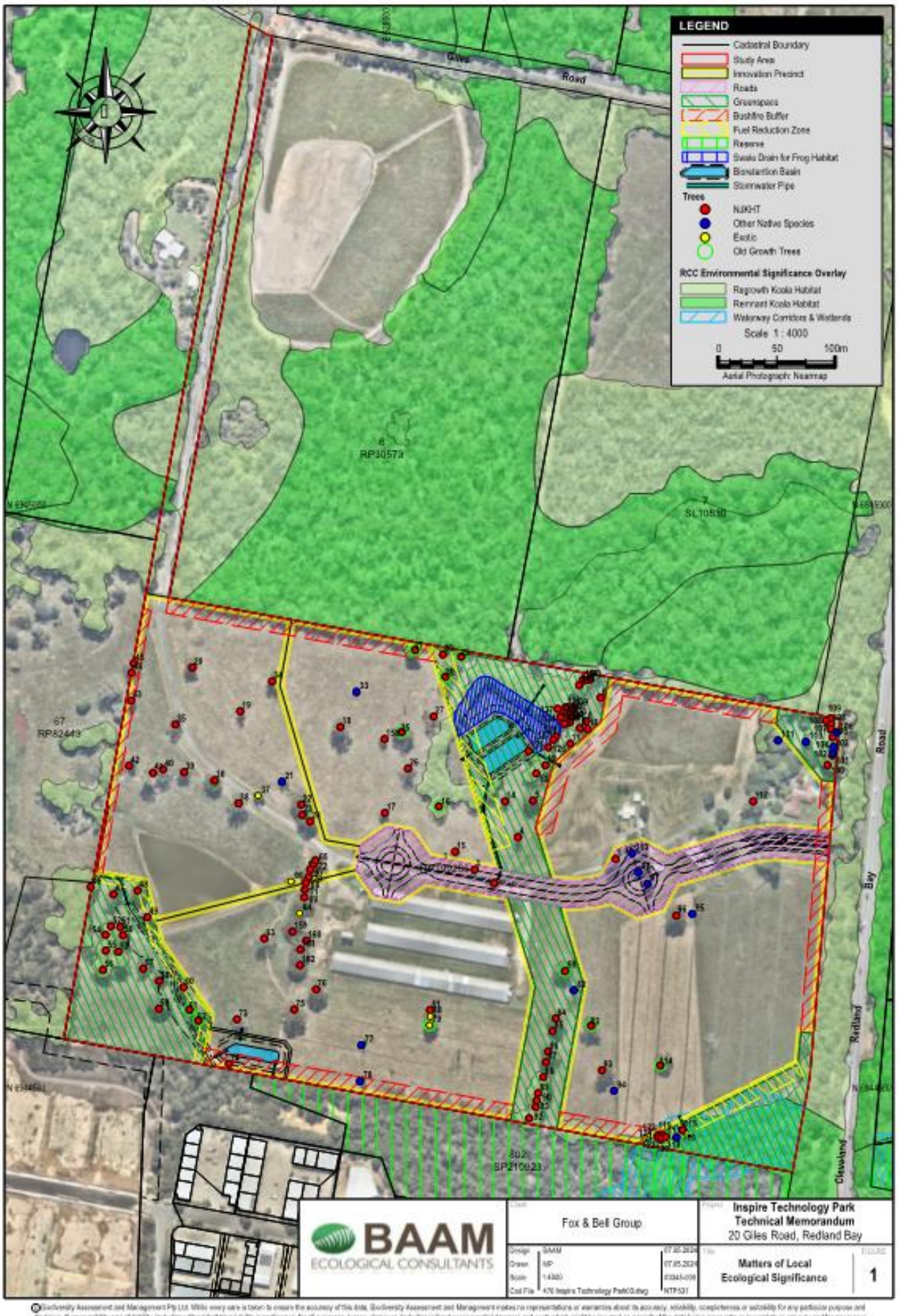

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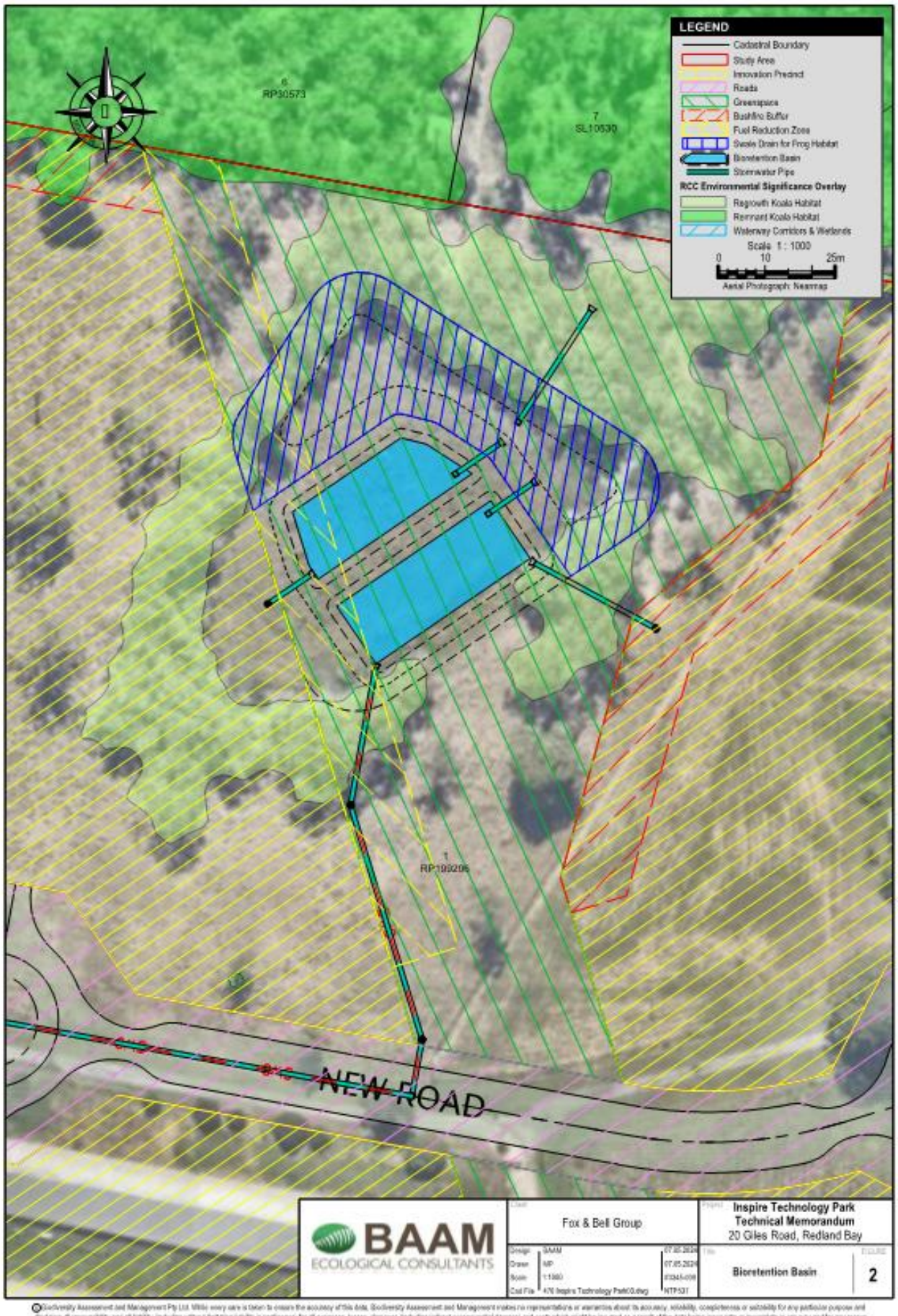
Image 1. 'Bushland Planting Style' illustration (Water by Design 2014).

The presence of the bioretention basin in the proposed format will not compromise the ecological function of the Greenspace corridor.

Figure 2 shows the location of the proposed bioretention basin in relation to the existing surrounding vegetation. The majority of the tree and shrub vegetation surrounding the dam will be retained within the Greenspace corridor. An exception is the approximately 0.21 ha area of melaleuca and eucalypt regrowth adjoining the south-west portion of the dam. This vegetation is mapped as locally significant. As it is in a location which impacts the viability of the northern-central portion of the Innovation Precinct, its loss cannot be reasonably avoided and is therefore proposed to be offset at the ratio of 3:1.

Further investigation of the suitability of the existing dam for Tusked Frog *Adelotus brevis* was undertaken on 5 March 2024 under ideal conditions for their detection - an overnight minimum temperature of 21.2°C, 15mm of rainfall the previous day, and standing water present in the ponded portion of the basin. To elicit a call response, Tusked Frog calls were played through a speaker for 30 seconds, followed by 2 minutes of listening. This was repeated at regular intervals, approximately every 30 metres around the edge of the basin. The banks of the basin were also searched during this time. No Tusked Frogs were observed by sight or call during the duration of the survey. As stated in the Likelihood of Occurrence Assessment (Appendix I, BAAM 2023), the species is more likely to occur within the adjoining lands where suitable waterway habitats have been retained or restored.

To ensure suitable habitat for Tusked Frog and other frog species is available on site, a dedicated swale drain will be constructed at the outflow location. The edges of the drain will be vegetated to provide habitat for frogs.



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2.2 HEALTHY WATERS CODE

Table 2 provides responses to the Healthy waters code – Specific benchmarks for assessment, addressing PO2 and PO7 as requested.

Table 2. Benchmarks for assessable development from the Healthy waters code

Performance Outcomes	Acceptable Outcomes	Response
For assessable development		
PO2 On-site stormwater management systems do not rely on the retention of existing artificial water bodies, except where such water bodies: (1) perform significant ecological, water quality or recreation functions; (2) do not pose a significant risk to stream health or water quality; (3) are structurally sound; (4) do not pose any risk to community health and safety; and (5) will not impose a significant maintenance or cost burden on the community in the short or long terms	No acceptable outcome is nominated. Editor's note—Council would generally expect that such waterbodies are not retained as many are currently in poor condition and need substantial remediation. Where an existing waterbody is proposed to be retained as an integral component of water management on the site, an assessment should be done in accordance with Planning Scheme Policy 2 – Infrastructure works. This assessment should be done in conjunction with an ecological assessment report so that conflicts between competing environmental values can be identified and resolved	It is understood the existing dam is not suitable to be adapted to perform a stormwater bioretention basin function and must be replaced by a properly designed bioretention basin to achieve the required water quality outcomes. It will be developed in a 'bushland planting style' format that will integrate with retained vegetation, reinstated vegetation within the surrounding Greenspace, and the interface with downstream riparian habitat to the north.
PO7 Where located within open space, stormwater devices or functions do not reduce the utility of that space for its intended recreational or ecological functions.	No acceptable outcome is nominated.	It is proposed to construct the bioretention basin in accordance with the Bioretention Technical Guidelines (Water by Design 2014), aiming to emulate the 'bushland planting style' shown in Image 1, which will be densely planted with native vegetation comprising groundcovers, shrubs and trees occurring locally, replicating the structure and composition of existing local bushland and riparian vegetation communities. As this would have been an ephemeral creek prior to the farm dam being in place, the waterway conditions will be returned to a more 'normal' configuration and function which will complement and contribute to the intended ecological function of the Greenspace corridor for native fauna.

2.3 ENVIRONMENTAL SIGNIFICANCE OVERLAY CODE

Table 3 provides responses to the Environmental significance overlay code – for assessable development, addressing PO3, PO4 and PO14 as requested.

Table 3 Environmental significance overlay code responses – PO2, PO3 and PO14

Performance Outcomes	Acceptable Outcomes	Response
For assessable development		
Values to be protected		
PO2 Development does not result in a significant reduction in the level or condition of biodiversity and ecological functions and processes in the locality.	No acceptable outcome is nominated.	The site layout has, through design, sought to retain the higher value habitat. There will be a loss of 0.26 ha of mapped MLES within the proposed urbanised portion of the study area due to the required civil works. This includes the vegetation on the south-western edge of the existing dam. To achieve the required land form for the type of large-lot development proposed, it is understood that incorporation of the existing vegetation on the south-western edge of the dam into the Greenspace corridor would significantly complicate earthworks and unacceptably affect the type of industry that could establish in the central northern portion of the property. It is proposed that the native vegetation removed (48 NJKHTs as paddock trees and 0.26 ha of mapped MLES that includes *Melaleuca* and *Eucalyptus* regrowth on the south-western edge of the dam) will be offset at the rate of 3:1 in accordance with the Environmental Offset Policy (the same ratio as for MLES) to provide a net gain in Koala habitat within the local area. Planting of approximately 832 trees within the currently cleared locations within proposed greenspace and retained regrowth vegetation areas in the central north and south-western corner of the site will provide an overall improvement in habitat connections, which will have a net benefit for overall biodiversity and ecological functions and processes in the locality.
PO3 Development does not cause substantial fragmentation of habitat areas.	No acceptable outcome is nominated.	No substantial fragmentation is proposed. The provision of the designated linkages will provide an overall increase in vegetated habitat connections through the property. Development of the bioretention basin in a 'bushland planting style' will be of a form more closely resembling the original vegetation of the site than the existing farm dam, providing an increased area of woodland and riparian habitat for local fauna.
Corridors and enhancement planting		
PO14 Corridors have sufficient width to maintain viable	No acceptable outcome is nominated.	The proposed layout design provides direct connections to and through the site. The proposed central Greenspace will be designed to

Performance Outcomes	Acceptable Outcomes	Response
wildlife or habitat linkages.		specifically provide habitat linkage for Koalas. It is not proposed to vegetate the central Greenspace to resemble native bushland, but rather to ensure easily maintained, open habitat with well-spaced, good quality food trees for Koalas. The proposed 40m wide Greenspace corridor will achieve this aim. The Greenspace widens to over 100m at its northern extent (including the bioretention basin) where it joins the adjacent bushland. Planting around the bioretention basin will be of a 'bushland planting style', contributing to the function of the corridor. Greenspace proposed for the south-west corner of the property will connect habitat along the southern boundary to habitat in the adjacent property to the west where only a tenuous link currently exists. The Greenspace has been designed specifically to ensure ease of maintenance to maintain its long-term viability for species common in the peri-urban landscapes of the location.

3.0 OLDER GROWTH TREES

While most of the paddock trees are younger trees (<16-33 years), as described in BAAM (2023), aerial imagery indicates 11 older growth trees were left standing when the property was cleared at some time between 1968 and 1977. The locations of these trees are shown on **Figure 1**, and are:

- 5 X Narrow-leaved Ironbark *E. siderophloia* – 80 cm, 100 cm, 80 cm, 50 cm and 70 cm dbh.
- 2 X Brown Bloodwood *C. trachyphloia* – 100 cm and 54 cm dbh.
- Pink Bloodwood *C. intermedia* – 100 cm dbh.
- Narrow-leaved Scribbly Gum *E. racemosa* – 80 cm dbh.
- Blue Gum *E. tereticornis* – 50 cm dbh.
- Tallowwood *Eucalyptus microcorys* - 200 cm dbh.

As shown on **Figure 1**, five of these trees are within the proposed development footprint and outside of proposed Greenspace or bushfire buffers. Details of these five trees are provided in **Table 4**.

4.0 NEW ROAD ACCESS

The new road access would not result in further tree clearing beyond that described in BAAM (2023) as the access entry point was previously included in the Innovation Precinct.

Table 4: Details of older growth trees within the development footprint

Tree no. & species	Tree dimensions	Habitat features	Images	
			Image 1	Image 2
Tree 16 Pink Bloodwood *Corymbia intermedia*	Height = 22.5m Multi-stem dbh = 100cm 12m canopy spread	No hollows evident, although some dead branches are present that could have small hollows. Some bark removed that could be attributed to climbing mammals or reptiles. Macropod scats recorded beneath in 2024.		
Tree no. 25 Northern Grey Ironbark *Eucalyptus siderophloia*	Height = 26m Single stem dbh = 80cm 6m canopy spread	No apparent hollows. Not possible to observe scratches on Ironbark. No scats of any fauna species recorded beneath this tree during two inspections (2023 & 2024).		

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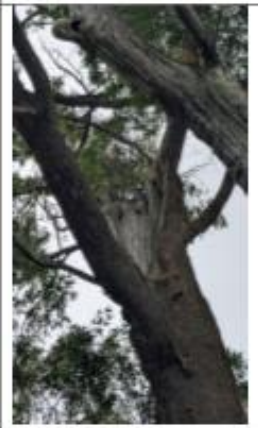
Tree no. & species	Tree dimensions	Habitat features	Images	
			Image 1	Image 2
Tree no. 79 Northern Grey Ironbark *Eucalyptus siderophloia*	Height = 19m Single stem dbh = 50cm 11m canopy spread	No apparent hollows. Not possible to observe scratches on Ironbark. No scats of any fauna species recorded beneath this tree during two inspections (2023 & 2024).		
Tree no. 83 Tallowwood *Eucalyptus microcorys*	Height = 25m Single stem dbh = 50cm 18m canopy spread	Several large hollow entrances in dead bough and one on living bough. Stringy bark obscures scratch marks. Common Brushtail Possum scats recorded beneath (2024).		

Tree no. & species	Tree dimensions	Habitat features	Images	
			Image 1	Image 2
Tree no. 114 Brown Bloodwood *Corymbia trachyphloia*	Height = 17m Single stem dbh = 54cm 6.5m canopy spread	No apparent hollows. Stringy bark obscures scratch marks. No scats of any fauna species recorded beneath this tree during two inspections (2023 & 2024).		

5.0 REFERENCES

BAAM (2023). Terrestrial Ecology Assessment Inspire Technology Park – 20 Giles Road, Redland Bay. Consultants report to Fox and Bell. June 2023.

Water by Design (2014). Bioretention Technical Design Guidelines (Version 1.1). Healthy Waterways Ltd. Brisbane.

Technical Memorandum
Ecology Advice for Proposed Minor Change
For
Fox & Bell Group

BAAM ECOLOGICAL CONSULTANTS

30 October 2025

Ray Wassenberg
Fox and Bell Group
Email: rayw@foxandbell.com.au

Dear Ray

RE: Technical Memorandum – Ecology Advice for proposed minor change - Inspire Technology Park Material Change of Use Application number: MCU23/0085

Please find following an updated technical memorandum providing our review of a proposed minor change in respect to development application number MCU23/0085. The subject site is located at 20 Giles Road Redland Bay QLD 4165 and formally described as Lot 1on RP 199206.

The subject application seeks a preliminary approval for a material change of use (medium impact industry) including a variation request to vary the effect of City Plan in accordance with the inspire Technology and Innovation Centre Plan of Development (POD).

The proposed minor change seeks to remove a central wildlife corridor and locate it on the western portion of the subject land. This review has been updated to assess further detailed design of the proposed impact footprint.

BAAM has previously undertaken several site investigations to inform the ecological reporting for the proposed project and responses to information requests and further advice requests from Redland City Council.

We trust the following is suitable for your purposes.

Yours faithfully

Adrian Caneris
Managing Director& Principal Wildlife Specialist
Biodiversity Assessment and Management Pty Ltd

File No	Author
0345-009/2025	

1.0 REVISED DESIGN REVIEW

It is understood that Fox and Bell have ongoing discussions with the Redland City Council (RCC) in relation to the merits of a proposed minor change to the subject MCU application (MCU23/0085) (**Figure 1**). The proposed changes are shown on **Figure 2**. The changes can be generally described as a relocation of the central corridor (central greenspace) to the western boundary of the subject land to avoid any roadway intersection with the proposed corridor.

The central greenspace area was designed to facilitate the movement of those species known or likely to use the habitat linkages provided. The target species identified were Koala and wallabies. Avian species can readily fly through the site. The proposed greenspace was reviewed and a planting palette provided (Table 7.1 of the BAAM Ecological Report). Table 7.1 set out the proposed species composition for planting within the greenspace, the density and number of each species to be planted per hectare within the 2.7 ha of open area within the greenspace that is available for planting, and those trees that flower winter-spring providing foraging habitat for Flying-foxes. Spacing between trees was recommended at approximately 33 m apart. Planting would occur in groups of 5,7 and 9 to create more natural "landscape" as trees tend to grow in groups of the same species rather that 1 of each individual species alternating. We considered the central greenspace would provide a suitable ongoing habitat connection for the provision of wildlife movement through the site.

The proposed rehabilitation plantings would have provided approximately 832 Koala forage trees and 17 Koala shelter trees (native trees with dense canopies) in the 2.7 ha of greenspace outside of existing mapped regrowth vegetation. Of these, 489 trees would provide winter-spring flowering resources for Grey-headed Flying-fox.

The proposed change would not remove the ability for the provision of the above trees, although in a different location on the site, and in fact is expected to provide opportunity for an increased number due to the removal of the roadway. There is also likely opportunity for increased density of trees and diversity of species. The proposed wildlife corridor without an intersecting roadway provides a safer, less stressful, and more ecologically functional movement facility for wildlife. It supports uninterrupted movement, reduces mortality, and maintains ecosystem processes with lower maintenance costs and fewer human-wildlife conflicts.
In contrast, a corridor intersected by a roadway, even with the proposed mitigation measures, faces challenges from habitat fragmentation, noise, light pollution, and increased mortality risks, associated with the roadway which can undermine its effectiveness for some species. While crossing structures can help, they are not universally effective for all species and require ongoing investment. This is now avoided.

The removal of the roadway intersecting within the corridor also provides additional land for habitat restoration which further improves the ecological outcomes. It is understood the proposed corridor and access easement will be dedicated to Council. These lands immediately adjoin existing council bushland holdings and lands protected under covenants and will therefor provide additional habitat and habitat connections which council would have management and formal control of. The existing easement provides for suitable access and could also be further enhanced with additional plantings where suitable locations are identified. Overall, the revised design provides for an overall increase in mitigation responses and ecological outcomes.

Figure 1: Inspire Technology Park, Prior Design

LEGEND
Cadastral Boundary
Study Area
Areas of clearing
Bushfire Buffer
Private Open Space
Public Open Space
Watercourses and Drainage
Regrowth Vegetation
Reserve
Trees
NJKHT
Other Native Species
Exotic
Old Growth Trees
Scale 1 : 4000
0 50 100m
Aerial Photograph: Nearmap
Gives Road
RP30573
SL10530
S7 RP82443
RP193205
Road
Bay
Redland
Cleveland
BAAM ECOLOGICAL CONSULTANTS
Fox & Bell Group
Inspire Technology Park
Technical Memorandum 2025
20 Gives Road, Redland Bay
Revised Design and Tree Plots
2

1.1 Comparison of benefits of a Wildlife Corridor with and without a Roadway

1. **Enhanced Wildlife Safety and Reduced Mortality**:
   - **No Roadway**: Animals can move freely without the risk of vehicle collisions, which are a leading cause of wildlife mortality. This is particularly important for species like large mammals (e.g., deer, bears) or slow-moving species (e.g., amphibians, reptiles).
   - **With Roadway**: Roads fragment habitats and increase the risk of roadkill, which can significantly reduce population sizes, especially for endangered or vulnerable species.
2. **Uninterrupted Habitat Connectivity:**
   - **No Roadway**: Provides continuous habitat, allowing animals to access food, mates, and diverse habitats without barriers. This supports genetic diversity by enabling gene flow between populations.
   - **With Roadway**: Roads create physical and psychological barriers, discouraging animals from crossing due to noise, lights, or traffic. Even with crossing structures (e.g., overpasses, underpasses), some species avoid them, reducing connectivity.
3. **Lower Stress and Disturbance:**
   - **No Roadway:** Wildlife experiences minimal disturbance from human activities, such as traffic noise, vibrations, or light pollution, which can disrupt behaviours like foraging, mating, or migration. Movement is not limited to those species by which an underpass does not present as a barrier or increased predation.
   - **With Roadway:** Roadway noise and light pollution can cause stress and alter animal behaviour and reduce movement. Removal of the roadway can improve localised reproductive success.
4. **Improved Ecosystem Health:**
   - **No Roadway:** Continuous corridors provide increased support for ongoing natural processes like seed dispersal, pollination, and typical predator-prey interactions as opposed to an underpass where predation can be increased due to funnelling of wildlife to a specific point.
   - **With Roadway:** Roads can disrupt these processes by limiting movement of key species (e.g., pollinators or predators), potentially leading to cascading negative ecological effects, though it is noted these processes are currently extremely limited in the location.
5. **Reduced Human-Wildlife Conflict:**
   - **No Roadway:** Fewer opportunities for interactions, reducing incidents like vehicle collisions or vehicle damage.
   - **With Roadway:** Increased risk of human-wildlife conflicts, such as animals avoiding underpass and seeking to cross the roadway, leading to safety concerns for both.

6. **Lower Maintenance and Infrastructure Costs:**

   - **No Roadway:** No requirement for wildlife crossing structures (e.g., overpasses, underpasses) or ongoing maintenance, resulting in a more cost-effective and fully functioning corridor inclusive of all species.
   - **With Roadway:** Requires investment in crossing structures, fencing, and monitoring to mitigate wildlife impacts, and ongoing maintenance to ensure ongoing functionality and effectiveness. Crossing infrastructure can be limited in suitability for some species and often does not fully eliminate vehicle strike risks.

1.2 GREENSPACE AND VEGETATION OUTCOMES

Table 1 provides a comparison of the prior and revised (proposed Minor Change) design.

Prior Design	Revised (proposed Minor Change) Design
4.62 ha (18.3%) of the site was identified as greenspace for conservation and biodiversity purposes.	Greenspace is increased to be: Dedication of public open space is 5.342 ha Private open space is 0.2686 ha (frontage Setback)
Retaining 25 existing paddock trees within greenspace and bushfire setbacks excluding trees within the Bio-basin area.	Retaining 35 existing paddock trees within greenspace and bushfire setbacks, excluding trees within the Bio-basin area.
Incorporating all mapped regulated vegetation within greenspace.	Incorporating all mapped regulated vegetation within greenspace.
Planting approximately 690 Koala forage and shelter trees of local provenance into the 2.25 ha central, linear greenspace to provide a vegetated link between bushland areas to the north and south of the property.	Planting approximately 830 Koala forage and shelter trees of local provenance into the northern linear greenspace to provide a vegetated link between bushland areas to the north and south of the property. Increased plantings result from loss of the roadway intrusion.
Undertake supplementary planting of approximately 390 Koala forage and shelter trees within the 1.28 ha south-west corner greenspace to better connect existing habitats present outside of the southern and western site boundaries.	Undertake supplementary planting of approximately 390 Koala forage and shelter trees within the 1.28 ha south-west corner greenspace to better connect existing habitats present outside of the southern and western site boundaries. This area now links directly with the corridor providing additional habitat connectivity.
Retained three hollow bearing trees within Central corridor	Whilst there is loss of three (3) hollow bearing trees from central corridor, two (2) are now retained in the western greenspace.
Rehabilitation of the greenspace in the Southeastern Corner	Rehabilitation of 6715 m^2 greenspace in the Southeastern Corner

1.3 KOALA PLAN

As *the premises on which the development is carried out includes an area that is both – (i) a Koala Priority Area and (ii) a Koala Habitat Area* but does not propose any interfering with Koala habitat in a koala habitat area, it is assessed under schedule 11 of the *Planning Regulation 2017*.

The entire property is within a Koala Priority Area under the south-east Queensland Koala Planning Framework. All the mapped Regional Ecosystems on the site are mapped as Core Koala Habitat Area and are proposed to be wholly retained within greenspace. We have reviewed the Planning Regulation Schedule 11, Part 2, Schedule 4 Assessment Benchmarks.

In meeting these provisions, the revised design has ensured retention of movement options between mapped Koala habitat areas within 200 of an area mapped on the site and provision of appropriate setbacks from mapped Koala habitat.

The key point to meet for the Koala plan is ensuring the proposed use provides a functioning movement corridor between adjoining Koala Habitats, which is wholly achieved and in fact improved by the revised design.

The provision of fauna exclusion fencing along the western corridor and central bio basin area to prevent fauna access to or through the industrial site from the proposed Corridor is recommended.

2.0 CONCLUSION

The proposed design is considered as a minor change in respect to ecological outcomes. Whilst the proposed corridor is relocated to the western side of the property, moving from the prior centrally located position, the corridor will still provide for all the fauna movement envisaged for the prior design and will provide an improved connection for fauna movement due to the removal of the intersecting roadway.

The revised design is considered to be superior in that it removes any intersection with the roadway and provides a connection which directly adjoins other retained habitats in the local landscape. The same restoration actions for the corridor are proposed and there will be an overall increase in habitat provided within the corridor.

There is added benefit in that there is no ongoing requirement for maintenance of the fauna movement infrastructure which was required in the prior design. We consider the revised design is both a suitable option in respect to fauna movement and provides other ecological benefits, including an increase in overall habitat connectivity.

Land and environment consultants

Bushfire management plan

Proposed development | 20 Giles Road | Redland Bay | Queensland
Prepared for Fox and Bell Group | 6 July 2023

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Bushfire management plan

Final

Report 23026 | Fox and Bell Group | 6 July 2023

Approved by Robert Janssen

Position Managing principal

Signature

Date 6 July 2023

This report has been prepared in accordance with the brief provided by the client and has relied upon the information collected at or under the times and conditions specified in the report. All findings, conclusions or recommendations contained in the report are based on the aforementioned circumstances. The report is for the use of the client and no responsibility will be taken for its use by other parties. The client may, at its discretion, use the report to inform regulators and the public.

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Document control

Version	Date	Prepared by	Reviewed by
Draft	20 June 2023	C. Turner	R. Janssen
Final	6 July 2023	C. Turner	R. Janssen

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Table of contents

Contents

Table of contents i

1 Introduction 1

1.1 Method 1

1.2 Suitably qualified person 2

2 Description of the site and the proposed development 3

2.1 Site description 3

2.2 Proposed development 3

2.3 SPP bushfire prone area map 3

3 Bushfire hazard assessment 5

3.1 Severe fire weather 5

3.2 Fire history 5

3.3 Site assessment 5

3.4 Potential bushfire intensity calculations 8

3.5 Bushfire hazard areas 9

4 Bushfire hazards associated with the site 10

4.1 Fire danger season 10

4.2 Fire history 10

4.3 Bushfire attack 10

4.4 Potential bushfire hazards from adjacent land use 10

4.5 Water and access for emergency services 10

5 Bushfire hazards associated with the proposed development 11

5.1 Siting and design 11

5.2 Stormwater management area 11

5.3 Green space areas 11

5.4 Hazardous materials manufactured or stored in bulk 11

5.5 Vulnerable uses, emergency services and community support services 12

5.6 Emergency access and egress 12

5.7 Fire-fighter water supply 12

5.8 Radiant heat exposure 12

6 Bushfire mitigation plan 13

6.1 Bushfire management zones 13

6.2 Uses involving hazardous materials, vulnerable uses, emergency services and community support services 13
6.3 Landscaping 13
6.4 Fire-fighter water supply 13
6.5 Access and egress 14
6.6 Service installation 14
7 Conclusion 16

Figures

Figure 2.1 Site locality and SPP bushfire prone area map 4
Figure 6.1 Bushfire mitigation plan 15

Tables

Table 3.1 Site observations 5
Table 3.2 Potential bushfire intensity 8

Photographs

Photograph 3.1 VHC 9.2 at A 7
Photograph 3.2 VHC 9.2 at B 7
Photograph 3.3 VHC 9.2 at C 7
Photograph 3.5 VHC 9.2 at D 7
Photograph 3.6 VHC 40.4 at E 7
Photograph 3.7 VHC 9.2 at F 7
Photograph 3.4 VHC 22.1 at K 8

Appendix

Appendix 1 Proposed masterplan
Appendix 2 Radiant heat exposure assessment
Appendix 3 Bushfire hazard overlay code assessment

Disclaimer

Notwithstanding the precautions adopted in this report, it should always be remembered that bushfires burn under a range of conditions. An element of risk, no matter how small always remains, and although AS 3959-2018 is designed to improve the performance of such buildings, there can be no guarantee, because of the variable nature of bushfires, that any building will withstand bushfire attack on every occasion.

It should be noted that upon lodgement of a development proposal, State Government, council and/or the fire service may recommend additional construction requirements.

Although every care has been taken in the preparation of this report, Land and Environment Consultants Pty Ltd accept no responsibility resulting from the use of the information in this report.

1 Introduction

Land and Environment Consultants Pty Ltd (**LEC**) was engaged to prepare a bushfire management plan (**BMP**) for the proposed material change of use – preliminary approval for the Inspire Technology Park masterplan (**proposed development**) at 20 Giles Road, Redland Bay (**the site**), properly described as lot 1/RP199206.

A development application will be made for the proposed development under the Redland City Plan 2018.

The Redland City Plan 2018 *Bushfire hazard overlay code* (**Bushfire hazard overlay code**) defers to the Queensland State Planning Policy (**SPP**) *Bushfire prone area map* (**SPP bushfire prone area map**) which identifies the site as a bushfire prone area. Therefore, the development application for the proposed development is subject to compliance with the Bushire hazard overlay code.

This BMP has been prepared in accordance with *Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience - Bushfire'* (QFES 2019a) (**Bushfire resilient communities**) – Bushfire resilient communities was prepared by the Queensland Fire and Emergency Services (**QFES**) to provide technical guidance for the implementation of the *Natural Hazards, Risk and Resilience – bushfire, State Planning Policy State Interest guidance material* (DSDMIP 2019). It documents the bushfire hazard assessment of the site and demonstrates how the proposed development will comply with the Bushfire hazard overlay code. It includes:

- an introduction (this section) and description of methods and information resources used for the preparation of this BMP;
- description of the site and the proposed development;
- bushfire hazard assessment;
- identification of bushfire hazards associated with the site and the proposed development;
- radiant heat exposure assessment;
- a plan for mitigating bushfire hazards; and
- assessment of the proposed development against the Bushfire hazard overlay code.

1.1 Method

To meet requirements of Bushfire resilient communities, the following tasks were undertaken:

- review of the SPP bushfire prone area map in the SPP interactive mapping system (DILGP 2023) and the Queensland regional ecosystem (**RE**) map, vegetation hazard class (**VHC**) map, severe fire weather map and fire history map in the QFES online mapping system (QFES 2023) (**Catalyst**);
- inspection of land within 100 metres (**m**) of the site for vegetation characteristics, current land management practices, slope and evidence of previous fires;
- bushfire hazard assessment in accordance with the method in Bushfire resilient communities;
- radiant heat exposure assessment using the Fire Protection Association of Australia *BAL calculator V4.9* (**BAL calculator**) which models the 'method 2' bushfire attack level assessment procedure in the *Australian Standard* (AS 3959-2018) *Construction of buildings in bushfire prone areas;* and
- assessment of the proposed development against the Bushfire hazard overlay code.

Aerial imagery of the site was accessed online from Google Earth to assist in validating observations and measurements made during the site assessment.

1.2 Suitably qualified person

This BMP was technically reviewed and approved by Robert Janssen who is a suitably qualified and experienced bushfire management consultant.

Robert is the managing principal at LEC and has over 25 years of experience in bushfire planning and operations. He has prepared BMPs for residential, commercial and industrial property developments, utilities, government facilities and conservation estates.

Robert's formal qualifications as an environmental scientist and consulting experience are coupled with 10 years of experience as a nationally accredited fire-fighter with the national parks and wildlife service in New South Wales and Queensland.

2 Description of the site and the proposed development

This chapter provides a description of the site and the proposed development.

2.1 Site description

The location of the site is shown in Figure 2.1. The site is 25 hectares (**ha**) and has access to mains water and existing public roads.

The eastern boundary of the site adjoins Cleveland Redland Bay Road and part of the northern boundary adjoins Giles Road which is the site's current access location.

The site is currently used for an agricultural purpose and is mostly cleared of bushland vegetation. It consists of dwelling houses, farm sheds, fenced paddocks and dams.

The site's boundaries adjoin a combination of bushland vegetation and paddocks which have tall grass.

2.2 Proposed development

The proposed development is for Inspire Technology Park masterplan which will establish an Innovation precinct and green space areas as shown by the plan of development in Appendix 1.

Stormwater management structures will be developed within the northern part of the central green space corridor. They will be landscaped with a variety of sedge and grass species typically used for bioretention basins.

Beyond the stormwater management area, the green space areas will be rehabilitated with tree species from the local pre-clear RE mapping but will be maintained landscapes with a mown grass understorey.

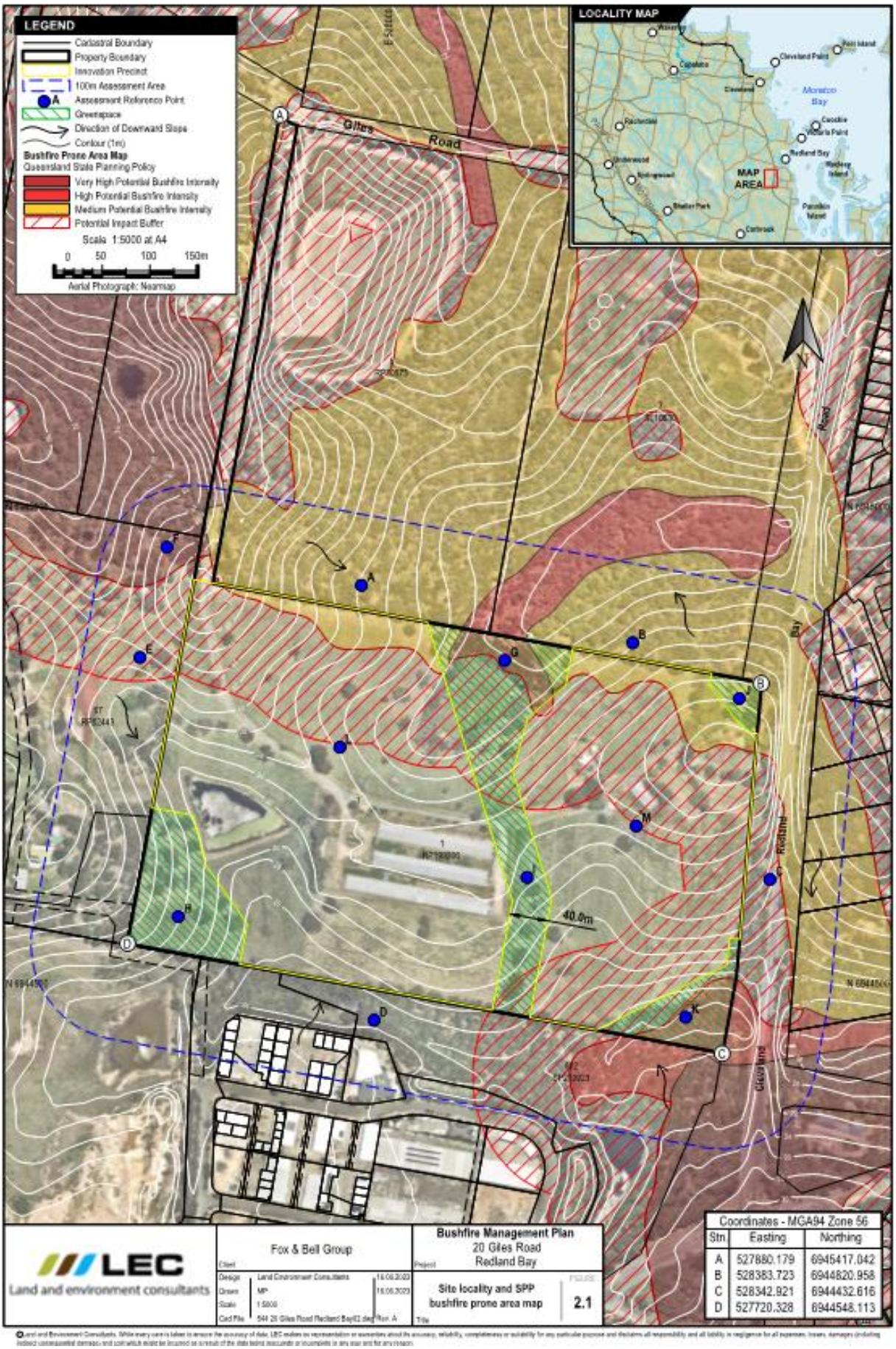
Currently, vehicle access and egress for the proposed development is via the existing driveway connection to Giles Road. Primary access to the proposed development is proposed from Cleveland Redland Bay Road.

The proposed development will be connected to mains water and will include a reticulated hydrant system.

2.3 SPP bushfire prone area map

The SPP bushfire prone area map for the site is shown in Figure 2.1. Verification of the bushfire prone areas shown in the SPP bushfire prone area map is provided via the bushfire hazard assessment in Chapter 3.

Please note, the terms 'bushfire prone area' and 'bushfire hazard area' have the same meaning and are interchanged throughout this report. Both terms mean an area of vegetation that is determined to have a potential bushfire intensity ≥ 4,000 kilowatts/m (**kW/m**) and the land within 100 m of this vegetation.


LEGEND
Cadastral Boundary
Property Boundary
Innovation Precinct
100m Assessment Area
A
Assessment Reference Point
Greenspace
Direction of Downward Slope
Contour (1m)
Bushfire Prone Area Map
Queensland State Planning Policy
Very High Potential Bushfire Intensity
High Potential Bushfire Intensity
Medium Potential Bushfire Intensity
Potential Impact Buffer
Scale 1:5000 at A4
0 50 100 150m
Aerial Photograph: Nearmap
LOCALITY MAP
MAP AREA
Giles Road
Redland Bay
Cleveland Point
Point Island
Capalaba
Cleveland
Moreton Bay
Victoria Point
Underwood
Shelley Park
Carbrook
Russell Island
Macleay Island
Coochiemudlo Island
Redland
Bay
Road
40.0m
A
B
C
D
E
F
G
H
J
K
L
M
Coordinates - MGA94 Zone 56
Stn | Easting | Northing
A | 527880.179 | 6945417.042
B | 528383.723 | 6944820.958
C | 528342.921 | 6944432.616
D | 527720.328 | 6944548.113
LEC
Land and environment consultants
Fox & Bell Group
Client
Bushfire Management Plan
20 Giles Road
Redland Bay
Project
Site locality and SPP bushfire prone area map
FIGURE
2.1
Title

3 Bushfire hazard assessment

This chapter provides details of the desktop review, site inspection and bushfire hazard assessment of the site.

3.1 Severe fire weather

The severe fire weather map in Catalyst indicates the 5 % annual exceedance probability forest fire danger index (**FFDI**) for the site is 53. This FFDI value has been used for the potential bushfire intensity calculations in Section 3.4 and the radiant heat exposure assessment in Section 5.8.

3.2 Fire history

Fire history data in Catalyst indicates that no fires have occurred within 1 kilometre (**km**) of the site during the past 10 years.

3.3 Site assessment

LEC inspected land within 100 m of the site on 13 April 2023. Observations were recorded about current land use and management, vegetation characteristics, the slope of land and evidence of previous fires.

The locations of assessment reference points used for the bushfire hazard assessment are shown in Figure 2.1. Table 3.1 provides a summary of observations from the site inspection and notes about the bushfire hazard assessment of assessment reference points. Features of assessment reference points are shown in Photographs 3.1-3.7.

Table 3.1 Site observations

Assessment reference point	Catalyst VHC	Ground truthed VHC	Notes
A	VHC 9.2 *Moist to dry eucalypt woodland on coastal lowlands and ranges* (**VHC 9.2**)	VHC 9.2	Bushland vegetation adjoining the northern boundary of the site.
B	VHC 9.2	VHC 9.2	Bushland vegetation adjoining the northern boundary of the site.
C	VHC 9.2	VHC 9.2	Bushland vegetation adjoining the eastern boundary of the site.
D	VHC 40.4 *Continuous low grass or tree cover* (**VHC 40.4**) and VHC 41.4 *Discontinuous low grass or tree cover* (**VHC 41.4**)	VHC 9.2	Bushland vegetation adjoining the southern boundary of the site.
E	VHC 40.4 and VHC 41.4	VHC 40.4	Tall continuous grass adjoining part of the western boundary of the site.
F	VHC 8.1 *Wet eucalypt tall open forest*	VHC 9.2	Bushland vegetation adjoining part of the western boundary of the site.
G	VHC 22.1 *Melaleuca open forests on seasonally inundated lowland coastal swamps* (**VHC 22.1**)	Not applicable	This assessment reference point is within the green space area and is aligned with the stormwater management area that will be landscaped with a variety of sedge and grass species. Therefore, assessment reference point G is assessed as VHC 40.4

Table 3.1 Site observations

Assessment reference point	Catalyst VHC	Ground truthed VHC	Notes
			in the potential bushfire intensity calculations in Section 3.4.
H	VHC 40.4 and VHC 41.4	Not applicable	This assessment reference point is within the green space area. It will be rehabilitated with tree species from the local pre-clear RE mapping but will be a maintained landscape with a mown grass understorey. Therefore, assessment reference point H is assessed as VHC 41.4 in the potential bushfire intensity calculations in Section 3.4.
I	VHC 40.4 and VHC 41.4	Not applicable	This assessment reference point is within the green space area. It will be rehabilitated with tree species from the local pre-clear RE mapping but will be a maintained landscape with a mown grass understorey. Therefore, assessment reference point I is assessed as VHC 41.4 in the potential bushfire intensity calculations in Section 3.4.
J	VHC 40.4 and VHC 41.4	Not applicable	This assessment reference point is within the green space area. It will be rehabilitated with tree species from the local pre-clear RE mapping but will be a maintained landscape with a mown grass understorey. Therefore, assessment reference point J is assessed as VHC 41.4 in the potential bushfire intensity calculations in Section 3.4.
K	VHC 22.1	VHC 22.1	This assessment reference point is within the green space area. Existing bushland vegetation will be retained in this area.
L	VHC 40.4 and VHC 41.4	Not applicable	This assessment reference point is within the proposed innovation precinct which will correlate with VHC 42.6 *Nil to very low vegetation cover* (**VHC 42.6**) when developed. Therefore, assessment reference point L has been assessed as VHC 42.6 in the potential bushfire intensity calculations in Section 3.4.
M	VHC 40.4 and VHC 41.4	Not applicable	This assessment reference point is within the proposed innovation precinct which will correlate with VHC 42.6 when developed. Therefore, assessment reference point M has been assessed as VHC 42.6 in the potential bushfire intensity calculations in Section 3.4.

Photograph 3.1 VHC 9.2 at A

Photograph 3.2 VHC 9.2 at B

Photograph 3.3 VHC 9.2 at C

Photograph 3.4 VHC 9.2 at D

Photograph 3.5 VHC 40.4 at E

Photograph 3.6 VHC 9.2 at F

7

Photograph 3.7 VHC 22.1 at K

3.4 Potential bushfire intensity calculations

The potential bushfire intensity of assessment reference points was determined using the Queensland Public Safety Business Agency *Potential Bushfire Intensity Calculator* (version November 2014) which is an Excel spreadsheet calculator that models the bushfire hazard assessment method in Bushfire resilient communities.

Bushfire resilient communities define bushfire hazard classes as follows:

- very high – potential bushfire intensity > 40,000 kW/m;
- high – potential bushfire intensity 20,000-40,000 kW/m;
- medium – potential bushfire intensity 4,000-20,000 kW/m; and
- non-bushfire hazard – potential bushfire intensity < 4,000 kW/m.

Results of potential bushfire intensity calculations which determine the bushfire hazard class of assessment reference points shown in Figure 2.1 are presented in Table 3.2.

Table 3.2 Potential bushfire intensity

Assessment reference point	VHC	Potential fuel load (tonnes/ha)[1]	Slope (°)[2]	Potential bushfire intensity (kW/m)	Bushfire hazard class
A	VHC 9.2	17.2	7	15,758	Medium
B	VHC 9.2	17.2	6	14,707	Medium
C	VHC 9.2	17.2	4	12,811	Medium
D	VHC 9.2	17.2	6	14,707	Medium
E	VHC 40.4	5	9	1,529	Non-bushfire hazard class
F	VHC 9.2	17.2	6	14,707	Medium
G	VHC 40.4	5	0	822	Non-bushfire hazard class
H	VHC 41.4	3	0	296	Non-bushfire hazard class
I	VHC 41.4	3	0	296	Non-bushfire hazard class
J	VHC 41.4	3	0	296	Non-bushfire hazard class
K	VHC 22.1	28.4	0	26,504	High
L	VHC 42.6	2	0	131	Non-bushfire hazard class

Table 3.2 Potential bushfire intensity

Assessment reference point	VHC	Potential fuel load (tonnes/ha)[1]	Slope (°)[2]	Potential bushfire intensity (kW/m)	Bushfire hazard class
M	VHC 42.6	2	0	131	Non-bushfire hazard class

Notes 1 Potential fuel load taken from Bushfire resilient communities.
2 Slope defaults to 0° for VHC 41.4 and VHC 42.6 which have discontinuous bushfire fuels.

3.5 Bushfire hazard areas

Results of the potential bushfire intensity calculations determined that the site is within a bushfire hazard area. Therefore, the development application for the proposed development is subject to compliance with the Bushfire hazard overlay code.

4 Bushfire hazards associated with the site

This chapter identifies bushfire hazards associated with the site.

4.1 Fire danger season

The fire danger season in South-east Queensland starts in August, peaks in September and begins to fall in November, but will remain elevated until consistent summer rainfall occurs. Typically, the worst fire weather conditions will be experienced during the fire danger season when the wind direction is from the north or west.

An FFDI of 53 will be associated with hot, dry and windy conditions. If a bushfire starts and takes hold under these conditions, it will be difficult to control and fast moving in large areas of bushland vegetation.

4.2 Fire history

As discussed in Section 3.2, fire history data indicates that no fires have occurred within 1 km of the site during the past 10 years. Notwithstanding, given the site adjoins large areas of bushland vegetation, it is considered possible that the site could be exposed to the effects of bushfire attack in the future.

4.3 Bushfire attack

Bushfire attack on the proposed development is possible from assessment reference points A-D, F and K, which are shown in Figure 2.1, where hazardous vegetation occurs. These bushfire attack scenarios are further assessed in Section 5.8.

Although VHC 40.4 at assessment reference points E and G, which are shown in Figure 2.1, were assessed as a non-bushfire hazard class in Section 3.4, it is defined as being grassfire prone in Bushfire resilient communities. Therefore, it is included in the bushfire attack scenarios assessed in Section 5.8.

4.4 Potential bushfire hazards from adjacent land use

Developed land adjacent to the site is not a bushfire hazard to the proposed development given that it consists of discontinuous bushfire fuels and will not carry a running fire front.

Areas of bushland vegetation and tall grass adjoining the site are a potential bushfire hazard to the proposed development given they have continuous bushfire fuels and could carry a running fire front.

4.5 Water and access for emergency services

The site has access to mains water and a public road network which will provide access and egress for emergency services and future occupants.

5 Bushfire hazards associated with the proposed development

This chapter identifies potential bushfire hazards associated with the proposed development.

5.1 Siting and design

The proposed development will be designed to mitigate the risk of bushfire hazards determined by the bushfire hazard assessment in this BMP.

Future development within the Innovation precinct (**future development**) will be appropriately separated from hazardous vegetation at assessment reference points A-G and K, which are shown in Figure 2.1.

Roads and driveways within the proposed development will be designed to provide efficient access and egress for emergency services and occupants.

The proposed development will be connected to mains water and will include a reticulated hydrant system.

5.2 Stormwater management area

The stormwater management area, which is identified as assessment reference point G in Figure 2.1, will be landscaped with a variety of sedge and grass species typically used for bioretention basins. The landscaping will result in an area of continuous bushfire fuel when it reaches a mature state and could carry a surface fire. Future development will be appropriately separated from the landscaping associated with the stormwater management structures.

5.3 Green space areas

Beyond the stormwater management area, the green space areas will be rehabilitated with tree species from the local pre-clear RE mapping but will be maintained landscapes with a mown grass understorey. The mown areas will not carry a surface fire.

The exception is the green space area identified as assessment reference point K in Figure 2.1 where an existing area of bushland vegetation will be retained. Notwithstanding, this green space area will include a mown grass corridor which will separate the bushland vegetation from future development.

5.4 Hazardous materials manufactured or stored in bulk

There is potential for future development to involve hazardous materials manufactured or stored in bulk.

The Bushfire hazard overlay code seeks the avoidance of development involving hazardous materials manufactured or stored in bulk in bushfire hazard areas. However, where these developments are unavoidable in a bushfire hazard area, it requires site planning to incorporate a setback from hazardous vegetation which achieves a radiant heat flux level ≤ 10 kW/m^2 at buildings or building envelopes as a risk mitigation treatment.

Future development involving hazardous materials manufactured or stored in bulk will also be developed and operated in accordance with requirements of the Queensland *Work Health and Safety Act 2011* (**WHS Act**) and associated regulation and guidelines, the Queensland *Environmental Protection Act 1994* (**EP Act**) and the relevant building assessment provisions under the Queensland *Building Act 1975* (**Building Act**).

5.5 Vulnerable uses, emergency services and community support services

Although unlikely to occur, if future development involves vulnerable uses, eg a childcare centre, emergency services or uses providing community support services; it will also be required to provide a setback from hazardous vegetation which achieves a radiant heat flux level ≤ 10 kW/m^2 at the buildings or building envelopes.

5.6 Emergency access and egress

Access and egress for the proposed development will be via Cleveland Redland Bay Road. The existing driveway connection to Giles Road will be used for emergency access only.

5.7 Fire-fighter water supply

The proposed development will be connected to mains water and will include a reticulated hydrant system.

5.8 Radiant heat exposure

The Bushfire hazard overlay code requires future development to be setback from hazardous vegetation by a distance which achieves a radiant heat flux level ≤ 29 kW/m^2 at buildings or building envelopes.

Future development involving hazardous materials manufactured or stored in bulk, vulnerable uses, emergency services and community support services are to be setback from hazardous vegetation by a distance which achieves a radiant heat flux level ≤ 10 kW/m^2 at buildings or building envelopes.

The radiant heat profile of bushfire attack from assessment reference points A-G and K, which are shown in Figure 2.1, was assessed using the BAL calculator. Inputs used in the BAL calculator and results are provided in Appendix 2. The results determine the setbacks from assessment reference points A-G and K which are required to achieve a radiant heat flux level ≤ 29 kW/m^2 and ≤ 10 kW/m^2.

6 Bushfire mitigation plan

This chapter identifies mitigation measures that must be implemented as part of the proposed development to comply with the Bushfire hazard overlay code.

It is the total of the mitigation measures in this chapter that will reduce the risk of bushfire hazard to a tolerable level. Failure to implement all actions in their entirety could result in an increased level of exposure to bushfire hazards.

6.1 Bushfire management zones

The bushfire management zones (**BMZs**) shown in Figure 6.1 must be established within the site.

Buildings and building envelopes associated with future development must not be located within a BMZ. The exceptions are fencing, retaining walls, roads and driveways, pathways and carparking which must be constructed with fire-resisting materials.

If a BMZ is to be established as open space it must be landscaped with turf and maintained as lawn at a nominal height of ≤ 100 millimetres (**mm**).

6.2 Uses involving hazardous materials, vulnerable uses, emergency services and community support services

Future development involving hazardous materials manufactured or stored in bulk, vulnerable uses, emergency services and community support services must not be located between hazardous vegetation and the 10 kW/m^2 radiant heat flux contour shown in Figure 6.1.

Future development involving hazardous materials manufactured or stored in bulk must be developed and operated in accordance with requirements of the WHS Act and associated regulation and guidelines, the EP Act and the relevant building assessment provisions of the Building Act.

6.3 Landscaping

Landscaping associated with future development must be in accordance with Part 5 of *Bushfire Resilient Building Guidance for Queensland Homes* (QRA 2020) (**Bushfire resilient building**). Plant selection should favour species listed in Appendix E of Bushfire resilient building or Table 8.2.2.2 of the Bushfire hazard overlay code.

Vegetation debris and rubbish must be removed from landscaped areas at regular time intervals during a calendar year.

Turf areas must be maintained as lawn at a nominal height of ≤ 100 mm.

6.4 Fire-fighter water supply

Future development must be connected to mains water in accordance with the local water retailer's specifications for supply and pressure.

Future development must include a reticulated hydrant system which is designed and constructed in accordance with *Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots* (QFES 2019b) (**Fire hydrant and vehicle access guidelines**) which defers to the local water retailer's specifications and the *Australian Standard* (2419.1-2021) *Fire hydrant installation, system design, installation and commissioning*.

Where there are differences between the local water retailer's specifications and AS 2419.1-2021 the higher-level standard should prevail.

6.5 Access and egress

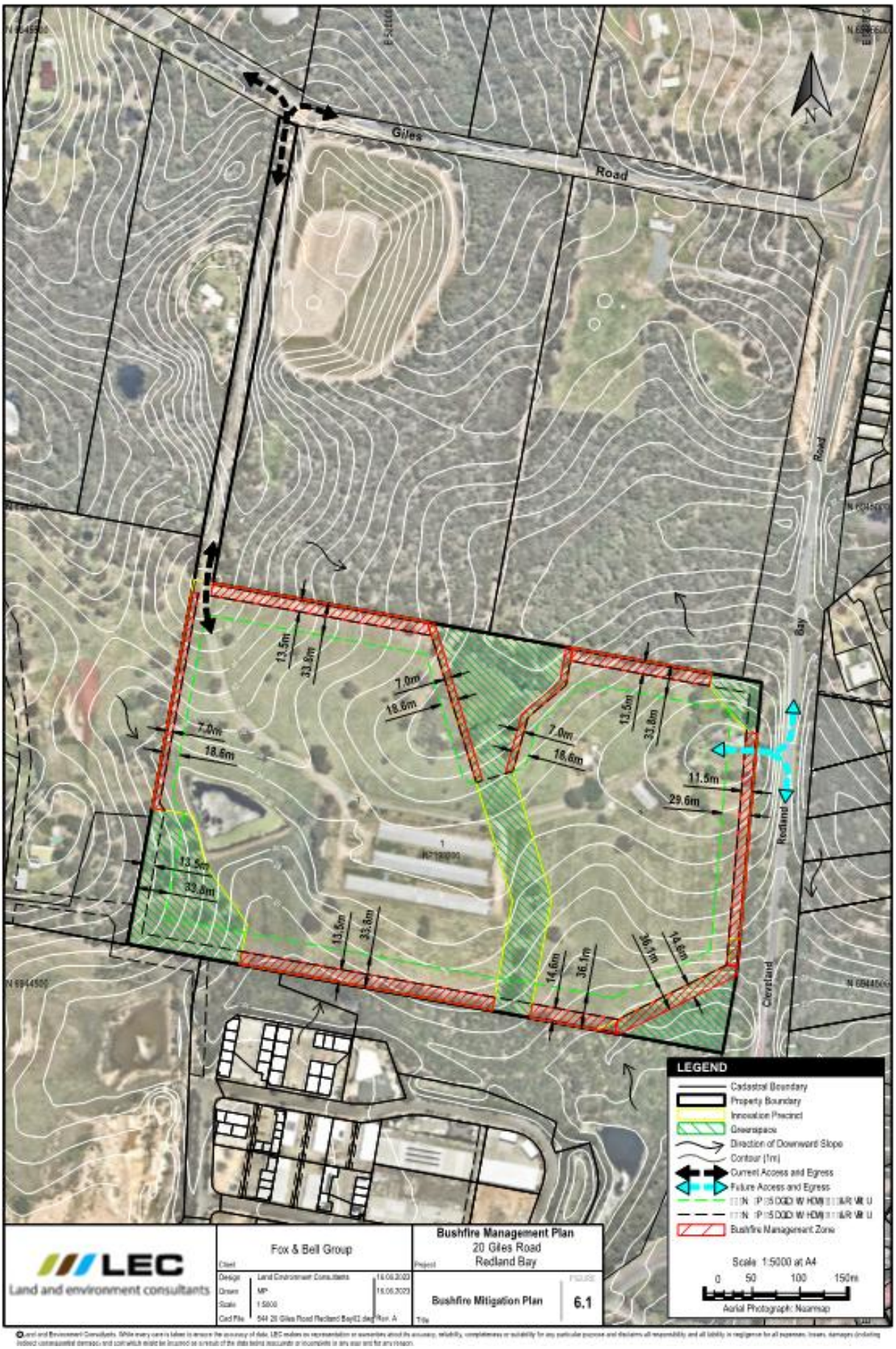
Future roads and driveways must be designed to accommodate an urban fire truck in accordance with the minimum standards specified in Fire hydrant and vehicle access guidelines which defers to the *Road Planning and Design Manual – 2nd Edition* (DTMR 2013) for load bearing capacity, geometry and turning radii.

Where possible, perimeter roads, driveways, pathways and carparks must be used to separate building envelopes associated with future development from hazardous vegetation.

Access and egress for the proposed development is shown in Figure 6.1.

6.6 Service installation

Reticulated services, ie water, electricity and gas, must be installed underground.


Giles
Road
Road
Bay
Redland
Cleveland
13.5m
33.8m
7.0m
18.6m
11.5m
29.6m
14.6m
36.1m
LEGEND
Cadastral Boundary
Property Boundary
Innovation Precinct
Greenspace
Direction of Downward Slope
Contour (1m)
Current Access and Egress
Future Access and Egress
Bushfire Management Zone
Scale 1:5000 at A4
0 50 100 150m
Aerial Photograph: Nearmap
LEC
Land and environment consultants
Fox & Bell Group
Client
Bushfire Management Plan
20 Giles Road
Redland Bay
Project
Land Environment Consultants
Design
MP
Drawn
1:5000
Scale
544 20 Giles Road Redland Bay(2) dwg
Cad File
16.05.2023
16.05.2023
Rev. A
Bushfire Mitigation Plan
Title
FIGURE
6.1

7 Conclusion

This BMP was technically reviewed and approved by a suitably qualified person and is in general accordance with Bushfire resilient communities.

A bushfire hazard assessment of the site determined that the site is affected by bushfire hazard and the proposed development is subject to compliance with the Bushfire hazard overlay code.

Mitigation measures that must be implemented with the future development of the site are specified in Chapter 6. With the implementation of these mitigation measures the proposed development complies with the Bushfire hazard overlay code as demonstrated in Appendix 3.

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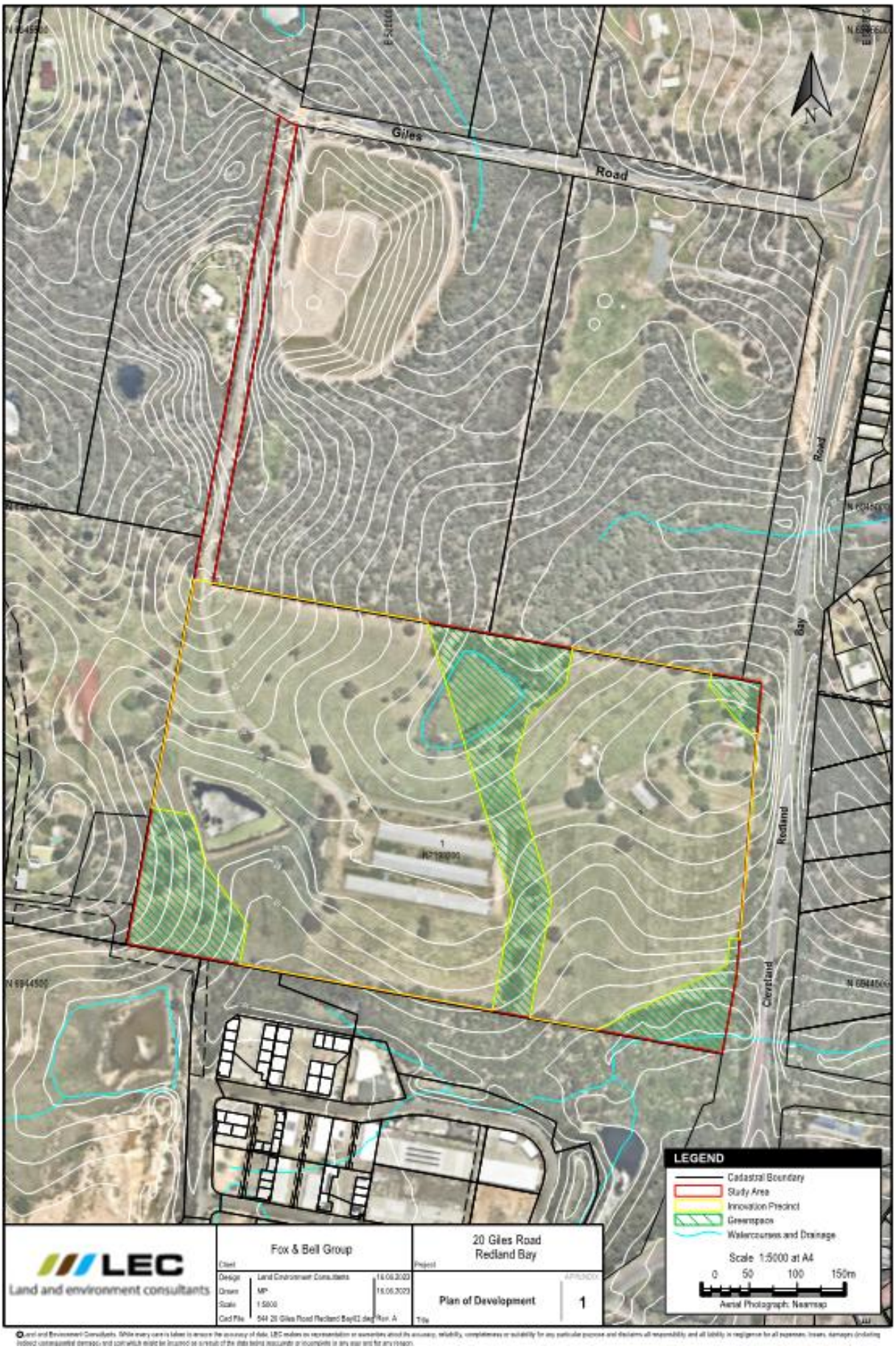
Standards Australia Limited (Standards Australia) 2021, *Australian Standard 2419.1-2021 – Fire hydrant installation, System design, installation and commissioning*, Sixth edition, September 2021

Standards Australia Limited (Standards Australia) 2018, *Australian Standard 3959-2018 Construction of buildings in bushfire prone areas*, Fourth edition, November 2018

Appendix 1 Proposed masterplan


Giles
Road
Road
Redland
Bay
Cleveland
LEGEND
Cadastral Boundary
Study Area
Innovation Precinct
Greenspace
Watercourses and Drainage
Scale 1:5000 at A4
0 50 100 150m
Aerial Photograph: Nearmap
LEC
Land and environment consultants
Fox & Bell Group
Client
20 Giles Road
Redland Bay
Project
Design Land Environment Consultants 16.05.2023
Drawn MP 16.05.2023
Scale 1:5000
Cad File 544 20 Giles Road Redland Bay01.dwg Rev. A
Plan of Development
1
Title

Appendix 2 Radiant heat exposure assessment

Bushfire attack from assessment reference points A, B, D and F

- Forest fire danger index - 53
- Vegetation - VHC 9.2 *Most to dry eucalypt woodland on coastal lowlands and ranges*
- Understorey fuel load – 14.9 tonnes/hectare (**t/ha**)
- Total fuel load – 17.2 t/ha
- Effective slope – 7° down slope
- Site slope – 0° slope
- Flame width – 100 metres (**m**)

Note Inputs used for the radiant heat exposure assessment are in accordance with Section 7.3 of *Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience – Bushfire* (QFES 2019a) **(Bushfire resilient communities)**.

FPA | FLAMESOL

Calculated April 15, 2025, 10:01 am (AEDT) v 4.4.0

323026

Minimum Distance Calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.53 km/h
Vegetation classification	WoodBand	Flame length	12.04 m
Understorey fuel load	14.9 t/ha	Flame angle	33 °, 63 °, 71 °, 78 °, 78 ° & 83 °
Total fuel load	17.2 t/ha	Elevation of receiver	4.81 m, 5.36 m, 5.69 m, 5.84 m, 5.89 m & 5.97 m
Vegetation height	n/a	Fire intensity	13,650 kW/m
Effective slope	7 °	Transmissivity	0.877, 0.86, 0.837, 0.81200000000000001, 0.799 & 0.733
Site slope	0 °	Viewfactor	0.5957, 0.4406, 0.2672, 0.2022, 0.1643 & 0.0447
Flame width	100 m	Minimum distance to < 40 kW/m²	10 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	13.5 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	19.9 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	28.3 m
		Minimum distance to < 10 kW/m²	33.8 m

Rate of Spread - McArthur, 1973 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Bushfire attack from assessment reference point K

- Forest fire danger index - 53
- Vegetation - VHC 22.1 *Melaleuca open forests on seasonally inundated lowland coastal swamps*
- Understorey fuel load – 23.4 t/ha
- Total fuel load – 28.4 t/ha
- Effective slope – 0° slope[1]
- Site slope – 0° slope
- Flame width – 100 metres

Note Inputs used for the radiant heat exposure assessment are in accordance with Section 7.3 of Bushfire resilient communities.
1 The slopes associated with the short banks of a drainage gullies was set to 0°.

FPA | FLAMESBE

Calculated April 16, 2025, 10:12 am (FBDr v.4.4)

323026

Minimum Distance Calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.48 km/h
Vegetation classification	Forest	Flame length	13.08 m
Understorey fuel load	23.4 t/ha	Flame angle	53 °, 63 °, 71 °, 76 °, 77 ° & 83 °
Total fuel load	28.4 t/ha	Elevation of receiver	5.22 m, 5.82 m, 6.18 m, 6.34 m, 6.37 m & 6.40 m
Vegetation height	n/a	Fire intensity	21,857 kW/m
Effective slope	0 °	Transmissivity	0.875, 0.857, 0.833, 0.807000000000001, 0.794 & 0.731
Site slope	0 °	Viewfactor	0.5982, 0.4423, 0.299, 0.2032, 0.1648 & 0.0449
Flame width	100 m	Minimum distance to < 40 kW/m²	10.8 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	14.6 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	21.4 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	35.3 m
		Minimum distance to < 10 kW/m²	36.1 m

Rate of Spread - Pearlfire, 1977 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Bushfire attack from assessment reference point C

- Forest fire danger index - 53
- Vegetation - VHC 9.2 *Most to dry eucalypt woodland on coastal lowlands and ranges*
- Understorey fuel load – 14.9 t/ha
- Total fuel load – 17.2 t/ha
- Effective slope – 4° down slope
- Site slope – 0° slope
- Flame width – 100 metres

Note Inputs used for the radiant heat exposure assessment are in accordance with Section 7.3 of Bushfire resilient communities.

Calculated April 16, 2023, 2:04 pm (MDx v.4.0)

123025

Minimum Distance Calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.24 km/h
Vegetation classification	Woodland	Flame length	10.18 m
Understorey fuel load	14.9 t/ha	Flame angle	54 °, 64 °, 72 °, 77 °, 79 ° & 84 °
Total fuel load	17.2 t/ha	Elevation of receiver	4.11 m, 4.57 m, 4.84 m, 4.95 m, 4.99 m & 5.00 m
Vegetation height	n/a	Fire intensity	11,098 kW/m
Effective slope	4 °	Transmissivity	0.88, 0.866, 0.844, 0.821, 0.8080000000000001 & 0.739
Site slope	0 °	Viewfactor	0.5915, 0.4375, 0.2941, 0.1996, 0.1621 & 0.0443
Flame width	100 m	Minimum distance to < 40 kW/m²	8.5 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	11.5 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	17 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	24.6 m
		Minimum distance to < 10 kW/m²	26.6 m

Rate of Spread - McArthur, 1973 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Bushfire attack from assessment reference points E and G

- Forest fire danger index - 53
- Grassland fire danger index – 75
- Vegetation - VHC 40.4 *Continuous low grass or tress cover*
- Understorey fuel load – 4.5 t/ha
- Total fuel load – 5 t/ha
- Effective slope – 0° slope
- Site slope – 0° slope
- Flame width – 100 metres

Note Inputs used for the radiant heat exposure assessment are in accordance with Section 7.3 of Bushfire resilient communities.

FPA | FLAMES01

Calculated April 10, 2025, 10:37 am (MDx v.4.0)

323026

Minimum Distance Calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Grassland Fire Danger Index	75	Rate of spread	9.75 km/h
Vegetation classification	Grassland	Flame length	5.88 m
Understorey fuel load	4.5 t/ha	Flame angle	54 °, 65 °, 72 °, 78 °, 80 ° & 88 °
Total fuel load	5 t/ha	Elevation of receiver	2.41 m, 2.71 m, 2.88 m, 2.92 m, 2.94 m & 2.88 m
Vegetation height	n/a	Fire intensity	25,187 kW/m
Effective slope	0 °	Transmissivity	0.89, 0.88, 0.865, 0.847, 0.838 & 0.761
Site slope	0 °	Viewfactor	0.5864, 0.427, 0.2887, 0.1935, 0.157 & 0.043
Flame width	100 m	Minimum distance to < 40 kW/m²	5 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	8.8 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	10.3 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	15.2 m
		Minimum distance to < 10 kW/m²	18.8 m

Rate of Spread - Noble et al. 1980

Flame length - Purton, 1982

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Appendix 3 Bushfire hazard overlay code assessment

Table 8.2.2.3.1 – Benchmarks for assessable development

Performance outcomes	Acceptable outcomes	Compliance assessment
Compatible development		
PO1 Development involving the accommodation or congregation of vulnerable sectors of the community such as childcare centres, community care centres, educational establishments, detention facilities, hospitals, rooming accommodation, retirement facilities or residential care facilities, is not located on land subject to bushfire hazard, unless there is an overriding community need or the development is located in the specialised centre zone.	**AO1.1** The following uses do not occur within bushfire hazard area (bushfire prone area): 1. childcare centres; 2. community care centres; 3. educational establishments; 4. detention facilities; 5. hospitals; 6. rooming accommodation; 7. retirement facilities; and 8. residential care facilities.	**Complies with AO1.1** Future development within the Innovation precinct (**future development**) is unlikely to involve the uses listed in AO1.1. Notwithstanding, if future development does involve these uses it will provide a setback from hazardous vegetation which achieves a radiant heat flux level ≤ 10 kilowatts/square metre (**kW/m²**) at buildings or building envelopes.
PO2 Emergency services and uses providing community support services are able to function effectively during and immediately after a bushfire hazard event.	**AO2** No acceptable outcome is nominated.	**Complies with PO2** Future development is unlikely to involve emergency services or community support services. Notwithstanding, if future development involves these uses it will provide a setback from hazardous vegetation which achieves a radiant heat flux level ≤ 10 kW/m² at buildings or building envelopes.
PO3 Development involving hazardous materials manufactured or stored in build is not located on land subject to bushfire hazard.	**AO3.1** The manufacture or storage of hazardous material in bulk does not occur within bushfire hazard area (bushfire prone area).	**Complies with AO3.1** There is potential for future development to involve hazardous materials manufactured or stored in bulk. Future development involving this use will provide a setback from hazardous vegetation which achieves a radiant heat flux level ≤ 10 kW/m² at buildings or building envelopes.
Development design and separation from bushfire hazard – reconfiguration of lots		
PO4 Where reconfiguration creates lots of 2,000m² or less, a separation distance to achieve a radiant heat flux level of 29kW/m² at the edge of proposed lot(s). Editor's note – the radiant heat levels and separation distances are to be established in accordance with method 2 set out in AS 3959-2018 Construction of buildings in bushfire prone areas.	**AO4.1.1** No new lots are created within the bushfire hazard area (bushfire prone area): OR **AO4.1.2** Lots are separated from hazardous vegetation by a distance that achieves radiant heat flux level of 29kW/m² at all boundaries. Editor's note – Where a separation distance is proposed to be achieved utilising existing cleared development areas external to the site, certainty must be established (through tenure or other means) that the land will remain cleared	**Not applicable** The proposed development is for a material change of use.

Performance outcomes	Acceptable outcomes	Compliance assessment
	of hazardous vegetation. Editor's note – For staged developments, temporary separation distances, perimeter roads or fire trails may be absorbed as part of subsequent stages. Editor's note – The achievement of a cleared separation distance may not be achievable where other provisions within the planning scheme seek the protection of certain ecological, slope, visual or character features of functions.	
PO5 Where reconfiguration creates lots more than 2000m², a building envelope of reasonable dimensions is provided on each lot which is separated from hazardous vegetation such that it achieves a radiant heat flux level of 29kW/m² at any point .	**AO5** No acceptable outcome is nominated.	**Not applicable** The proposed development is for a material change of use.
PO6 Where reconfiguration is undertaken in an urban area, a constructed perimeter road with reticulated water supply is established between the lots and hazardous vegetation, and is readily accessible at all times for urban fire fighting vehicles. The access is available for both fire fighting and maintenance/defensive works. Editor's note – Applicants should also have regard to the relevant standards set out in the reconfiguration of a lot code and infrastructure works codes in this planning scheme.	**AO6.1** Lot boundaries are separated from hazardous vegetation by a public road which: 1. has a two lane sealed carriageway; 2. contains a reticulated water supply; 3. is connected to other public roads at both ends and at intervals of no more than 500m; 4. accommodates geometry and turning radii in accordance with Qld Fire and Emergency Services' Fire Hydrant and Vehicle Access Guidelines; 5. has a minimum of 4.8m vertical clearance above the road; 6. is designed to ensure hydrants and water access points are not located within parking bay allocations; and 7. incorporates roll-over kerbing.	**Not applicable** The proposed development is for a material change of use.
	AO6.2 Fire hydrants are designed and installed in accordance with AS2914.1.2005.	
PO7 Outside an urban area, either a constructed perimeter road, or a formed, all weather fire trail is established between the lots or building envelopes and the hazardous vegetation, and is readily accessible at all times for the type of	**AO7.1** Lot boundaries are separated from hazardous vegetation by a public road or fire trail which has: 1. a reserve or easement width of at least 20m; 2. a minimum trafficable	**Not applicable** The proposed development is for a material change of use.

Redland City Plan 2018 v10 Commenced 25/5/2023
8.2.2 Bushfire hazard overlay

Performance outcomes	Acceptable outcomes	Compliance assessment
fire fighting vehicles servicing the area. The access is available for both fire fighting and maintenance/hazard reduction works.	(cleared and formed) width of 4m capable of accommodating a 15 tonne vehicle and which is at least 6m clear of vegetation; 3. no cut or fill embankments or retaining walls adjacent to the 4m trafficable path; 4. a minimum of 4.8m vertical clearance; 5. turning areas for fire-fighting appliances in accordance with Qld Fire and Emergency Services' Fire Hydrant and Vehicle Access Guidelines; 6. a maximum gradient of 12.5%; 7. a crossfall of no greater than 10 degrees; 8. drainage and erosion control devices in accordance with the standards in Planning Scheme Policy 2 – Infrastructure works; 9. vehicular access at each end which is connected to the public road network at intervals of no more than 500m; 10. designated fire trail signage; 11. if used, has gates locked with a system authorised by Qld Fire and Emergency Services; and 12. if a fire trail, has as access easement that is granted in favour of council and Qld Fire and Emergency Services.	
PO8 The lot layout: 1. minimises the length of the development perimeter exposed tom or adjoining hazardous vegetation; 2. avoids the creation of potential bottle-neck points in the movement network; 3. establishes direct access to a safe assembly/evacuation area in the event of an approaching bushfire; and 4. ensures roads likely to be used in the event of a fire are designed to minimise traffic	**AO8** No acceptable outcome is nominated. Editor's note – In order to demonstrate compliance with the performance outcome, a bushfire management plan prepared by a suitably qualified person may be required. The bushfire management plan should be developed in accordance with the Public Safety Business Agency (PSBA) guideline entitled 'Undertaking a Bushfire Protection Plan.' Advice from the Queensland Fire and Emergency Services (QFES) should be sought as appropriate.	**Not applicable** The proposed development is for a material change of use.

Redland City Plan 2018 v10 Commenced 25/5/2023
8.2.2 Bushfire hazard overlay

Performance outcomes	Acceptable outcomes	Compliance assessment
congestion. Editor's note – For example, development should avoid finger-like or hour-glass subdivision patterns or substantive vegetated corridors between lots.		
PO9 Critical or potentially hazardous infrastructure such as water supply, electricity, gas and telecommunications are located underground.	**AO9** No acceptable outcome is nominated.	**Not applicable** The proposed development is for a material change of use.
Development design and separation from bushfire hazard – material change of use		
PO10 Development is located and designed to ensure proposed buildings or building envelopes achieve the following radiant heat flux level at any point: 1. 10kW/m² where the use involves the accommodation or congregation of vulnerable sectors of the community such as childcare centres, community care centres; educational establishments, detention facilities, hospitals, rooming accommodation, retirement facilities or residential care facilities; or 2. 29kW/m² otherwise. Editor's note – the radiant heat levels and separation distances are to be established in accordance with method 2 set out in AS3959-2018 – Construction of buildings in bushfire prone areas. The radiant heat flux of 10kW/m² does not relate to a specific bushfire attack level (BAL) in the AS 3959, but reflects the Critical Limit for emergency services (firefighters cannot operate): - life threatening with less than 1 minute exposure in protective clothing. (Bushfire Resilient Communities Figure 5: Potential effects of radiant heat)	**AO10.1** Buildings or building envelopes are separated from hazardous vegetation by a distance that achieves a radiant heat flux level at any point of the building or envelope respectively, of 10kW/m² for a use mentioned in the performance outcome, or 29kW/m² otherwise. Editor's note – Where a separation distance is proposed to be achieved by utilising existing cleared development areas external to the site, certainty must be established (though tenure or other means) that the land will remain cleared of hazardous vegetation. Editor's note – For staged developments, temporary separation distance, perimeter roads or fire trails may be absorbed as part of subsequent stages. Editor's note – The achievement of a cleared separation distance must be achieved in a way that ensures compliance with other provisions within the planning scheme seeking protection of certain ecological, slope, visual or character features or functions.	**Complies with PO10** Section 6.1 of the Bushfire management plan (**BMP**) requires buildings and building envelopes associated with future development to be separated from hazardous vegetation by a distance which achieves a radiant heat flux level ≤ 29 kW/m² at the buildings or building envelopes. This requirement is formalised by way of the bushfire management zone shown in Figure 6.1 of the BMP. Section 6.2 of the BMP requires buildings and building envelopes involving hazardous materials manufactured or stored in bulk, vulnerable uses, emergency services and community support services to be separated from hazardous vegetation by a distance which achieves a radiant heat flux level ≤ 10 kW/m² at the buildings or building envelopes. This requirement is formalised by way of the 10 kW/m² radiant heat flux contour shown in Figure 6.1 of the BMP.
PO11 Effective safety and evacuation procedures and measures are established.	**AO11** No acceptable outcome is nominated. Editor's note – A bushfire management plan prepared by a suitably qualified professional may be required to demonstrate compliance with the performance outcome.	**Complies with PO11** Future roads and driveways will be designed to accommodate an urban fire truck in accordance with the minimum standards specified in *Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots* (QFES 2019) which defers to the *Road Planning and Design Manual – 2nd Edition* (DTMR 2013) for load bearing capacity, geometry and turning radii.

Redland City Plan 2018 v10 Commenced 25/5/2023
8.2.2 Bushfire hazard overlay

Performance outcomes	Acceptable outcomes	Compliance assessment
PO12 A constructed perimeter road or a formed, all weather fire trail is provided between hazardous vegetation and the site boundary or building envelope, and is readily accessible at all times for the type of fire fighting vehicles servicing the area. However, a fire trail will not be required where it would not serve a practical fire management purpose.	**AO12.1** Development is separated from hazardous vegetation by a public road or fire trail which has: 1. a reserve easement width of at least 20m; 2. a minimum trafficable width of 4m capable of accommodating a 15 tonne vehicle and which is at least 6m clear of vegetation; 3. no cut or fill embankments or retaining walls adjacent the 4m wide trafficable path; 4. a minimum 4.8 m vertical clearance; 5. turning areas for fire-fighting appliances in accordance with Qld Fire and Emergency Services' Fire Hydrant and vehicle Access Guidelines; 6. a maximum gradient of 12.5%; 7. a cross fall of no greater than 10 degrees; 8. drainage and erosion control devices in accordance with the standards in Planning Scheme Policy 2 – Infrastructure works; 9. vehicular access at each end which is connected to the public road network at intervals of no more than 500m; 10. designated fire trail signage; 11. if used, has gates locked with a system authorised by Qld Fire and Emergency Services; and 12. if a fire trail, has an access easement that is granted in favour of council and Qld Fire and Emergency Services.	**Complies with PO12** It is not practical to specify details about the layout of roads and driveways within the site at this stage. Section 6.1 of the BMP permits the bushfire management zones to be established as roads, driveways, pathways and carparking. Section 6.5 of the BMP recommends perimeter roads, driveways, pathways and carparks to be used to separate building envelopes associated with future development from hazardous vegetation.
All development		
PO13 All premises are provided with vehicular access that enables safe evacuation for occupants and easy access by fire fighting appliances.	**AO13.1** Private driveways: 1. do not exceed a length of 60m from the street the building; 2. do not exceed a gradient of 12.5%; 3. have a minimum width of 3.5m; 4. have a minimum of 4.8m vertical clearance; 5. accommodate turning areas for fire-fighting appliances in accordance with Qld Fire and	**Complies with PO13** Section 6.5 of the BMP requires driveways within future development to be designed for urban fire trucks in accordance with the design standards in *Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots* (QFES 2019) which defers to the *Road Planning and Design Manual – 2nd Edition* (DTMR 2013) for load bearing capacity, geometry and turning radii.

Performance outcomes	Acceptable outcomes	Compliance assessment
	Emergency Services' Fire Hydrant and Vehicle Access Guidelines; and 6. serve no more than 3 dwellings or buildings.	
PO14 Development outside reticulated water supply areas, includes a dedicated static supply that is available solely for fire fighting purposes and can be accessed by fire fighting appliances.	**AO14.1** A water tank is provided within 10m of each building (other than a class 10 building) which: 1. is either below ground level or is constructed or screened by non-combustible materials; Editor's note – Non combustible is defined in AS3959-2018 Construction of buildings in bushfire prone areas and means: 'not deemed combustible as determined by AS 1530.1. – or not deemed combustible in accordance with the BCA' 1. has a take-off connection at a level that allows the following dedicated, static water supply to be left available for access by fire fighters: i. 10,000 litres for residential buildings; ii. 45,000 litres for industrial buildings; and iii. 20,000 litres for other buildings; 1. includes a hardstand area allowing medium rigid vehicle (15 tonne fire appliance) access within 6m of the tank; 2. is provided with fire brigade tank fittings – 50mm ball valve and male camlock coupling and, if underground, an access hole of 200mm (minimum) to accommodate suction lines; and 3. is clearly identified by directional signage provided at the street frontage.	**Not applicable** The proposed development will be connected to mains water and will have a hydrant system.
PO15 Landscaping uses species that are not likely to exacerbate a bushfire event, and does not increase fuel loads within separation area.	**AO15.1** Low flammability plant species identified in Table 8.2.2.2 are used for any planted landscaping within 10m of a building or structure.	**Complies with AO15.1** Section 6.3 of the BMP requires landscaping to favour species in Appendix E of *Bushfire Resilient Building Guidance for Queensland Homes* (QRA 2020) or Table 8.2.2.2 of this Bushfire hazard overlay code.
PO16 Bushfire risk mitigation treatments do not have a significant impact on the natural	**AO16** No acceptable outcome is nominated.	**Complies with PO16** Bushfire mitigation measures specified in Chapter 6 of the BMP do

Performance outcomes	Acceptable outcomes	Compliance assessment
environment or landscape character of the locality.		not require bushland vegetation to be cleared from the site.

Table 8.2.2.3.2 – Low flammability plant species

Mainland		SMBI	
Species	**Common Name**	**Species**	**Common Name**
Acacia melanoxylon	Blackwood Coastal	*Acacia melanoxylon*	Blackwood Coastal
Acacia sophorae	Coastal Wattle	*Acacia sophorae*	Coastal Wattle
Banksia spinulosa var collina		*Casuarina glauca*	Swamp Oak
Brachychiton acerifolius	Flame tree	*Cupaniopsis anacardioides*	Tuckeroo
Buckinghamia celcissima	Ivory Curl	*Dodoneaea* spp.	
Casuarina glauca	Swamp Oak	*Elaeocarpus reticulatus*	Blueberry Ash
Cupaniopsis anacardioides	Tuckeroo	*Ficus macrophylla*	Moreton Bay Fig
Dodoneaea spp.		*Glochidion ferdinandii*	Cheese tree
Elaeocarpus reticulatus	Blueberry Ash	*Hymenosporum flavum*	Native Frangipani
Ficus macrophylla	Moreton Bay Fig	*Jacksonia scoparia*	Dogwood
Glochidion ferdinandii	Cheese tree	*Lophostemon confertus*	Brushbox
Guioa semiglauca		*Mallotus philippensis*	Red Kamala
Hymenosporum flavum	Native Frangipani	*Myoporum acuminatum*	Boobialla
Jacksonia scoparia	Dogwood	*Pittosporum revolutum*	Brisbane Laurel
Lophostemon confertus	Brushbox	*Rapanea variabilis*	
Mallotus philippensis	Red Kamala	*Carpobrotus glaucescens*	Pigs Face
Myoporum acuminatum	Boobialla	*Hardenbergia violacea*	
Pittosporum revolutum	Brisbane Laurel	*Kennedia rubicunda*	
Pittosporum rhombifolium		*Lomandra longifolia*	
Rapanea variabilis		*Themeda triandra*	
Stenocarpus sinuatus		*Viola hederacea*	
Carpobrotus glaucescens	Pigs Face	*Chrysocephalum apiculatum*	
Hardenbergia violacea			
Kennedia rubicunda			
Lomandra longifolia			
Themeda triandra			
Viola hederacea			
Chrysocephalum apiculatum			

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w – www.robfriend.com
ABN 83 097 068 114
ACN 097 068 114

Your reference: --
Our reference: -- *RFA24-062*
Date: - 28 October 2024

Ray Wassenberg
Director
Fox & Bell Group
PO Box 649
Cleveland, Qld 4163

Dear Mr Wassenberg,

Re: - Peer Review – Bushfire Management Plan

Further to our recent conversation, please find below our peer review of a Bushfire management plan prepared by LEC – Land and Environmental Consultants (dated 6 July 2024) and which was submitted as part of a development application over land located at 20 Glies Street, Redland Bay.

To assist in the peer review the site was inspected on the 30th of September 2024.

The Peer Review has been undertake in response to a Further Advice Request issued by Redland City Council on the 15th of August 2024) and in particular to provide additional information to respond to Items 8, 9 and 10 in the Further Advice Request.

Item 8 reads –

8. Bushfire hazard – Vegetation Hazard Classes

Photographs and aerial imagery of reference points A, B, C, D and F indicate a mid-dense structure of canopy, sub-canopy and midstory species (e.g. various pioneer species and other elevated fuels) that is more representative of an open forest (VHC 9.1 – moist to dry eucalypt open forests on coastal lowlands and ranges) rather than a woodland (VHC 9.2 – moist to dry eucalypt woodland on coastal lowlands and ranges).

The bushfire hazard assessment is required to be updated to include a revised setback calculation based on VHC 9.1 instead of VHC9.2, noting that VHC 9.1 represents a higher potential fuel load.

Response -

- Our site inspection sought to understand the status of vegetation within the adjacent lands and particular the vegetation within the survey locations indicated in Figure 2.1 on the LEC BMP

- Site "A"
  - Was located within land held by Council as a land fill site and while that activity does not appear to be currently active the land is still managed by that section of Council that manages its land fill areas.
  - The property is located at 25 Giles Road, Redland Bay and described as Lot 6 on RP30573 covering an area of 144,141.49 sq.m. (14.41 hectares).
  - I note the LEC draft report is dated 20 June 2023 and as such the field work would have been undertaken prior to the drafting of the draft BMP.
  - Our review of the survey site photos in the LEC report for Site "A" indicates a subcanopy dominated by *Allocasuarina littoralis* with immature *Eucalyptus racemosa* in the image as well. The photograph indicates the understorey under the regenerating stratum of *Allocasuarina littoralis* is poor to non-existent and the groundcover is also sparse to very sparse.
  - Without the aid of historic vegetation survey transects, a review of a sequential historic aerial imagery can assist in understanding vegetation structure such as canopy cover or the density of trees within an area. A review of the Nearmap aerial imagery from 2009 and 2024 shows potential cover of vegetation within an area however the cover during a wetter period of the month does include ground cover, particularly with woodland communities as the space between the trees is open and permits the exposure of the groundcover in the aerial photograph.
  - Therefore, to understand potentially tree cover which is the basis for identifying a woodland verses an open forest when using Aerial Photography Interpretation (API) a practiced interpreter of aerial photography can discern different patterns within a photograph which indicates canopy, understorey and groundcover., aerial photography from the drier times is necessary. Largely "green" patterns are compared to lesser green photograph with a view on the constants which generally means to canopy cover is a constant with the understorey and ground cover reducing or is removed in drier times.
  - Therefore, using the historic aerial imagery from Nearmap for the generally drier times of the year, July to December allows for the green of the understorey and groundcover to drop away leaving the canopy to permit an interpretation. I would note if the vegetation were an open forest, there would be minimal green dropout.
  - With respect to the historic aerial imagery from Nearmap and for the vegetation within Lot 6 on RP30573, the Council owned lot, the canopy cover is evident in a series of aerial images from November / December from 2017 to the latest aerial image from 20th of September 2024 it is evident that the canopy cover is more analogous with a woodland rather than an open forest (see Attachment 1).
  - I would further note that the State Government's Regional Ecosystem mapping maps this vegetation as a mix of Category B and Category C regulated vegetation of the Regional Ecosystem 12.11.27.
  - RE12.11.27 is described as *Eucalyptus racemosa* subsp. *racemosa* and/or *E. seeana* and *Corymbia intermedia* woodland. Other characteristic species include *E. siderophloia, Angophora leiocarpa, C. trachyphloia* subsp. *trachyphloia* and rarely *E. pilularis. Melaleuca quinquenervia* may be present and at times becomes locally co-dominant. When this ecosystem occurs on the slopes or gentle rises within alluvial plains, *E. tereticornis, C. intermedia* and *E. siderophloia* tend to

dominate the canopy and neither *E. racemosa* subsp. *racemosa* or *E. seeana* may be present. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics, typically at low altitude (<60 metres) in near coastal situations. Not a Wetland. (BVG1M: 9g).

- It is noted that the Regional Ecosystem description for 12.11.27 is a woodland. The Technical Descriptions for regional ecosystems in the SEQld Bioregion, Bioregion 12 does not provide a technical description for 12.11.27 but as this RE was previously described as 12.11.5 and it appears to have been placed into a new Regional Ecosystem based on the dominance of *Eucalyptus racemose* in an otherwise similar vegetation community based on the structure, height and land zone. I also note that the technical description for 12.11.5 is also a woodland. This is based on a sample of vegetation communities fitting this RE and from data collected from 23 sites.
- The Qld Fire Department, Catalyst bushfire characteristics mapping maps this vegetation as the Vegetation Hazard Class 9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges.
- Our site inspection has confirmed, based on over 40 years of vegetation survey and bushfire management, that the vegetation within around Site "A and for much of this area, the vegetation structure is analogous with a woodland rather than an open forest.
- It would be interesting to note if Council would accept a consultant saying something was not what it was mapped as based on a look at a single aerial photography and an extremely limited number of photographs? My guess is that that level of information would not be accepted and therefore, that level of review should not be the basis of Council making a decision to demand a change in the reporting as has happed in this Further advice request.
- I would also note that the slopes of the land under which the vegetation is growing also has an influence on the rate of spread and fire line intensity. For Lot 6 that land slopes to the west and for Lot 7 that land has a dominant and higher slope to the south-east.

- Site "B"
  - This site is located within Lot 7 on SL10530 and substantially contains the same vegetation types as Site "A" within Lot 6 on RP30573 and as such all the comments made above are relevant to Site :B".
  - Again we did inspect this area during our site inspection and again based on my extensive experience in vegetation survey this area is clearly a woodland rather than an open forest and is consistent with the State Regional Ecosystem and Broad vegetation Group/Vegetation Hazard Class mapping.
  - I would note that the lands within Lot 7 slopes to a high point in the north-eastern corner of the proposed development site and as such this corner would be susceptible to a fire front from a fire within Lot 7 and prior to the commencement of the afternoon sea breeze.
- Note for Lot 7 and Lot 6
  - The LEC report indicates that " Bushland vegetation adjoining the northern boundary of the site."

- At the time of our site inspection we noted that Redland City Council has cleared a fire break approximately 10 to 20 metres in width along or close to their boundary within Lot 6 and this fire management extend to the north along Council joint boundary with Lot 7.
- Based on the Nearmap aerial imagery a firebreak along the western boundary of Lot 6 appears in the June 2018 aerial imagery. The firebreak is clearer in the August 2019 aerial imagery and appears to have been widened in the June 2024 aerial image.
- Further the occupier/owner of Lot 7 has also cleared, mostly understorey vegetation along their southern and western boundaries.
- This firebreak or more of a fire trail is evident from the near map October 2009 aerial image. The fire trail is evident in every aerial image to the April 2024 aerial image where it appears to also have been widened to a width of 20 metres plus circa April 2024.
- From this widening of the firebreaks within these two properties it is reasonable to conclude that they have been widened to reflect the potential bushfire risks associated with the vegetation in their respective properties and that it would be reasonable to conclude that each land holder would be maintaining those firebreaks into the future.

- Site "C"
  - This site is mentioned in Item 9 of the Further Advice Request and I am in agreement with Council in that the area abuts areas of discontinuous vegetation to the immediate east and west (the subject site) and as such the vegetation is too narrow to be classed as any structural vegetation type and as such is best described as a linear vegetated area.
  - Using *Leonard and Opie* 2017[1], this corridor of approximately 15 – 24 metres in width would be described as an area of low bushfire hazard.
- Site "D"
  - This site and patch is located on the southern boundary within an area of retained land around the German Church Road industrial area and is described as Lot 802 on SP210923 and is a reserve/parkland.
  - The area is vegetated with mid phase regrowth based on the planting into this area potentially as a condition of approval for the approval for the industrial park.
  - While the eastern portion of this patch is mapped as Category C regulated vegetation of the Regional Ecosystems 12.11.27 and 12.3.6 - *Melaleuca quinquenervia +/- Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia intermedia* open forest to woodland with a grassy ground layer dominated by species such as *Imperata cylindrica*. *Eucalyptus tereticornis* may be present as an emergent layer. *Eucalyptus seeana* may also occur in this ecosystem to the south and east of Brisbane. Occurs on Quaternary floodplains and fringing drainage lines in coastal areas. Palustrine. (BVG1M: 22a). I would suggest that based on the

[1] Leonard, J., Opie, K. (2017) *Estimating the potential bushfire hazard of vegetation patches and corridors.* CSIRO, Australia.

status of this patch that mapping it as Category C regulated vegetation of the RE12.3.6 is not supported by the status of the vegetation in terms of structure, cover and species present.

- This area is not a woodland or open forest as yet as its still in a regeneration phase and potentially was not planted with a view that the species used would skew it toward a particular outcome in terms of a Regional Ecosystems.
- Our inspection indicated that the current vegetation would be classed as VHC 40.4 and as such given it lacks substantial connectivity with another large area of hazardous vegetation, this area would be considered to be an area of low bushfire hazard.
- Further the configuration of the area is such that it would be highly unlikely that it would generate a vegetation fire which would intercept with the proposed development property's southern boundary at a full rate of spread and fire line intensity.

- Site "F"
  - Site "F' is located in vegetation just beyond the north-western boundary of the proposed development site.
  - LEC appear to have based their identification of this vegetation on the current QFD Catalyst Vegetation Hazard Class mapping which maps this areas as VHC8.1 Wet eucalypt tall open forest. I would note that the Vegetation Hazard Class mapping is based on the Regional Ecosystem mapping of 12.11.23 (90%) though using the Broad Vegetation Group at 1:2m scale. The mapped Regional Ecosystem is described as *Eucalyptus pilularis* open forest. Other canopy species include *E. microcorys, Corymbia intermedia, Angophora woodsiana, E. tindaliae* and *E. carnea. E. racemosa* subsp. *racemosa* and *Corymbia trachyphloia* are prominent in the Venman area whilst *C. gummifera* and *E. resinifera* are prominent in the Nerang area. Occurs on low coastal Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics (Neranleigh-Fernvale beds). Not a Wetland. (BVG1M: 8b).
  - However, the vegetation for at least 100 metres from the north-western corner of the site is dominated by *Eucalyptus racemosa* and the other species in the upper and mid stratum is consistent with the Regional Ecosystem 12.11.27 which the Qld Globe Regional Ecosystem mapping places at 10%.
  - The area immediately adjacent to Giles Road has evidence of historic disturbance and the Qld Globe regulated vegetation mapping maps this vegetation as Category C Regulated vegetation with Category B Regulated vegetation further west into the patch.
  - I would note that while there is the Regional Ecosystem 12.11.23 occurring to the south-west within Lot 64 on RP82443, the vegetation within the patch north-west of the proposed development property is not a *Eucalyptus pilularis* dominated community but is a *Eucalyptus racemosa* dominated community and as such it should be seen in terms of its vegetation hazard class, as VHC9.2 and not VHC8.1.
  - I would note the local landscape slopes up toward the proposed development site's north-western corner from the drainage line to the west. Therefore, a vegetation fire commencing to the west of Giles Road has the potential to be influenced by the

predominant slope and have a fire run directly toward the north-western corner of the proposed development site.

- Based on this potential fire run and that this vegetation is considered to be hazardous vegetation a setback should be taken into consideration when assessing the Acceptable or Tolerable bushfire risk setbacks. We note that Giles Road will be maintained in its current state and as such the roadway should be considered to be part of any separations distanced required to achieve that Acceptable or Tolerable level of bushfire risk of a Radiant heat flux of 29kW/m^2.

Conclusion Item 8

Based on the above analysis supported by our site inspection we have concluded: -

1. The attribution of the vegetation within Lots 6, 7 and the regrowth vegetation along the southern boundary is consistent with the description provided in the LEC report and as such the attribution of that vegetation as VHC9.2 is correct.
2. The vegetation along the proposed development sites eastern boundary can be described as an area of low bushfire hazard due to its disconnect from other area of vegetation by discontinuous vegetation along the east and western side of the roadside corridor.
3. The vegetation within the reserve land around the industrial area to the south of the proposed development site can effectively be described as VHC40.1 due to its current status and level of management input. It has limited groundcover thereby making it difficult for a ground fire ignited at a point source around it perimeter to involve any other vegetated parts above ground and as such it is correctly considered to be an area of Low bushfire hazard.
4. The vegetation to the north-west has been described in the LEC report presumably based on the current VHC mapping. However, this has been found to be incorrect based on our site inspection and based on the dominated and predominant species in the upper stratum, the Regional ecosystem as Category C or B is analogous with the Regional Ecosystem 12.11.27 and not 12.11.23.
5. As the vegetation within Lots 6, Lot 7 and Lot 69 on RP82443 (Lot 69) is to be considered to be hazardous vegetation and all structures should be setback from the edge of that hazardous vegetation such that its maximum radiant heat flux exposure is 29kW/m^2 which under the State Planning Policy is an Acceptable or Tolerable level of bushfire risk.
6. The Radiant Heat Flux calculations are provided below in Table 1 (Lot 6), Table 2 (Lot 7) and Table 3 (Lot 69) below. The setback calculations are based on the existing firebreak on Council managed land in Table 1 and on the privately held land within Lot 7. For consistency, the nominal width of the existing firebreaks of 15 metres has been used. With regard to the north-western corner the width of Giles Road has been used as the existing separations distance from the potentially hazardous vegetation which is 20 metres and a slope of

Table 1 – 15 metre wide firebreak within Lot 6

Lot 6 - Bushfire Attack Level calculator - AS3959-2018 (Method 2) (Calculated October 23, 2024, 6:55 pm (BALc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	0.98 km/h
Vegetation classification	Woodland	Flame length	8.43 m

Inputs		Outputs	
Understorey fuel load	14.9 t/ha	Flame angle	73.5 °
Total fuel load	17.2 t/ha	Panel height	8.09 m
Vegetation height	n/a	Elevation of receiver	3.91 m
Effective slope	.5 °	Fire intensity	8,716 kW/m
Site slope	.5 °	Transmissivity	0.85
Distance to vegetation	15 m	Viewfactor	0.2782
Flame width	100 m	Radiant heat flux	17.99 kW/m²
Windspeed	n/a	Bushfire Attack Level	BAL-19
Heat of combustion	18,600 kJ/kg		
Flame temperature	1,090 K		

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

- Using the Flamesol minimal distance calculator using the same input data the setback to achieve the specific Radiant Heat Flux levels are: -
    - 40kW/m^2 – 7 metres
    - 29kW/m^2 – 9.6 metres
    - 19kW/m^2 – 14.2 metres, and
    - 12.5kW/m^2 – 20.9 metres

Table 2 – Lot 7 North-eastern corner

Lot 7 - Bushfire Attack Level calculator - AS3959-2018 (Method 2) (Calculated October 23, 2024, 7:00 pm (BALc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.41 km/h
Vegetation classification	Woodland	Flame length	11.24 m
Understorey fuel load	14.9 t/ha	Flame angle	73.78 °
Total fuel load	17.2 t/ha	Panel height	10.79 m
Vegetation height	n/a	Elevation of receiver	3.87 m
Effective slope	5.78 °	Fire intensity	12,548 kW/m
Site slope	5.78 °	Transmissivity	0.851
Distance to vegetation	15 m	Viewfactor	0.3604
Flame width	100 m	Radiant heat flux	23.34 kW/m²
Windspeed	n/a	Bushfire Attack Level	BAL-29

Inputs		Outputs
Heat of combustion	18,600 kJ/kg	
Flame temperature	1,090 K	

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

- Using the Flamesol minimum distance calculator with the input data from Table 2 the specific radiant heat Flux exposure is attached at: -
    - 40kW/m^2 – 8.9 metres
    - 29kW/m^2 – 12.2 metres
    - 19kW/m^2 – 18.1 metres, and
    - 12.5kW/m^2 – 26.3 metres

Table 3 – North-western corner setback from Lot 69

Lot 69 North-western corner - Bushfire Attack Level calculator - AS3959-2018 (Method 2) (Calculated October 24, 2024, 2:50 pm (BALc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.47 km/h
Vegetation classification	Woodland	Flame length	11.62 m
Understorey fuel load	14.9 t/ha	Flame angle	78.37 °
Total fuel load	17.2 t/ha	Panel height	11.38 m
Vegetation height	n/a	Elevation of receiver	3.45 m
Effective slope	6.37 °	Fire intensity	13,069 kW/m
Site slope	6.37 °	Transmissivity	0.834
Distance to vegetation	20 m	Viewfactor	0.2776
Flame width	100 m	Radiant heat flux	17.61 kW/m²
Windspeed	n/a	Bushfire Attack Level	BAL-19
Heat of combustion	18,600 kJ/kg		
Flame temperature	1,090 K		

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

- Using the Flamesol minimal distance calculator using the same input data the setback to achieve the specific Radiant Heat Flux levels are: -
    - 40kW/m^2 – 9.2 metres
    - 29kW/m^2 – 12.5 metres
    - 19kW/m^2 – 18.6 metres, and
    - 12.5kW/m^2 – 27.0 metres
- Based on the calculations for necessary setbacks from Lot 6 Lot 7 and Lot 69, given the existing maintained firebreaks along the southern boundaries of both lots;
    - The calculated Radiant Heat Flux at the property boundary of Lot 6 is 17.99 kW/m^2 which means that a building constructed at the boundary is at an Acceptable or tolerable level of bushfire risk of 29kW/m^2 (we note that there is no proposal to build to boundary and this comment is merely to provide a context with regard to Radiant Heat Flux exposure) and
    - For buildings built to boundary abutting lot 7 they would be exposed to a calculated maximum radiant heat flux of 23.32kW/m^2 which is also less than the Acceptable or Tolerable level of bushfire risk of 29kW/m^2.
    - Any lot/s located in the north-western corner of the proposed development property and opposite the patch of vegetation within Lot 69 on RP82443, the 20 metre wide Giles Road will result in a maximum Radiant Heat Flux exposure at the property boundary of 17.61kW/m^2 which places that structure at an Acceptable or Tolerable level of bushfire risk.

Item 9 Reads –

"9. Bushfire hazard – Eastern boundary setback

Further information is requested to explain the calculation and requirement for the eastern boundary setback. The western extent of road reserve vegetation along Cleveland-Redland Bay Road is approximately 30m wide and is discontinued from the larger patch of vegetation to the east by the road. Therefore, it is considered that the road reserve vegetation could potentially be excluded as non-hazardous vegetation in accordance with step 3 of section 4.2.6 of Bushfire Resilient Communities (QFES, 2019) and therefore the eastern boundary setback (for bushfire hazard purposes) may theoretically not be required. It is not fully understood how this setback has been determined and if it is necessarily required.

Note: A setback area will still be required for appropriate landscaping as per item 4."

Response

- We are in agreement with Council on this point and the vegetation along the western verge of the Cleveland Redland Bay Road should be considered to be an area of low bushfire hazard and as such no particular setbacks are required.
- With respect to the note, I do not think any landscape works will be of a width of 90 metres or more and as such it is highly unlikely that any landscape buffering along Cleveland Redland Bay Road will become a bushfire hazard area after any landscape buffering.
- I would note that a reasonable landscaped area could be in the order of 20 metres and as such the 90 metres mentioned above was to emphasise what width of landscaping would

be required to permit the vegetation within the western side of the Cleveland - Redland Bay Road to become a potential bushfire hazard.

Conclusion to Item 9

Based on our site assessment, we have formed a view that the vegetation along the western side of the Cleveland - Redland Bay Road road reserve is not a bushfire hazard area.

Further, unless there is landscaping of a depth of 80 metres plus along the eastern boundary of the proposed development site, then that landscaping will not alter the potential bushfire hazard status above it being a low bushfire hazard.

Item 10 - Bushfire hazard – Fuel Reduction Zone in Conservation Precinct

"As per PO16 of the BHO code, bushfire risk mitigation treatments are not supported where they will have a significant impact on the natural environment or landscape character of the locality. Further, PO14 of the ESO code requires corridors to have sufficient width to maintain viable wildlife or habitat linkages, or otherwise be a minimum of 100m (AO14.1).

Given that the ecological corridor is already proposed to be less than 100m and includes stormwater devices, thereby further diminishing the viability of the corridor's function, the broad 14.6m (or any) FRZ encroachment into the corridor is not supported. This also applies to the proposed FRZ encroachment within the south-western and south-eastern Conservation Precinct areas.

In pursuing compliance with PO16 of the BHO code and PO7, PO14 of the ESO code, it is recommended that the FRZ is sited outside of the Conservation Precinct areas. Consider implementing a bushfire buffer as necessary, reflective of what has already been proposed along the internal perimeter of the property boundary and at the north-eastern edge of the central corridor.

Additionally, provide further information explaining the proposed setbacks relating to Assessment Point 'G' which has been determined by LEC to represent VHC 40.4 (non-bushfire hazard class) and appearing to require a 6.9m setback for <29kW/m radiant heat flux exposure. This contrasts with the 14.6m setback which has been proposed at either side of the northern corridor extent."

Response

- It is my understanding that the existing dam within the proposed Conservation Precinct is to be re-aligned to be wholly within the corridor and that it will be re-purposed to a stormwater management device i.e. detention basins.
- However, as the new, stormwater management device is to be located at the northern portion of the proposed Conservation Precinct in the centre of the proposed development, its locality will leave a vegetated area around the detention basin which on both sides is not wide enough to be classed as hazardous vegetation and the remainder of the corridor is also not wide enough to be deemed to be hazardous vegetation.
- Further, the intent of this development proposal and the resultant open space areas is that they will retained exiting trees where they occur within the Conservation Precincts but will be conserved as habitat area with existing native trees and grasses.
- Therefore, it is my opinion that there is no requirement for any fire management line or firebreak to be located within the Environmental precinct/ecological corridor.
- With respect to the area in the south-western corner of the proposed development area, which is also potentially to be dedicated to Council as Open Space as identified in the LEC

Report and other plans. This area will also see the retention of the existing trees within this are but is to also be retained as conservation/ habitat with the area with the groundcover maintained.

- As the central corridor and the identified areas within the south-western and northern corners are to be maintained as conservation, they will not present a bushfire risk to any uses within the development proposal nor to any structures or uses external to the proposed development property.

Conclusions for Item 10

Based on the discussion above I have concluded: -

1. The central environmental precinct is considered to not be a bushfire hazard area and as such no bushfire mitigation infrastructure is required to be located within that area.
2. Council may at some time locate or require to be located a vehicle access track, however that would be to enable Council to access the open space and undertake longer term management of the open space area and/or the detention basins but it is not necessary for bushfire mitigation for the proposed industrial use of the area outside of the open space/environmental precinct.
3. As the central corridor and portions to the north-east and south-west of the site are to be retained as managed conservation areas, these will not present a bushfire risk to any new uses within the site nor any existing structures and uses external to the site.

Attachments

Attachment 1 – Near map aerial images

Attachment 2 – Setback plan with RHF 29kW/m^2 located

Attachment 3 - Site photographs of the vegetation and firebreak constructed and recently upgraded within Lots 6 and 7 along the northern boundary.

If you have any queries with regard to this peer review and reply to Council's Further Advice Request, please fell free to call or email at your convenience.

Yours faithfully,

Rob Friend
Director
Rob Friend & Associates Pty Ltd

Attachment 1 – Nearmap Aerial Images

Aerial Image 1 – 21 November 2009 – note the firebreak around the boundary of Lot 7

13

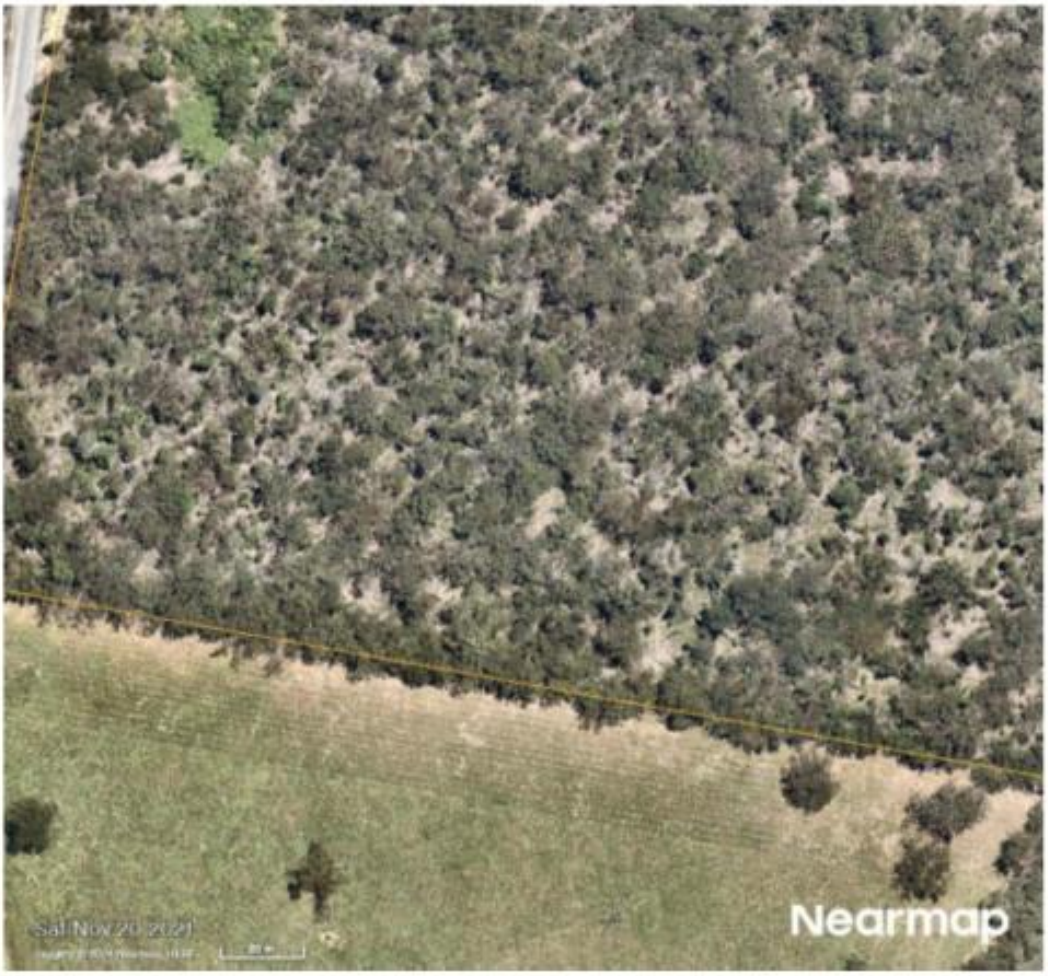
Aerial Image 2 – 21 November 2015 firebreak and the gaps in the canopy

Aerial Image 3 – 21 November 2015 – Lot 6, note the gaps in the canopy. No firebreak as yet

Aerial Image 4 – 20 November 2021 – note the existing firebreak within Lot 7 and a new firebreak along the eastern boundary of Lot 6

Aerial image 5 – 20 November 2021 – vegetation cover in Lot 7

17



Aerial Image 6 – 20 November 2021 – Vegetation cover in Lot 6

Aerial image 7 – 13 November 2023 - Vegetation cover Lot 7

Aerial image 8 – 13 November 2023 – Vegetation cover Lot 6. Note no firebreak along southern boundary

Aerial image 9 – 3 June 2024 – Lot 6 firebreak and fire trail upgrade

21

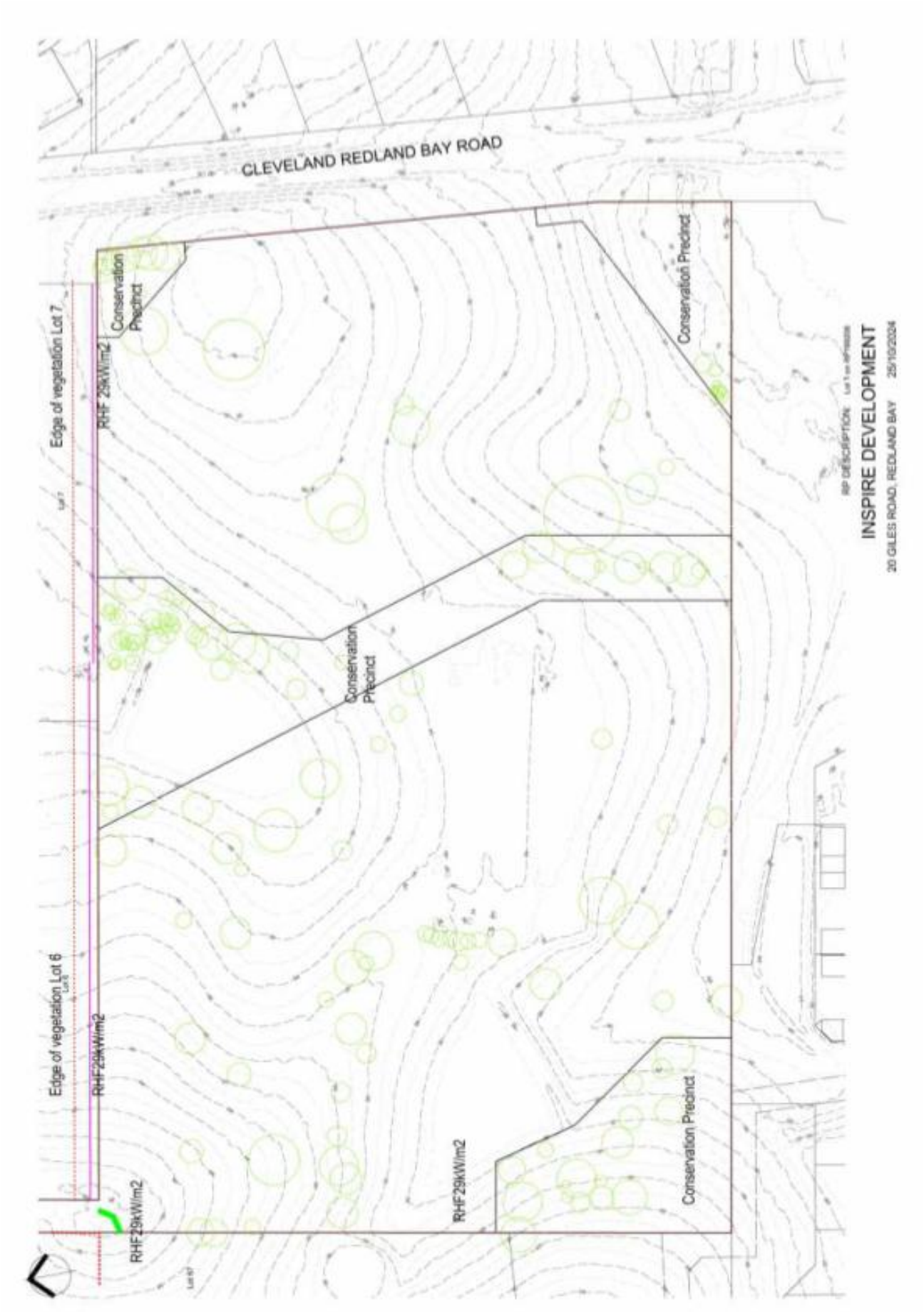
Aerial image 10 – 20 September 2024, firebreak upgrade in Lot 6

22

Aerial image 11 – 20 September 2024 – Firebreak in Lot 6

23

Attachment 2 – Setback Plan with RHF29kW/m^2


CLEVELAND REDLAND BAY ROAD
Conservation Precinct
Edge of vegetation Lot 7
RHF 29kW/m2
Conservation Precinct
Conservation Precinct
Edge of vegetation Lot 6
RHF29kW/m2
RHF29kW/m2
RHF29kW/m2
Conservation Precinct
INSPIRE DEVELOPMENT
20 GILES ROAD, REDLAND BAY 25/10/2024

Attachment 3 - Site photographs of vegetation and firebreaks in Lots 6 and 7

Photographic plate 1 – Giles road entrance into the proposed development property.

Photographic plate 2 – view east of the southern boundary of Lot 6. Note the firebreak just of the property boundary

Photographic plate 3 – view of the firebreak on along Lot 7's southern boundary

Photographic plate 4 – view east along the proposed development properties northern boundary of the firebreak within Lot 6 (foreground) and Lot 7 (far ground)

27

Photographic plate 5 – view from the proposed development sites northern boundary to the north along the boundary between Lot 6 and Lot 7

Photographic plate 6 – view to the west along the boundary with Lot 6 of the firebreak

Photographic plate 7 - view of the new internal fire trails into the vegetation within Lot 6.

Rob Friend & Associates Pty Ltd
Environmental Land Management Consultants

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Your reference: --
Our reference: -- *RFA24-062*
Date: - 31st of October 2025

Chief Executive Officer
Redland City Council
PO Box 21
Cleveland, Qld 4163

Attention – Mr David Manathunga, Planning Assessment, Redland City Council

Dear Madam,

Re: - Bushfire Hazard Assessment and Mitigation Plan – MCU23/0085

This Bushfire Hazard Assessment and Mitigation plan has been prepared for the Applicant, Inspire Redlands Pty Ltd for a Technology and Innovation Centre proposed on land located at 20 Giles Street, Redland Bay.

While there is an existing bushfire hazard report by LEC (6 July 2023) and a Peer Review advice by Rob Friend & Associates Pty Ltd (28 October 2024), both of which Council has dismissed based on their aerial photograph interpretation of the structural integrity of the adjacent vegetation and adherence to a specific data input value when calculating readiant heat flux and fire line intensity using method 2 in the Australian Standard AS3959-2018 - Construction of Building sin Bushfire Proen Areas.

However, as there is a new Material Change of Use Plan of Development (POD) based on consultation with Council the State and industry it is the view of the applicant that a bushfire hazard assessment report be prepare anew to respond to the updated POD.

Land Details

Address	20 Giles Road, Redland Bay
Real Property Description	Lot 1 on RP199206
Area	251,386 sq.m. (25.1386 ha)
Local Government Area	Redland City Council

Plan of Development

The proposed Material Change of Use Precinct Plan seeks development approval for (see Figure 1): -

- An innovation precinct of 195,257 sq.m.
- Private open space of 2,6852 sq.m.
- Public open space of 53,444sq.m. this will consist of three separate areas around the Innovation Precinct, one in the central portion of the site off the northern boundary, currently containing a farm dam, a 57 metre wide corridor along the western boundary of the site and which will return around the south-western corner of the site and a triangular area in the south-eastern corner of the site which will preserve an area of mapped Category C /RE12.3.6 regrowth area.
- Two areas of 10 metre wide private open space will be located along the site eastern boundary abutting the Cleveland Redland Bay Road road reserve.
- The proposal will also see the establishment of a Bushfire Management Zone of 24 metres wide within the Innovation precinct off the northern boundary.
- A 17 metre wide transition buffer is also proposed along the eastern edge of the proposed public open space along the western boundary and where it extends along the southern boundary from the south-western corner.
- A 5.6 metre transition buffer will also extend along the southern boundary within the Innovation Precinct from the southern boundary.
- The eastern half, approximately, of the southern boundary will consist of a retaining wall with a potential maximum height of over 4 metres in height along the eastern half of the southern boundary. The actual height of the retaining wall will be determined in the detailed design phase of the Innovation Precinct to establish level development lots across this area.
- Access to the Innovation Precinct will be from Cleveland Redland Bay Road.
- As mentioned above much of the site will be levelled to enable the reconfiguring of the Innovation Precinct into developable industrial lots of various sizes which will be identified in the Reconfiguring of a Lot (ROL) phase of the development.
- The lots connection to Giles Road to the north will be retained as public open space with an easement for underground services to come into the property and as such a service road/track will also be retained to provide access for future maintenance of the underground services.

Site Description

General Description

- The land is located to the immediate west of Cleveland Redland Bay Road within the suburb of Redland Bay.
- Access to the land fronts Giles Street via a driveway along a narrow strip of the lot with a sealed surface.
- The land currently contains three old Chicken raising sheds along with a couple of dwelling houses and associated ancillary structures and 2 farm dams.

- The land abuts a private rural property and a Council waste management reserve along its northern boundary, a rural property to the west which is partially cleared of woody vegetation and an existing Industrial and Innovation Park off German Church Road to the south. It is noted that as part of that development, areas of land along the subject sites southern boundary containing a waterway, were retained and revegetated.
- To the east is the Cleveland Redland Bay Road.

Topography

- The property contains a low ridge extending from a high point in the north-western portion of the property and which extends to the south-east across the property.
- The property therefore forms the headwaters of two minor upper catchment drainage lines one draining to the north and north-east which forms Moogurrapum Creek and the other draining to another arm of Moogurrapum Creek.
- Two farm dams are also located within these upper catchment drainage lines, one on either drainage line.
- Apart from the high point in the north-western portion and the two drainage lines, there are no other significant topographic feature within the property or immediately adjacent to it.

Vegetation

- The State Government's Regulated Vegetation Area mapping and Regional Ecosystem mapping maps small area of Category C regulated vegetation or high value regrowth of the Regional Ecosystems;
    - 12.3.6 – *Melaleuca quinquenervia +/- Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia intermedia* open forest to woodland with a grassy ground layer dominated by species such as *Imperata cylindrica. Eucalyptus tereticornis* may be present as an emergent layer. *Eucalyptus seeana* may also occur in this ecosystem to the south and east of Brisbane. Occurs on Quaternary floodplains and fringing drainage lines in coastal areas. Palustrine. (BVG1M: 22a).
    - 12.11.23 – *Eucalyptus pilularis* open forest. Other canopy species include *E. microcorys, Corymbia intermedia, Angophora woodsiana, E. tindaliae* and *E. carnea. E. racemosa* subsp. *racemosa* and *Corymbia trachyphloia* are prominent in the Venman area whilst *C. gummifera* and *E. resinifera* are prominent in the Nerang area. Occurs on low coastal Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics (Neranleigh-Fernvale beds). Not a Wetland. (BVG1M: 8b).
    - 12.11.27 – *Eucalyptus racemosa* subsp. *racemosa* and/or *E. seeana* and *Corymbia intermedia* woodland. Other characteristic species include *E. siderophloia, Angophora leiocarpa, C. trachyphloia* subsp. *trachyphloia* and rarely *E. pilularis. Melaleuca quinquenervia* may be present and at times becomes locally co-dominant. When this ecosystem occurs on toe slopes or gentle rises within alluvial plains, *E. tereticornis, C. intermedia* and *E. siderophloia* tend to dominate the canopy and neither *E. racemosa* subsp. *racemosa* or *E. seeana* may be present. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics, typically at low altitude (<60 metres) in near coastal situations. Not a Wetland. (BVG1M: 9g).
- The mosaic polygons of 12.11.23 and 12.11.27 are mapped as 90/10, however based on our site interpretations, these Category C polygons should be either 100% 12.11.27 or the percentage reverses as 12.11.27 is the dominant species associations in these regrowth

areas. There is an area of 12.11.23 on the neighbouring property to the immediate west, Lot 67 on RP82443 however, this association does not extend into the subject site at any point.

- Further the mapping of Category C is potentially doubtful, based on stem count and as such it is reasonable to conclude that the subject site should be entirely mapped as Category X or non-remnant vegetation.
- It is noted that no Property Map of Assessable Vegetation (PMAV) has been certified over the property, however it is likely based on our incidental survey, that a PMAC mapping Category X over all of the property would be successful.

Adjacent lands

Out site inspection of the site identified the following bushfire related infrastructure and issues relevant to the subject site and proposed Material Change of Use (MCU) application.

- Redland City Council owns land located north of the subject sites and located at 17/25 Giles Road, Redland Bay and described as Lot 6 on RP30573 and this land is a reserve under the Land Act 1994 and has been used as a waste land fill site in the past. We understand that the land fill operations are no longer being conducted and the landfill area has been capped. However, the land is still a reserve and as such may be revisited in the future should areas for additional waste management be required.
- Additionally, Council has also established a 10 – 20 metre wide fire management line along the southern and eastern boundaries circa august 2019 and appear to be maintaining that fire management line. In addition to this perimeter fire management line an internal vehicle tracks linking the south-western corner of the property to the southern end of the capped landfill area and onto the eastern boundary.
- The adjacent property to the Council Reserve at 2-6 Giles Road, Redland Bay and described as Lot 7 on SL10530 as an area of native remnant vegetation adjacent to the subject site's northern boundary. This property contains a relatively large area of cleared and managed vegetation in its northern extent. Additionally, this land holder has also established as 20 metre plus firebreak along their southern, eastern and western property boundaries circa April 2024.
- The western boundary abuts a property at 34 Giles Road, Redland Bay which is described as Lot 67 on RP82443. This property contains a dwelling house and ancillary structures located in the very southern portion of the property. It is noted a covenant area, Lot A on SP210926 has been placed around the dwelling house. An easement presumably for delivery of underground service also transects the property from Giles Road to the Industrial and Innovation Park to the south of this property and the subject site.
- This land contains individual trees and small stands of trees but does not present a bushfire risk to the subject site as the land holder maintains this are through grazing and other grass maintenance activities.
- To the south is an Industry and Innovation Park which is for the most part developed and as a result of this development a reserve area described as Lot 802 on SP210923 has been established and this area has been subjected to revegetation as a condition of approval of that Industrial and Innovation Park.
- The western half of this reserve does not present a bushfire risk to the proposed site due to its width, however the eastern portion of this reserve does and as such the proposed development will need to respond to that bushfire risk.

- To the east is the Cleveland – Redland Bay Road which also has a limited vegetated corridor within the road reserve and along the subject site's eastern boundary. To the east of the road reserve area residential properties with a vegetated covenanted area. These covenanted areas are connected to reserve land along a waterway corridor and presumably under the management of Redland City Council. This vegetated areas is mapped and considered to be a bushfire hazard area and as such the subject site is within 100 metres of this mapped bushfire hazard area.

Bushfire planning and building compliance

We note that bushfire planning under the State Planning Policy and carried into Planning Schemes is based on residential development and as such a paradigm that development is to meet a planning outcome that has it genesis in the bushfire building planning for residential structures, that being Class 1, 2 and 3 structures means that in developments such as this development for an Industrial and Innovation Park where there will be no Class 1, 2 or 3 structures and for that matter no Class 9 or Class 10A structures associated with a Class 1 structures, requiring development such as this to comply with a residential development planning requirement is, at best, an inconsistency in the land use planning in Queensland.

All structures within this development will be one of a Class 5 / Class 7 / Class 8 structures and under the Qld Development Code, no Class 7 structures are required to respond to AS3959 as a deemed to satisfy the National Construction Code (NCC). This, therefore, would allow a Class 5 or 7 or 8 structure to be constructed right up against vegetation which in a residential development would not be permitted. We note that other standards are relevant to these classes of structures and they require material that can withstand exposure to direct flame or heat attack for a minimum of 2 hours.

Therefore, requiring this development to respond to a residential planning requirement as a standard requirement in a planning scheme i.e. exposure to a maximum radiant heat flux exposure of 29kW/m^2 does not recognise the basis of the radiant heat flux exposure level with respect to building type.

However, the Inspire Redlands Pty Ltd Development Code and for development within 24 metres of the northern boundary of Lot 1 on RP199206 (the Bushfire Management Zone) will be required to comply with;

a) Sites and buildings are to be assessed for bushfire risk and comply with the National Construction Code (NCC).

b) Residential uses, fire sensitive uses (which include land uses which involve the accommodation or congregation of vulnerable sectors of the community such as childcare centres, community care centres, educational establishments, detention facilities, hospitals, rooming accommodation, retirement facilities or residential care facilities) or Essential Community Infrastructure are not to be located within the Bushfire Management Zone.

c) Landscaping uses species that are not likely to exacerbate a bushfire event and does not increase fuel loads within separation areas.

d) Building walls facing the external northern boundary are built to withstand a minimum 2 hours' flame attack as specified in the National Construction Code ("NCC").

e) No storage of hazardous materials in locations with a Radiant heat flux exposure of greater than 10kW/m^2; and

f) Fences and retaining walls are to be non-flammable in their construction.

Bushfire Hazard Mapping

Redland City Planning Scheme

- The Redland City Planning Scheme Bushfire Hazard Overlay Map, maps areas of high and medium bushfire hazards around the site with some medium and high bushfire hazard polygons extending across the property boundary into the subject site.
- Based on our site inspection all of the polygons of medium and high bushfire hazard within the site are not justified based on the site survey.
- We do note however, that the Redland City Plan bushfire hazard overlay mapping is old mapping and as such the current State Planning Policy, Natural Hazards, Risk and Resilience Bushfire Hazard Map should be the mapping that is assessed when looking at bushfire hazards within and around the proposed development site.

State Planning Policy

- The SPP bushfire hazard map, maps areas of very high potential bushfire intensity over lands to the north-west and south-east of the subject site, areas of high potential bushfire intensity within a drainage line to the north. This high bushfire hazard polygon extends over the northern property boundary over a stand of trees around the dam wall of the northern farm dam.
- The remaining areas of bushfire hazard are polygons of medium potential bushfire intensity which covers much of the vegetation over the two properties to the north and trees in the north-eastern corner of the property.
- Similar to the comment above, the areas of bushfire hazard which extends over the property boundary can be removed as this vegetation is not such that it is considered to be hazardous as the understory has been removed and grazed or slashed by the historic landholders.
- The SPP mapping is supported by the following bushfire hazard mapping characteristics;
    - Very high bushfire hazard polygons
        - FFDI 53
        - VHC 8.1 - Wet eucalypt tall open forest. This VHC is attributed with a surface fuel load of 31t/ha and a total fuel load of 35t/ha.
    - High bushfire intensity polygons
        - FFDI 53
        - VHC 22.1 - Melaleuca open forests on seasonally inundated lowland coastal swamps. This VHC is attributed with a surface fuel load of 23.4t/ha and a total fuel load of 28.4t/ha.
    - Medium bushfire intensity polygons
        - FFDI 53
        - VHC 9.2 - Moist to dry eucalypt woodland on coastal lowlands and ranges. This VHC is attributed with a surface fuel load of 14.9t/ha and a total fuel load of 17.2t/ha.

Discussion

Existing background

In Council's response to the earlier Concept Plan indicated that the vegetation mapped to the north of the proposed development site which is mapped by the Qld Fire Department as the Vegetation Hazard Class 9.2 - Moist to dry eucalypt woodland on coastal lowlands and ranges was to be considered to be the VHC9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges based on their analysis of the aerial photography. The author of this advice disagrees with this statement and maintain that the mapping of the woodland as VHC9.2 was consistent with the mapped Regional Ecosystem as 12.11.27 and consistent with the Qld Fire Department's vegetation hazard class mapping in its Mapviewer and our site investigations.

However, the author agrees with Council Officers that the vegetation along the south-eastern corner of the subject site should be considered to be the VHC 22.1 however, this area is in a regrowth phase and as such it may not reach its full status as the Regional Ecosystem 12.3.6 - *Melaleuca quinquenervia +/- Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia intermedia* open forest on coastal alluvial plains (BVG1M: 22a).

Further we have found that the vegetation to the north west on neighbouring land and to the south-east again on other lands is not dominated by Regional Ecosystem 12.11.23 - *Eucalyptus pilularis* open forest on coastal metamorphics and interbedded volcanics and expressed as the Vegetation Hazard Class 8.1 in the States Bushfire characteristics mapping but is dominated by the Regional Ecosystem 12.11.27 - *Eucalyptus racemosa* subsp. *racemosa* and/or *E. seeana* and *Corymbia intermedia* woodland on metamorphics +/- interbedded volcanics which is analogous with the Vegetation Hazard Class 9.2 - Moist to dry eucalypt woodland on coastal lowlands and ranges.

Further Council has also stipulated that when calculating the Radiant heat flux and fire line intensity within particular vegetation hazard classes, using Method 2 in Appendix B of the Australian Standard AS3959-2018 that a flame temperature of 1200k is to be used instead of the default flame temperature of 1090k.

It is acknowledged that in the Bushfire Resilient Communities (BRC), State Planning Policy Technical Reference Guide of October 2019, the radiant heat flux and fireline intensity can be calculated using the State Bushfire Asset Protection Zone calculator the flame temperature of 1200k is the default flame temperature. However, the BRC also permits the calculation of the flame temperature and fireline intensity using Method 2 in AS3959 as long as the locally mapped FFDI value is used as well as the ground truthed Vegetation Hazard Class and the attributed fuel loads for that or those vegetation hazard classes. However, if Method 2 is used, the BRC does not stipulate that the flame temperature of 1200k has also to be adopted and as such the default flame temperature of 1090k can be used and that calculation is compliant with the BRC and as such should be seen as fit for purposes.

When asked Council has not produced any reference material or advice from the Qld Fire Department that when using Method 2 a flame temperature of 1200k has to be used, therefore the flame temperature of 1090k is compliant with the Bushfire Resilient Communities Technical Reference Guide and as such fit for purpose.

Site Discussion

Bushfire Behaviour

Topography

With respect to the topography around the site;

- North
    - The northern drainage line forms a delineation between slope and slope direction of the two properties to the north. Based on our site investigations and review of the Qld Globe Lidar contour lines we concluded;
        - The slope within the privately held property (Lot 7 on SL10530) slopes up from the drainage line toward the sites north-eastern corner at approximately 5.7 degrees (identified as slope 1). On the northern side of the northern drainage line the land slope up to the north and norther-west at minus 5.2 degrees slope Identified as slope 2.
        - The slopes to the north and west of the northern drainage line and within the Council owned and managed waste management reserve slopes of 5.6 degrees (identified as slope 3) for the most part to the north-west and west from the drainage line.
        - It is noted that the slopes within the Council owned waste management reserve is parallel to slightly away from the subject site's northern boundary and as such a fire burning upslope will be a flanking fire not a head fire.
        - However, if it is considered that a fire that would burn toward the subject site from the "handle" connector to Giles Road then the slope that ought to be used with respect to the rate of spread, fireline intensity and radiant heat exposure levels is the negative slope, that being minus 5.6 degrees. This is there for identified as Slope 4.
        - Based on these slopes and the mapped and ground truthed Vegetation Hazard Class, VHC9.2 along with the FFDI value and the attributed surface fuel loads, Tables 1, 2, 3 and 4 provide the calculation of the fireline intensity and minimum separations distances for the set radiant heat flux values.

Table 1 – Slope 1

20 Giles Rd, Redland Bay - Slope 1 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 30, 2025, 7:19 pm (MDc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.4 km/h
Vegetation Classification	Woodland	Flame length	11.19 m
Understorey fuel load	14.9 t/ha	Flame angle	57.7 °, 68.7 °, 76.7 °, 81.7 °, 83.7 ° & 88.7 °
Total fuel load	17.2 t/ha	Elevation of receiver	3.83 m, 3.99 m, 3.63 m, 2.92 m, 2.41 m & 0 m
Vegetation height	n/a	Fire intensity	12,479 kW/m

Inputs		Outputs	
Effective slope	5.7 °	Transmissivity	0.879, 0.863, 0.84, 0.816, 0.802 & 0.736
Site slope	5.7 °	Viewfactor	0.5929, 0.4403, 0.297, 0.201, 0.1633 & 0.0445
Flame width	100 m	Minimum distance to < 40 kW/m²	8.9 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	12.1 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	18 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	26.2 m
		Minimum distance to < 10 kW/m²	31.5 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Table 2 – Slope 2

20 Giles Rd, Redland Bay - Slope 2 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 30, 2025, 7:23 pm (MDc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	0.66 km/h
Vegetation Classification	Woodland	Flame length	6.36 m
Understorey fuel load	14.9 t/ha	Flame angle	51 °, 60 °, 68 °, 73 °, 75 ° & 80 °
Total fuel load	17.2 t/ha	Elevation of receiver	2.99 m, 3.45 m, 3.97 m, 4.55 m, 4.91 m & 8.36m
Vegetation height	n/a	Fire intensity	5,882 kW/m
Effective slope	-5.2 °	Transmissivity	0.888, 0.878, 0.863, 0.844, 0.832 & 0.758
Site slope	-5.2 °	Viewfactor	0.5834, 0.4287, 0.2887, 0.1934, 0.157 & 0.0432
Flame width	100 m	Minimum distance to < 40 kW/m²	5.6 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	7.6 m

Inputs		Outputs	
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	11.2 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	16.5 m
		Minimum distance to < 10 kW/m²	20.2 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Table 3 – Slope 3

20 Giles Rd, Redland Bay - Slope 3 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 30, 2025, 7:26 pm (MDc v.4.9)).

NOTE – this slope is parallel to the subject sites northern boundary and as such the rate of spread, fireline intensity and radiant heat flux exposure values do not represent the flanking fire but the head fire that would burn upslope and slightly away from the development.

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.39 km/h
Vegetation Classification	Woodland	Flame length	11.12 m
Understorey fuel load	14.9 t/ha	Flame angle	56.6 °, 68.6 °, 76.6 °, 81.6 °, 83.6 ° & 88.6 °
Total fuel load	17.2 t/ha	Elevation of receiver	3.77 m, 3.98 m, 3.63 m, 2.94 m, 2.46 m & 0 m
Vegetation height	n/a	Fire intensity	12,393 kW/m
Effective slope	5.6 °	Transmissivity	0.879, 0.863, 0.84, 0.816, 0.803 & 0.736
Site slope	5.6 °	Viewfactor	0.5966, 0.4382, 0.2955, 0.2008, 0.1636 & 0.0446
Flame width	100 m	Minimum distance to < 40 kW/m²	8.8 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	12.1 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	18 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	26.1 m
		Minimum distance to < 10	31.3 m

Inputs		Outputs	
		kW/m²	

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Table 4 - Slope 4

20 Giles Rd, Redland Bay - Slope 4 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 31, 2025, 9:29 am (MDc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	0.64 km/h
Vegetation Classification	Woodland	Flame length	6.24 m
Understorey fuel load	14.9 t/ha	Flame angle	51 °, 60 °, 68 °, 73 °, 75 ° & 80 °
Total fuel load	17.2 t/ha	Elevation of receiver	2.97 m, 3.44 m, 3.99 m, 4.58 m, 4.96 m & 8.64 m
Vegetation height	n/a	Fire intensity	5,722 kW/m
Effective slope	-5.6 °	Transmissivity	0.889, 0.879, 0.863, 0.845, 0.833 & 0.759
Site slope	-5.6 °	Viewfactor	0.5849, 0.4335, 0.2866, 0.1939, 0.1569 & 0.0432
Flame width	100 m	Minimum distance to < 40 kW/m²	5.5 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	7.4 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	11.1 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	16.2 m
		Minimum distance to < 10 kW/m²	19.9 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Radiant Heat Flux calculations using Council's input data

Based on the above slopes and Council's position that the VHC9.2 is VHC9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges and that a flame temperature of 1200k is to be used instead of a flame temperature of 1090k, tables 5 – 8 replicates the slopes from Tables 1 – 4 but with the Council input data.

Table 5 – Slope 1

20 Giles Rd, Redland Bay - Slope 1 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 31, 2025, 9:35 am (MDc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.97 km/h
Vegetation Classification	Forest	Flame length	15.76 m
Understorey fuel load	21 t/ha	Flame angle	68.7 °, 74.7 °, 79.7 °, 82.7 °, 83.7 ° & 88.7 °
Total fuel load	24.2 t/ha	Elevation of receiver	5.54 m, 5.2 m, 4.36 m, 3.19 m, 2.45 m & 0 m
Vegetation height	n/a	Fire intensity	24,746 kW/m
Effective slope	5.7 °	Transmissivity	0.853, 0.833, 0.808, 0.785, 0.774 & 0.721
Site slope	5.7 °	Viewfactor	0.4178, 0.31, 0.2098, 0.1422, 0.1153 & 0.0309
Flame width	100 m	Minimum distance to < 40 kW/m²	17.9 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	24 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	34 m
Flame temperature	1,200 K	Minimum distance to < 12.5 kW/m²	46.3 m
		Minimum distance to < 10 kW/m²	53.9 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Table 6 – Slope 2

20 Giles Rd, Redland Bay - Slope 2 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 31, 2025, 9:39 am (MDc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	0.93 km/h
Vegetation Classification	Forest	Flame length	8.96 m
Understorey fuel load	21 t/ha	Flame angle	62 °, 67 °, 72 °, 75 °, 76 ° & 80 °
Total fuel load	24.2 t/ha	Elevation of receiver	4.99 m, 5.51 m, 6.26 m, 7.16 m, 7.7 m & 12.57 m
Vegetation height	n/a	Fire intensity	11,664 kW/m
Effective slope	-5.2 °	Transmissivity	0.873, 0.859, 0.837, 0.814, 0.801 & 0.741
Site slope	-5.2 °	Viewfactor	0.4065, 0.3013, 0.203, 0.1372, 0.1115 & 0.0301
Flame width	100 m	Minimum distance to < 40 kW/m²	11.3 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	15.1 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	22 m
Flame temperature	1,200 K	Minimum distance to < 12.5 kW/m²	31.1 m
		Minimum distance to < 10 kW/m²	36.9 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Table 7 – Slope 3

20 Giles Rd, Redland Bay - Slope 3 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 31, 2025, 9:46 am (MDc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	1.96 km/h
Vegetation Classification	Forest	Flame length	15.68 m
Understorey fuel	21 t/ha	Flame angle	68.6 °, 74.6 °, 79.6 °, 82.6 °, 83.6

Inputs		Outputs	
load			° & 88.6 °
Total fuel load	24.2 t/ha	Elevation of receiver	5.54 m, 5.21 m, 4.39 m, 3.25 m, 2.52 m & 0 m
Vegetation height	n/a	Fire intensity	24,576 kW/m
Effective slope	5.6 °	Transmissivity	0.853, 0.834, 0.808, 0.785, 0.774 & 0.721
Site slope	5.6 °	Viewfactor	0.418, 0.3098, 0.2101, 0.1423, 0.1153 & 0.0309
Flame width	100 m	Minimum distance to < 40 kW/m²	17.8 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	23.9 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	33.8 m
Flame temperature	1,200 K	Minimum distance to < 12.5 kW/m²	46.1 m
		Minimum distance to < 10 kW/m²	53.7 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Table 8 – Slope 4

20 Giles Rd, Redland Bay - Slope 4 - Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated October 31, 2025, 9:50 am (MDc v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	0.9 km/h
Vegetation Classification	Forest	Flame length	8.8 m
Understorey fuel load	21 t/ha	Flame angle	61 °, 67 °, 72 °, 75 °, 76 ° & 80 °
Total fuel load	24.2 t/ha	Elevation of receiver	4.94 m, 5.52 m, 6.31 m, 7.26 m, 7.84 m & 13.04 m
Vegetation height	n/a	Fire intensity	11,347 kW/m
Effective slope	-5.6 °	Transmissivity	0.874, 0.859, 0.838, 0.814, 0.802 & 0.741
Site slope	-5.6 °	Viewfactor	0.4075, 0.3005, 0.2026, 0.137, 0.1111 & 0.0301

Inputs		Outputs	
Flame width	100 m	Minimum distance to < 40 kW/m²	11.1 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	14.9 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	21.7 m
Flame temperature	1,200 K	Minimum distance to < 12.5 kW/m²	30.7 m
		Minimum distance to < 10 kW/m²	36.5 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980
Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980
Elevation of receiver - Douglas & Tan, 2005
Flame angle - Douglas & Tan, 2005
Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Response to Bushfire Risks

The new MCU Plan of Development has respond to the bushfire risks as required by Council's data input requirement's and has: -

1. Established a 24 metre wide bushfire management zone within the Innovation Precinct for the entire northern boundary.
2. As the lands to the west, 34 Giles Road, Redland Bay (Lot 67 on RP82443) is clear of structural areas of woody vegetation this area does not present a bushfire risk to the proposed development. The stand of regrowth woody vegetation in this properties south-eastern corner is not mapped as hazardous vegetation and an assessment of that patches size and structural integrity would support the current bushfire hazard mapping the Qld Fire Department's Mapviewer/SPP Natural Hazards Risk and Resilience Bushfire hazard mapping. However, as an area of approximately 57 metres in width is proposed as part of the MUC application, this land may be required by Council to be vegetated and as such a 17 metre wide buffer is proposed and this would be sparsely planted with a dominant maintained grassland or similar landscape treatment. This landscape treatment will be provided in detail as part of the ROL detailed design works.
3. For the majority of the southern boundary, that vegetation is not considered to be an area of hazardous vegetation due to its width and it is removed based on the Patch and Corridor filtering as per Leonard and Opie (2017).
4. However, the area of vegetation abutting and including some within the subject sites south-eastern corner is considered to be an area of hazardous vegetation. The development will require some significant fill to be deposited in that corner to establish a level development lot, but subject to detailed design. The required retaining wall will be 4 to 5 metres in height and as such that retaining wall as well as a non-flammable fence onto of that retaining wall will provide a significant radiant heat barrier and as such, no specific bushfire setback will be required.

   However, if in the detailed design for the Reconfiguring of a lot for the proposed innovation Park uses, the circumstances change with respect to the required height of retaining walls

in this area, as part of the ROL application, the necessity for a bushfire buffer setback may need to be reviewed.

5. Services for the development in terms of reticulated water will be delivered into and around the proposed development and specified in the detailed layout design as part of the ROL application. However, this reticulated water delivery will be compliant with conditions imposed by the water utility, City Water and also be compliant with the *QFES Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots* (2015).
6. Further, all internal roadways will also be compliant with relevant conditions of Approval as specified by Redland City Council as well as being compliant with *QFES Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots* (2015).
7. All landscaping proposed as part of the ROL application recognise areas of adjacent bushfire hazard and not introduce any additional bushfire risks to the proposed development or increase the bushfire risk to the site neighbours.

The relevant maps and figures are provided in Appendix 1 below with site photos provided in Appendix 2 below.

If you have any queries with regard to this Bushfire hazard assessment report, please feel free to call or email at your convenience.

Yours faithfully,

Rob Friend
Director
Rob Friend & Associates Pty Ltd

Appendix 1 – Figures

Figure 1 – Material Change of Use Plan

LEGEND / PRECINCT AREAS
Innovation Precinct 195257 m2
Private Open Space 2685 m2
Public Open Space 53444 m2
Surrounding Bushland
Bush Fire Management Zone
TOTAL LOT AREA = 251385 m2
RLC BUSHLAND
195257 m2
19815 m2
26025 m2
6715 m2
977 m2
1708 m2
5889 m2
Low Dec. Transition Buffer
ENVIRONMENTAL COVENANT
REDLANDS BUSINESS PARK
JASMINE DRIVE
PARK
CLEVELAND REDLAND BAY ROAD
INSPIRE REDLANDS PTY LTD
INSPIRE DEVELOPMENT
20 GILES ROAD
REDLAND BAY
PRECINCT PLAN
ITIC
11

Figure 2 – Site Location

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0 440

Metres

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Figure 3 – Aerial Image

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Metres

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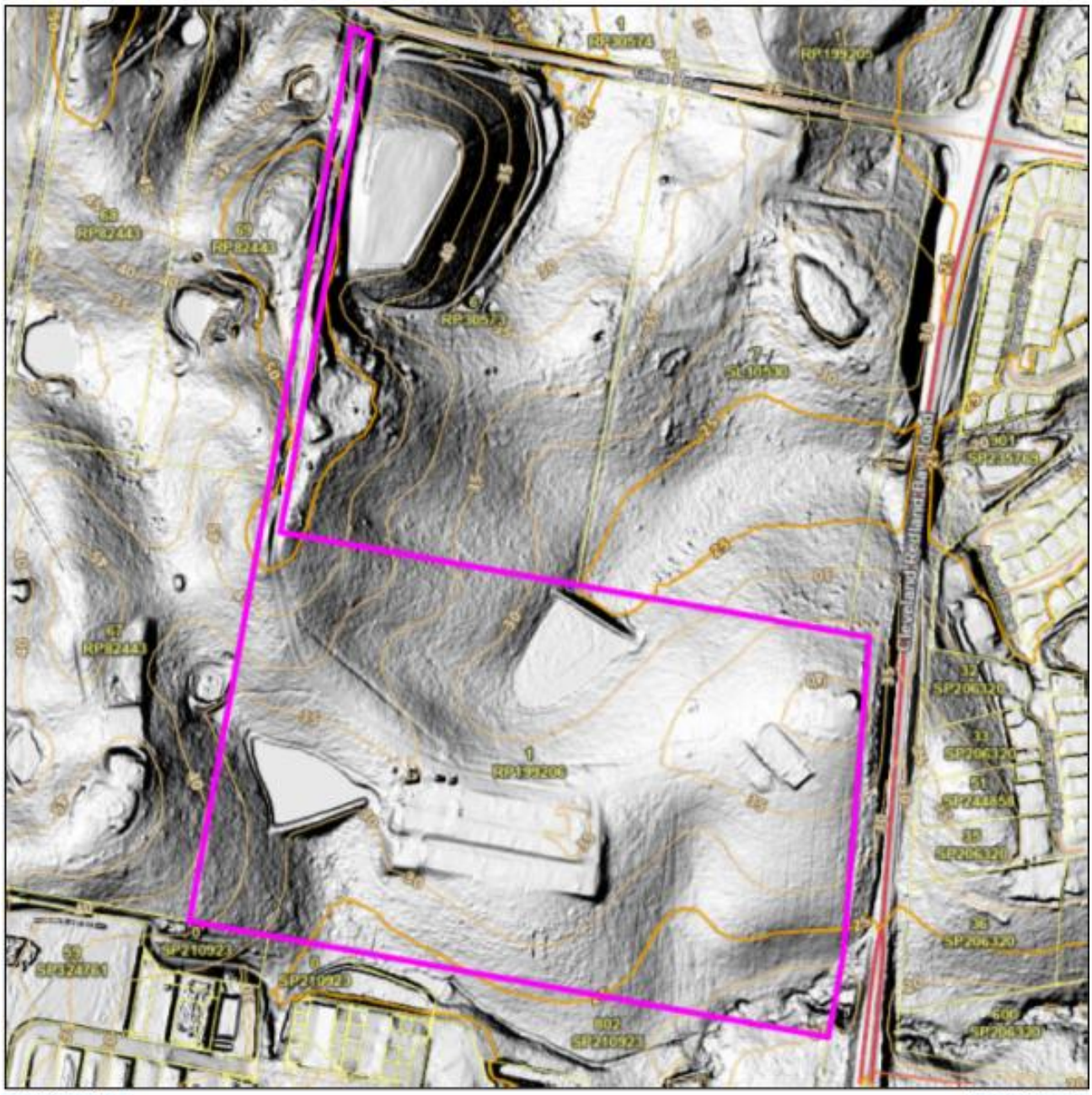
Figure 4 – Topographic Mapping (Qld Globe 1 m lidar)

20 Giles Road, Redland Bay

Hillshade & Contours

27°36'53"S 153°16'45"E 27°36'53"S 153°17'23"



27°37'27"S 153°16'45"E 27°37'27"S 153°17'23"

A product of Queensland Globe

Legend located on next page

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0 100 metres

Scale: 1:6000

Printed at: A4

Print date: 23/9/2024

Not suitable for accurate measurement.

Projection: Web Mercator EPSG:102100 (3857)

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25

Figure 5 – Regulated Vegetation and Regional Ecosystems

20 Giles Road, Redland Bay

RVMA & REs

27°36'53"S 153°16'45"E 27°36'53"S 153°17'23"

27°37'27"S 153°16'45"E 27°37'27"S 153°17'23"

A product of Queensland Globe

Legend located on next page

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0 100 metres

Scale: 1:6000

Printed at: A4

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28

Figure 6 – QFD VHC and FFDI Map

20 Giles Rd Redland Bay - FFDI & VHC

31/10/2025, 11:55:43 am

1:7,000

0 285 570 1,140 ft

0 87.5 175 350 m

Fire Weather Severity (FFDI h20)

VHC - Remnant Vegetation V10 (Regional Ecosystems)

Broad Vegetation Hazard Class Dynamic

BVG 8 Wet eucalypt open forest

BVG 9-15 Eastern eucalypt woodlands to open forests

BVG 21-22 Melaleuca open woodlands on depositional plains

BVG 40 Low grass or tree cover in rural areas

BVG 41 Low grass or tree cover in built-up area

BVG 42 Nil to very low vegetation cover

BVG 43 Waterbodies

Base Parcels Only

LatestStateProgram AllUsers

Red: Band_1

Green: Band_2

Blue: Band_3

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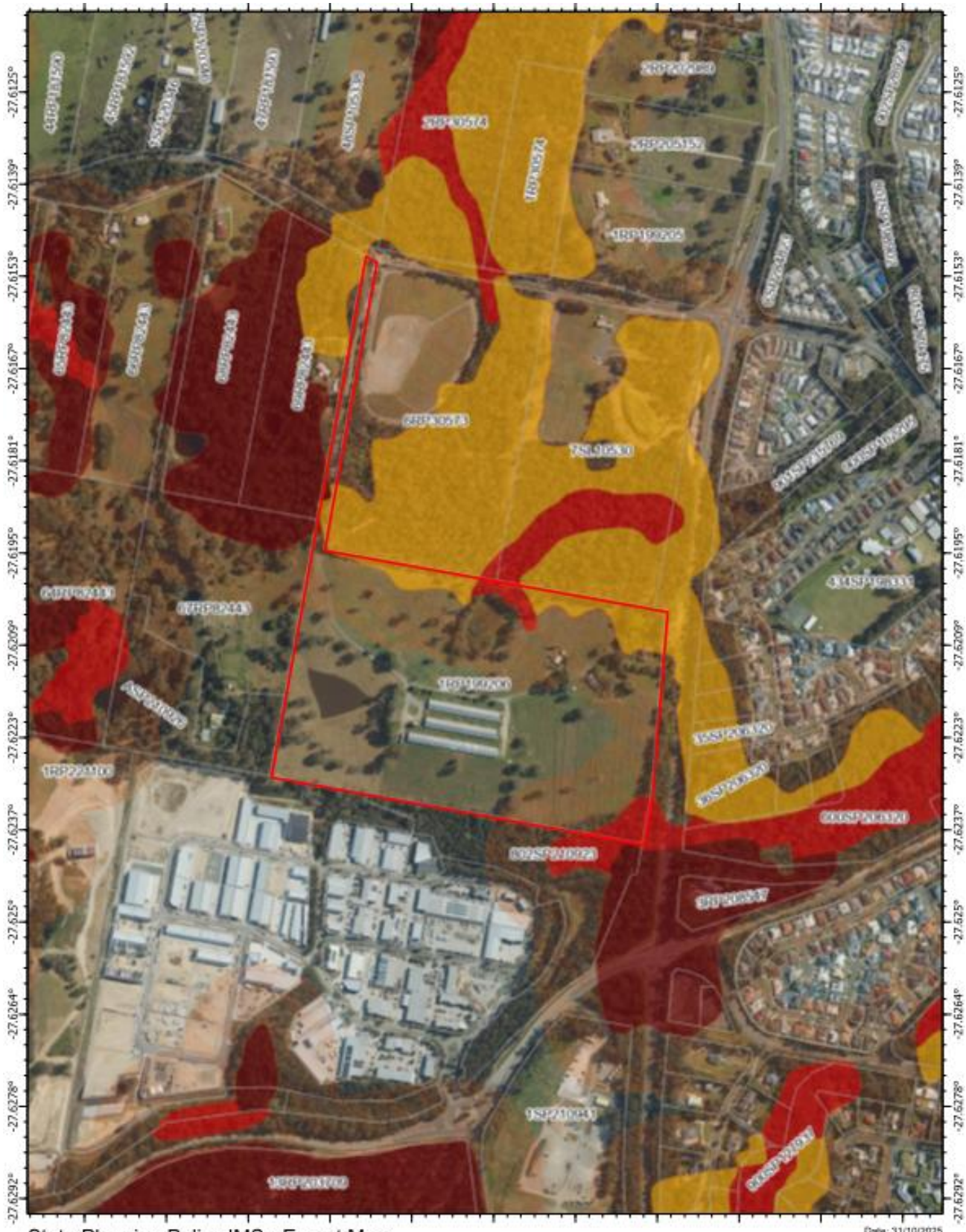
Figure 7 – Redland City Plan – Bushfire Hazard Overlay Map

Bushfire Hazard Overlay Mapping			
Scale @ A4: 1:5,329	Date: 10/29/2025	Redland CITY COUNCIL INFORMATION PURPOSES ONLY	No warranty given in relation to the data (including accuracy, reliability, completeness or suitability) and no liability accepted (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws. External contributors to data listed at www.qrm.qld.gov.au/products or www.redland.qld.gov.au.

32

Figure 8 – State Planning Policy – Bushfire Hazard Map



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Attachment 2 - Site photographs of vegetation and firebreaks in Lots 6 and 7

Photographic plate 1 – Giles road entrance into the proposed development property.

Photographic plate 2 – view east of the southern boundary of Lot 6. Note the firebreak just of the property boundary

Photographic plate 3 – view of the firebreak on along Lot 7's southern boundary

Photographic plate 4 – view east along the proposed development properties northern boundary of the firebreak within Lot 6 (foreground) and Lot 7 (far ground)

Photographic plate 5 – view from the proposed development sites northern boundary to the north along the boundary between Lot 6 and Lot 7

Photographic plate 6 – view to the west along the boundary with Lot 6 of the firebreak

38

Photographic plate 7 - view of the new internal fire trails into the vegetation within Lot 6.

Digital Water Solutions

09 OCT 2024

Development Assessment - Sewer Modelling Assessment Report

ATTN:	Ray Wassenberg
From:	Digital Water Solutions
Author(s):	Casey Shannon
Reviewer:	Scott Gerke
Date:	09/10/2024

Contents

1. Introduction 5
1.1. Site Location 5
2. Sewerage Network 6
2.1. Introduction 6
2.2. Desired Standards of Service 6
2.3. Sewer Loading 7
2.4. Sewer Model Assessment 8
2.5. Sewer Pump Stations 18
Sewer Pump Station 067 (SPS067) 18
Sewer Treatment Plant Pump Station (SPS STP) 19
2.6. Waste Water Treatment Plant 21
2.7. Site Check for Sewer Connection 21
Conclusions and Recommendations 24
3. Appendix A – Maximum Flood (Sewer) 25
4. Appendix B – Pump Station Augmentation Cost Comparison (Sewer) 27
5. Appendix C – Example Pump Station Selection SPS067 31

Digital Water Solutions Pty Ltd
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QLD 4213
Australia

Executive Summary

Digital Water Solutions (DWS) has undertaken water and sewer modelling assessment for the proposed development at 20 Giles Rd, Redland Bay QLD within the Local Government Area of Redland City Council (RCC). A water and sewerage assessment was submitted as part of the development application in August 2023. The submission was reviewed by RCC which requested clarification related to the sewerage network impacts and potential impacts on the Victoria Point Sewerage Treatment Plan (STP). No Comments or requests were received with relation to the water supply network.

The proposed development site located on Lot 1 on RP199206 and has total area of 25.14ha. The proposed development involves the creation of up to 20.556 ha of developable industrial land with a net developable area in the range of 16 to 18 ha dedicated to a technology precinct.

A review of the development loading estimate was undertaken following adjustments to the proposed site layout and revised developable area. The revised estimation also considered outcomes of a review of the consumption identified at the already established stages of the Industrial Park. The review showed existing consumption was below the Low Impact Industry base consumption rates. The revised estimated EP of the proposed development is 371 EP.

Modelling showed the development will impact the timing of an upgrade of Sewerage Pump Station 67 (SPS067). The pump station was identified by RCC for upgrade in 2041 based on RCC's population forecast. loadings identified by the development will contribute an additional 371 EP, which will bring forward the augmentation to 2036.

The proposed development increases the ultimate pump capacity requirements at SPS067 from 285 L/s to 288.9 L/s or an additional 4 L/s. This equates to an increase in pump power from the previously identified 259 kW to 264 kW (an increase of 5 kW) totalling an additional $81,353 based on RCC's adopted pump station costings for a **NEW** SPS. Importantly, these costing are for new pump stations and not upgrading existing like SPS067. It is expected RCC's costings are conservative and final upgrade costs will rely on additional information to determine the condition of civil, electric and mechanical components of the pump station. It is possible the increase will only require selection of an alternate pump unit for the SPS.

Its likely any increase in pumping requirements would at most require selection of a alternate impeller to meet the post development requirements of the SPS067 sewerage pumping requirements.

The impact on the sewerage treatment plant pump station was negligible, with no change in the ultimate scenario augmentation requirement and no meaningful change in the pumps power requirement. The increase equates to 0.8 kW which places the pump costing in the same costing bracket and pre-development costings.

The impact of the Victoria Point Wastewater Treatment Plant (WWTP) is minimal, The identified impact on the STP Upgrade was a 0.7% increase in EP in Ultimate scenario. Further, the gravity and rising mains have adequate capacity to cater for the proposed sewerage loading.

Assessment of the proposed development and its impacts on the water network demonstrated that the existing water network has sufficient capacity to accommodate the additional demands generated by the development. It has been confirmed no water network augmentations are required because of the development.

Modelling Assessment Summary:
Sewer Assessment

- The gravity network immediately downstream from the proposed development to SPS067 has adequate capacity as the maximum water level during PWWF in Ultimate scenario is fully contained within the pipe.
- The augmentation timing of SPS067 is affected by the additional 327 EP of the proposed development, causing the upstream EP to exceed the pumps capacity by 2036 instead of 2041 pre-development. The development adds a 4L/s or 5kW requirement from SPS067 which is minimal given the ~300 L/s ultimate scenario requirement of the pump station.
- A review of available pumps from FLYGT showed the same pump would likely be selected regardless of the additional development loadings. The example pump and pre and post development duty points is show in Appendix C.
- No spills (water level within 1 m of manhole cover level) are observed post-development.
- The proposed upgrade of the Victoria Point WWTP is increased by an additional 327 EP. This was identified as a 0.7% increase based on the RCC's ultimate loading forecast.

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1. Introduction

Digital Water Solutions has been Commissioned by Fox and Bell Pty Ltd to provide water and wastewater modelling assessment report for a proposed Technology Park at 20 Giles Rd, Redland Bay QLD.

1.1. Site Location

The proposed development site shown in Figure 1, described as a Technological and Innovation Centre is located at 20 Gillies, Redland Bay QLD 4165, located within Redland City Council local authority boundary. The subject land is Lot 1 on RP199206 with a total area of 25.17 ha with 20.556 ha proposed for the Innovation precinct and 4.584 ha proposed for Conservation.

An existing sewer main exists to the South-East of the lot with available connections at the corner of Cleveland Redland Bay Rd and German Church Rd. The existing sewer main services the Redland Business Park (RBP) and falls within the Victoria Point sewerage reticulation catchment.

An existing 200 mm water main that services the Redland Business Park (RBP) through 34 Giles Rd, which connects to a 600 mm trunk main serviced by the Heinemann Rd Reservoirs. The 200 mm borders the siter of the proposed development in the South-West and is the main considered for connection in this assessment. The Redland Business Park is serviced by via the existing 200 mm water main.

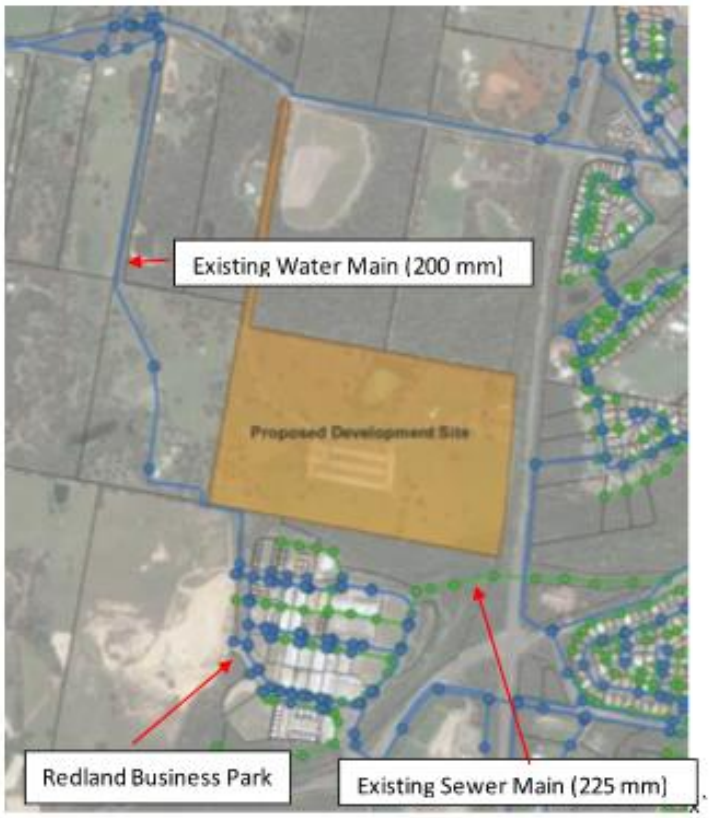

Figure 1: Proposed Development site and existing water and sewer infrastructure.

2. Sewerage Network

2.1. Introduction

The existing sewer network consists of a 225 mm sewer main servicing RBP to the south of the proposed development site. This main gravities to an existing 525 mm trunk main to SPS067 located Behind Fir St, discharging into a gravity main down a 525 - 750 mm trunk main to the Victoria Point Wastewater Treatment Plant (WWTP).

The proposed sewer connection point is manhole 410477 as shown in Figure 2.

Figure 2: Location of proposed connection manhole.

2.2. Desired Standards of Service

Redland City Council adopt the design criteria outlined in the SEQ Water Supply and Sewerage Design and Construction Code (2020). An amendment for the Depth of Flow during PWWF has been adopted from previous Desired Standards and Service (Sewerage) of at least 1.0 m below manhole cover level. Table 1 summarises the design criteria and desired standards used in this assessment.

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Table 1: Sewerage Design Criteria

Parameter	Criteria
Average Dry Weather Flow (ADWF)	210 L/EP/d
Peak Wet Weather Flow (PWWF)	5 x ADWF (1,050 L/EP/d)
Total Pump Station Capacity	PWWF
Depth of Flow (at PWWF)	Water level at least 1.0 m from manhole cover level
Minimum Velocity	0.75 m/s
Maximum Velocity	3.0 m/s
Preferred Velocity	1.0 – 1.5 m/s
Min Grade (150 mm)	1/180

2.3. Sewer Loading

The Redland City Plan 2018 (Version 8) was used to estimate the Equivalent Persons (EP) of the proposed development that is used to estimate sewer loading. Billing data for stage 1 and stage 2 of the existing Redland Business Park (located directly South of the proposed development) was assessed to help estimate the classification of the proposed development. Based on 6 months of billing data between July to December, the average daily consumption was 18.1 KL/d with 7.9 ha of occupied lots equating to 10.8 EP/net developable area using AWDF = 210 L/EP/d. This places the business park below the low impact industrial loading rate for average day.

Column 1 Area classification	Column 2 LGIP development types	Column 3 Planned density[1]		Column 4 Demand generation rate for a trunk infrastructure network[2]				
		Total non-residential plot ratio	Residential density (dwellings/net dev ha)	Water supply network (EP/net dev ha)	Sewerage network (EP / net dev ha)	Transport network (vpd / net dev ha)	Parks and land for community facilities network (EP/net dev ha)	Stormwater network (imp ha/net dev ha)
Mixed use zone	Retail	0.5	0	59.0	80.0	2,000.0	0.0	0.9
Principal centre zone (Cleveland)	Commercial, Retail, Attached dwelling	2	124	151.6	196.2	4,649.6	21.1	1.0
Principal centre zone (Capalaba)	Commercial, Retail, Attached dwelling	2.5	124	184.2	240.2	5,799.6	21.1	1.0
Specialised centre zone (Redland Hospital)	Commercial, Retail, Community purpose (Hospital)	0.7	0	269.7	269.7	1,112.9	0.0	0.9
Low impact industry zone	Retail, Industrial (low impact)	0.6	0	21.9	22.5	720.0	0.0	0.9
Medium impact industry zone	Retail, Industrial (medium impact)	0.6	0	28.1	28.6	555.0	0.0	0.9
Waterfront and marine industry zone	Retail, Industrial	0.5	0	22.5	23.1	542.3	0.0	0.9
Precinct CF1 cemeteries and crematoria	Community purpose	0.1	0	6.0	6.0	100.0	0.0	0.1
Precinct CF2 community facilities	Community purpose	0.24	0	43.0	27.0	240.0	0.0	0.5
Precinct CF3 educational establishments	Community purpose (secondary	0.2	0	100.0	94.0	400.0	0.0	0.5

Redland City Plan 2018 – Version 8 Schedule 3 LGIP mapping and support material —419

The loading on the sewerage network for low impact industrial developments is 22.5 (EP/net dev ha). The technology precinct has a gross area of 20.556 ha with an estimated Net area of 16.5 ha or ~ 80% of the gross area.

Therefore, the calculated EP for the proposed development is 22.5 (EP/Net dev ha) x 16.5 dev ha = 371 EP. This is the sewerage loading adopted in this assessment.

Redland City Council's 2022 Victoria Point Sewer master planning model was used in this assessment. The sewer model was loaded with the 371 EP at the proposed development site, an increase from 44.42 EP previously used in all future planning horizons of the Victoria Point sewer master planning model. The development loading of 371 EP equates to 0.9 L/s in Average Dry Weather Flow (ADWF) and 4.5 L/s in Peak Wet Weather Flow (PWWF). Only PWWF flow and the Ultimate future planning scenario is considered in this assessment. The proposed development is an increase of 327 EP or 4 L/s (PWWF) over RCC's existing allowances for the site.

2.4. Sewer Model Assessment

Long-section 1 traces from the receiving manhole down to the trunk main as shown in Figure 3.

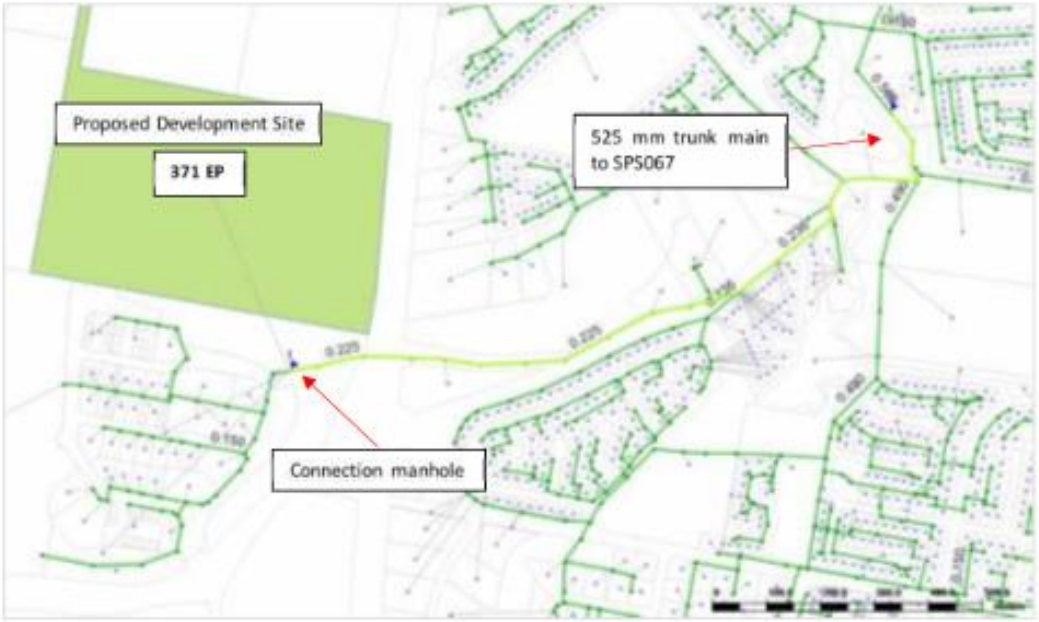

Figure 3: Long-section 1 trace from connection manhole to trunk main.

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Long-section 2 traces further down the trunk main to SPS067 as shown in Figure 4.

Figure 4: Long-Section 2 traces down trunk main to SPS067.

Long-section 3 traces from SPS067 to the WWTP

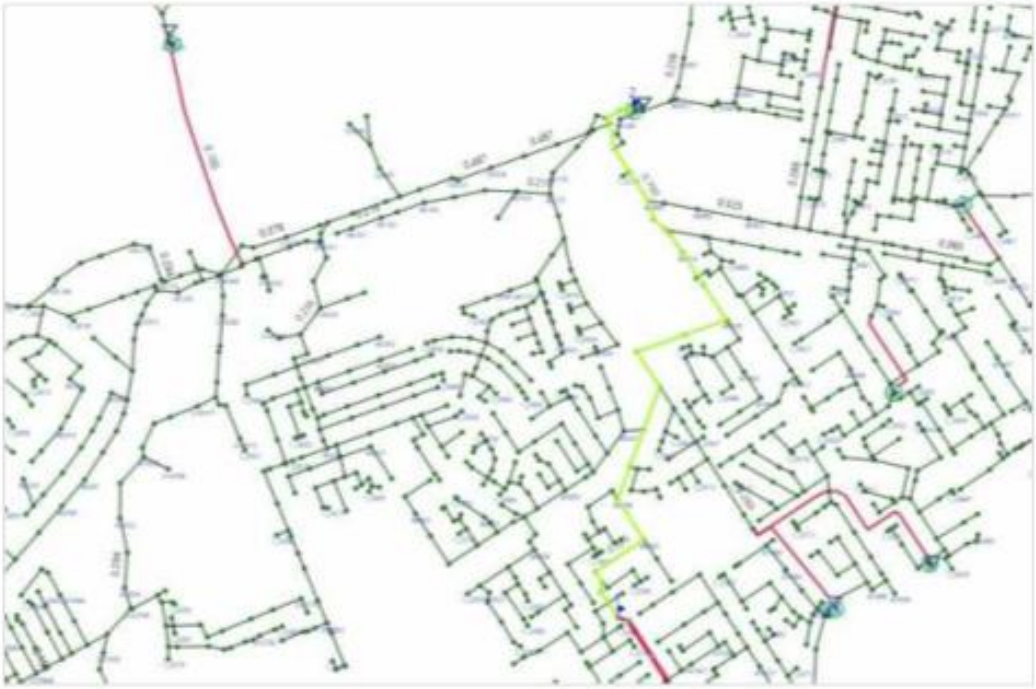

Figure 5: Long-Section 3 traces down trunk main from SPS067 to the WWTP.

Figure 6 shows a long section of the maximum pipe water level immediately downstream from the connection manhole to the 525 mm trunk main further downstream towards SPS067. The long section in Figure 7 shows minimal increase in water level post-development of about 0.03 - 0.04 m. The flow is fully contained within the pipe until it reaches the 525 mm trunk main.

Figure 8 and Figure 9 show the water level in long-section 2 tracing down to SPS067. The results show that post-development, the water level is fully contained within the pipes in PWWF Ultimate scenario. An increase in water level of about 0.01m is observed in the trunk main post-development.

Figure 10 and Figure 11 show the water level in long-section 3 tracing down from SPS067 to the WWTP. The results show minimum water level increase in the network in PWWF Ultimate scenario of about 0.2 m.

Further, no spills are observed (water level within 1 m of manhole ground level) in Ultimate Scenario during PWWF either before or after SPS067. This is demonstrated in the long-sections from Figure 6 through Figure 11 and shown in the flooding heat map in Appendix A – Maximum Flood (Sewer).

Flow velocity pre-diversion in the 225 mm downstream from the development is 0.65 to 1.2 m/s depending on the grade of the pipe. Post-development flow velocities in the same section of pipe are 0.7 – 1.3 m/s which fall within the preferred range of 1.0 to 1.5 m/s .

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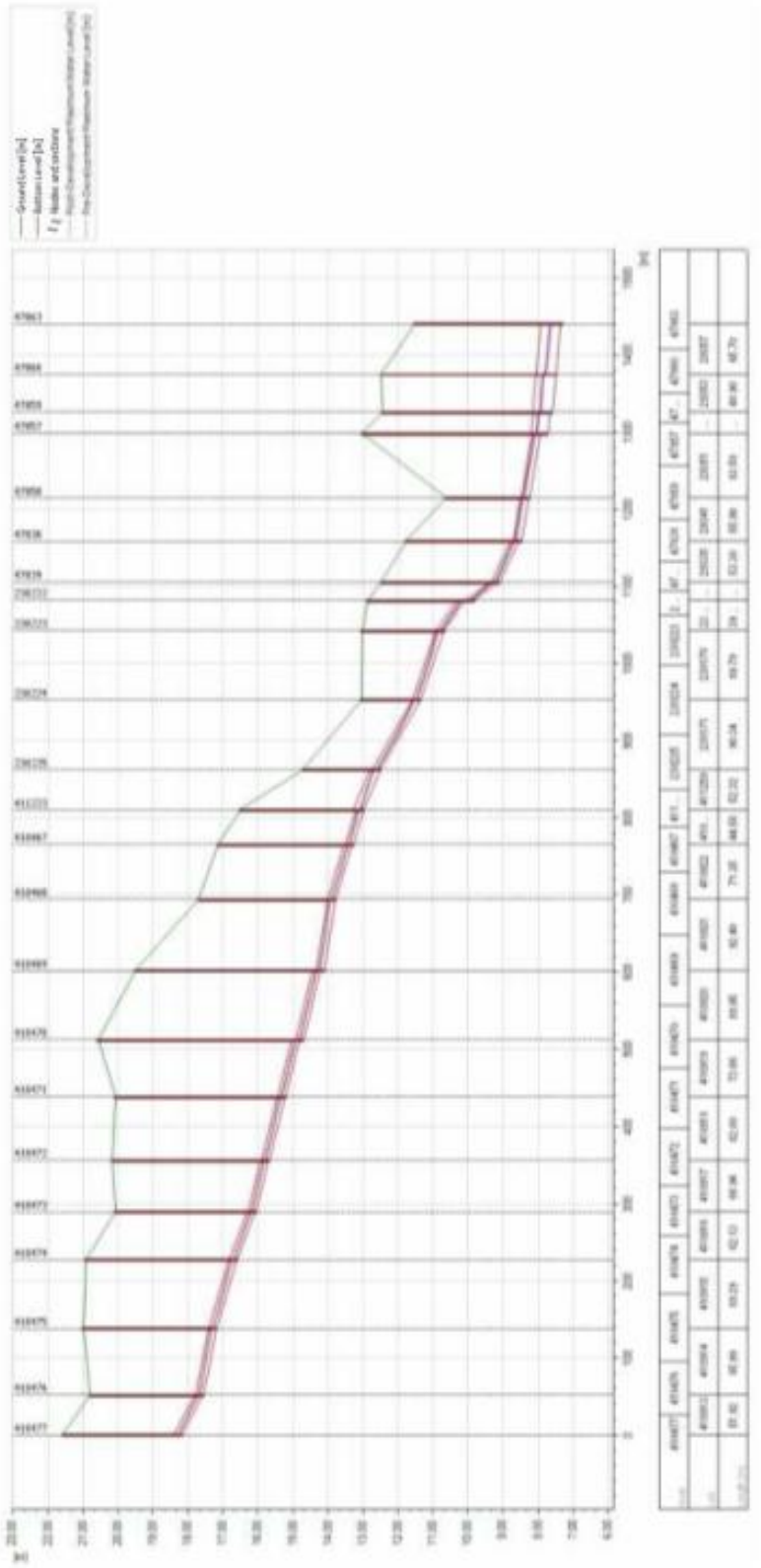

Figure 6: Long-section 1 maximum water level in Ultimate scenario PWWF pre- and post-development.

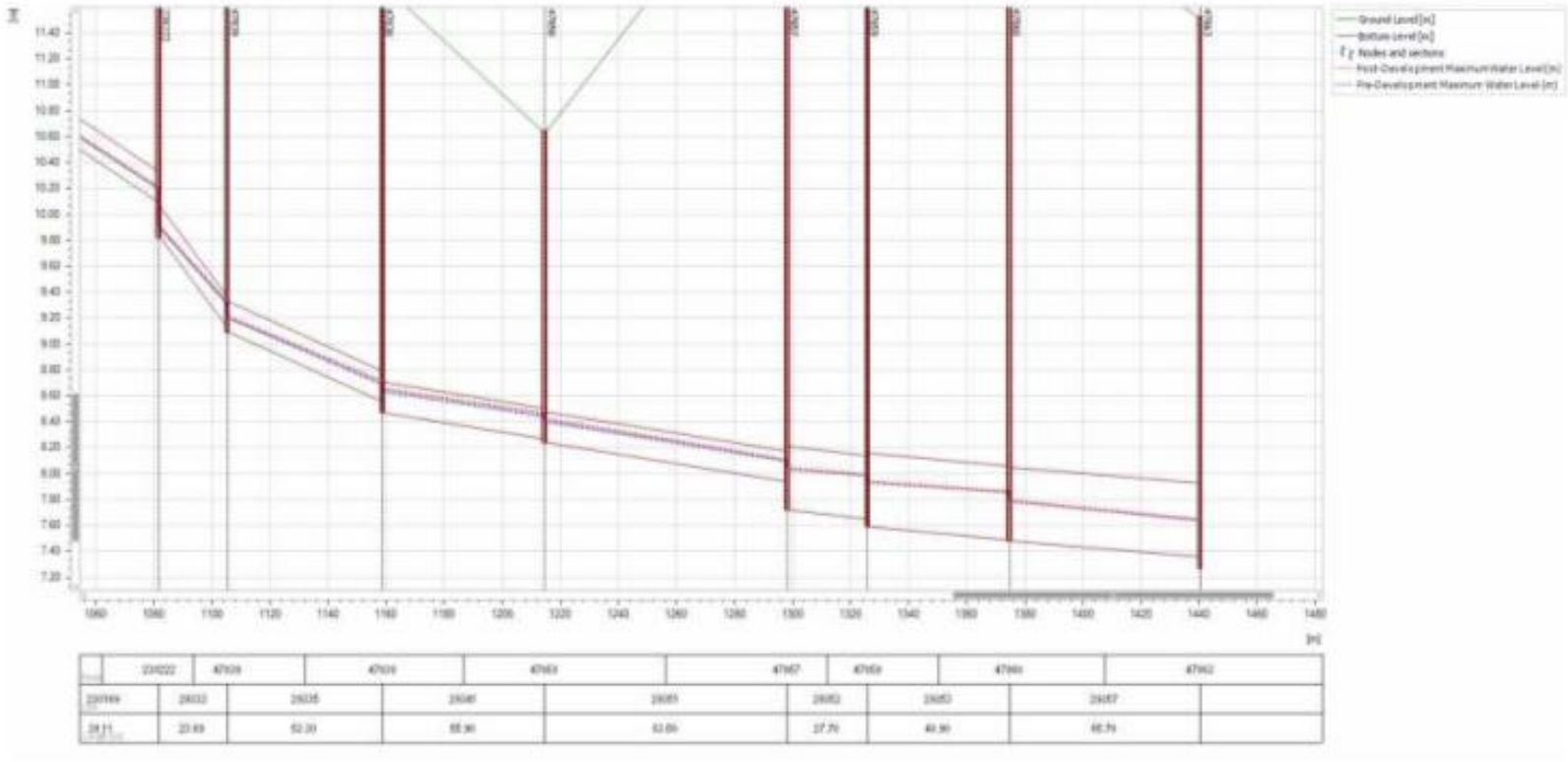

Figure 7: Long-section 1 maximum water level pre- and post-development (Zoomed in).

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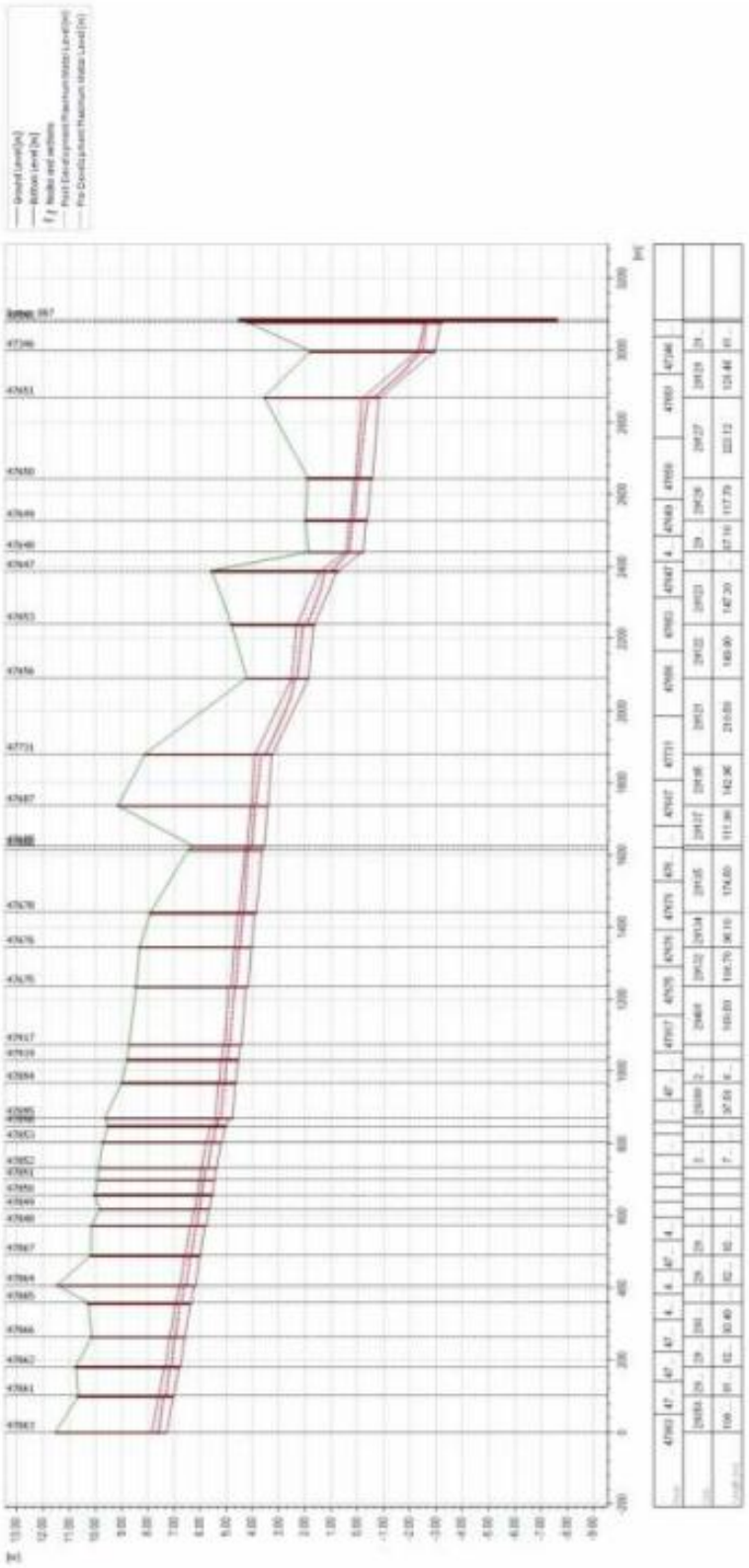

Figure 8: Long-section 2 maximum water level in Ultimate scenario PWWF pre- and post-development.

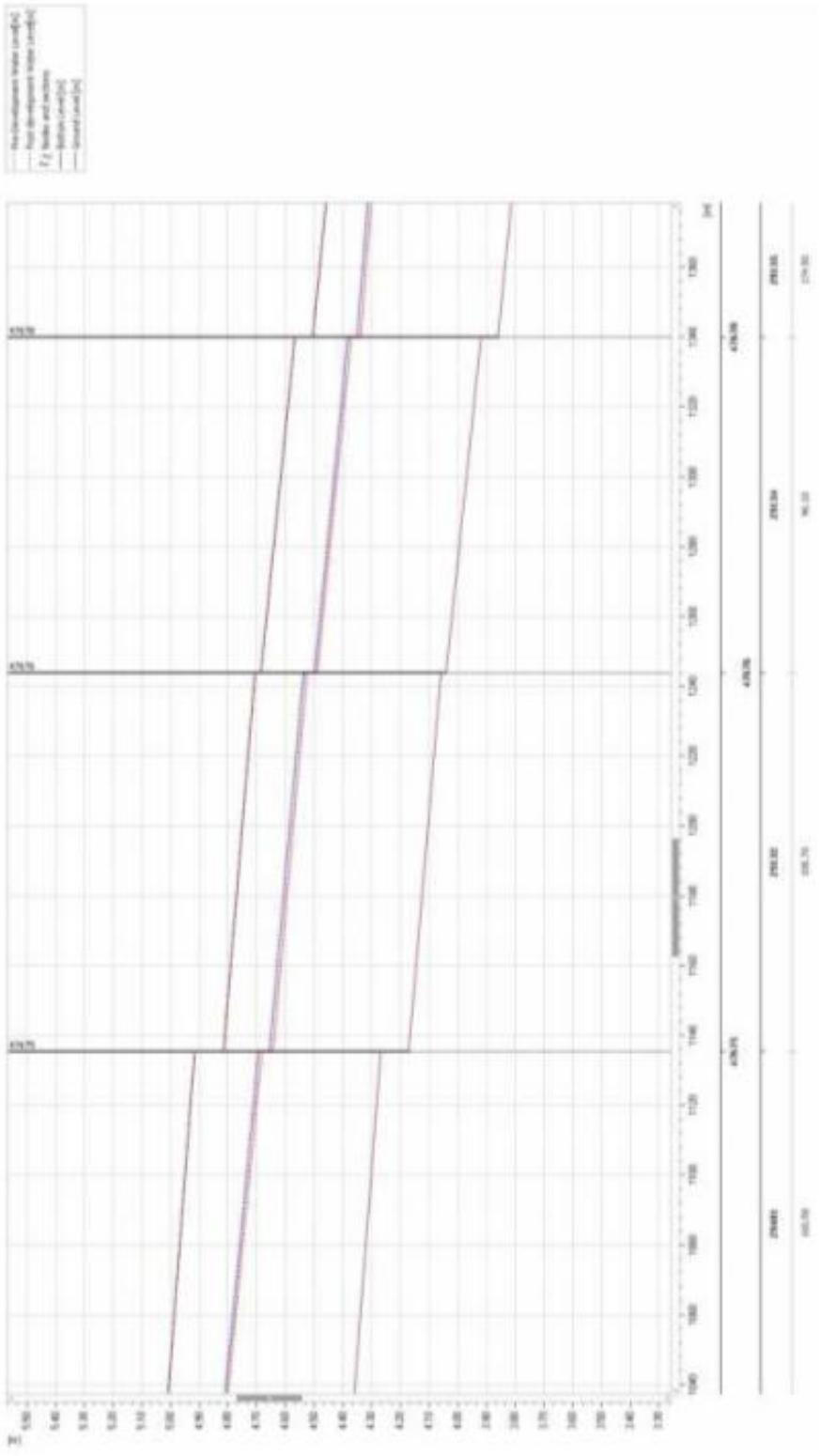

Figure 9: Long-section 2 maximum water level (Zoomed in).

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15

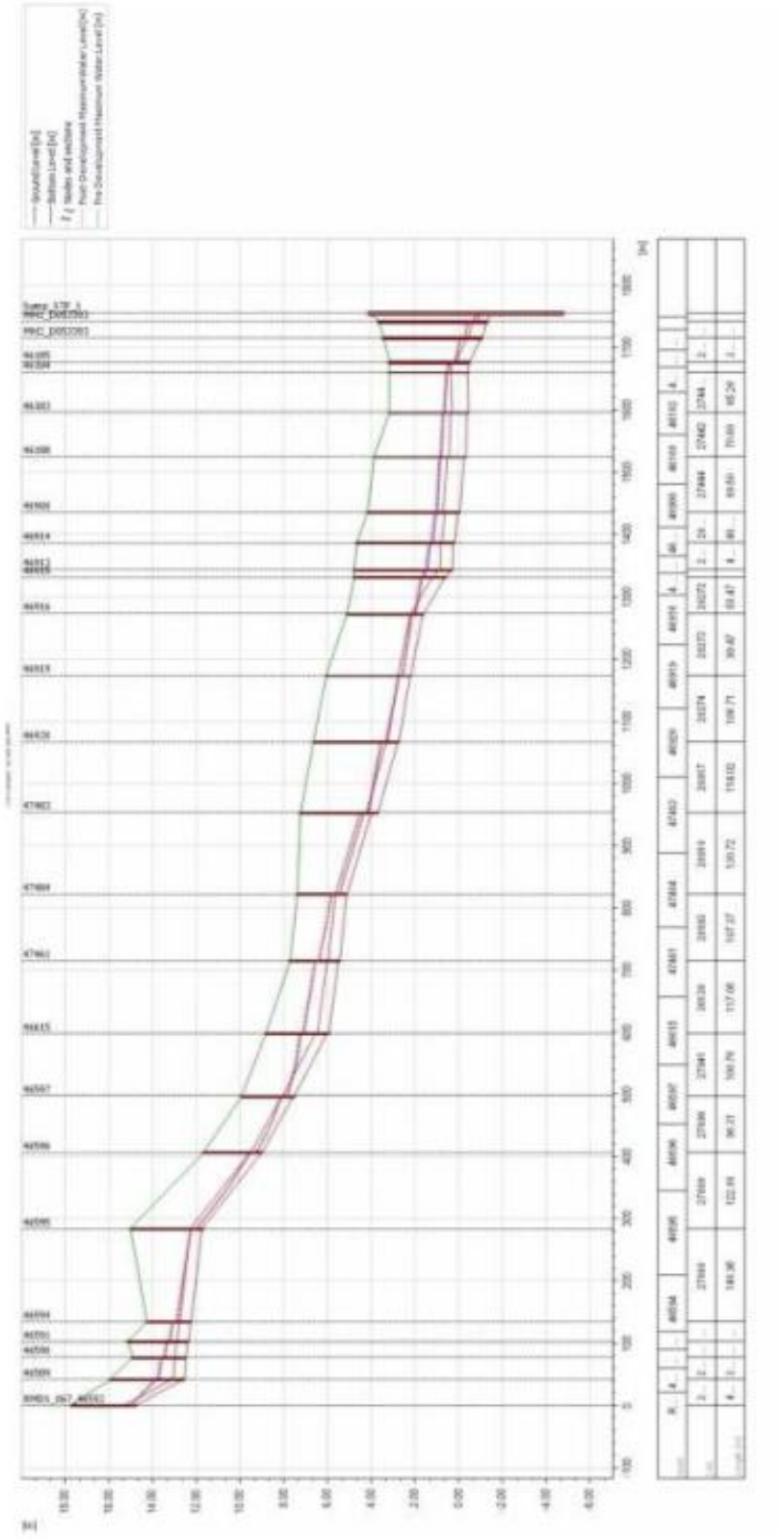

Figure 10: Long-section 3 maximum water level in Ultimate scenario PWWF pre- and post-development.

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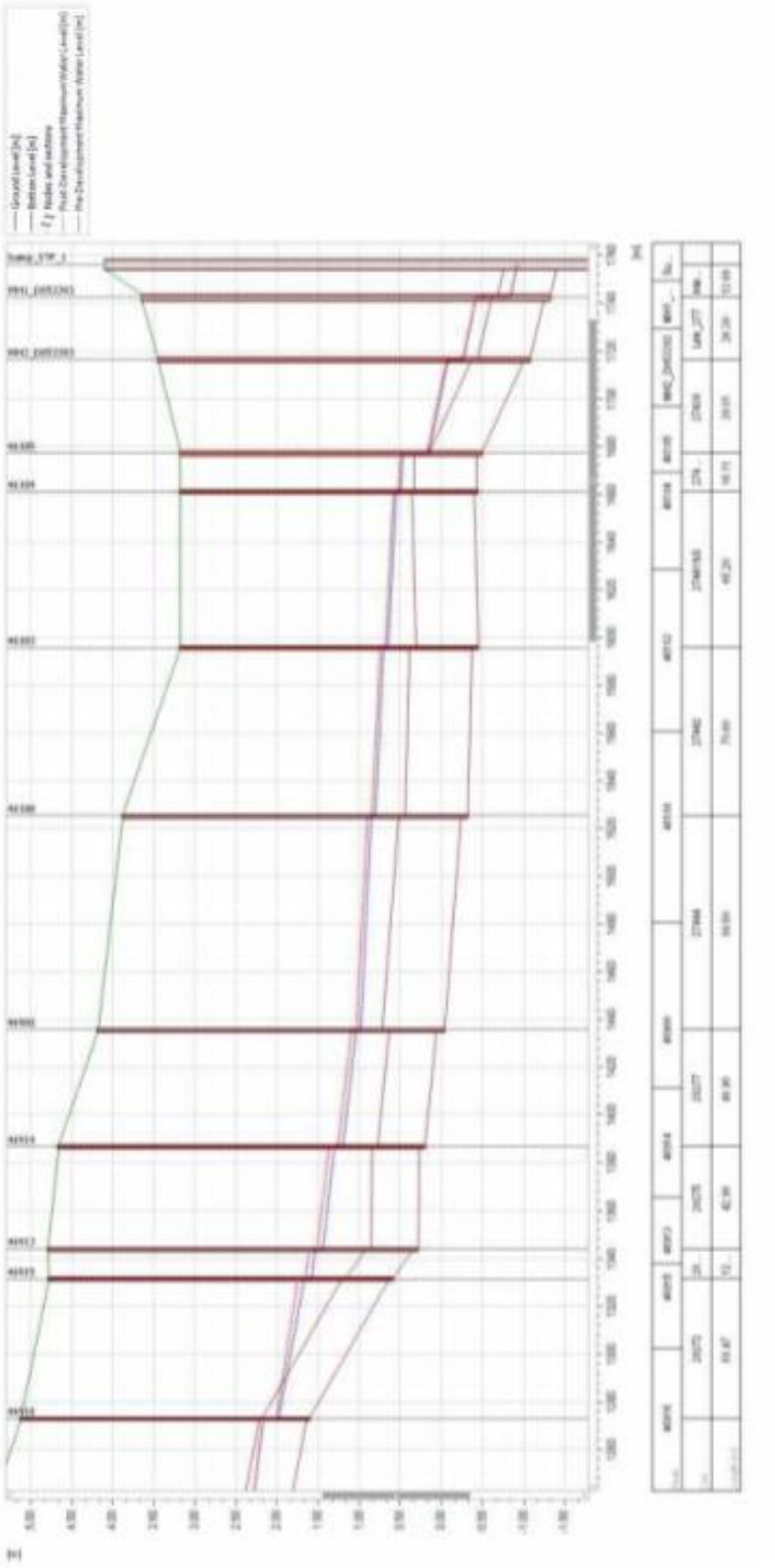

Figure 11: Long-section 3 maximum water level (Zoomed in).

2.5. Sewer Pump Stations

Sewer Pump Station 067 (SPS067)

Sewer Pump Station 67 (SPS067) is one of Victoria Points largest sewer pump stations, SPS067 services the entire South Victoria Point catchment conveying directly to the Wastewater Treatment Plant (WWTP).

The recent masterplan for Victoria Point sewer network has Identified SPS067 as requiring an upgrade by 2041 to meet the expected increase in flow from future population projections. Table 2 shows the existing pumps capacity compared to the EP projection from the latest master planning data, showing that the EP exceeds the pump capacity in 2041. The flow to EP conversion is PWWF = 1,050 L/EP/d.

Table 3 includes the proposed developments additional 371 EP from 2026. The pre-development EP totals in Table 2 include the 44.42 EP originally on this site in each scenario in the IDM. Taking this into account, the total EP added to the Post-development EP total is 371 EP (Development EP) – 44.42 EP (Total EP in each horizon on pre-development site) = 327 EP. The table shows that the proposed development increases the EP such that the pumps capacity is exceed by 2036, bringing forward the required pump augmentation of SPS067.

Table 2: SPS067 Current discharge capacity compared with expected upstream population forecast.

SPS No.	Total Pump Capacity (L/s)	Total Pump Capacity (EP)	2021 EP	2026 EP	2031 EP	2036 EP	2041 EP	2046 EP	2051 EP	ULT EP
67 (Pre-Dev)	239	**19,635**	16,933	18,025	18,826	19,343	19,792	20,087	20,238	23,448

Table 3: SPS067 discharge capacity compared to EP projections including proposed development.

SPS No.	Total Pump Capacity (L/s)	Total Pump Capacity (EP)	2021 EP	2026 EP	2031 EP	2036 EP	2041 EP	2046 EP	2051 EP	ULT EP
67 (Post-Dev)	239	**19,635**	16,933	18,352	19,153	19,670	20,119	20,414	20,565	23,775

The assessment showed the SPS067 upgrade is brought forward from 2041 to 2036. The estimated 371 EP total of the new development represents an increase of 327 EP (~4 L/s) or a 1.4% increase in Ultimate scenario over the previously identified 2022/23 master planning augmentation.

SPS067 Costing

The additional 4 L/s required from SPS067 due to the development adds an extra 0.43 m of headloss through the rising mains which results in an additional 3.9 kW of hydraulic power required from the pump station. Using a 75% efficiency factor (as adopted in the latest master plan), results in a shaft power of 264 kW post-development, a 5.2 kW increase in the SPS067 pump augmentation which is 259 kW. The takes the pump costing from the 260 kW bracket to the 265 kW which has an $81,353 based on the costings adopted in the latest master plan.

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These costings are based on pump power (kW) and an adopted rate ($/kW). These costing where adopted in the master plan to provide an approximate figure for pump station augmentations but are generally adopted for new pump stations, not existing. So, the additional 5kW required for upsizing an existing pump in SPS067 is expected to be considerably less than this figure. Importantly, these costing are for **new** pump stations and not upgrading existing like SPS067. It is expected RCC's costings are conservative and final upgrade costs will rely on additional information to determine the condition of civil, electric and mechanical components of the pump station.

A review of pump unity capable of meeting the needs of SPS067 showed the pre and post development pumping requirements would likely result in the same pump unit being selected. The proposed pump duty for both pre and post development fell within the same pump model and impeller size. The pump selection was undertaken for information purposes only and may not align with RCC's design specifications / procurement standards. Given there is minimal difference between the duty point for the pre and post development needs for SPS067 would at most require selection of a larger impeller.

Refer to Appendix B – Pump Station Augmentation Cost Comparison for head calculations used to calculate the hydraulic power required by the pump for costing.

Sewer Treatment Plant Pump Station (SPS STP)

The only other pump downstream from the proposed development is SPS STP, the pump into the Victoria Point wastewater treatment plant.

The recent masterplan for Victoria Point sewer network has Identified SPS STP as requiring an upgrade by Ultimate scenario to meet the expected increase in flow from future population projections. Table 4 shows the existing pumps capacity compared to the EP projection from the latest master planning data, showing that the EP exceeds the pump capacity in Ultimate scenario.

Table 4: SPS STP Current discharge capacity compared with expected upstream population forecast.

SPS No.	Total Pump Capacity (L/s)	Total Pump Capacity (EP)	2021 EP	2026 EP	2031 EP	2036 EP	2041 EP	2046 EP	2051 EP	ULT EP
STP (Pre-Dev)	239	**19,635**	34,760	36,258	37,914	39,236	40,115	40,590	40,908	47,902

Table 5: SPS STP discharge capacity compared to EP projections including Proposed development.

SPS No.	Total Pump Capacity (L/s)	Total Pump Capacity (EP)	2021 EP	2026 EP	2031 EP	2036 EP	2041 EP	2046 EP	2051 EP	ULT EP
STP (Post-Dev)	239	**19,635**	34,760	36,585	38,241	39,562	40,442	40,917	41,234	48,229

Table 5 includes the proposed developments total of 371 EP from 2026. The table shows that the proposed development EP increase does not affect the timing of the SPS STP augmentation.

SPS STP Costing

The 327 EP increase equates to a 4 L/s pump requirement increase which increases the head across the pump by a negligible amount (Calculated as 0.004 m). This equates to expected 0.84 kW increase in the required pump power. This changes the required pump power from 108.3 kW to 109.1 kW. This puts the pump in the same 5 kW bracket for pump costing of 110 kW as the pre-development augmentation, so the development has no significant cost increase on the required ultimate augmentation of SPS STP.

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2.6. Waste Water Treatment Plant

The total load in EP on the Victoria Point wastewater treatment plant (WWTP) for each future planning horizon pre and post-development is shown in Table 6. The total EP is calculated from the Victoria Point sewer model which was updated using Redland City Council's latest Infrastructure Demand Model (IDM) used in the 2022-23 Masterplan.

Table 6: Loading increase on the WWTP due to the proposed development.

Planning Horizon	2021	2026	2031	2036	2041	2046	2051	ULT
Pre-Dev EP	34,763	36,261	37,916	39,238	40,118	40,593	40,910	47,911
Post-Dev EP	-	36,588	38,243	39,565	40,444	40,920	41,237	48,238
% Diff	N/A	0.90%	0.86%	0.83%	0.81%	0.80%	0.80%	0.68%

The additional loadings proposed by the development will increase the total loading on the Victoria Point WWTP by the total estimated 327 EP. The increase of 327 EP is above RCC current network planning forecasts for the Victoria Point network and WWTP. It is understood WWTP planning is being undertaken in parallel with network planning at RCC. The final size and staging of the Victoria Point WWTP upgrades has not been established, RCC is assessing multiple developments in the Victoria Point sewerage catchment to determine the size and any potential staging of the augmentation.

2.7. Site Check for Sewer Connection

The area on the site to be dedicated to the Innovation Precinct has an elevation between 34 – 41 m AHD (marked orange in Figure 12). The boundary towards the proposed connection manhole is between 20 – 24 m AHD. Figure 12 shows the location of preliminary manhole and pipe locations to check for adequate grade from the proposed development site to the connection manhole.

Figure 12: Proposed development site contours and preliminary grade check. Blue nodes and pipes used for grade check.

The sample connection was developed in RCC's Mike+ model which demonstrated there was abundant opportunity to facilitate the connection of the proposed development into the existing sewerage network. discrepancy

Figure 13 shows a long section of the concept design of gravity network from the development site to the connection manhole and the maximum water level post-development in PWWF.

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QLD 4213
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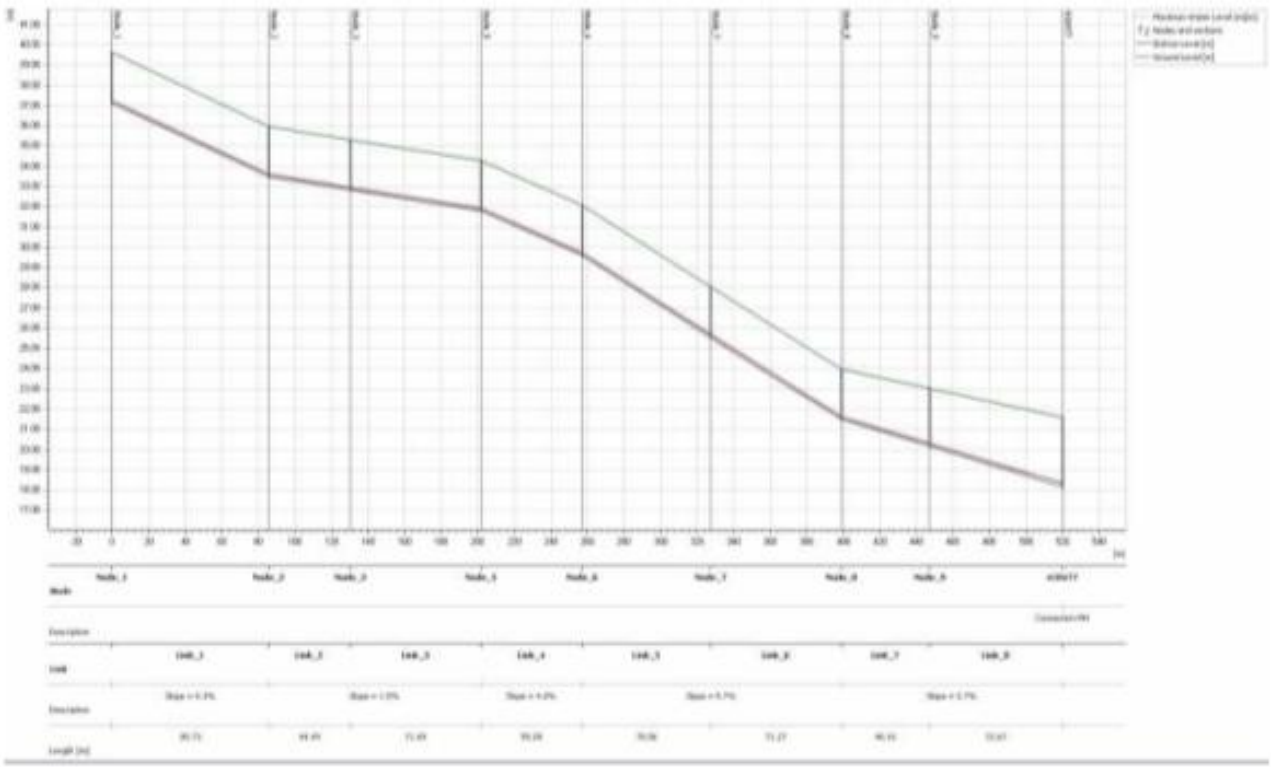

Figure 13: Long-section of concept design from development to connection manhole.

As shown in Figure 13, there is adequate fall from the proposed development site shown in orange in Figure 12. Each pipe exceeds the minimum grade of 1/180 (0.56%), and 150 mm has adequate capacity for the development as thew water level is fully contain within the pipe during PWWF.

Conclusions and Recommendations

Based on the assessment the following conclusions and recommendations can be made:

- The gravity network immediately downstream from the proposed development to SPS067 has adequate capacity as the maximum water level during PWWF in Ultimate scenario is fully contained within the pipe.
- No spills (water level within 1 m of manhole cover level) are observed post-development.
- The augmentation timing of SPS067 is affected by the additional loading from the proposed development. The proposed development increases the total loading by a total of 327 EP (Total 371 EP), causing the upstream EP to exceed the pumps capacity by 2036 instead of 2041 pre-development. This equates to a 4L/s or 5 kW increase in the capacity of SPS067 in Ultimate scenario.
- A review of available pumps from FLYGT showed the same pump would likely be selected regardless of the additional development loadings. The example pump and pre and post development duty points is show in Appendix C.
- It is recommended the developer work with RCC to ensure the proposed augmentation of pump station SPS067 is scheduled and sized to cater for future sewerage loading.

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QLD 4213
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3. Appendix A – Maximum Flood (Sewer)

Green nodes represent no flooding (water level > 1.0 m from ground level), the red nodes have been confirmed to be shallow manholes (depth < 1.0 m) so always show as flooding with the 1 m freeboard symbology, black nodes are flood level > 0 m. Here, these are only the upstream nodes of rising mains and thus always show as flooding.

No additional spills are identified because of the proposed development.

Figure 14: Pre-development max flood (m) in PWWF Ultimate scenario.

25

Figure 15: Post-development max flood (m) in PWWF Ultimate scenario.

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4. Appendix B – Pump Station Augmentation Cost Comparison (Sewer)

Given that these two pumps are so large and the increase in flow due to the proposed development so minor, the hydraulic could not reliably show a meaningful difference in the head increase used in this table to calculate the pumps power. The headloss was calculated using a Hazen-Williams headloss calculator using the rising main properties and required pump discharge. This is detailed in Table 7 and Table 8.

Table 7: Headloss calculations for SPS067 to aid in pump power calculations.

SPS067	Length (m)	Dia (m)	Material	HW - c	Q Pre-dev (l/s)	Calculated Headloss Pre-dev (m)	Q Post-dev (l/s)	Calculated Headloss Post-dev (m)
RM1	678	0.295	AC / PCV	140	146.3	8.51	148.3	8.73
RM2	638	0.2887	HDPR PE100 N16	140	138.7	8.02	140.6	8.23
				SUM	285.0	16.53	288.9	16.96

Table 8: Headloss calculations for SPS STP to aid in pump power calculations.

SPS STP	Length (m)	Dia (m)	Material	HW - c	Q Pre-dev (l/s)	Calculated Headloss Pre-dev (m)	Q Post-dev (l/s)	Calculated Headloss Post-dev (m)
RM1	25	0.5	Concrete	140	142.5	0.229	144.5	0.235
RM2	25	0.5	Concrete	140	142.5	0.229	144.5	0.235
				SUM	285.0	0.46		0.47

This total headloss was added to the head of the pre-development pump augmentations to calculate the post-development pump power and shown Table 9.

Table 9: Pump power calculations and pump augmentation costings.

SPS No.	Required Total Pump Capacity (ULT PWWF) (L/s)	Year	Q (L/s)	h (m)	Hydraulic Power (kW)	neta (efficiency factor)	Shaft Power (kW)	ROUND Nearest 5 (kW)	Pump Amount ($)	Pump Amount Difference ($)
67 (Pre-Dev)	285.0	2041	285.0	69.7	194.2	0.75	259	260	5,585,710	
67 (Post-Dev)	288.9	2036	288.9	70.1	198.1	0.75	264	265	5,667,063	$ 81,353
STP (Pre-Dev)	582.1	ULT	582.1	14.3	81.2	0.75	108	110	2,907,323	

27

SPS No.	Required Total Pump Capacity (ULT PWWF) (L/s)	Year	Q (L/s)	h (m)	Hydraulic Power (kW)	neta (efficiency factor)	Shaft Power (kW)	ROUND Nearest 5 (kW)	Pump Amount ($)	Pump Amount Difference ($)
STP (Post-Dev)	586.1	ULT	586.1	14.3	81.8	0.75	109	110	2,907,323	$ 0
SPS067 Difference			4.0		3.9		5.23		81,353	
STP Difference			4.0		0.6		0.83		0	

The pump power is calculated in Table 9 using the following equation:

- either it is the static lift from one height to an other or the total head loss component of the system - and can be calculated like

$P_{h(kW)} = q\,\rho\,g\,h / (3.6\ 10^6)$

$= q\,p / (3.6\ 10^6)$ (1)

where

$P_{h(kW)}$ = hydraulic power (kW)

q = flow (m^3/h)

ρ = density of fluid (kg/m^3)

g = acceleration of gravity (9.81 m/s^2)

h = differential head (m)

p = differential pressure (N/m^2, Pa)

Shaft Pump Power

The shaft power - the power required transferred from the motor to the shaft of the pump - depends on the efficiency of the pump and can be calculated as

$P_{s(kW)} = P_{h(kW)} / \eta$ (3)

where

$P_{s(kW)}$ = shaft power (kW)

η = pump efficiency

The costing is based on the kW brackets adopted from the latest RCC sewer master plan as detailed in

Table 10: Pump Sation rates, for new not existing pump stations.

Total Pump Station kW	Adopted Rate ($)
5	$278,266
10	$470,947
15	$640,683
20	$797,047
25	$944,166
30	$1,084,313
35	$1,218,917
40	$1,348,950

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Total Pump Station kW	Adopted Rate ($)
45	$1,475,114
50	$1,597,939
55	$1,717,835
60	$1,835,130
65	$1,950,090
70	$2,062,937
75	$2,173,858
80	$2,283,009
85	$2,390,529
90	$2,496,535
95	$2,601,130
100	$2,704,407
105	$2,806,447
110	$2,907,323
115	$3,007,100
120	$3,105,837
125	$3,203,587
130	$3,300,399
135	$3,396,319
140	$3,491,386
145	$3,585,639
150	$3,679,112
155	$3,771,837
160	$3,863,844
165	$3,955,161
170	$4,045,814
175	$4,135,826
180	$4,225,221
185	$4,314,020
190	$4,402,243
195	$4,489,907
200	$4,577,032
205	$4,663,634
210	$4,749,728
215	$4,835,330
220	$4,920,454
225	$5,005,113
230	$5,089,319
235	$5,173,086
240	$5,256,425
245	$5,339,346
250	$5,421,861

Total Pump Station kW	Adopted Rate ($)
255	$5,503,979
260	$5,585,710
265	$5,667,063
270	$5,748,047
275	$5,828,671
280	$5,908,943
285	$5,988,869
290	$6,068,459
295	$6,147,719
300	$6,226,656
400	$7,746,327
500	$9,176,144
600	$10,538,207
700	$11,846,390
800	$13,110,152
900	$14,336,317
1000	$15,530,023
1100	$16,695,264
1200	$17,835,225
1300	$18,952,500
1400	$20,049,239
1500	$21,127,251
1600	$22,188,073
1700	$23,233,032
1800	$24,263,278
1900	$25,279,819
2000	$26,283,547
4200	$46,161,578

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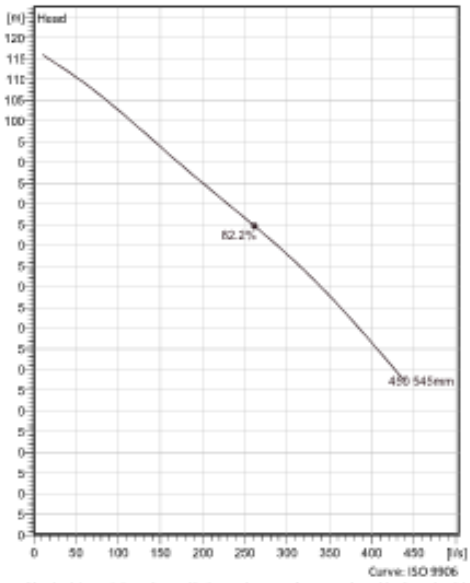
5. Appendix C – Example Pump Station Selection SPS067

CP 3240/835 3~ 450

Shrouded single or multi-channel impeller pumps with large throughlets and single volute pump casing for liquids containing solids and fibres. Cast iron design with double sealing technology. Some models available as stainless steel versions.

Technical specification

Curves according to: Water, pure Water, pure [100%],4 °C,1000 kg/m³,1.569 mm²/s



Curve: ISO 9906

Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Configuration

Motor number
C0835.000 54-52-4AA-W 290KW

Installation type
- Semi permanent, Wet

Impeller diameter
545 mm

Discharge diameter
200 mm

Pump information

Impeller diameter
45 mm

Discharge diameter
200 mm

Inlet diameter
250 mm

Maximum operating speed
1490 rpm

Number of blades
2

Throughlet diameter
78 mm

Max. fluid temperature
40 °C

Material

Impeller
Grey cast iron

Project	Xylect-20078755	**Created by**			
Block	0	**Created on**	10/22/2024	**Last update**	10/22/2024

CP 3240/835 3~ 450

Technical specification

Motor - General

otor number	hases	ated speed	ated power
C0835.000 54-52-4AA-W 290KW	~	490 rpm	90 kW
Approval	**umber of poles**	**ated current**	**tator variant**
No		25 A	
Frequency	**ated voltage**	**nsulation class**	**ype of Duty**
50 Hz	80 V		1
ersion code			
000			

Motor - Technical

Power factor - 1/1 Load	Motor efficiency - 1/1 Load	Total moment of inertia	Starts per hour max.
0.89	4.6 %	.55 kg m²	15
Power factor - 3/4 Load	**Motor efficiency - 3/4 Load**	**Starting current, direct starting**	
0.86	4.5 %	230 A	
Power factor - 1/2 Load	**Motor efficiency - 1/2 Load**	**Starting current, star-delta**	
0.78	3.5 %	410 A	

Project	Xylect-20078755	**Created by**			
Block	0	**Created on**	10/22/2024	**Last update**	10/22/2024

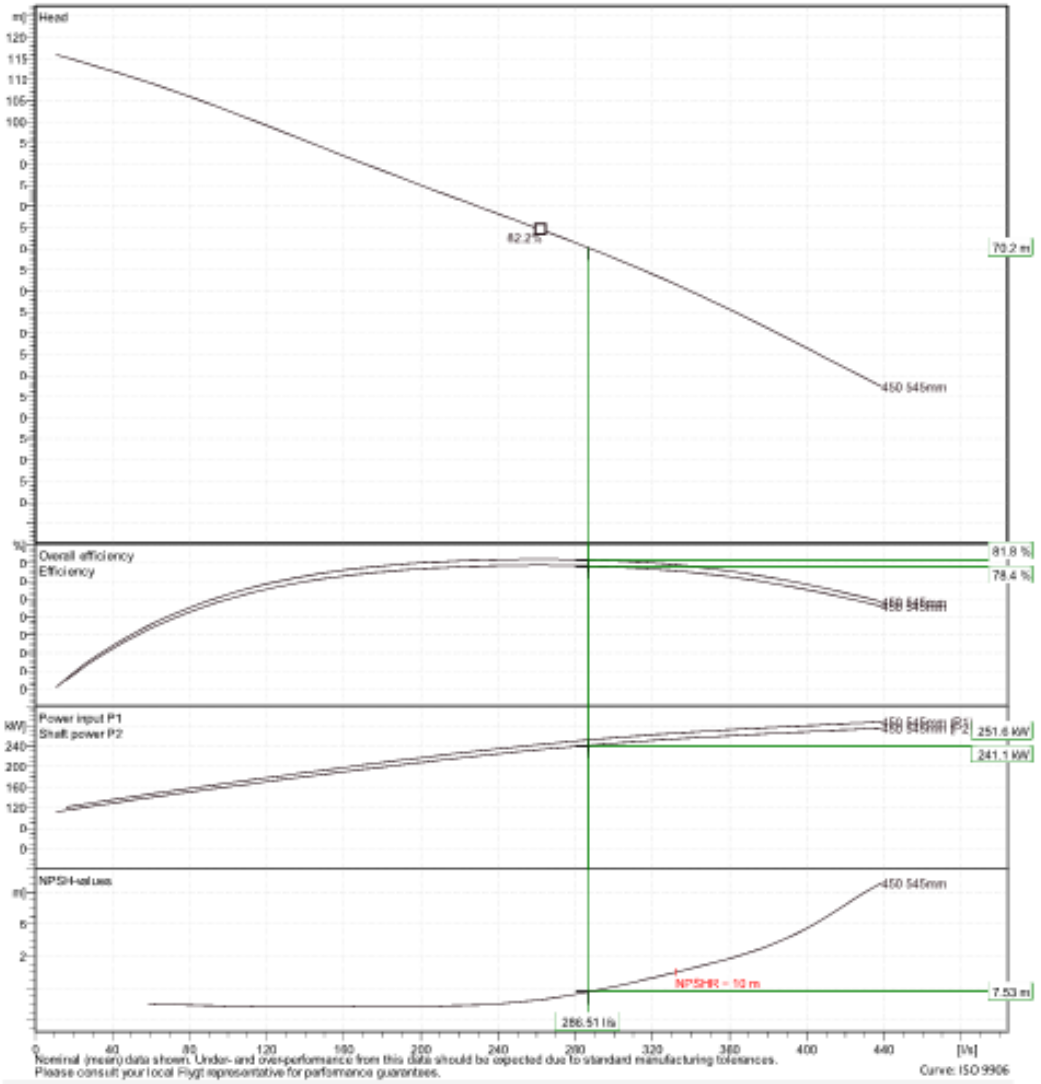
CP 3240/835 3~ 450

Performance curve

Duty point

Flow	Head
287 l/s	70.2 m

Curves according to: Water, pure Water, pure [100%], 4 °C, 1000 kg/m³, 1.569 mm²/s



Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances.
Please consult your local Flygt representative for performance guarantees.

Curve: ISO 9906

Xylect-20078755

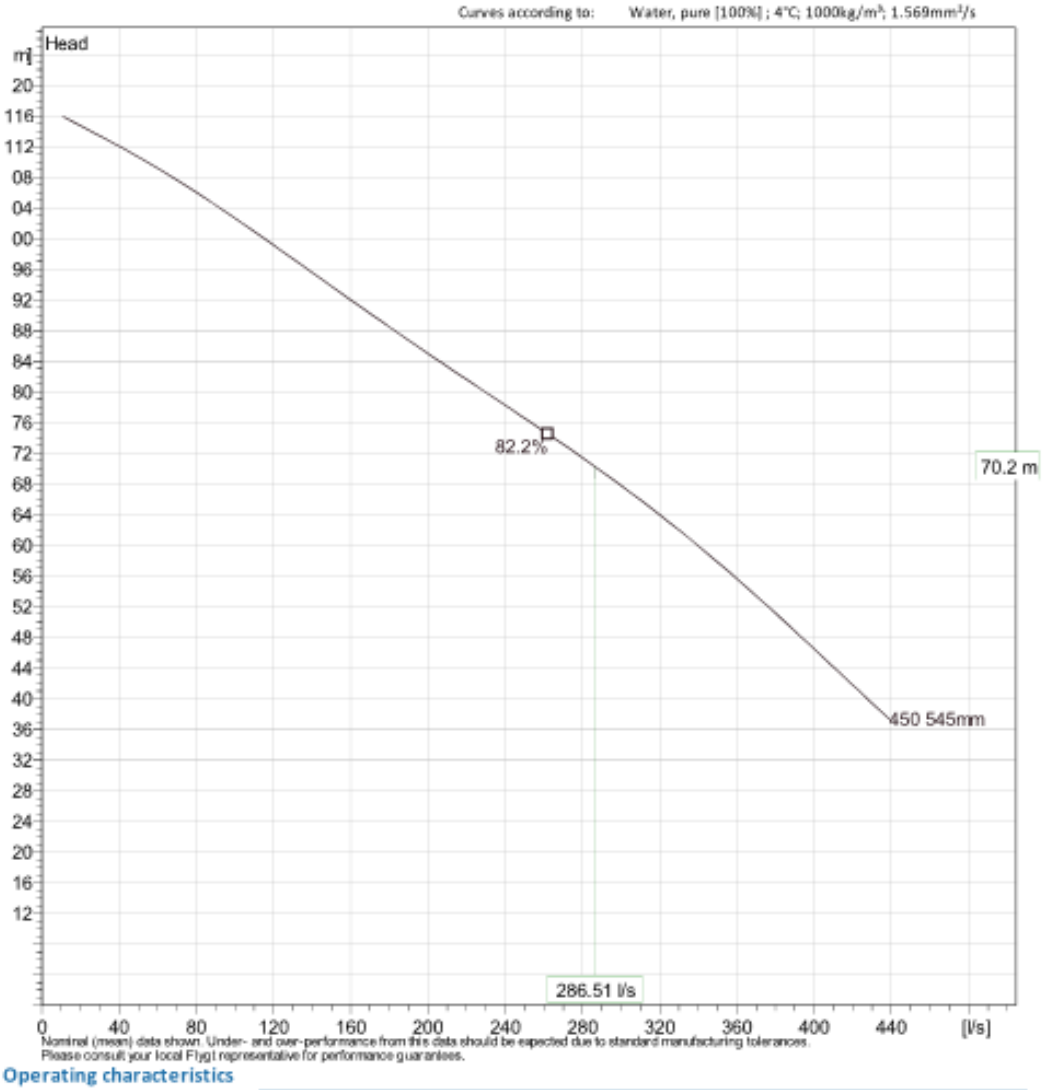
0 **Created on** **10/22/2024** **Last update** 10/22/2024

CP 3240/835 3~ 450

Duty Analysis

FLYGT a xylem brand

Curves according to: Water, pure [100%] ; 4°C; 1000kg/m³; 1.569mm²/s



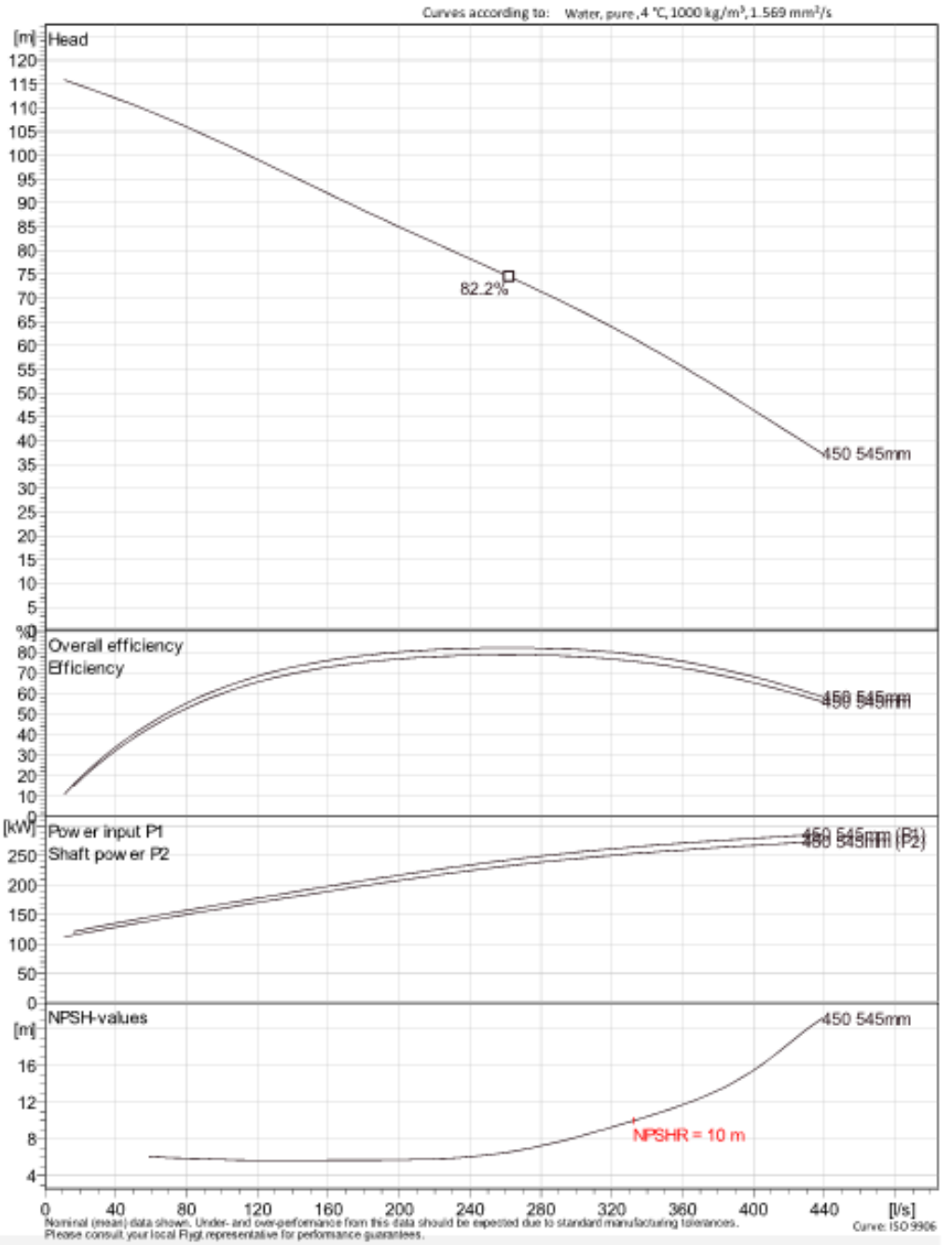
Operating characteristics

Pumps / Systems	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr.eff.	Spec. Energy	NPSHre
	l/s	m	kW	l/s	m	kW		kWh/m³	m
Post Developmen	288	69.9	242	288	69.9	242	81.8 %	0.243	7.62
RCC Existing	287	70.2	241	287	70.2	241	81.8 %	0.244	7.53

Project		**Created by**			
Block	Xylect-20078755	**Created on**	10/22/2024	**Last update**	10/22/2024

CP 3240/835 3~ 450

VFD Curve



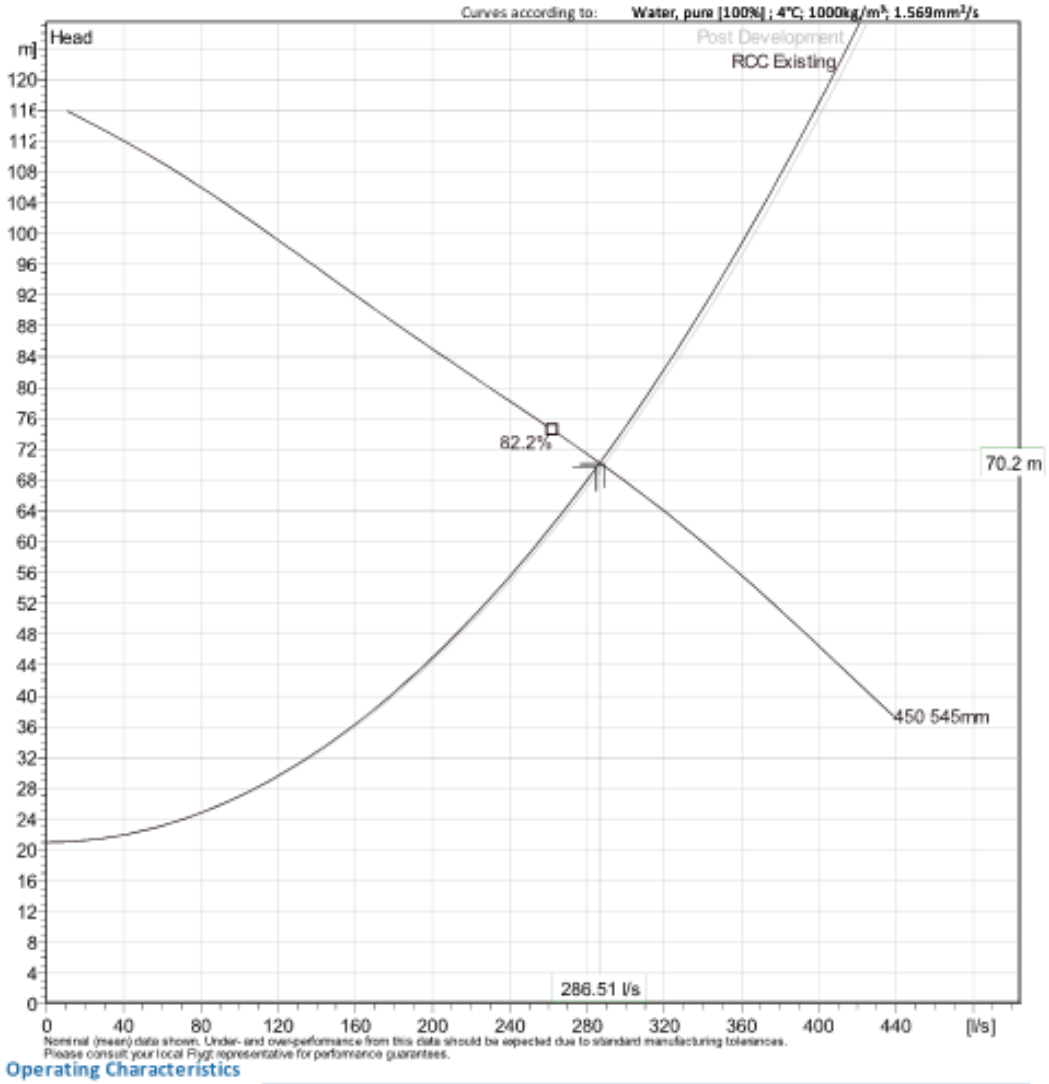
Project	Xylect-20078755	**Created by**			
Block	0	**Created on**	10/22/2024	**Last update**	10/22/2024

CP 3240/835 3~ 450

VFD Analysis

FLYGT a xylem brand

Curves according to: Water, pure [100%] ; 4°C; 1000kg/m³; 1.569mm²/s



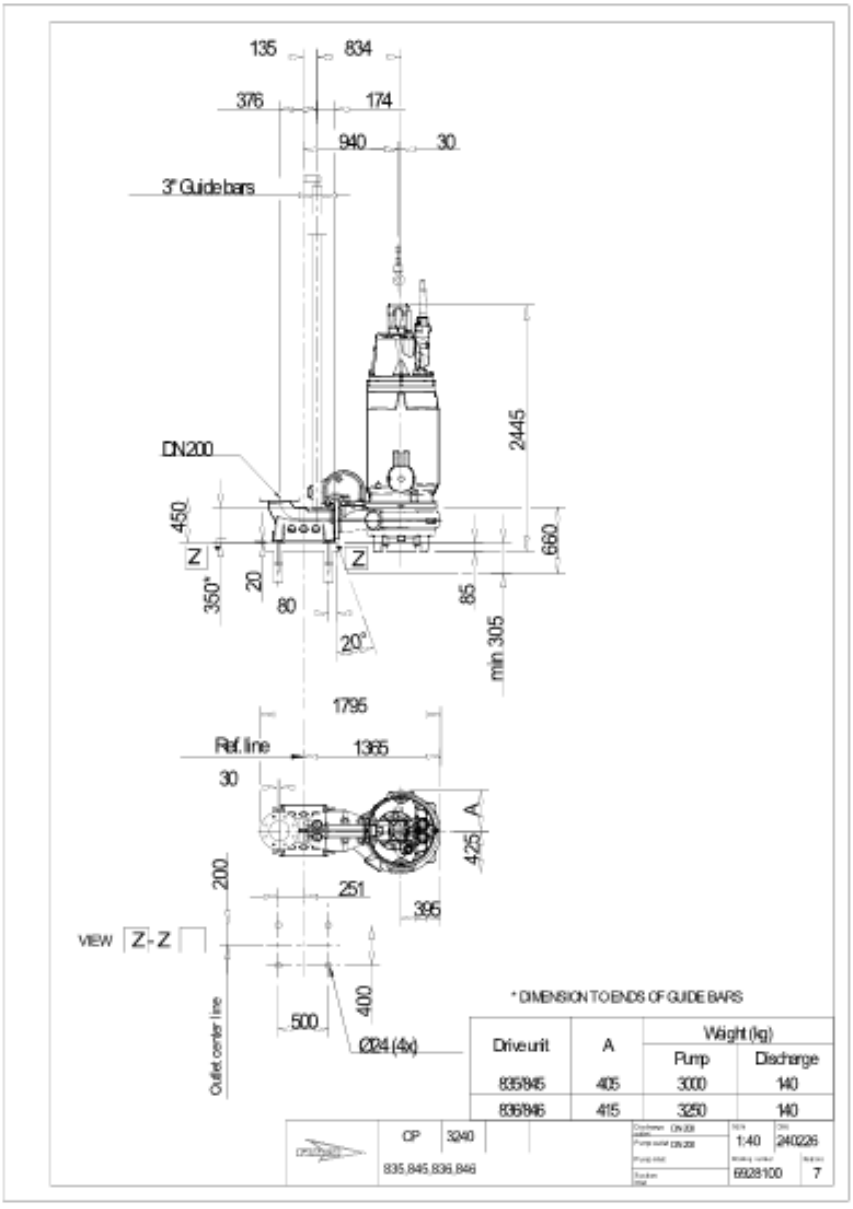
Operating Characteristics

Pumps / Systems	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hydr.eff.	Specific energy	NPSHre
		l/s	m	kW	l/s	m	kW		kWh/m³	m
Post Developm	50 Hz	288	69.9	242	288	69.9	242	81.8 %	0.243	7.62
RCC Existing	50 Hz	287	70.2	241	287	70.2	241	81.8 %	0.244	7.53

Project	Xylect-20078755	Created by			
Block	0	Created on	10/22/2024	Last update	10/22/2024

CP 3240/835 3~ 450

Dimensional drawing



Project	Xylect-20078755		**Created by**		
Block	0		**Created on**	10/22/2024 **Last update**	10/22/2024

RECOMMENDED DEVELOPMENT CONDITIONS

ASSESSMENT MANAGER CONDITIONS		TIMING
1.	Comply with all conditions of this approval, at no cost to Council, at the timing periods specified in the right-hand column. Where the column indicates that the condition is an ongoing condition, that condition must be complied with for the life of the development.	Ongoing.
Approved plans and documents		
2.	Undertake the development in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval and any notations by Council on the plans.	Prior to the use commencing and ongoing.

Plan/document title	Reference number	Prepared by	Plan/doc. date
Plan of Development - Inspire Technology and Innovation Centre (amended in red by Council)	Rev M	Saunders Havill Group Pty Ltd	3 November 2025
Precinct Plan (amended in red by Council)	11598 P 05 Rev A – CON 01	Saunders Havill Group Pty Ltd	28/10/2025
Concept Plan (amended in red by Council)	11598 P 04 Rev F	Saunders Havill Group Pty Ltd	28/10/2025
Landscaping Concept Plan – Landscape Masterplan (amended in red by Council)	11598 Issue E 05	Saunders Havill Group Pty Ltd	October 2025
Landscaping Concept Plan – Cleveland-Redland Bay Road Interface (amended in red by Council)	11598 Issue E 06	Saunders Havill Group Pty Ltd	October 2025
Landscaping Concept Plan – Sections (amended in red by Council)	11598 Issue E 07	Saunders Havill Group Pty Ltd	October 2025
Landscaping Concept Plan – Indicative Plant Palette (amended in red by Council)	11598 Issue E 08	Saunders Havill Group Pty Ltd	October 2025
Noise Impact Assessment	Rev No. J	JT Environmental Engineering Consultants	03/03/2025
Sewer Modelling Assessment Report	-	Digital Water Solutions Pty Ltd	09/10/2024
Stormwater Management Plan	Revision 2	HCE Engineers	30/10/2025

General Arrangement Plan	Revision F 23238-SK13	HCE Engineers	30/10/2025
North Basin Layout Plan and Details	Revision D 23238-SK16	HCE Engineers	30/10/2025
North Basin Sections	Revision C 23238-SK17	HCE Engineers	30/10/2025
Stormwater Quantity Developed Catchment Plan	Revision C 23238-SK20	HCE Engineers	30/10/2025
Stormwater Quality Catchment Plan	Revision C 23238-SK21	HCE Engineers	30/10/2025
BAAM Ecological Consultants Technical Memorandum	0345-009T1	BAAM Ecological Consultants	9/05/2024
Revised Design and Tree Plots – Figure 2	0345-009	BAAM Ecological Consultants	23/10/2025
BAAM Bioretention Basin Design – Figure 2	0345-009	BAAM Ecological Consultants	7/05/2024
Technical Memorandum-Ecology Advice for proposed minor change	0345-009	BAAM Ecological Consultants	30/10/2025

Table 1: Approved plans and documents

3.	Apply the variations approved in the plan of development listed in table 1, to development that is subject of the variation approval or development that is the natural and ordinary consequence of development that is the subject of the variation approval.	Ongoing.
Infrastructure Agreement		
4.	Comply with the infrastructure agreement relating to the subject site.	Ongoing.
Updated Plans		
5.	Submit to Council, have approved, an updated precinct plan (11598 P 05) revision A and concept plan (11598 P 04) Revision H which incorporates the following amendments and rename it Precinct plan (11598 P 06) revision B and Concept Plan (11598 P 05) Revision I: a) Update the ITIC1 innovation precinct and ITIC2 greenspace designations to be consistent amendments made in red by Council including: (i) minimum 66m wide provision within the ITIC2 precinct for greenspace along the western site boundary. b) Bushfire management zone along the southern ITIC1	Prior to the lodgement of a development application on the subject land.

	innovation precinct with a minimum of 24m. c) Private open space adopting a width of 15m along the interface with Cleveland Redland Bay Road.	
6.	Comply with the approved Concept Plan (11598 P 04) Revision I.	Ongoing.
7.	Comply with the approved Precinct Plan (11598 P 06) Revision B.	Ongoing.
Community Title Scheme		
8.	Register a Community Title Scheme (CTS) including Community Management Statement (CMS) for the development in accordance with the *Planning Act*, the *Body Corporate and Community Management Act* and its regulations. The CMS must include the following: a) The physical components to be controlled under a CMS include stormwater management, roads, private infrastructure such as water, fire services and sewer. *Note: details of the arrangements must be disclosed to future land owners prior to purchasing the title.*	As part of future development applications and ongoing.
Utilities		
9.	Connect the development to private external reticulated sewer, external reticulated water and underground electricity supply.	Prior to the sealing of the first lot, or commencement of any use, on the subject land, whichever occurs first.
10.	Design and construct private reticulated water main and sewer main generally in accordance with sewer and water reticulation plan (as amended in red by Council), showing the proposed works are in accordance with the following: a) Avoid interference with mapped koala core habitat within koala priority area. b) Alignment of sewer and water must minimise clearing of	As part of future development applications.

	native vegetation through design and by using tunnel boring or similar as agreed by Council.	
Roadworks		
11.	Submit to Council for approval, engineering plans and details showing the following road and frontage works (not including works outside the jurisdiction of the Redland City Council) are in accordance with the City Plan Planning Scheme Policy 2 – Infrastructure Works, and which includes the following: a) Road construction including concrete kerb and channel and road pavement. b) Footpath earthworks, topsoiling and turfing of all disturbed footpath areas. c) Reinstatement of concrete kerb and channel where required. d) Entry treatment/access to the site. e) A minimum 22m wide concrete industrial collector street avoiding cul-de-sac road by adopting a looped road layout. f) A minimum 1.5m wide concrete pedestrian footpath at an alignment of 1.5m from the property boundary along both side of the road.	As part of the lodgement of the first development application.
12.	Direct vehicle access to Giles Road is only for the purpose of emergency response vehicle egress.	Ongoing.
13.	Maintain all roads within the premises as privately owned, publicly accessible, assets managed by a body corporate.	Ongoing.
Stormwater		
14.	Manage stormwater discharge from the site in accordance with the City Plan Planning Scheme Policy 2- Infrastructure Works, so as to not cause actionable nuisance to adjoining properties	Ongoing.
15.	Submit to Council for approval, a revised stormwater management plan and report, that is generally in accordance with the approved conceptual stormwater management plan and which addresses both quality and quantity in accordance with the City Plan Planning Scheme Policy 2 – Infrastructure Works, and which includes the following:	As part of the lodgement of the first development application affecting each catchment.

	a) An amended services layout plan which is based on the layout of the approved master plan and precinct plan. b) Maximises rehabilitation vegetation within the greenspace corridor by adopting a design which minimises impact to existing native vegetation. c) Design of allotment drainage. d) Detailed drawings of the proposed stormwater quality treatment systems and any associated works. The drawings must include longitudinal and cross sections as well as details of treatment media and any associated vegetation. e) An electronic copy of the MUSIC model. f) A maintenance plan including estimates of asset and maintenance costs.	
16.	Maintain stormwater infrastructure as detailed in the approved precinct plan (as amended in red by Council) within the premises as privately owned, publicly accessible, assets managed by a body corporate.	Ongoing.
Earthworks		
17.	Submit to Council for approval a concept earthworks plan including retaining wall required for the development to create internal roads and construction of pad levels general in accordance with the stormwater management plan, the City Plan; Planning Scheme Policy 2 – Infrastructure Works, and the following: a) Design and construct all retaining structures in accordance with the Australian Standard for Earth-retaining structures (AS4678-2002), in particular the minimum 60 year design life requirements. b) Design retaining wall structures greater than 1.5m in height to be stepped/terraced to incorporate landscaping between the two walls or single tier with landscaping and adequate access for inspection and maintenance purposes. c) Retaining walls must be retained within private ownership managed by the future Body Corporate.	As part of future development applications.
Environmental		
18.	Submit to Council, for approval, an Ecological Assessment Report, being in accordance with City Plan – Planning Scheme Policy 1 Environmental Significance and Planning Scheme Policy 2 – Infrastructure Works, which addresses the impact to native	As part of the lodgement of the first development application.

	vegetation mapped within the ITIC 1 (Innovation Precinct). The report must be prepared by a qualified environmental professional (i.e., ecologist), and include the following:
	
	• A response to demonstrate compliance with the performance outcomes PO2-PO18 of the environmental significance overlay code.
	• A survey accurate tree plot and tree schedule that illustrates:
	  ○ The post-development status of trees (retain, remove or subject to arborist inspection)
	  ○ Species and genus of trees and any habitat features present;
	  ○ Height, spread and diameter breast height (DBH), and associated Tree Protection Zones (TPZ) as specified by AS 4970-2025; and
	  ○ Location of TPZ's and tree protection fencing alignment in relation to all proposed works. This must be shown overlayed on the survey accurate Site Plan and in accordance with Australian Standard AS4970-2025: Protection of Trees on Development Sites.	

19.	Submit to Council, for approval, a detailed rehabilitation and planting plan for the northern bioretention basin identified on the approved landscaping concept plan – landscape masterplan). This is to include a planting schedule, proposed rehabilitation and environmental management actions, and a maintenance program. This plan must be prepared in accordance with the approved BAAM ecological consultants technical memorandum, as listed in Table 1, and incorporate the following: a) The bioretention basin must be constructed in accordance with the Bioretention Technical Guidelines (Water by Design 2014), aiming to emulate the 'bushland planting style' which will be densely planted with native vegetation community comprising groundcovers, shrubs and trees occurring locally, replicating the structure and composition of existing local bushland and riparian vegetation communities. b) A dedicated vegetated swale drain must be constructed at the outflow location to provide suitable habitat for the Tusked Frog (*Adelotus brevis*) and other frog species is available on site, in general accordance with the approved BAAM bioretention basin design (Figure 2 of the BAAM ecological consultants technical memorandum).	As part of the lodgement of the first development application.

20.	Submit to Council, for approval, a detailed rehabilitation plan for the Greenspace Precinct (ITIC2) identified on the approved precinct plan, in accordance with the Plan of Development (POD) and the Redland City Plan 2018 (v10) Planning Scheme Policy 1 – Environmental Significance, unless varied by the POD, that delineates and includes details of the following: (a) The areas of vegetation that will be retained. (b) The areas of vegetation that will be cleared including areas associated with private water and sewer connections. (c) The plans for rehabilitation and vegetation (weed removal and planting). Revegetation of the Greenspace Precinct ITIC2 must include: (d) A minimum 49-metre-wide habitat core which is densely vegetated to support and enhance wildlife movement and habitat. The species selection and structure are to target the relevant Regional Ecosystem per the Redlands Coast Regional Ecosystem Database. (e) Stormwater infrastructure must be located to the outer edge of the corridor and avoid or minimise loss of existing native vegetation. (f) Any essential infrastructure generally must be located at the outer edge of the ITIC2 greenspace precinct. (g) Retaining wall structures and steep batters are avoided in the ITIC2 Greenspace Precinct. (h) Rehabilitation is to include the re-planting of koala trees at a rate of 1:3 (1 tree removed: 3 trees planted) as prescribed in the approved ecological report listed in table 1 and species derived from Regional Ecosystems listed below. *Note: The rehabilitation is to include a minimum of 830 koala habitat trees planted within Greenspace Precinct. Species selection is to consist of locally endemic flora species, and vegetation assemblages derived from Regional Ecosystems (RE) 12.11.23, 12.11.5j (27) and/or 12.3.6. Recommended species can be reviewed in the Redland Coast Regional Ecosystems Description Database.* *https://www.redland.qld.gov.au/info/20255/plants_and_trees_in_redlands_coast/632/ecosystem_mapping*	As part of the lodgement of the first development application.
21.	Prior to the commencement of clearing native vegetation at the site, submit to Council for approval a vegetation clearing and	As part of the lodgement of the

	fauna management plan prepared by a suitably qualified environmental professional in accordance with Planning Scheme Policy 1 – Environmental Significance and the following: a) Fauna friendly/exclusion fencing alignment. b) Sequential clearing requirements in accordance with part 3, section 11 requirements of the Nature Conservation (Koala) Conservation Plan 2017; c) Salvaging of hollows from trees approved for removal and a dedicated stockpiling location for salvaged hollows. d) A survey accurate tree plot and tree schedule that illustrates the post-development status of trees (retain, remove or subject to arborist inspection), including areas associated with private water and sewer connections; e) Species of trees and any habitat features present; Height, spread and diameter breast height (DBH), and associated Tree Protection Zones (TPZ) as specified by AS 4970-2025; and f) Location of TPZ's and tree protection fencing alignment in relation to all proposed works. This must be shown overlayed on the survey accurate Site Plan and in accordance with Australian Standard AS4970-2025: Protection of Trees on Development Sites. g) Fauna management and spotter/catcher requirements. Where earthworks or infrastructure are proposed to encroach more than 10% within calculated TPZ's, the Vegetation Clearing and Fauna Management Plan is to be supported by an Arborist Impact Assessment (AIA), prepared by a minimum AQF level-5 arborist.	first development application.
22.	Submit to Council for approval a dam dewatering management plan that is in general accordance with section 4.4.2 of Waterbody Management Guideline Module 4: Maintenance & Operations Version 1 (Water By Design, 2013). The plan is to be supported by an Arborist Impact Assessment (AIA) prepared by a minimum AQF level-5 arborist and include recommendations by a suitably qualified aquatic ecologist (or similar).	As part of the application for operational works for the relevant stage.
23.	Clearing of native vegetation within the premises is not permitted.	Prior to the approval of the Vegetation Clearing and Fauna Management Plan.

Greenspace precinct		
24.	Dedicate land as detailed in the approved precinct plan (amended in red by Council) to Council in fee simple (on trust) for conservation purposes.	As part of the relevant development application and ongoing.
25.	Avoid the use of retaining wall structures within the greenspace precinct (ITIC2) which is being dedicated to Council and to maximise fauna movement north-south through the site.	Ongoing.
Landscaping		
26.	Provide a minimum 15m wide landscaping buffer in accordance with the approved landscaping concept plan amended in red by Council and retain in private ownership managed by a future body corporate.	As part of the relevant development application and ongoing.
Bushfire		
27.	Submit to Council, a site-specific bushfire hazard assessment and management plan, prepared by a suitably qualified and experienced professional, including radiant heat flux modelling, in accordance with the methodologies set out in the Bushfire Resilient Communities technical reference guide, and includes the following: (a) A response to the relevant performance outcomes of the Bushfire Hazard Overlay code to demonstrate compliance with the code. (b) A site-specific bushfire hazard assessment and radiant heat flux modelling to demonstrate future building envelopes and hazardous vegetation will not be susceptible to a radiant heat flux exposure greater than 29 kW/m^2. (c) Mitigation strategies (the bushfire management plan) to achieve development outcomes of the *Redland City Plan 2018 Bushfire Hazard Overlay Code*. (d) The designated rehabilitation areas and associated future growth potential must be considered and assessed within the Bushfire Hazard Assessment. (e) The site-specific bushfire hazard assessment, radiant heat flux modelling and mitigation strategies must be in	Prior to the lodgement of a development application on the subject land.

	accordance with guidance in Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience – Bushfire' as amended and adopting best-practise. (f) In accordance with guidance from the Queensland Fire Department, the application of 1,200 K flame temperature should be utilised within the modelling calculations for setback distances.	
28.	Submit a certification report from the engaged qualified Bushfire Consultant to demonstrate that the detailed design landscaping and rehabilitation plans does not conflict with the requirements of the Bushfire Hazard Assessment and Management Plan. This is to ensure that the designated low fuel transition buffer does not exacerbate bushfire risk to adjacent development.	As part of the lodgement of the first development application.
Noise		
29.	Submit and receive approval for a revised noise impact assessment, prepared by a suitably qualified and experienced professional stipulated within Planning Scheme Policy 6-Environmental Emissions, which is to be submitted and approved by Council and the following: (a) Provide revised modelling considering the approved precinct plan within table 1: approved plans. (b) Details of noise barriers, fences and vegetated buffers and/or relevant noise attenuation measures required to avoid adversely impacting noise sensitive land uses and areas.	As part of the lodgement of the first development application.
ADDITIONAL APPROVALS		
The preliminary approval does not authorise development to occur. Further development permits are necessary to allow development to be carried out, being any development listed as assessable development in the tables of assessment in the Plan of Development, or a local categorising instrument (where not varied by the plan of development).		
REFERRAL AGENCY CONDITIONS		

- **Queensland Department of State Development, Infrastructure and Planning**
  Refer to the attached correspondence from the State Assessment Referral Agency dated 29 July 2024 (SARA reference 2308-36203 SRA).

ASSESSMENT MANAGER ADVICE

- **Coastal processes and sea level rise**
  Please be aware that development approvals issued by Redland City Council are based upon current lawful planning provisions which do not necessarily respond immediately to new and developing information on coastal processes and sea level rise. Independent advice about this issue should be sought.

- **Services installation**
  It is recommended that where the installation of services and infrastructure will impact on the location of existing vegetation identified for retention, an experienced and qualified arborist that is a member of the Australian Arborist Association or equivalent association, be commissioned to provide impact reports and on site supervision for these works.

- **Fire ants**
  Areas within Redland City have been identified as having an infestation of the Red Imported Fire Ant (RIFA). Biosecurity Queensland should be notified on 13 25 23 of proposed development(s) occurring in the Fire Ant Restricted Area before earthworks commence. It should be noted that works involving movements of soil associated with earthworks may be subject to movement controls and failure to obtain necessary approvals from Biosecurity Queensland is an offence. It is a legal obligation to report any sighting or suspicion of fire ants within 24 hours to Biosecurity Queensland on 13 25 23. The Fire Ant Restricted Area as well as general information can be viewed on the Department of Agriculture and Fisheries (DAF) website www.daf.qld.gov.au/fireants

- **Cultural heritage**
  The *Aboriginal Cultural Heritage Act 2003* requires anyone who carries out a land use activity to exercise a duty of care. Further information on cultural heritage duty of care is available on the Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) website:

  https://www.datsip.qld.gov.au/resources/datsima/people-communities/cultural-heritage/cultural-heritage-duty-care.pdf

  The DATSIP has established a register and database of recorded cultural heritage matters, which is also available on the Department's website:

https://www.datsip.qld.gov.au/people-communities/aboriginal-torres-strait-islander-cultural-heritage/cultural-heritage-search-request

Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC) is the registered cultural heritage body in the Redland City local government area. It is recommended you consult with QYAC in relation to aboriginal and cultural heritage matters prior to the commencement of works on site. QYAC can be contacted on 07 3415 2816 or admin@QYAC.net.au

Should any aboriginal, archaeological or historic sites, items or places be identified, located or exposed during construction or operation of the development, the *Aboriginal and Cultural Heritage Act 2003* requires all activities to cease. Please contact DATSIP for further information.

- **Fauna protection**
  It is recommended an accurate inspection of all potential wildlife habitats be undertaken prior to removal of any vegetation on site. Wildlife habitat includes trees (canopies and lower trunk) whether living or dead, other living vegetation, piles of discarded vegetation, boulders, disturbed ground surfaces, etc. It is recommended that you seek advice from the Queensland Parks and Wildlife Service if evidence of wildlife is found.

- ***Environment Protection and Biodiversity Conservation Act***
  Under the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act* (the EPBC Act), a person must not take an action that is likely to have a significant impact on a matter of national environmental significance without Commonwealth approval. Please be aware that the listing of the Koala as **endangered** under this Act may affect your proposal. Penalties for taking such an action without approval are significant. If you think your proposal may have a significant impact on a matter of national environmental significance, or if you are unsure, please contact Environment Australia on 1800 803 772. Further information is available from Environment Australia's website at www.ea.gov.au/epbc

  Please note that Commonwealth approval under the EPBC Act is independent of, and will not affect, your application to Council.

Inspire Redlands Pty Ltd

Redland City Council

Infrastructure Agreement

Financial contribution towards the extra cost of trunk sewer treatment infrastructure and bring forward cost of trunk sewer transport infrastructure

Table of Contents

1	**Commencement**		**4**
	1.1	Commencement	4
	1.2	Condition precedent	4
2	**Infrastructure agreement**		**4**
	2.1	Purpose of this document	4
	2.2	Application of Planning Act	5
	2.3	Agreement to bind successors in title	5
	2.4	No fetter	5
	2.5	Relationship with other documents	5
	2.6	Adverse change to planning instrument	5
	2.7	No conversion, offsets or refunds	5
	2.8	No appeal rights	6
3	**Parties' obligations**		**6**
	3.1	Developer's obligations	6
	3.2	Landowner's obligations	6
	3.3	Council's obligations	6
4	**Infrastructure Contributions to comply**		**6**
	4.1	Purpose or use of an Infrastructure Contribution	6
	4.2	Infrastructure Contributions to comply generally	7
	4.3	Land Contributions to comply	7
	4.4	Requirement to obtain Approvals	7
5	**On maintenance, bonding procedures, and off maintenance**		**7**
	5.1	Application of this clause	7
	5.2	Usual requirements apply	7
	5.3	Notice of documents, etc	7
6	**Proposed transfers of land**		**8**
	6.1	Restriction on the right to sell the Land	8
	6.2	No unreasonable refusal of consent	8
	6.3	Landowner to remain liable	8
	6.4	Not to apply to Developed Lots	8
7	**Default**		**8**
	7.1	Giving of Default Notice	8
	7.2	Failure to comply with Default Notice	9
	7.3	Effect of Default Notice	9
8	**Disputes**		**9**
	8.1	Application of clause	9
	8.2	Dispute Notices	9
	8.3	Disputes about Default Notices	9
	8.4	Initial meeting or correspondence	10
	8.5	Mediation	10
	8.6	Determination	10
	8.7	Court proceedings for unresolved dispute	11
	8.8	Costs of dispute	11

9	**Notices**	**11**
9.1	Giving Notices	11
9.2	Receiving Notices	12
9.3	Other matters	12
10	**GST**	**13**
10.1	Construction	13
10.2	Consideration GST exclusive	13
10.3	Payment of GST	13
10.4	Timing of GST payment	13
10.5	Tax invoice	13
10.6	Adjustment event	13
10.7	Reimbursements	14
10.8	No merger	14
11	**General**	**14**
11.1	Payment of costs	14
11.2	Automatic increase provision	14
11.3	Duty	15
11.4	Amendment of this document	15
11.5	Waiver and exercise of rights	16
11.6	Rights cumulative	16
11.7	Consents	16
11.8	Further steps	16
11.9	Governing law and jurisdiction	16
11.10	Assignment	16
11.11	Liability	16
11.12	Entire understanding	16
11.13	Relationship of parties	17
11.14	Force Majeure	17
11.15	Effect of execution	17
11.16	Electronic counterparts	17
11.17	Deed	17
12	**Definitions and construction**	**18**
12.1	Definitions	18
12.2	Construction	21
Schedule 1		**23**
Schedule 2		**24**
Schedule 3		**26**
Schedule 4		**27**

MCU23/0085

Date 13th August 2025

Parties

Inspire Redlands Pty Ltd ACN 676 858 923 (**Developer**)

Redland City Council (**Council**)

Background

A The Developer intends to carry out the Development on the Land.

B The Development will require the provision of Infrastructure Contributions for trunk sewer infrastructure.

C The Developer is the Owner of the Land.

D The Developer and the Council have agreed to execute this document to record their agreement about the Infrastructure Contributions

E The parties have agreed that the Developer will pay an extra cost and bring forward cost for trunk sewer infrastructure, as identified in the ICS, in addition to the applicable Levied Charges for subsequent Development Permits authorising the carrying out of assessable development on the Land.

Agreed terms

1 Commencement

1.1 Commencement

This document commences on the date when the last party executes this document, which is to be recorded by that party in **Item 1**, and at the top of this page, at the time of execution.

1.2 Condition precedent

Despite **clause 1.1**, the Developer is not required to comply with the Developer Obligations unless and until such time as the Development Approval has taken effect.

2 Infrastructure agreement

2.1 Purpose of this document

The purpose of this document is to establish the parties' rights and obligations in relation to the Infrastructure Contributions identified in the ICS.

2.2 Application of Planning Act

This document is an infrastructure agreement under the Planning Act and, in particular, under section 158 of the Planning Act.

2.3 Agreement to bind successors in title

(a) The Developer Obligations will not be affected by a change in the ownership of the whole or any part of the Land, other than in accordance with **clause 6.1**.

(b) It is the intention of the parties that the Developer Obligations will attach to the Land and be binding on the Owner and the Owner's successors in title, in accordance with section 155 of the Planning Act.

2.4 No fetter

Nothing in this document fetters the rights, powers, authorities, functions or discretions of Council, any other Approval Authority or any other government agency under the provisions of any Law.

2.5 Relationship with other documents

(a) Nothing in this document precludes Council, any other Approval Authority, or any other government agency, from requiring Infrastructure Contributions under a condition of, or levying infrastructure charges in relation to, a development approval in relation to the Development.

(b) To avoid any doubt, any future development for the Development will be subject to Levied Charges in accordance with the applicable Infrastructure Charging Instrument as in force from time to time, and nothing in this document affects the calculation of such Levied Charges.

2.6 Adverse change to planning instrument

The Developer Obligations do not depend on development entitlements that may be affected by a change to a planning instrument.

2.7 No conversion, offsets or refunds

(a) The Developer is not entitled to any offset against, or refund of, infrastructure charges levied for the Development in relation to the Infrastructure Contributions in the ICS.

(b) If the Developer receives any offset or refund contrary to **clause 2.7(a)**, the Developer must, within 20 Business Days of receiving the offset or refund, pay to Council the amount of the offset or refund.

(c) The Developer and the Landowner must not make a Claim or take any other action under this document, the Planning Act or any other document or law for the following:

(i) an offset (or similar) against a Financial Contribution required by Council for the Infrastructure Contributions in the ICS;

(ii) a refund (or similar) for the Infrastructure Contributions in the ICS;

(iii) an application to convert any Infrastructure Contribution in the ICS or similar infrastructure the subject of a condition of the Development Approval from non-trunk infrastructure to trunk infrastructure;

(iv) any other offset against, or refund of, infrastructure charges levied for the Development, whether in relation to the Infrastructure Contributions in the ICS or otherwise.

(d) The Developer and the Landowner acknowledge and agree that Council can plead this document as a bar in the event the Developer or the Landowner makes a Claim or takes an action for a matter stated in this **clause 2.7**.

(e) This **clause 2.7** does not merge on termination of this document and continues in effect until Council gives the other parties a Notice waiving the benefit of this **clause 2.7**.

2.8 No appeal rights

The Developer must not make any Claim in relation to a condition of a development approval requiring compliance with this document.

3 Parties' obligations

3.1 Developer's obligations

The Developer must:

(a) provide the Infrastructure Contributions in accordance with the ICS; and

(b) otherwise comply with the terms of this document.

3.2 Landowner's obligations

(a) The Landowner must comply with the Developer Obligations (including all obligations in **clause 3.1**).

(b) The obligations of the Landowner under this document continue and remain in force and effect, even if the Landowner ceases to be the Owner of the Land, unless and until **clause 6.1** is satisfied.

(c) For the avoidance of doubt, if there are multiple Landowners, a reference in this document to the Landowner is a reference to each Landowner jointly and severally.

3.3 Council's obligations

Council must:

(a) accept any Infrastructure Contribution provided to it in accordance with this document; and

(b) otherwise comply with the terms of this document.

4 Infrastructure Contributions to comply

4.1 Purpose or use of an Infrastructure Contribution

The Developer covenants and agrees that to the extent an Infrastructure Contribution attributable to the Developer is stated or implied as having a particular purpose or use, Council:

(a) has not made a representation or warranty that an Infrastructure Contribution is to be used for a particular purpose or use;

(b) has no obligation to use an Infrastructure Contribution for a particular purpose or use;

(c) does not warrant or represent that any specified or unspecified work is to be provided; and

(d) has no obligation to monitor or follow-up the use of an Infrastructure Contribution.

4.2 Infrastructure Contributions to comply generally

An Infrastructure Contribution must be provided in accordance with the ICS.

4.3 Land Contributions to comply

A Land Contribution must be provided in a state fit for the purpose the Land Contribution is being given and to the satisfaction of the Council.

4.4 Requirement to obtain Approvals

The Developer must, in providing any Infrastructure Contribution:

(a) apply for and obtain from an Approval Authority any and all necessary Approvals to provide the Infrastructure Contribution; and

(b) subject to section 157 of the Planning Act, to the extent that it applies, comply with, and provide the Infrastructure Contribution in accordance with, any and all relevant Approvals.

5 On maintenance, bonding procedures, and off maintenance

5.1 Application of this clause

This clause applies in relation to any Works Contribution provided by the Developer under this document.

5.2 Usual requirements apply

(a) The Developer must comply with all usual requirements that Council would ordinarily impose in relation to the maintenance (including on maintenance, bonding procedures and requirements, and off maintenance) of the Works Contribution, in accordance with Council's policies and practices as in force from time to time, as if the Works Contribution had been required under a condition of a development approval, rather than under this document.

(b) For the avoidance of doubt, the requirements that the Developer is required to comply with under **clause 5.2(a)** include any requirements relating to the provision of a maintenance bond.

5.3 Notice of documents, etc

(a) At least 20 Business Days prior to the date that the Developer provides a Works Contribution, the Developer must give a Notice to Council

requesting confirmation of the requirements that will apply to the Works Contribution under **clause 5.2**.

(b) Within 10 Business Days of receiving any Notice under **clause 5.3(a)**, Council must provide a Notice to the Developer that attaches, contains links or references to, or otherwise identifies the requirements that will apply to the Works Contribution under **clause 5.2**.

6 Proposed transfers of land

6.1 Restriction on the right to sell the Land

Subject to **clause 6.4**, the Landowner must not sell or transfer the whole or any part of the Land unless the Landowner has first obtained:

(a) written consent from the proposed transferee that this agreement will continue to attach to the relevant part of the Land; and

(b) written consent from Council, which the Council may require be in the form of a deed of novation, to the proposed transferee becoming subject to the Landowner's obligations under **clause 3.2**.

6.2 No unreasonable refusal of consent

Council must not unreasonably refuse to provide consent, or enter into a deed of novation, sought under **clause 6.1**.

6.3 Landowner to remain liable

In the event of the whole or any part of the Land being sold or transferred other than in accordance with **clause 6.1**, the Landowner (immediately prior to the sale or transfer) must perform and fulfil each of its obligations under this document that have not been performed and fulfilled immediately or at such other time as Council stipulates in a Notice, even if the time otherwise appointed for the performance and fulfilment of that obligation has not yet then arrived.

6.4 Not to apply to Developed Lots

This **clause 6** does not apply to the sale or transfer of a Developed Lot.

7 Default

7.1 Giving of Default Notice

If a party considers that another party has defaulted in respect of an obligation under this document, that party (ie the non-defaulting party) may give a Default Notice to the party considered to be in default:

(a) specifying the default in reasonable detail; and

(b) requesting the defaulting party to rectify the default within a reasonable period specified in the Default Notice.

7.2 Failure to comply with Default Notice

If a party receives a Default Notice and fails to comply with the Default Notice, the party that gave the Default Notice may (without limiting any of its rights) recover from the defaulting party as a liquidated debt the money it expends in giving the Default Notice.

7.3 Effect of Default Notice

(a) If a Dispute Notice is given in relation to a default the subject of a Default Notice, there is no obligation to comply with the Default Notice until the dispute is resolved under **clause 8** or finally decided by a Court.

(b) The giving of a Default Notice does not stay the effect of this document.

(c) A default by one party does not prevent the other party from continuing to exercise any rights, or comply with any obligations, under this document.

(d) A default in relation to a joint obligation of the parties does not prevent any party from continuing to exercise any rights or comply with any obligations under this document.

8 Disputes

8.1 Application of clause

This **clause 8.1** applies to any dispute between the parties to this document (including in relation to prior conduct of the parties or the interpretation of this document) but does not:

(a) apply to a Claim to recover a debt; or

(b) prevent a party from applying to a court for urgent injunctive or declaratory relief because of an emergency that endangers:

(i) a person's life or health;

(ii) a building's structural safety; or

(iii) the operation or safety of infrastructure.

8.2 Dispute Notices

If a dispute arises between the parties to this document, a party may give a Dispute Notice to the other party:

(a) identifying the dispute and the facts relied on in relation to the dispute; and

(b) stating either that:

(i) the parties are required to meet within 5 Business Days; or

(ii) a written response to the Dispute Notice is required from the other party within 10 Business Days.

8.3 Disputes about Default Notices

If a dispute relates to the issuing of a Default Notice, the resolution of the dispute must determine:

(a) whether the Default Notice must be complied with; and

(b) if the Default Notice must be complied with, the timeframe in which the Default Notice must be complied with.

8.4 Initial meeting or correspondence

(a) If a Dispute Notice is given under **clause 8.2(b)(i)**, the parties must meet, within 5 Business Days after the date the Dispute Notice is given, at Cleveland, Queensland at least once to discuss the dispute including the possible resolution of the dispute.

(b) If a Dispute Notice is given under **clause 8.2(b)(ii)**, the recipient party must respond in writing to the Dispute Notice within 10 Business Days.

8.5 Mediation

(a) If a meeting or written response under **clause 8.4** fails to resolve the dispute, the parties may agree to refer the dispute to mediation.

(b) If the parties agree to refer the dispute to mediation, then the parties must either:

(i) appoint a mediator by agreement; or

(ii) if the parties are unable, within 5 Business Days of agreeing to refer the dispute to mediation, agree on a mediator to be appointed, request the President of the Queensland Law Society to make the appointment.

8.6 Determination

(a) If any dispute notified under **clause 8.2** is not resolved within the following periods, the parties may agree, within 5 Business Days after that time period ends, to refer the dispute to an independent, appropriately qualified referee for determination:

(i) if the dispute was not referred to mediation – within 15 Business Days after the date the Dispute Notice was given; or

(ii) if the dispute was referred to mediation – within 30 Business Days after the date the Dispute Notice was given.

(b) If the parties agree to refer the dispute to a referee for determination, then the parties must either:

(i) appoint a referee by agreement; or

(ii) if the parties are unable, within 5 Business Days of agreeing to refer the dispute to a referee for determination, agree on a referee to be appointed, request the President of the Queensland Law Society to make the appointment.

(c) In determining the dispute, the referee must:

(i) determine the process for resolution of the dispute, including whether a conference must be held and whether written submissions must be provided;

(ii) act fairly and impartially, and conduct the process in accordance with the requirements of procedural fairness;

(iii) act as an expert, not an arbitrator;

(iv) act expeditiously to attempt to achieve a resolution for the parties in the most cost effective manner; and

(v) make the determination according to law and to reflect the intent of this document.

(d) The determination of a referee must:

(i) be in writing;

(ii) be given to both parties; and

(iii) contain a full statement of the reasons for the determination.

(e) If a referee has not provided a determination within 50 Business Days of the date the Dispute Notice was given, a party may do either or both of the following:

(i) apply to a court for resolution of the dispute; or

(ii) notify the other party that it will not be bound by the referee's determination.

(f) If a party does not, within 20 Business Days after a referee's determination is given, apply to a court to overturn or vary the determination, the determination will be final and binding on the parties.

8.7 Court proceedings for unresolved dispute

A party must not apply to a court for the resolution of a dispute unless the dispute is not resolved within:

(a) if the dispute is not referred to mediation – 15 Business Days after the date the Dispute Notice is given;

(b) if the dispute is referred to mediation, and is not referred to determination – 30 Business Days after the date the Dispute Notice is given; or

(c) if the dispute is referred to determination – in accordance with **clause 8.6(e)**.

8.8 Costs of dispute

(a) The parties must share equally all costs of any mediator or referee appointed in relation to a dispute.

(b) However, each party must pay its own costs in connection with resolving the dispute.

9 Notices

9.1 Giving Notices

(a) A Notice relating to this document:

(i) may be given by an Authorised Person of, or the solicitors for, the relevant party;

(ii) must be in writing; and

(iii) must, subject to **clause 9.1(b)**, be:

(A) left at the address of the addressee in Australia stated in **Schedule 1**;

(B) sent by prepaid ordinary post to the address of the addressee in Australia stated in **Schedule 1**;

(C) sent by facsimile to the facsimile number of the addressee in Australia stated in **Schedule 1**; or

(D) sent by email to the email address of the addressee stated in **Schedule 1**.

(b) A party may change their address, facsimile number or email address for the giving of Notices at any time by giving Notice to the other parties.

9.2 Receiving Notices

(a) Unless a later time is specified in it, a Notice takes effect from the earlier of the time that it is actually received, or that it is taken to be received.

(b) A Notice delivered by hand is taken to be received:

(i) if delivered by 5.00pm on a Business Day – on that Business Day; or

(ii) otherwise – on the next Business Day.

(c) A Notice delivered by post is taken to be received on the day when, in the ordinary course of post, it would have been delivered.

(d) A Notice sent by facsimile is taken to be received:

(i) if the transmission report produced by the machine from which the facsimile was sent indicates that the facsimile was sent in its entirety to the recipient's facsimile number by 5.00pm on a Business Day – on that Business Day; or

(ii) otherwise – on the next Business Day.

(e) A Notice sent by email is taken to be received:

(i) if the email is sent by 5.00pm on a Business Day, and the sender does not receive a computer-generated report indicating that the email was not successfully sent – on that Business Day; or

(ii) otherwise – on the next Business Day.

9.3 Other matters

(a) This **clause 9** is in addition to the methods of service of notices set out in the *Property Law Act 1974* (Qld).

(b) A party who receives a Notice is not obliged to enquire as to the authority of a person who purports to sign the Notice on behalf of a party.

10 GST

10.1 Construction

In this **clause 10**:

(a) unless there is a contrary indication, words and expressions which are not defined in this document but which have a defined meaning in the GST Law have the same meaning as in the GST Law;

(b) **GST Law** has the same meaning given to that expression in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth) or, if that Act does not exist for any reason, means any Act imposing or relating to the imposition or administration of a goods and services tax in Australia and any regulation made under that Act; and

(c) references to GST payable and input tax credit entitlements include:

(i) notional GST payable by, and notional input tax credit entitlements of the Commonwealth, a State or a Territory (including a government, government body, authority, agency or instrumentality of the Commonwealth, a State or a Territory); and

(ii) GST payable by, and the input tax credit entitlements of, the representative member of a GST group of which the entity is a member.

10.2 Consideration GST exclusive

Unless otherwise expressly stated, all consideration, whether monetary or non-monetary, payable or to be provided under or in connection with this document is exclusive of GST (**GST-exclusive consideration**).

10.3 Payment of GST

If GST is payable on any supply made by:

(a) a party; or

(b) an entity that is taken under the GST Law to make the supply by reason of the capacity in which a party acts,

(**Supplier**) under or in connection with this document, the recipient of the supply, or the party providing the consideration for the supply, must pay to the Supplier an amount equal to the GST payable on the supply.

10.4 Timing of GST payment

The amount referred to in **clause 10.3** must be paid in addition to and at the same time and in the same manner (without any set-off or deduction) that the GST-exclusive consideration for the supply is payable or to be provided.

10.5 Tax invoice

The Supplier must deliver a tax invoice or an adjustment note to the recipient of a taxable supply before the Supplier is entitled to payment of an amount under **clause 10.3**.

10.6 Adjustment event

If an adjustment event arises in respect of a supply made by a Supplier under or in connection with this document, any amount that is payable under

clause 10.3 will be calculated or recalculated to reflect the adjustment event and a payment will be made by the recipient to the Supplier or by the Supplier to the recipient as the case requires.

10.7 Reimbursements

(a) Where a party is required under or in connection with this document to pay for, reimburse or contribute to any expense, loss, liability or outgoing suffered or incurred by another party or indemnify another party in relation to such an expense, loss, liability or outgoing (**Reimbursable Expense**), the amount required to be paid, reimbursed or contributed by the first party will be reduced by the amount of any input tax credits to which the other party is entitled in respect of the Reimbursable Expense.

(b) This **clause 10.7** does not limit the application of **clause 10.3**, if appropriate, to the Reimbursable Expense as reduced in accordance with **clause 10.7(a)**.

10.8 No merger

This **clause 10** does not merge on the completion, rescission or other termination of this document or on the transfer of any property supplied under this document.

11 General

11.1 Payment of costs

Each party must pay its own legal and other costs and expenses of negotiating, preparing, executing and performing its obligations under this document.

11.2 Automatic increase provision

(a) This **clause 11.2** applies to any Financial Contribution payable, or Security to be provided, under this document.

(b) Any amounts to which this **clause 11.2** applies are to be indexed annually, and calculated as soon as possible after the PPI for March in the relevant year is published. The indexed amount is to take effect as at 1 July in each calendar year following the calculation, on and from 1 July 2025. Each indexed amount is to be calculated as follows:

$$IA = A \times (100\% + AR)$$

(c) For the purposes of the formula in **clause 11.2(b)**:

(i) **IA** = the indexed amount;

(ii) **A** = the amount to be indexed;

(iii) **AR** = the annual rate of the 3 year rolling average of the PPI (calculated from: the March which occurred three (3) years prior to the March which occurs in the current financial year) (expressed as a percentage to four (4) decimal places), calculated as follows:

$$AR = (1 + X)^{1/n} - 1$$

(d) For the purposes of the formula in **clause 11.2(c)(iii)**:

(i) **n** = 3 years; and

(ii) **X** = [(the index number published by the PPI for the March which occurs in the current financial year) minus (the index number published by the PPI Index for the March which occurred three (3) years prior to the March which occurs in the current financial year (the ***Earlier Index Number***))] divided by the Earlier Index Number.

By way of worked example, if AR is to be calculated on 1 July 2020 and:

(a) the index number published by the PPI for March 2020 is 105.3; and

(b) the Earlier Index Number (being the index number published by the Road and Bridge Construction Index for March 2017) is 100.4

then:

X	=	*[(105.3 – 100.4)/100.4] = 0.0488*
AR	=	*(1 + 0.0488) 1/3 – 1*
AR	=	*1.6011%*

(e) Despite **clauses 11.2(b) to 11.2(e)(d)**, if the IA is less than A (ie the amount to be indexed), the relevant amount will not change.

(f) Council must give the parties Notice of indexed amounts calculated under **clauses 11.2(b) to 11.2(e)(d)** within 5 Business Days after carrying out the calculation.

(g) The Developer must give the Council a replacement or further Security, or a further Financial Contribution, as applicable, so that the Council has received a total Security or Financial Contribution, as applicable, equal to the indexed amount no later than 20 Business Days after receipt of a Notice under **clause 11.2(f)**.

(h) A party cannot give a Dispute Notice in respect of this **clause 11.2**, other than about a calculation error.

11.3 Duty

All duty and registration fees payable on this document, or on any instruments of transfer, agreements or other documents referred to in or contemplated by this document, must be paid by the Developer.

11.4 Amendment of this document

(a) The parties may at any time agree to vary the terms of this document except this clause.

(b) No modification, variation or amendment of this document is of any force or effect unless it:

(i) is in the form of a deed executed by the parties; and

(ii) complies with the requirements of the Planning Act.

11.5 Waiver and exercise of rights

A single or partial exercise or waiver by a party of a right relating to this document does not prevent any other exercise of that right or the exercise of any other right.

11.6 Rights cumulative

Except as expressly stated otherwise in this document, the rights of a party under this document are cumulative and are in addition to any other rights of that party.

11.7 Consents

Except as expressly stated otherwise in this document, a party may conditionally or unconditionally give or withhold any consent to be given under this document and is not obliged to give its reasons for doing so.

11.8 Further steps

Each party must promptly do whatever any other party reasonably requires of it to give effect to this document and to perform its obligations under it.

11.9 Governing law and jurisdiction

(a) This document is governed by and is to be construed in accordance with the laws applicable in Queensland.

(b) Each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts exercising jurisdiction in Queensland and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to any proceedings being brought in those courts.

11.10 Assignment

(a) A party must not assign or deal with any right under this document without the prior written consent of the other parties.

(b) Any purported dealing in breach of this clause is of no effect.

11.11 Liability

An obligation of two or more persons binds them separately and together.

11.12 Entire understanding

(a) This document contains the entire understanding between the parties as to the subject matter of this document.

(b) All previous negotiations, understandings, representations, warranties, memoranda or commitments concerning the subject matter of this document are merged in and superseded by this document and are of no effect. No party is liable to any other party in respect of those matters.

(c) No oral explanation or information provided by any party to another:

(i) affects the meaning or interpretation of this document; or

(ii) constitutes any collateral agreement, warranty or understanding between any of the parties.

11.13 Relationship of parties

This document is not intended to create a partnership, joint venture or agency relationship between the parties.

11.14 Force Majeure

(a) If a party is unable, by reason of any event of Force Majeure, to carry out its obligations under this document (other than obligation to pay any monetary amount), that party must give a Notice to the other parties advising of the event of Force Majeure under as soon as reasonably practicable after the event of Force Majeure.

(b) A Notice under **clause 11.14(a)** must:

(i) specify the obligations that the party is unable to perform;

(ii) fully describe the event of Force Majeure;

(iii) include an estimate of the time during which the event of Force Majeure will continue; and

(iv) specify the measures proposed to be adopted to remedy or abate the event of Force Majeure.

(c) If a party gives a Notice advising of an event of Force Majeure, that party's obligations that cannot be performed will be suspended during the period for which the event of Force Majeure or its effect extends, provided the party has taken all reasonable steps to remove the Force Majeure or ameliorate its effects.

(d) If an obligation is suspended by reason of Force Majeure under this **clause 11.14**, any obligations that are contingent on that obligation are also suspended during the period for which the event of Force Majeure or its effects extends, provided the party has taken all reasonable steps to remove the Force Majeure or ameliorate its effects.

11.15 Effect of execution

This document is not binding on any party unless it has been duly executed by each person named as a party to this document.

11.16 Electronic counterparts

(a) This document may be signed in any number of counterparts and all counterparts, taken together, constitute one instrument. A party may execute this document by signing any counterpart. Counterparts of this document may be delivered electronically, including by email.

(b) For the purposes of section 127 of the *Corporations Act 2001* (Cth), by signing this document, any officer of a company authorises any other officer to produce a copy of this document bearing their signature for the purpose of signing the copy to complete the document's execution.

11.17 Deed

This document is a deed. Factors which might suggest otherwise are to be disregarded.

12 Definitions and construction

12.1 Definitions

In this document these terms have the following meanings:

Term	Definition
Adopted Resolution	Redland City Council's Adopted Infrastructure Charges Resolution (No. 3.2) 2023, which took effect on and from 20 September 2023, as amended from time to time.
Approval	A consent, permit, licence, certificate, authorisation, notice or approval under a law, or that is required under or in relation to this document.
Approval Authority	An entity or body with relevant power or authority to issue an Approval.
Authorised Person	The following: (a) for the Developer – any person Notified in writing as an authorised person by the Developer; (b) for Council – Council's chief executive officer and any lawful delegate thereof.
Business Day	The meaning given to "business day" in the *Acts Interpretation Act 1954* (Qld), for Council's local government area.
Claim	An allegation, debt, cause of action, liability claim, proceeding, appeal, suit or demand of any nature at law or otherwise, whether present or future, fixed or unascertained, actual or contingent. This includes any legal proceeding in the Planning and Environment Court or Supreme Court of Queensland.
Commencement Date	The date the last party executes this document, which is to be recorded in **Item 1**.
Completion	The stage in the provision of a Works Contribution by the Developer when the Works Contribution is complete, other than for a minor omission or minor defect which: (a) is not essential; (b) does not prevent the Works Contribution from being reasonably capable of being used for its intended purpose; and (c) the rectification of which will not prejudice the convenient use of the Works Contribution.
Council	The entity described in **Item 3**.
Default Notice	A Notice given by one party to another under **clause 7.1**.

Developed Lot	A Lot that is: (a) created from the Land by the registration of a Plan of Subdivision approved by Council under section 50 of the *Land Title Act 1994* (Qld); (b) in its intended ultimate form for use in accordance with the Development Approval; (c) not intended to be the subject of a further development application for a material change of use of premises (other than for a "Dwelling house" as defined in the Planning Scheme) or for reconfiguring a lot; and (d) not intended to remain in the ownership of the Developer, or the Landowner as at the Commencement Date.
Developer	The person described in **Item 2**.
Developer Obligations	The obligations of the Developer under this document.
Development	The proposed development of the Land generally in accordance with the Development Approval.
Development Approval	The preliminary approval for a material change of use including a variation approval granted by the Council by way of a decision notice, described as being for the 'Inspire Technology & Innovation Centre', and assigned reference number MCU23/0085.
Development Permit	The part of a decision notice for a development application that authorises the carrying out of the assessable development to the extent stated in the decision notice.
Dispute Notice	A Notice given by one party to the other under **clause 8.2**.
EP	Demand expressed in equivalent persons.
Financial Contribution	The payment of a monetary amount for infrastructure.

Force Majeure	Any of the following: (a) damage by fire, explosion, earthquake, lightning, storm, war, flood, civil commotion or act of God; (b) legal proceedings (actual or threatened); (c) bad weather; (d) industrial disputes; or (e) a combination of these or any other cause, matter or thing beyond the control of the affected party.
ICS	The infrastructure contribution schedule in **Schedule 3**.
Infrastructure Charging Instrument	A law or an instrument made under a law by an Authority for the levying of an infrastructure charge.
Infrastructure Contribution	A contribution for infrastructure, including: (a) a Financial Contribution; (b) a Land Contribution; and (c) a Works Contribution.
Item	An item in **Schedule 1**.
Land	The land described in **Item 4**.
Land Area	The total area of a newly created lot by the development.
Land Contribution	The provision of land (including any interest in, or licence over, land) for infrastructure.
Landowner	The Owner of the Land as at the Commencement Date and any successors in title for the Land or any part of the Land.
Law	Any statute, regulation or subordinate legislation of the Commonwealth, the State of Queensland, or any local or other government in force in the State of Queensland, irrespective of where enacted.
Levied Charges	Infrastructure charges levied under an Infrastructure Charging Instrument.
Lot	The meaning given in the *Land Title Act 1994* (Qld).
Net Developable Hectare	The meaning given in the *Planning Regulation 2017* (Qld) for net developable area, expressed in hectares.
Notice	Any certificate, demand or notice to be given by a party under this document.
Owner	The meaning given in the Planning Act, for an owner of land.

Plan	A map or plan in **Schedule 2**.
Planning Act	The *Planning Act 2016* (Qld).
Planning Scheme	Redland City Plan – Version 12
Plan of Subdivision	The meaning given in the *Land Title Act 1994* (Qld).
PPI	The producer price index for construction 6427.0 (ABS PPI) index number 3101 – Road and Bridge Construction Index for Queensland published by the Australian Bureau of Statistics or if that index is no longer published then an index which in the Council's reasonable opinion is a similar index.
Stage	A Stage of the Development as shown on an approved staging plan associated with any future development undertaken in accordance with this Development Approval.
Works Contribution	The undertaking of works for infrastructure, including any materials or services required for that infrastructure.

12.2 Construction

Unless expressed to the contrary, in this document:

(a) words in the singular include the plural and vice versa;

(b) any gender includes the other genders;

(c) if a word or phrase is defined, its other grammatical forms have corresponding meanings;

(d) "includes" means includes without limitation;

(e) no rule of construction will apply to the disadvantage of a party because that party drafted, put forward or would benefit from any term;

(f) a reference to:

(i) a person includes a partnership, joint venture, unincorporated association, corporation, entity and a government agency;

(ii) a person includes the person's legal personal representatives, successors, assigns and persons substituted by novation;

(iii) any legislation includes subordinate legislation under it and includes that legislation and subordinate legislation as modified or replaced;

(iv) an obligation includes a warranty or representation and a reference to a failure to comply with an obligation includes a breach of warranty or representation;

(v) a right includes a benefit, remedy, discretion or power;

(vi) time is to local time in the Council's local government area;

(vii) "$" or "dollars" is a reference to Australian currency;

(viii) this or any other document includes the document as novated, varied or replaced and despite any change in the identity of the parties;

(ix) writing includes:

(A) any mode of representing or reproducing words in tangible and permanently visible form, including fax transmission; and

(B) words created or stored in any electronic medium and retrievable in perceivable form.

(x) this document includes all schedules and annexures to it;

(xi) a clause, schedule or annexure is a reference to a clause, schedule or annexure, as the case may be, of this document; and

(xii) in the ICS, an "item" is to an item in the ICS;

(g) a term that is used, but not defined in, this document will, unless the context otherwise requires, have the meaning given to it by (in the following descending order):

(i) the Planning Act; or

(ii) its ordinary meaning;

(h) if the date on or by which any act must be done under this document is not a Business Day, the act must be done on or by the next Business Day; and

(i) headings do not affect the interpretation of this document.

MCU23/0085

Schedule 1
Agreement Details

Item	Description	Details
1	Commencement Date	
	Date	13 August 2025 *[to be inserted above by the last party to execute this document]*
2	Developer	
	Name	Inspire Redlands Pty Ltd ACN 090 740 524
	Address	C/- Fox & Bell Pty Ltd, 19 Waterloo Street, Cleveland 4163
	Postal address	PO Box 649 Cleveland 4163
	Phone	(07) 3821 1244
	Email	mail@foxandbell.com.au
3	Council	
	Name	Redland City Council
	Address	Corner Bloomfield and Middle Streets Cleveland QLD 4163
	Postal address	PO Box 21 Cleveland QLD 4163
	Phone	(07) 3829 8999
	Email	bsoinfrastructurecharges@redland.qld.gov.au
4	Land	
	Address	20 Giles Road, Redland Bay, Queensland 4165
	Lot and plan description	Lot 1 on RP199206

Corrs Chambers Westgarth

Schedule 2
Plans

No.	Description
1	

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Corrs Chambers Westgarth

Plan 1

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Schedule 3
Infrastructure Contribution Schedule (ICS)

Column 1 Item	Column 2 Infrastructure Contribution	Column 3 Description of Infrastructure Contribution	Column 4 Timing of provision of Infrastructure Contribution	Column 5 Provider of Infrastructure Contribution	Column 6 Recipient of Infrastructure Contribution
1	**Financial Contributions**				
1.1	**Extra costs**				
1.1.1	Financial Contribution for the extra sewer infrastructure cost of the Development outside the priority infrastructure area identified in the Council's local government infrastructure plan	Provision of a Financial Contribution: (a) at no cost to the Council; (b) for the purpose of contributing towards the Council's costs of providing sewer infrastructure; (c) via progressive instalments for each Stage of the Development; (d) calculated: (i) at a rate of $4,546 per EP; and (ii) on a per lot basis for each Developed Lot to be created in the relevant Stage; and (iii) on the basis that each Net Developable Hectare generates demand for sewer infrastructure at a rate of 10.4 EP per Net Developable Hectare.	Unless otherwise agreed in writing between the parties, each instalment of the Financial Contribution must be paid prior to the earlier of the following, for each stage of the Development: (a) Approval of a Plan of Subdivision that creates a Developed Lot within the relevant Stage; or (b) commencement of any use within the relevant Stage.	Developer	Council
1.2	**Bring Forward Cost**				
1.2.1	Financial Contribution for the bring forward cost of trunk sewer infrastructure being the sewer pump station SP067.	Provision of a Financial Contribution: (a) at no cost to the Council; (b) for the purpose of contributing towards the Council's bring-forward cost of a sewer pump station, identified as SP067, being required sooner than planned by the Council, as a result of the Development; and (c) in an amount of $75,839.47.	Unless otherwise agreed in writing between the parties, the Financial Contribution must be paid prior to the earlier of the following: (a) Approval of a Plan of Subdivision that creates the 1st Developed Lot within the Development; or (a) commencement of any use for the Development.	Developer	Council

Schedule 4
Owner's consents

1

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Corrs Chambers Westgarth

Execution

Executed as a deed

Executed by **Inspire Redlands Pty Ltd**)	
)	
)	
.....	.....
Company Secretary/Director	Director
.....	.....
Name of Company Secretary/Director (print)	Name of Director (print)
Executed for and on behalf of the **Redland City Council** in the presence of:)	
)	
)	
.....	.....
Authorised officer	Witness
.....	.....
Name of authorised officer (print)	Name of witness (print)

14.2 COMMUNITY FACILITY UPDATE - NEW SOUTHERN MORETON BAY ISLANDS YOUTH AND COMMUNITY CENTRE

Objective Reference: **A12573956**

Authorising Officer: **Brooke Denholder, General Manager Community & Customer Services**

Responsible Officer: **Andrew Wells, Acting Group Manager Communities**

Report Author: **Larissa Godfrey, Strategic Advisor Social Planning**

Attachments: **Nil**

PURPOSE

To provide an update on the future community facility at 32-40 High Central Road, Macleay Island, with an update on the proposed design and costings.

BACKGROUND

A new Youth and Community Centre is planned for vacant land within the community precinct at 32-40 High Central Road, Macleay Island. This land is in Council ownership and is zoned Community Facilities (CF2). The Macleay Island Community Hall and Blue Care Respite Centre (Council leased facility) are co-located on this site.

Council considered this matter at its meeting of 18 December 2024 and noted that next steps included the preparation of a design, the lodgement of development and building application and approvals with construction expected to commence in 2026. The funds for the project were addressed with a $1M approved State Government Grant and $1M in Council's 2025-2026 capital budget that received favourable Council prioritisation and approval. An additional source of funding was noted in that report for site works as required, from the LGIP Land for Community Facilities reserve.

ISSUES

Tropical Cyclone Alfred made landfall on 8 March 2025 with subsequent flooding and high winds bringing down trees, power poles, transmission and mobile phone towers. The Southern Moreton Bay Island (SMBI) communities were severely impacted being without power and communications for 7-8 days and were isolated as the ferry was not operating.

As part of the cyclone recovery process, Council undertook investigations into how to make the Island Communities more resilient for future events. This includes community buildings that incorporate disaster resilience features so they are equipped to function as a coordination point and hub for recovery efforts, offering a place to charge phones, and provide a point of communication and food for emergency workers.

Recovery Objective 16 of the Redland City Council Tropical Cyclone Alfred Local Recovery Plan (Local Recovery Plan) (adopted by Council on 16 July 2025) is to "*Assess appropriateness of places of refuge and accommodation options & advocate for more resilient spaces including independent power and communications sources".* Measures of success in the Local Recovery Plan include:

- *Key island and isolated sites (Council depot, hall, community centres, supermarkets) able to operate independently without access to mainland power and communications in future disasters.*

- *Disaster resilience features applied into new and existing buildings (particularly evacuation spaces).*

After discussion with the project architects, Council's Project Delivery Group (PDG) and community feedback, it was determined that the simple structure originally envisaged would not meet the operational requirements of end users and the multiplicity of spaces needed, including for the building to operate as a place of refuge and resilience hub.

A superior design is proposed offering larger spaces and separation of user groups via a breezeway. Category 3 cyclone resilience features would be incorporated into the new design and include: reinforced concrete and steel framing to withstand high wind speeds and frames with cyclone-rated connectors, such as tie-down rods and metal brackets, to prevent roof uplift along with shutters, solar panels, battery and a generator.

In accordance with the Local Recovery Plan, the proposal to incorporate disaster resilience features combined with increased functionality to provide for multiple users of the centre such as bookable meeting and counselling rooms, youth space, and training rooms has resulted in an increase in construction and servicing costs over what was envisaged in the original 2023/2024 design. A full preliminary estimate has been prepared by Rider Levett Bucknall and reviewed by Council officers, resulting in a new total project cost estimate of $3,406,939. The current budget of $2,050,000 is therefore insufficient to complete the project.

As raised in Council's previous consideration of this matter on 18 December 2024, draw down on the reserve for the LGIP Land for Community Facilities network is therefore proposed.

Next Steps

- A development application was lodged on 20 September 2025 ($200,000 was allocated in Council's 2024/2025 adopted budget for planning and design).
- Building approval and commencement of construction in 2025/2026.
- In line with the above mentioned funding strategy there will be a request of approximately $1.5M in the 2026/2027 budget development to contribute to servicing and site works. This would be mostly allocated from the LGIP Land for Community Facilities reserve. The building is proposed to be included in the Local Resilience Action Plan and may be eligible for funding from other levels of government given the community resilience offered by the building.

STRATEGIC IMPLICATIONS

Legislative Requirements

Planning and building works will be undertaken in accordance with the *Planning Act 2016* and *Building Act 1975*.

Risk Management

The new purpose built Youth and Community Centre will result in a reduction in health and safety risk that the existing lack of adequate and safe buildings poses. The new building represents a significant opportunity to provide a resilient youth and community centre and will be aligned with Council's desire to ensure disaster resilience features are applied into the new building.

A project update was provided to the Portfolio Board on 25 August 2025. A status update was provided together with the reasoning for the increase in budget for the 2026/2027 financial year. A recommendation from the Portfolio Board was that Councillors be advised of the project status and funding implications and to seek Council resolution for the expanded scope and budget.

Subsequent this, portfolio assurance gateway reviews were held on both 3 and 17 November 2025. This gateway review activity supported a report being submitted to Council to seek endorsement for the expanded project scope and budget.

As part of normal grants procedures, if Council decides not to construct the community centre then the grant funding will need to be returned to the State.

Financial

Construction costs of the 300m² building in 2025/2026 will utilise the $1M approved Thriving Suburbs State Government Grant (to be expended by 2026/2027) and the existing $1M capital allocation. Additional expenditure will need to be addressed as part of a budget development process for 2026/2027. The exact amount will be known following completion of the final design and quotes for construction. A full preliminary estimate has been prepared by Rider Levett Bucknall and reviewed by PDG, resulting in an expected total project cost estimate of $3,406,939. In order to satisfy this gap, an amount in the order of $1,500,000 is expected to be required in 2026/2027 and is expected to be sourced from the LGIP Land for Community facility reserve.

Note: The LGIP Land for Community Facility reserve of $5,718,060 is sufficient to contribute to community facility projects on SMBI along with future projects that may be progressed such as those in Cleveland, Minjerribah, Victoria Point, Thornlands/Redland Bay.

People

The staff resourcing required to deliver the next step for these projects will be drawn from existing headcount within the Community and Customer Services Department and from Project Delivery Group within Infrastructure and Operations.

Environmental

There are no environmental constraints and the building areas are not covered by planning scheme overlays that may constrain development (e.g. flood).

Social

Social issues where relevant have been discussed in this report.

Human Rights

The proposals do not contravene the *Human Rights Act 2019*.

Alignment with Council's Policy and Plans

The proposals are aligned with Council's policies and plans.

CONSULTATION

Community consultation was held between 3 September to 8 October 2024. A brochure was distributed to residents and businesses on the SMBI and an advertisement placed in the Friendly Bay Islander. To help inform the centre's design, activities and services, a survey was available on Council's Your Say website. A Council stall was held at the Lions Community Market at 32-40 High Central Road Macleay Island on Saturday 7 September 2024, 8:00am to 12:00pm to answer queries.

Consulted	Consultation Date	Comments/Actions
Minjerribah Moorgumpin (Elders-In-Council) Aboriginal Corporation and Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC)	12 March 2025	Consulted.
Portfolio Board	25 August 2025	Update provided to the Portfolio Board. Direction sought on next steps.
Group Manager Communities; Manager Customer and Cultural Services; Service Manger Library Services; and Service Manager Strengthening Communities	4 Sep 2024, March and October 2025	Consulted.
Strategic Property Manager; Service Manager Health and Environment	4 September 2024, March October 2025	Consulted.
Group Manager City Planning and Assessment; Group Manager Environment and Regulation and Principal Strategic Planner	4 September 2024	Advice on Development Application provided.
Service Manager Infrastructure Projects, Service Manager Design and Technical Projects; Service Manager Facilities Services	4 September 2024	Consulted.
Service Manager Infrastructure Projects	4 September and 6 November 2024	Consulted. Advice provided on design and construction tender options.
Service Manager Disaster Management	4 September and 20 November 2024, March and October 2025	Use for Disaster Recovery supported.
Councillor Division 5	4 September, 21 November 2024, September 2025	Consulted.
Portfolio assurance gateway reviews	3 and 17 November 2025	Update provided and direction sought.

OPTIONS

Option One

That Council resolves as follows:

1. To endorse a nominal capital budget allocation of $1.5M in the 2026/2027 financial year for delivery of the Southern Moreton Bay Islands Youth and Community Centre with disaster resilience features, ensuring Council can progress procurement for construction and mitigate any risk of grant funding needing to be returned to the State.
2. To note that Disaster Resilience funding and other funding may be available from other levels of government and that this will be applied for as the opportunity arises.

Option Two

That Council resolves to note the report and request further information.

OFFICER'S RECOMMENDATION

That Council resolves as follows:

1. **To endorse a nominal capital budget allocation of $1.5M in the 2026/2027 financial year for delivery of the Southern Moreton Bay Islands Youth and Community Centre with disaster resilience features, ensuring Council can progress procurement for construction and mitigate any risk of grant funding needing to be returned to the State.**
2. **To note that Disaster Resilience funding and other funding may be available from other levels of government and that this will be applied for as the opportunity arises.**

14.3 ADOPTED INFRASTRUCTURE CHARGES RESOLUTION (NO.3.3) 2025

Objective Reference: **A12643313**

Authorising Officer: **Brooke Denholder, General Manager Community & Customer Services**

Responsible Officer: **David Jeanes, Group Manager City Planning & Assessment**

Report Author: **Kellie Maine, Infrastructure Charges Officer**

Attachments:
1. **Adopted Infrastructure Charges Resolution (No. 3.3) 2025** ⇩
2. **Amendments to Adopted Infrastructure Charges Resolution (3.2) 2023** ⇩

PURPOSE

To consider endorsement of an amended Adopted Infrastructure Charges Resolution (AICR) for compliance with the *Planning Act 2016* (PAct).

BACKGROUND

The current AICR (No. 3.2) (Attachment 2) was adopted at 13 September 2023 General Meeting (resolution 2023/198) taking effect from 20 September 2023 under the PAct.

The *Planning Regulation 2017* (the Regulation) supports the principal legislation by outlining the mechanics for the operation of the PAct. Similarly, the Minister's Guidelines and Rules version 3.0 (MGR) sets out processes for working out the cost of developer contributed infrastructure for an offset or refund against infrastructure charges.

The amended AICR (No. 3.3) 2025 (Attachment 1) is proposed to recognise current maximum charge rates identified in the Regulation and to clarify the parameters for working out the cost of trunk works and land contributions for an offset or refund. Administrative amendments are also proposed including changes to use categories to align with the PAct.

Proposed Amendments

Section of the AICR	Proposed amendment
Clause 1	This clause has been amended to refer to the proposed amended AICR (3.3) 2025
Clause 5 (4)	'*local government infrastructure planning instrument*' has been added to clarify what 'LGIP' refers to.
Clause 24 (2)(a)	Editor's note amended to clarify that for working out the current market value of required land using the before and after method, and where the required land is in the LGIP, the original land should be valued '*disregarding any perceived change in value caused or contributed by interim development within the Emerging Community Zone which occurs prior to the Council's approval of a structure plan pursuant to Planning Scheme Policy 5 of the planning scheme.*
Clause 24 (2)(b)	Editor's note amended to clarify that for working out the current market value of required land using the before and after method, and where the development approval under which the required land is required is not for a material change of use of premises, the remaining land is to be valued *'disregarding any perceived change in value caused or contributed by interim development within the Emerging Community Zone which occurs prior to the Council's approval of a structure plan pursuant to Planning Scheme Policy 5 of the planning scheme'.*
Clause 24 (3) (c) added	An additional clause has been added to clarify that for working out the current market value of required land, '*the land must be valued using different rates for the unconstrained (developable) component of the land and the constrained*

Section of the AICR	Proposed amendment
	(undevelopable) components of the land. More than one rate may apply to unconstrained areas of land or constrained areas of land'. Examples have also been provided to assist with implementation.
Clause 25 (2)(a)(i) Clause 25 (2)(b)(xvi)	Amended to clarify that when working out a recalculation of the establishment cost for required work, the 'market cost' includes the direct construction cost and does not include a cost associated with a margin or profit.
Clause 25 (3) (a)(i)(ii)(iii) Clause 25 (3)(b)(i)(ii)	Amended to update the monetary thresholds related to the number of quotations required when working out a recalculation of the establishment cost for required work, and when a competitive tender process is required to reflect current market conditions.
Schedule 1, Dictionary	Definition for LGIP amended to refer to 'Redland City Plan 2018 Local Government Infrastructure Plan as amended from time to time' to capture the most current LGIP in effect at the time.
Schedule 2, Adopted Charges	Rates updated to reflect current maximum charge in the Regulation. Administrative amendment to Editor's note for secondary dwellings in Table B and Table C, Agricultural ~~supply~~ supplies store updated.
Schedule 3, Applicable uses under the planning scheme	Adult store added to commercial (retail) category as standalone use and removed as an 'other use' in this use category. Educational establishment for the Flying Start for Queensland Children Program removed as no longer applicable.
Schedule 4, Applied adopted charges for particular uses	Indexation applicable for the 2025/2026 financial year applied in this table, consistent with the rates of indexation applied in Schedule 2.

ISSUES

Adopted charges

Charge amounts have been updated in the amended AICR (No. 3.3) 2025 to reflect current rates including Council's discounted rates for 'Semi-dependent' and 'Dependent retirement villages' and 'Agricultural supplies stores' in rural areas.

An additional use class and associated charge rates for an 'adult store' has been added to the commercial (retail) charge category to ensure consistency with the Regulation. An 'adult store' has been removed as an 'other use' in the commercial (retail) use category.

Cost of offsets or refunds

The MGR prescribes the parameters for working out the cost of infrastructure under the PAct and *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* (SEQ Water Act). For infrastructure works this includes:

(a) Clarity — the methodology should be clear, certain and transparent;

(b) Cost effectiveness — the methodology for pursuing an actual cost valuation should not be cost prohibitive for applicants; and

(c) Time efficiency — timeframes should be realistic and encourage the efficient resolution of actual cost valuations.

For land dedicated to Council, a market valuation must be undertaken (using the before and after method) considering the highest and best use of the land, along with site constraints. The before and after method requires the original land to be valued, and the value of the remaining land which is land that will not be transferred to Council.

The amended Editor's notes in clause 24 provide further clarity on how to calculate original land value and remaining land value in circumstances involving land in the Emerging Community Zone, noting that original land is considered to mean land before a development approval takes effect. The additional clause (c) also requires valuations to clearly distinguish between the value of constrained and unconstrained land, which may have a different land value.

The amendments to clause 24 clarify how the before and after method will be applied by Council for determining current market value of required land. It includes more rigor and certainty around the processes for determining the value of land contributions, satisfying parameter (a) of the MGR for infrastructure works.

The amendments to clause 25 provide more certainty and rigor around what is included and excluded when calculating the market cost of required work. The amended monetary thresholds for submitting one or three quotations to Council and undergoing a competitive tender process reflect increases to construction costs in recent years and are consistent with Council's 2025 Procurement and Contracts Manual. These amendments will ensure the thresholds remain reasonable, and support time efficiency and cost effectiveness. This will support parameter (a), (b) and (c) of the MGR for infrastructure works.

Applicable uses

The amendments to 'Schedule 3, Applicable uses in the Planning Scheme' aligns the uses referred to in this schedule with uses as currently referred to in the Regulation. It also removes uses that are no longer required for the purposes of calculating infrastructure charges.

STRATEGIC IMPLICATIONS

Legislative Requirements

Council is required to have an AICR to levy infrastructure charges on development. The resolution must comply with the PAct and supporting instruments.

Risk Management

Whilst Council is still able to apply the maximum adopted charges as identified in the Regulation without necessarily updating its AICR annually to list changes in charge rates, the amended AICR provides more transparency and improves the accuracy of information available to the public. The amended AICR (No. 3.3) 2025 provides more rigor in meeting the parameters of the MGR and provides more certainty around the requirements for calculating the cost of trunk infrastructure contributions.

Financial

There are no financial implications associated with this report. The adopted charge rates in the amended ACIR (No.3.3) 2025 align with the maximum adopted charge rates in the Regulation which are already being applied by Council, which Council can do so as noted above.

People

There are no human resource implications associated with this report.

Environmental

There are no environmental implications associated with this report.

Social

There are no social implications associated with this report.

Human Rights

There are no known human rights implications associated with this report.

Alignment with Council's Policy and Plans

This proposal is in line with the following Objective of the Corporate Plan.

5.4 Sustainably manage growth and quality development in the city through planning, implementation and management of the *Redland City Plan, Local Government Infrastructure Plan and Netserv Plan.*

The recommendations in this report will not require amendments to the Redland City Plan.

CONSULTATION

Consulted	Consultation Date	Comments/Actions
Legal Services – Senior Solicitor	17 November 2025	Legal Services were consulted on changes to clause 24 (2)(a)(c). The proposed amendments were supported, with only minor amendments suggested to the wording of Editor's notes in clause 24 (2)(a) and clause 24 (2)(b) which have been incorporated in Attachment 1.
Environment and Regulation Group - Strategic Property Manager	14 September 2025	The Strategic Property Manager was consulted on changes to clause 24 regarding Editor's notes, noting the statutory process in the MGR. Proposed amendments were supported and no further amendments were requested.

OPTIONS

Option One

That Council resolves as follows:

1. To endorse the amended Redland City Council Adopted Infrastructure Charges Resolution (No 3.3) of 2025 in Attachment 1.
2. That the resolution will take effect on 17 December 2025.

Option Two

That Council resolves as follows:

1. To endorse the amended Redland City Council Adopted Infrastructure Charges Resolution (No 3.3) of 2025 with different or additional changes to those outlined in this report.
2. That the resolution will take effect on 17 December 2025.

Option Three

That Council resolves to not endorse the amended Redland City Council Adopted Infrastructure Charges Resolution (No 3.3) of 2025.

OFFICER'S RECOMMENDATION

That Council resolves as follows:

1. **To endorse the amended Redland City Council Adopted Infrastructure Charges Resolution (No 3.3) of 2025 in Attachment 1.**
2. **That the resolution will take effect on 17 December 2025.**

Redland City Council

Adopted Infrastructure Charges Resolution (No. 3.3) 2025

Redland City Council

Adopted Infrastructure Charges Resolution (No. 3.3) 2025

Contents

Part 1 Introduction 1

1. Short title 1
2. Commencement 1
3. *Planning Act* 2016 1
4. Purpose 1
5. Interpretation 2

Part 2 Adopted charges 3

6. Purpose of Part 2 3
7. Adopted charges 3
8. Trunk infrastructure networks for the adopted charges 3
9. Applicable date for the adopted charges 4
10. Applicable area for the adopted charges 4
11. Applicable uses for the adopted charges 4

Part 3 Levied charges 5

12. Purpose of Part 3 5
13. Applicable development for the levied charge 5
14. Working out the levied charge 6
15. Working out the applied adopted charge 7
16. Working out the extra demand 7
17. Working out the discount for the prescribed financial contribution 9
18. Working out the automatic increase 10

Part 4 Offset and refund for trunk infrastructure 11

19. Purpose of Part 4 11
20. Working out the establishment cost 12
21. Initial calculation of the establishment cost for required work 12
22. Cost-based estimate of the establishment cost for required work 13
23. Initial calculation of the establishment cost for required land 15
24. Current market value of required land 17
25. Recalculation of the establishment cost for required work 20

26. Recalculation of the establishment cost for required land 25
27. Application of an offset and refund 29
28. Details of an offset and refund 29
29. Timing of an offset and refund 29
Part 5 Conversion applications *33*
30. Purpose of Part 5 33
31. Conversion criteria 33
32. Conversion applications 33
Part 6 Extra trunk infrastructure costs *34*
33. Purpose of Part 6 34
34. Payment of extra trunk infrastructure costs 34
Schedule 1 Dictionary *35*
Schedule 2 Adopted charges *42*
Schedule 3 Applicable uses under the planning scheme *54*
Schedule 4 Applied adopted charges for particular uses *60*
Schedule 5 Identified trunk infrastructure criteria for conversion applications *62*
Schedule 6 Planned cost for trunk infrastructure networks *70*
Schedule 7 Maximum construction on costs for work *73*

Redland City Council

Adopted Infrastructure Charges Resolution (No. 3.3) 2025

Part 1 Introduction

1. Short title

This resolution may be cited as Redland City Council Adopted Infrastructure Charges Resolution (No. 3.3) 2025 (***the resolution***).

2. Commencement

This resolution has effect on and from 17 December 2025.[1]

3. *Planning Act* 2016

(1) This resolution is a charges resolution made under the *Planning Act 2016 (**Planning Act**)* by Redland City Council as the following:

(a) the local government, for the local government trunk infrastructure networks;

(b) the SEQ service provider, for the SEQ service provider trunk infrastructure networks.

Editor's note—See Section 113 of the Planning Act.

(2) This resolution is to be read in conjunction with the following:

(a) the *Planning Regulation 2017* (***Planning Regulation***);

(b) the *IPA* planning scheme and the *SPA* planning scheme.

(3) This resolution is attached to but does not form part of the *IPA* or *SPA* planning scheme.

Editor's note—See Section 118(1) of the Planning Act.

4. Purpose

The purpose of this resolution is to state the following:

(1) the adopted charges for providing the local government trunk infrastructure networks and SEQ service provider trunk infrastructure networks for development;

(a) the charges to be levied by Redland City Council for development for the demand placed on Redland City Council trunk infrastructure networks and SEQ service provider trunk infrastructure networks;

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[1] The making of this resolution by the local government was first uploaded to the Council's website on 17 December 2025.

(b) matters relevant to the working out of an offset and refund for a trunk infrastructure contribution for Redland City Council trunk infrastructure networks and SEQ service provider trunk infrastructure networks for development;

(c) how the payment of extra trunk infrastructure costs for development is to be worked out and required.

5. Interpretation

(1) The dictionary in Schedule 1 defines words used in this resolution.

(2) A word not defined in this resolution which is defined in the *Planning Act* has the meaning given in the *Planning Act*.

(3) A word not defined in this resolution or the *Planning Act* has the meaning given to it by the edition of the Macquarie Dictionary that is current at the date this resolution takes effect, subject to Section 14A of the *Acts Interpretation Act 1954* and Section 14 of the *Statutory Instruments Act 1992*.

Editor's note—Section 14A(1) of the Acts Interpretation Act 1954, which provides that in the interpretation of a provision of an Act the interpretation that will best achieve the purpose of the Act is to be preferred to any other interpretation, applies to a statutory instrument under Section 14 of the Statutory Instruments Act 1992.

(4) The extrinsic material for the *local government infrastructure planning instrument* (LGIP) is to be used as an aid in the interpretation of this resolution where it assists in resolving any ambiguity in the operative provisions (in particular in the interpretation of Parts 4 and 5).

Part 2 Adopted charges

6. Purpose of Part 2

Part 2 states the following:

(1) the adopted infrastructure charges for providing trunk infrastructure networks for development (***adopted charge***);

(2) the ***trunk infrastructure networks***, which are the following:

(a) the trunk infrastructure for the transport, public parks and land for community facilities and stormwater infrastructure network (***local government trunk infrastructure networks***);

(b) the trunk infrastructure for the SEQ service provider's water service and wastewater service (***SEQ service provider's trunk infrastructure networks***);

(3) the date the adopted charges take effect (***applicable date***);

(4) the part of the local government area to which the adopted charges apply (***applicable area***);

(5) the uses to which the adopted charges apply (***applicable use***).

7. Adopted charges

The adopted charges are stated in Schedule 2 and Schedule 4 for the following:

(1) for the local government, for providing the local government trunk infrastructure networks;

(2) for the SEQ service provider, for providing the SEQ service provider trunk infrastructure networks.

Editor's note—See Section 113(1) of the Planning Act.

8. Trunk infrastructure networks for the adopted charges

The trunk infrastructure networks are specified in an ***infrastructure planning instrument*** which comprises the following:

(1) the *local government infrastructure planning instrument*—the (LGIP);

(2) the SEQ service provider infrastructure planning instrument—the following:

(a) the SEQ service provider's water netserv plan under the SEQ Water Act;

(b) Redland City Council's LGIP, if subsection (a) is not applicable.

Editor's note—Section 14B(1) of the Acts Interpretation Act 1954, which provides that the interpretation of a provision of an Act, consideration may be given to extrinsic material capable of assisting in the interpretation, applies to a statutory instrument under Section 14 of the Statutory Instruments Act 1992.

9. Applicable date for the adopted charges

(1) The applicable date for the adopted charges is the day this resolution has effect.

Editor's note—See Section 113(4) of the Planning Act.

(2) For the avoidance of doubt the adopted infrastructure charges for providing trunk infrastructure networks in effect immediately before the making of this resolution remain in effect immediately before the applicable date.

10. Applicable area for the adopted charges

(1) The applicable area for the adopted charges is all of the local government area.

Editor's note— See Section 114(2) of the Planning Act.

11. Applicable uses for the adopted charges

(1) The applicable uses under the *IPA* planning scheme and the *SPA* planning scheme to which the adopted charges apply are stated in Schedule 3.

(2) Redland City Council is to include a use under the *IPA* planning scheme and the *SPA* planning scheme which is included in the 'Other uses' charge category in Schedule 3, column 1 in a charge category permitted under the *Planning Regulation*, Schedule 16, based on an assessment of the use and the demand placed upon the trunk infrastructure networks.

(3) Redland City Council has indicatively included the uses under the *IPA* planning scheme and *SPA* planning scheme in Schedule 3, column 3 and column 4 which are identified as an 'Other use' in Schedule 3, column 2 in the charge category permitted under the *Planning Regulation*, Schedule16, stated in Schedule 3, column 1, subject to an assessment of the use and the demand placed upon the trunk infrastructure networks.

Editor's note—See Schedule 16 of the Planning Regulation.

Part 3 Levied charges

12. Purpose of Part 3

Part 3 states the following:

(1) the applicable development for which adopted charges may be levied by Redland City Council for development for the demand placed upon the respective trunk infrastructure network by the development (***levied charge***);

(2) the method to be applied by Redland City Council for working out the levied charge including the following:

(a) the adopted charge to be applied (***applied adopted charge***);

(b) the extra demand placed upon the respective trunk infrastructure network which will be generated by the development (***extra demand***);

(c) the discount to be applied for a financial contribution (***prescribed financial contribution***):

(i) provided for in relation to a trunk infrastructure network under a planning scheme policy of Redland City Council;

(ii) required by a condition of a previous development approval given by Redland City Council before 1 July 2011 and which has not lapsed;

(iii) which has been paid to Redland City Council or otherwise satisfied under an infrastructure agreement between the applicant for the previous development approval and Redland City Council for the provision of land, work or money for a trunk infrastructure network;

(iv) which has not been reimbursed or otherwise previously applied against another financial contribution; and

(v) where the demand placed upon the trunk infrastructure network for which the financial contribution was paid has not been taken up by an existing lawful use or previous lawful use for which the financial contribution was paid;

(3) the method to be applied by Redland City Council for working out the increase in the levied charge from the day the levied charge is levied to the day the levied charge is paid (***automatic increase***).

13. Applicable development for the levied charge

(1) A levied charge may be levied for the following development:

(a) reconfiguring a lot;

(b) material change of use of premises;

(c) carrying out of building work.

Editor's note—See Section 119 of the Planning Act and Section 52(3)(a) of the Planning Regulation.

(2) A levied charge is not to be levied for the following:

(a) development in the following:

(i) a priority development area under the *Economic Development Act 2012*;

(ii) core port land under the Transport Infrastructure Act 1994;

(iii) an airport site under the *Airports Act 1996*;

(b) work or use of premises authorised under the Mineral Resources Act 1989, the Petroleum Act 1923, the Petroleum and Gas (Production and Safety) Act 2004 or the Greenhouse Gas Storage Act 2009;

(c) development by a department, or part of a department, under a designation;

(d) development for a non-State school under a designation.

Editor's note—See Section 113(3) of the Planning Act.

Editor's note—For Section 13(2)(d), 'non-State school' is defined in Section 6 of the Education (Accreditation of Non-State Schools) Act 2017.

14. Working out the levied charge

(1) The levied charge for the development is to be worked out by Redland City Council as follows:

LC = (AC x *ED) - D*

Where:

LC is the levied charge for the development, which cannot be less than zero.

AC is the applied adopted charge for the development worked out under Section 15.

ED is the extra demand placed on trunk infrastructure generated by the development, worked out under Section 16.

D is the discount for the prescribed financial contribution worked out under Section 17.

(2) The levied charge is to be worked out for the respective trunk infrastructure network as follows:

(a) for each of the local government trunk infrastructure networks as identified in the LGIP; and

(b) for each of the SEQ service provider trunk infrastructure networks.

15. Working out the applied adopted charge

The applied adopted charge for the development is to be worked out by Redland City Council for the respective trunk infrastructure network by applying the following:

(1) the applied adopted charge for particular uses in Schedule 4, if Redland City Council considers that it should be applied having regard to the extra demand placed upon the respective trunk infrastructure network which will be generated by the development; or

(2) the adopted charge in Schedule 2, if subsection (b) does not apply.

16. Working out the extra demand

(1) The extra demand placed on trunk infrastructure that is generated by the development is to be worked out by Redland City Council for the respective trunk infrastructure network as follows:

ED = DD - DC

Where:

ED is the extra demand placed on trunk infrastructure that is generated by the development.

DD is the demand placed upon the respective trunk infrastructure network which will be generated by the development (***development demand***).

DC is the demand placed upon the respective trunk infrastructure network generated by previous development prescribed in subsection (3) if applicable (***demand credit***).

(2) The development demand is worked out using the relevant unit of calculation for an adopted charge for the development in Schedule 2 and Schedule 4 (***demand unit***).

(3) The demand credit for previous development is to be worked out using the following:

(a) for a proposed material change of use or building work, the greater of the following:

(i) if the premises is subject to an existing use which is lawful and already taking place on the premises (***existing lawful use***) that places demand upon the respective trunk infrastructure network, the demand generated for the existing lawful use using the applicable demand units for the use;

(ii) if the premises is subject to a previous use which was lawful at the time it was carried out and is no longer taking place on the premises (***previous lawful use***) that placed demand upon the respective trunk infrastructure network, the demand generated for the previous lawful use using the applicable demand units for the use;

(b) for a proposed reconfiguring a lot or vacant land for a proposed material change of use or building work, the demand generated for each existing lot

of the premises which is serviced by the respective trunk infrastructure network;

(c) for demand generated by other development on the premises if at the time of working out the demand credit the other development may be lawfully carried out without the need for a further development permit (including, without limitation, a development permit for development other than a material change of use of premises), using the applicable demand units for the other development.

Editor's note—See Section 120(2) of the Planning Act.

(4) The demand credit under subsection (3) is to be worked out by Redland City Council prior to the time for the giving of the relevant approval to which the levied charge applies as follows:

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) an applicant which is seeking the demand credit is to:

(i) give a notice in the prescribed form to Redland City Council which provides evidence of the existing lawful use or previous lawful use and the calculation of the demand credit; and

(ii) pay the prescribed fee;

Editor's note—The prescribed fee may include the Redland City Council's costs for determining the demand credit.

(b) Redland City Council is to:

(i) determine if a demand credit is applicable to the development;

(ii) work out the demand credit if applicable; and

(iii) allocate the demand credit to the part of the premises where:

A. in the case of a demand credit referred to in subsection (3)(a)(i), the part of the premises where the existing lawful use physically is taking place;

B. in the case of a demand credit referred to in subsection (3)(a)(ii), the part of the premises where the previous lawful use physically took place;

C. in the case of a demand credit referred to in subsection (3)(b), the part of the premises where the existing lot physically is located;

D. in the case of a demand credit referred to in subsection (3)(c), the part of the premises where the relevant development physically may occur; and

(iv) give a notice to the applicant stating the outcome of Redland City Council's determination.

Editor's note—The notice may be given in an infrastructure charges notice.

(5) A demand credit is only to be provided to a maximum amount equal to the development demand.

17. Working out the discount for the prescribed financial contribution

(1) The amount of the discount for the prescribed financial contribution is to be worked out by Redland City Council as follows:

D = PFC - (AC x DC)

Where:

D is the discount which cannot be less than zero.

PFC is the amount of the prescribed financial contribution.

AC is the applied adopted charge for the proposed development worked out under Section 15a.

DC is the demand credit if applicable worked out under Section 16.

(2) The discount for the prescribed financial contribution is to be worked out by Redland City Council prior to the time for the giving of the relevant approval to which the levied charge applies as follows:

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) an applicant which is seeking the discount for the prescribed financial contribution is to:

(i) give a notice in the prescribed form to Redland City Council which provides evidence of the prescribed financial contribution and the calculation of the discount; and

(ii) pay the prescribed fee;

Editor's note—The prescribed fee may include the Redland City Council's costs for determining the discount for the prescribed financial contribution.

(b) Redland City Council is to:

(i) determine if the discount for a prescribed financial contribution is applicable to the development;

(ii) work out the discount for the prescribed financial contribution if applicable; and

(iii) give a notice to the applicant stating the outcome of Redland City Council's determination.

Editor's note—The notice may be given in an infrastructure charges notice.

18. Working out the automatic increase

(1) The automatic increase of the levied charge is to be worked out by Redland City Council as the amount which is equal to the increase calculated by using the index stated in the *Planning Act*.

Editor's note—See Section 114(3)(b), (4), (5) and (6) of the Planning Act.

Editor's note—For a levied charge payable under an adopted infrastructure charges notice, see Section 648D(9)(a) of the Sustainable Planning Act 2009 as in force immediately before 4 July 2014..

Editor's note—For a levied charge payable under an infrastructure charges notice under the Sustainable Planning Act 2009, see Section 631(3)(b) and (4) of the Sustainable Planning Act 2009 as in force on 4 July 2014.

(2) However the amount of the automatic increase of the levied charge must not be more than the amount of the increase prescribed by the *Planning Act*.

Editor's note—See Section 114(3)(b), (4), (5) and (6) of the Planning Act.

Editor's note—For a levied charge payable under an adopted infrastructure charges notice, see Section 648D(9)(b) and (10) (of the Sustainable Planning Act 2009 as in force immediately before 4 July 2014.

Editor's note—For a levied charge payable under an infrastructure charges notice under the Sustainable Planning Act 2009, see Section 631(5) and (6) of the Sustainable Planning Act 2009 as in force on 4 July 2014.

Part 4 Offset and refund for trunk infrastructure

19. Purpose of Part 4

Part 4 states the following matters relevant to the working out of an offset or refund for the provision of trunk infrastructure for the respective trunk infrastructure network for development:

(1) the method to be applied by Redland City Council for working out the establishment cost of trunk infrastructure for an offset or refund where an applicant is required under a condition of a relevant approval to provide land or work for the following trunk infrastructure (***trunk infrastructure contribution***):

Editor's note— See Section 116 of the Planning Act.

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) ***identified necessary trunk infrastructure***—development infrastructure which is identified in the respective infrastructure planning instrument;

Editor's note—See Section 128(1)(a) of the Planning Act.

(b) ***different necessary trunk infrastructure***—development infrastructure which:

(i) is an alternative to the identified necessary trunk infrastructure; and

(ii) (B) delivers the same desired standards of service for the network of development infrastructure stated in the respective infrastructure planning instrument;

Editor's note—See Section 128(1)(b) of the Planning Act.

(c) (***other necessary trunk infrastructure***—development infrastructure which is not identified necessary trunk infrastructure or different necessary trunk infrastructure that satisfies the conversion criteria and is necessary to service development;

Editor's note—See Section 128(2) of the Planning Act.

(d) ***prescribed trunk infrastructure***—development infrastructure which is not identified necessary trunk infrastructure, different necessary trunk infrastructure or other necessary trunk infrastructure that becomes trunk infrastructure under the *Planning Act* by way of a conversion application;

Editor's note—See Section 142(3) of the Planning Act.

(2) whether an offset or refund applies and if so the details of the offset and refund and the timing of the offset and refund.

20. Working out the establishment cost

The establishment cost for a trunk infrastructure contribution is to be worked out by Redland City Council using the following:

(1) for the initial calculation of the establishment cost for required work—the method in Section 21;

(2) for the initial calculation of the establishment cost for required land—the method in Section 23;

(3) for the recalculation of the establishment cost for required work calculated—the method in Section 25;

(4) for the recalculation of the establishment cost for required land—the method in Section 26.

Editor's note—See Section 116 of the Planning Act.

21. Initial calculation of the establishment cost for required work

(1) The establishment cost for a trunk infrastructure contribution for work (***required work***) is to be worked out by Redland City Council using any of the following:

(a) the planned estimate—work;

(b) a ***cost-based estimate*** of the establishment cost for the required work using the method in Section 22;

(c) an estimate of the establishment cost for the trunk infrastructure contribution reasonably determined by Redland City Council.

(2) Redland City Council is to have regard to the following matters when deciding whether to use the planned estimate for the work, in working out the establishment cost for the required work:

(a) for identified necessary trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of the item of identified necessary trunk infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of the item of identified necessary trunk infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(b) for different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(c) for identified necessary trunk infrastructure, different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the standards and requirements for the required work;

(ii) the impact the required work has on the development potential and value of the premises the subject of the relevant approval.

Editor's note—A relevant approval is a development approval under the Planning Act.

Editor's note—The method used by Redland City Council is to be stated in the infrastructure charges notice.

(3) The planned estimate of the required work *(**planned estimate—work**)* if:

(a) the required work are the whole of an item of identified necessary trunk infrastructure—is the ***planned cost*** being the amount of the value of the item stated in Schedule 6;

(b) the required work are part of an item of identified necessary trunk infrastructure—is the estimate of the proportion of the planned cost of the item of identified necessary trunk infrastructure applicable to the trunk infrastructure contribution having regard to the method used by Redland City Council to work out the planned cost of the item of identified trunk infrastructure stated in the LGIP; and

(c) the required work are different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure—is the estimate of the planned cost of the infrastructure having regard to the method used by Redland City Council to work out the planned cost of the identified necessary trunk infrastructure for the network of development infrastructure stated in the LGIP.

22. Cost-based estimate of the establishment cost for required work

(1) This section is to apply where the establishment cost for the required work is to be worked out by Redland City Council using a cost-based estimate.

(2) The ***cost-based estimate*** for the required work is to:

(a) be determined by using first principles estimating based on the following:

(i) the scope (as determined by Redland City Council) of the required work which includes the following:

A. the standard to which the required work are to be provided;

B. the location of the required work;

C. the quantity of the required work;

(ii) Redland City Council's design and construction requirements for the required work;

(b) exclude the following:

(i) a cost of the planning of the required work;

(ii) a cost of providing temporary infrastructure;

(iii) a cost of providing other infrastructure which is not part of the required work;

(iv) a cost of the decommissioning, removal and rehabilitation of infrastructure identified in subsections (2)(b)(iii) and (2)(b)(iii);

(v) a part of the required work provided by:

A. Redland City Council; or

B. a person, other than the applicant or a person engaged by the applicant;

(vi) a cost to the extent that GST is payable and an input tax credit can be claimed for the required work;

(vii) a cost attributable directly or indirectly to the failure of an applicant or a person engaged by the applicant to perform and fulfil a relevant approval for the required work;

Editor's note—A relevant approval is a development approval under the Planning Act.

(viii) a cost caused or contributed to by a negligent or wilful act or omission by the applicant or a person engaged by the applicant;

(ix) a cost of providing development infrastructure which is only made necessary by the development and does not contribute to the function of the required work;

(x) a cost of providing trunk infrastructure which relates to another development infrastructure network;

(xi) a cost of providing development infrastructure which is replacing existing infrastructure with different infrastructure in another development infrastructure network;

(xii) a cost of providing development infrastructure in excess of the desired standards of service for the network of development infrastructure stated in the LGIP;

(xiii) a cost of existing development infrastructure which services or is planned to service existing or future demand that is replaced by the required work;

(xiv) a cost of maintaining an infrastructure asset where required by a condition of approval;

(xv) a cost associated with risk and contingencies for the required work.

23. Initial calculation of the establishment cost for required land

(1) The establishment cost for a trunk infrastructure contribution for land ***(required land)*** is to be worked out by Redland City Council using one of the following, in the following order:

(a) the planned estimate—land;

(b) the establishment cost for other land previously accepted by Redland City Council ***(other land)*** which, in its opinion, is reasonably consistent with the required land ***(consistent land establishment cost)***—if Redland City Council decides to not use the planned estimate—land, having regard to matters stated in subsection (2);

Editor's note—In forming its opinion on whether the other land is reasonably consistent with the required land, the Redland City Council may have regard to the matters including, but not limited to the following:

- *planning scheme requirements (e.g. zoning, overlays and the LGIP);*
- *infrastructure requirements for the same network as the required land;*
- *timing of the valuation previously accepted;*
- *methodology used to value the other land;*
- *valuation considerations and development constraints which were taken into account in determining the value of the other land.*

(c) the proportion of the rateable value of the parcel of land (of which the required land forms part) ***(proportional value)*** current at the time of working out the establishment cost—if Redland City Council decides to not use a consistent land establishment cost because:

(i) no other land has been previously accepted by Redland City Council;

(ii) Redland City Council does not consider other land is reasonably consistent with the required land;

(d) the current market value of the required land using the method in Section 24—if Redland City Council decides the current market value is more accurate than the proportional value.

(2) Redland City Council is to have regard to the following matters when deciding whether to use the planned estimate—land in working out the establishment cost for the required land:

(a) for identified necessary trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of the item of identified necessary trunk

infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of the item of identified necessary trunk infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(b) for different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(c) for identified necessary trunk infrastructure, different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the standards and requirements for the required land;

(ii) the impact the required land has on the development potential and value of the premises the subject of the relevant approval.

Editor's note—A relevant approval is a development approval under the Planning Act.

Editor's note—The method used by Redland City Council is to be stated in the infrastructure charges notice.

(3) The planned estimate for the required land is the estimate of the establishment cost determined as follows ***(planned estimate—land)***, if:

(a) the required land is the whole of an item of identified necessary trunk infrastructure—is the ***planned cost*** being the amount of the value of the item stated in Schedule 6;

(b) the required land is part of an item of identified necessary trunk infrastructure—is the estimate of the proportion of the planned cost of the item of identified necessary trunk infrastructure applicable to the required land having regard to the method used by Redland City Council to work out the planned cost of the item of identified necessary trunk infrastructure stated in the extrinsic material for the LGIP; and

(c) the required land is different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure—is the estimate of the planned cost of the infrastructure having regard to the method used by Redland City Council to work out the planned cost of items

of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required land stated in the extrinsic material for the LGIP.

24. Current market value of required land

(1) This section is to apply where the establishment cost for required land is to be worked out by Redland City Council using the current market value of the required land.

(2) The ***current market value*** of the required land is to be determined by using the before and after method of valuation by:

(a) firstly, determining the value ***(original land value)*** of the original land of which the required land forms part ***(original land)*** before the required land is transferred to Redland City Council;

Editor's note—Where the required land is identified in the LGIP, the original land is to be valued:

- *as if the required land had never been identified;*
- *identifying and considering all relevant constraints;*
- *disregarding any change in the value (e.g. through development opportunities) caused, or contributed to, by the identification of the required land in the LGIP; and*
- *on the basis of the highest and best use of the original land by development that is subject to code assessment and strictly complies with all acceptable outcomes.*

Editor's note—Where the required land is not identified in the LGIP, the original land is to be valued:

- *identifying and considering all relevant constraints;*
- *disregarding any perceived change in value caused or contributed by development within the Emerging Community Zone which occurs prior to the Council's approval of a structure plan pursuant to Planning Scheme Policy 5 of the planning scheme; and*
- *on the basis of the highest and best use of the original land by development that is subject to code assessment and strictly complies with all acceptable outcomes.*

(b) secondly, determining the value ***(remaining land value)*** of the land that is not to be transferred to Redland City Council ***(remaining land)***; and

Editor's note— Where the development approval under which the required land is required is for a material change of use of premises, the remaining land is to be valued:

- *identifying and considering all relevant constraints;*
- *where the approved development of the remaining land is:*
  - *the highest and best use of the land—on the basis of the approved development;*
  - *not the highest and best use of the land—on the basis of development that is subject to code assessment and strictly*

complies with all acceptable outcomes disregarding any change in the value (e.g. through development opportunities) caused, or contributed to, by the required land.

Editor's Note—Where the development approval under which the required land is required is not for a material change of use of premises, the remaining land is to be valued:

- *identifying and considering all relevant constraints;*
- *disregarding any change in the value (e.g. through development opportunities) caused, or contributed to, by the required land;*
- *disregarding any perceived change in value caused or contributed by development within the Emerging Community Zone which occurs prior to the Council's approval of a structure plan pursuant to Planning Scheme Policy 5 of the planning scheme; and*
- *on the basis of the highest and best use of the remaining land by development that is subject to code assessment and strictly complies with all acceptable outcomes.*

(c) thirdly, subtracting the remaining land value from the original land value.

(3) The before and after method of valuation is to be undertaken in accordance with the following requirements:

(a) the valuation is to be carried out to determine the current market value that would have applied on the day that is:

(i) where the required land is identified in the LGIP—the day on which the development application, which is the subject of a condition requiring the required land to be provided, first became properly made; or

where the required land is not identified in the LGIP—the day on which the development application, which is the subject of a condition requiring the required land to be provided, was approved;

(b) the valuation is to:

(i) include a report by an appropriately qualified town planner regarding the highest and best use of the original land and the remaining land ***(highest and best use advice)***, which the independent valuation expert has relied on to form an opinion about the value;

Editor's note—The highest and best use of the original land is to be based on development that is subject to code assessment and strictly complies with all acceptable outcomes.

Editor's note—The highest and best use of the remaining land is to be:

- *where the development approval under which the required land is required is for a material change of use of premises–the approved development;*

- *where the development approval under which the required land is required is not for a material change of use of premises– development that is subject to code assessment and strictly complies with all acceptable outcomes.*

(ii) identify the area of the land that is above the Q100 flood level and the area that is below the Q100 flood level;

(iii) identify and consider all other real and relevant constraints including, but not limited to:

A. vegetation protection;

B. ecological values including riparian buffers and corridors;

C. stormwater or drainage corridors;

D. slope;

E. bushfire and landslide hazards;

F. heritage;

G. airport environs;

H. coastal erosion;

I. extractive resources;

J. flooding;

K. land use buffer requirements;

L. tenure related constraints;

M. restrictions such as easements, leases, licences and other dealings whether or not registered on title; and

(iv) contain relevant sales evidence and clear analysis of how those sales and any other information was relied upon in forming the valuation assessment;

(c) the land must be valued using different rates for the unconstrained (developable) component of the land and the constrained (undevelopable) components of the land. More than one rate may apply to unconstrained areas of land or constrained areas of land.

Editor's note—Examples for section 24(3)(c) include but are not limited to:

- *Example 1 – if the area of land to be valued includes land constrained to being used for a recreation park and conservation area it may be appropriate to have separate constrained (undevelopable) rates for the recreation park area and the conservation area.*
- *Example 2 – if the area of land to be valued includes areas of land suitable for residential use and areas constrained to being used for*

major collector road purposes it will be appropriate to use an unconstrained (developable) rate for the residential land and a constrained (undevelopable) rate for the major collector road land.

(d) the valuation is to be undertaken by a certified practising valuer who must act professionally as a neutral and independent expert ***(independent valuation expert)***.

25. Recalculation of the establishment cost for required work

Market cost

(1) The establishment cost for required work may be recalculated by Redland City Council at the request of the applicant by using the market cost for the required work which is to be worked out in accordance with this Section 25.

Editor's note—See Section 137 of the Planning Act.

(2) The ***market cost*** for the required work is the estimate of the cost of the design and construction of the required work stated in the contract for construction for the required work:

(a) including the following:

(i) the direct construction cost or the direct embellishment cost of plant, material and labour for the required work for the required work;

(ii) the indirect construction cost or the indirect embellishment cost for the required work limited to the contractor overheads related to the required work which do not exceed the maximum indirect construction cost and the maximum embellishment cost stated in Schedule 7;

(iii) project costs for the required work which do not exceed the maximum on costs stated in Schedule 7 for the following:

A. the cost of survey for the required work;

B. the cost of geotechnical and other engineering and environmental investigations for the construction of the required work;

C. the cost of only detailed design for the required work;

D. the cost of project management, engineering supervision and contract administration for the required work;

(b) excluding the following:

(i) a cost of the planning of the required work;

(ii) a cost of providing temporary infrastructure;

(iii) a cost of providing other infrastructure which is not part of the required work;

(iv) a cost of the decommissioning, removal and rehabilitation of infrastructure identified in subsections (ii) and (iii);

(v) a part of the required work provided by:

A. Redland City Council; or

B. a person, other than the applicant or a person engaged by the applicant;

(vi) a cost to the extent that GST is payable and an input tax credit can be claimed for the required work;

(vii) a cost attributable directly or indirectly to the failure of an applicant or a person engaged by the applicant to perform and fulfil a relevant approval for the required work;

Editor's note—A relevant approval is a development approval under the Planning Act.

(viii) a cost caused or contributed to by a negligent or wilful act or omission by the applicant or a person engaged by the applicant;

(ix) a cost of providing development infrastructure which is only made necessary by the development and does not contribute to the function of the required work;

(x) a cost of providing trunk infrastructure which relates to another development infrastructure network;

(xi) a cost of providing development infrastructure which is replacing existing infrastructure with different infrastructure in another development infrastructure network;

(xii) a cost of providing development infrastructure in excess of the desired standards of service for the network of development infrastructure stated in the LGIP;

(xiii) a cost of existing development infrastructure which services or is planned to service existing or future demand that is replaced by the required work;

(xiv) a cost of maintaining an infrastructure asset where required by a condition of approval;

(xv) a cost associated with risk and contingencies for the required work;

(xvi) a cost associated with a margin or profit.

Determining the market cost

(3) Redland City Council is to, prior to the applicant starting the construction of the required work, determine the market cost for the required work as follows:

(a) the applicant is to:

(i) for a trunk infrastructure contribution up to $100,000 (exclusive of GST) and buying off a prequalified supplier arrangement or the marketplace—obtain at least one written quotation for the work and;

(ii) for a trunk infrastructure contribution more than $100,000 (exclusive of GST) but not more than $450,000 (exclusive of GST) and buying off a prequalified supplier arrangement or the marketplace—obtain:

A. at least three written quotations for the work;

B. evidence that the supplier or contractor has appropriate insurances, licences, work health and safety and quality assurance systems in place;

(iii) for a trunk infrastructure contribution more than $450,000 (exclusive of GST)—undertake a competitive tender process for the work;

(b) the applicant is to:

(i) for a trunk infrastructure contribution up to $450,000 (exclusive of GST), give to Redland City Council a notice in the prescribed form which states the following:

A. the quotations process under subsections (a)(i) and (ii) have been conducted;

B. the quotation/s received;

C. the evidence of the appropriate insurances, licences, work health and safety and quality assurance systems of the supplier or contractor;

D. the applicant's preferred quotation under subsection (a)(ii);

E. the applicant's reason for the preferred quotation under subsection (a)(ii);

F. the terms of the construction contract for the work;

G. a plan for each development infrastructure network clearly showing the extent of the work for which an offset is sought;

H. the applicant's calculation of the market cost for the work;

(ii) for a trunk infrastructure contribution more than $450,000 (exclusive of GST), give to Redland City Council a notice in the prescribed form which states the following:

A. a competitive tender process required under subsection (a)(iii) has been conducted;

B. the tenders received;

C. the applicant's preferred tenderer;

D. the applicant's reason for the preferred tenderer;

E. the terms of the construction contract for the work;

F. a plan for each development infrastructure network clearly showing the extent of the work for which an offset is sought;

G. the applicant's calculation of the market cost for the work; and

(iii) pay the prescribed fee;

Editor's note—The prescribed fee may include Redland City Council's costs for determining the market cost.

(c) Redland City Council may, within 15 business days of the date the notice under subsection (b) is received by Redland City Council, give a notice to the applicant which states that the applicant is to provide a document to enable Redland City Council to determine the market cost including without limitation the following:

(i) details in respect of a construction contract for the required work; and

(ii) a plan for each development infrastructure network clearly showing the scope of the required work for which the recalculated establishment cost is sought;

(d) the applicant is to comply with a notice given by Redland City Council to the applicant under subsection(c);

(e) Redland City Council is to as soon as reasonably practicable determine the market cost acting reasonably having regard to the matters in subsections (a) to (d);

(f) Redland City Council, after determining the market cost, is to as soon as reasonably practicable:

(i) give to the applicant a notice which states the following:

A. Redland City Council's calculation of the market cost for the required work and the reason for any difference from the applicant's calculation;

B. the establishment cost for the required work; and

(ii) issue an amended infrastructure charges notice.

(4) To avoid any doubt, Redland City Council may issue the amended infrastructure charges notice using the establishment cost in Section 25(3)(f)(i)B even where it is lower than the original establishment cost.

Adjustment of the establishment cost

(5) Redland City Council is to, after the completion of the construction of the required work and prior to the date for the payment of a levied charge, determine an adjustment to the establishment cost as follows:

(a) this subsection only applies to a cost of required work ***(prescribed cost)*** if the cost:

(i) would have formed part of the market cost used to work out the establishment cost for the required work; and

(ii) was not included in the market cost used to work out the establishment cost or was included in the market cost used to work out the establishment cost but was for an amount less than the prescribed cost;

(b) the applicant, prior to 15 business days after the applicant has completed the required work:

(i) may give to Redland City Council a single written notice which is to state the following:

A. that the applicant requests that Redland City Council adjust the establishment cost to take account of the prescribed cost;

B. all information reasonably necessary to establish the calculation of the prescribed cost and that the cost is a prescribed cost, including evidence satisfactory to Redland City Council, to demonstrate that the prescribed cost has been incurred by the applicant;

C. the applicant's calculation of the prescribed cost; and

(ii) must pay the prescribed fee if subsection (i) applies;

Editor's note—The prescribed fee may include Redland City Council's costs for determining whether the establishment cost is to be adjusted.

(c) Redland City Council may, within 15 business days of the date the notice under subsection (b) is received, give a notice to the applicant which states that the applicant is to provide to Redland City Council a document to enable it to determine the value of an adjusted establishment cost;

(d) the applicant is to comply with a notice given by Redland City Council to the applicant under subsection (3)(C);

(e) Redland City Council is to as soon as reasonably practicable determine whether the establishment cost is to be adjusted acting reasonably having regard to the matters in subsections (a) to (d);

(f) Redland City Council, after determining whether the establishment cost is to be adjusted, is to as soon as reasonably practicable:

(i) give to the applicant a notice which states the following:

A. Redland City Council's calculation of the adjusted establishment cost for the required work and the reason for any difference from the applicant's calculation;

B. the establishment cost for the required work; and

(ii) issue an amended infrastructure charges notice.

Dispute process

(6) An applicant, within 10 business days of the date of a notice under subsections (3)(f) or (5)(f):

(a) may give to Redland City Council a notice in the prescribed form stating that it disputes Redland City Council's recalculation of the establishment cost for the required work; and

(b) must pay the prescribed fee if subsection (a) applies.

Editor's note—The prescribed fee may include Redland City Council's costs for the dispute process including the cost of the independent registered quantity surveyor.

(7) Redland City Council and the applicant are to take the following action to resolve the dispute:

(a) Redland City Council is to appoint an independent registered quantity surveyor to determine the establishment cost for the required work in accordance with this section;

(b) Redland City Council and the applicant are to cooperate in good faith with the independent registered quantity surveyor;

(c) Redland City Council and the applicant are to accept the independent registered quantity surveyor's determination of the establishment cost for the required work;

(d) Redland City Council is to, as soon as reasonably practicable:

(i) give to the applicant a notice which states the establishment cost for the required work determined by the independent registered quantity surveyor; and

(ii) issue an amended infrastructure charges notice.

26. Recalculation of the establishment cost for required land

Current market value

(1) The establishment cost for required land may be recalculated by Redland City Council at the request of the applicant by using the current market value of the

required land determined by using the before and after method of valuation prescribed in Section 24 in accordance with this Section 26.

Editor's note—See Section 137 of the Planning Act.

Applicant's submission of current market value

(2) The applicant is to give to Redland City Council the following:

(a) a notice in the prescribed form requesting the recalculation of the establishment cost for the required land which is accompanied by the following:

(i) a valuation of the required land undertaken by an independent valuation expert ***(applicant's valuation)***;

(ii) a report prepared by an appropriately qualified town planner regarding the highest and best use of the original land and the remaining land on which the applicant's valuation is based ***(applicant's highest and best use advice)***;

(b) the prescribed fee.

Editor's note—The prescribed fee may include Redland City Council's costs of the recalculation process including the costs of the independent valuation expert nominated by Redland City Council and the town planner engaged by Redland City Council.

Redland City Council's determination of current market value

(3) Within 20 business days after the notice and accompanying documents under subsection (2) are received, Redland City Council is to:

(a) accept the applicant's valuation; or

(b) refer the applicant's valuation to an independent valuation expert nominated by Redland City Council to:

(i) assess whether the applicant's valuation is consistent with the current market value; and

(ii) assess whether the applicant's valuation is correctly determined using the before and after method of valuation prescribed in Section 24.

Editor's note—Redland City Council may request additional information from the applicant in order to undertake the assessment.

(4) If Redland City Council's nominated independent valuation expert's determination is that the applicant's valuation is not consistent with the current market value or is not correctly determined using the before and after method of valuation prescribed in Section 24 then the independent valuation expert must:

(a) provide the reasons for the independent valuation expert's determination; and

(b) provide a valuation using the before and after method of valuation stated in Section 24 (***amended valuation***).

(5) Redland City Council is to decide whether to:

(a) accept the applicant's valuation; or

(b) propose an amended valuation based on subsection (4)(b).

(6) If Redland City Council accepts the applicant's valuation, it is to:

(a) give written notice to the applicant stating that it has agreed to the applicant's valuation (***accepted valuation***);

(b) index the establishment cost for the required land using the CPI from the date of the accepted valuation to the date stated in the amended infrastructure charges notice; and

(c) issue an amended infrastructure charges notice to the applicant stating the establishment cost for the required land.

Amended valuation

(7) If Redland City Council proposes an amended valuation, it is to give a written notice to the applicant stating:

(a) that it rejects the applicant's valuation and give reasons for doing so; and

(b) the proposed amended valuation.

(8) Within 20 business days of receipt of Redland City Council's written notice proposing the amended valuation under subsection (7), the applicant must give written notice to Redland City Council that it:

(a) accepts the amended valuation; or

(b) rejects the amended valuation and its reasons for doing so.

(9) If the applicant accepts the amended valuation, Redland City Council must:

(a) index the establishment cost for the land infrastructure using the CPI from the date of the amended valuation to the date stated in the amended infrastructure charges notice; and

(b) give an amended infrastructure charges notice to the applicant stating the establishment cost of the land infrastructure.

(10) If the applicant rejects the amended valuation, then within 20 business days after receipt of a notice under subsection (8)(b), Redland City Council is to refer the applicant's valuation to a further independent valuation expert nominated by Redland City Council from its list of certified practising valuers as per subsection (12).

Final independent valuation

(11) Redland City Council may not refer the applicant's valuation to an independent valuation expert for final determination if the applicant has not paid to Redland City Council the prescribed fee under subsection (2)(b) including the costs of the independent valuation expert nominated by Redland City Council and the town planner engaged by Redland City Council.

(12) If Redland City Council refers the applicant's valuation to a further independent valuation expert, Redland City Council is to:

(a) give written notice to the applicant that it rejects the applicant's valuation and give reasons for doing so;

(b) give written notice to the applicant stating that it has referred the applicant's valuation to an independent valuation expert;

(c) give the following to the independent valuation expert:

(i) the applicant's valuation and the applicant's highest and best use advice;

(ii) the highest and best use advice prepared by an appropriately qualified town planner engaged by Redland City Council regarding the highest and best use of the original land and the remaining land if Redland City Council does not accept the applicant's highest and best use advice;

(iii) the valuation of the required land, if Redland City Council used the before and after method of valuation prescribed in Section 24 for the initial calculation of the establishment cost for the required land and considers that it is relevant to the independent valuation expert's assessment.

(13) Within 20 business days after the independent valuation expert has been given the information under subsection (12)(c) the independent valuation expert is to (a ***Redland City Council's valuer's determination***):

(a) provide the independent valuation expert's determination in relation to the matters stated in subsection (3)(a); and

(b) if the independent valuation expert's determination is that the applicant's valuation is not consistent with the current market value or is not correctly determined using the before and after method of valuation prescribed in Section 24:

(i) provide the reasons for the independent valuation expert's determination; and

(ii) provide a valuation using the before and after method of valuation stated in Section 24.

(14) Within 10 business days after its receipt of the relevant subsequent Redland City Council's valuer's determination, Redland City Council is to give written notice to the applicant stating that it adopts the applicable valuer's determination (***revised local government's valuation***).

(15) If Redland City Council adopts the revised local government's valuation, Redland City Council is to:

(a) index the establishment cost for the required land using the CPI from the date of the revised local government's valuation to the date stated in the amended infrastructure charges notice; and

(b) issue an amended infrastructure charges notice to the applicant stating the establishment cost for the required land.

27. Application of an offset and refund

The following apply if a trunk infrastructure contribution services or is planned to service premises other than premises the subject of the relevant approval and an adopted charge applies to the development the subject of the relevant approval:

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) an ***offset***—where the establishment cost for the trunk infrastructure contribution is equal to or less than the levied charge;

(b) a ***refund***—where the establishment cost for the trunk infrastructure contribution is more than the levied charge.

28. Details of an offset and refund

(1) If an offset applies, the establishment cost for the trunk infrastructure contribution is to be worked out by Redland City Council in accordance with Section 20.

(2) If a refund applies, the refund amount will be the establishment cost for the trunk infrastructure contribution less the levied charge for the development worked out in accordance with Section 14.

29. Timing of an offset and refund

(1) An applicant entitled to an offset or refund for the trunk infrastructure contribution is to:

(a) give to Redland City Council a notice in the prescribed form which states the following:

(i) the date the trunk infrastructure contribution the subject of an offset or refund was lawfully completed;

(ii) that the trunk infrastructure contribution has been provided in accordance with the relevant approval for the trunk infrastructure contribution;

Editor's note—A relevant approval is a development approval under the Planning Act.

(b) for a refund—in addition to subsection (a), if the applicant is not the owner of the premises the subject of the relevant approval requiring the trunk infrastructure contribution, give to Redland City Council a written consent of the owner at the time the notice is given agreeing to the payment of the

refund amount being made to the applicant, unless the applicant demonstrates to the reasonable satisfaction of Redland City Council that:

(i) the owner of the premises has unreasonably withheld consent; or

(ii) because of the number of owners, it is impracticable to get their consent; and

(c) pay the prescribed fee.

Editor's note—The prescribed fee may include Redland City Council's costs for determining the matters in subsection (1)(a) and (b).

(2) Redland City Council is to as soon as is reasonably practicable after receiving a notice under subsection (1):

(a) determine whether the trunk infrastructure contribution has satisfied the matters in subsection (1)(a); and

(b) give to the applicant a notice stating the outcome of Redland City Council's determination.

(3) Redland City Council, if satisfied of the matters in subsection (1)(a), is to unless otherwise provided for in an infrastructure agreement:

(a) for an offset—set off the establishment cost for the trunk infrastructure contribution against the levied charge when the levied charge stated in the infrastructure charges notice is payable under the *Planning Act*;

(b) for a refund—give the refund to the applicant giving the notice under subsection (1)(a) when stated in the infrastructure charges notice.

(4) Redland City Council has adopted a policy position in relation to the determination in an infrastructure charges notice of when a refund is to be given by Redland City Council to achieve the following policy objectives:

(a) to seek to integrate Redland City Council's land use and infrastructure plans;

(b) to implement the respective infrastructure planning instruments as the basis for Redland City Council's trunk infrastructure funding;

(c) to implement infrastructure funding which is equitable and accountable and financially sustainable for Redland City Council.

(5) Redland City Council's policy position in relation to the determination in an infrastructure charges notice of when a refund is to be given by Redland City Council and related matters is as follows:

(a) for a trunk infrastructure contribution for identified necessary trunk infrastructure or different necessary trunk infrastructure which is provided before or in the planned date or period for the trunk infrastructure contribution stated in the LGIP:

(i) the following payment triggers achieve Redland City Council's policy objectives:

A. for a refund which is an amount that is $1 million or less—the refund may be given by 31 December of the financial year following the end of the relevant planned date or period for the trunk infrastructure contribution;

B. for a refund which is an amount that is more than $1 million but not more than $10 million—the refund may be given annually over 3 financial years in equal payments by 31 December in each year commencing in the year following the end of the relevant planned date or period for the trunk infrastructure contribution;

C. for a refund which is more than $10 million—the refund may be given annually over 5 financial years in equal payments by 31 December in each year commencing in the year following the end of the relevant planned date or period for the trunk infrastructure contribution;

(ii) each amount to be paid under in subsection (i) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid;

(b) for a trunk infrastructure contribution for identified necessary trunk infrastructure or different necessary trunk infrastructure which is provided after the planned date or period for the trunk infrastructure contribution stated in the LGIP:

(i) the following payment triggers achieve Redland City Council's policy objectives:

A. or a refund which is an amount that is $1 million or less—the refund may be given by 31 December of the financial year following the completion of the trunk infrastructure contribution;

B. for a refund which is an amount that is more than $1 million but not more than $10 million—the refund may be given annually over 3 financial years in equal payments by 31 December in each year commencing in the year following the completion of the trunk infrastructure contribution;

C. or a refund which is more than $10 million—the refund may be given annually over 5 financial years in equal payments by 31 December in each year commencing in the year following the completion of the trunk infrastructure contribution;

(ii) each amount to be paid under subsection (i) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid;

(c) for a trunk infrastructure contribution for other necessary trunk infrastructure:

(i) Redland City Council is to estimate the period in which the trunk infrastructure contribution would have been planned to be

provided had it been included in the LGIP having regard to the method used by Redland City Council to work out the relevant planned date or period of items of identified trunk infrastructure for the network of development infrastructure stated in the LGIP (***specified date or period***);

(ii) Redland City Council is to upon the completion of the trunk infrastructure contribution include the trunk infrastructure as existing trunk infrastructure in the respective infrastructure planning instrument;

(iii) the following payment triggers achieve Redland City Council's policy objectives:

A. for a refund which is an amount that is $1 million or less—the refund may be given 31 December of the financial year following the end of the specified date or period for the trunk infrastructure contribution;

B. for a refund which is an amount that is more than $1 million but not more than $10 million—the refund may be given annually over 3 financial years in equal payments by 31 December in each year commencing in the year following the end of the specified date or period for the trunk infrastructure contribution;

C. for a refund which is more than $10 million—the refund may be given annually over 5 financial years in equal payments by 31 December in each year commencing in the year following the end of the specified date or period for the trunk infrastructure contribution;

(iv) each amount to be paid under subsection (iii) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid;

(d) for a trunk infrastructure contribution for prescribed trunk infrastructure:

(i) Redland City Council is to upon the completion of the trunk infrastructure contribution include the trunk infrastructure as existing trunk infrastructure in the respective infrastructure planning instrument;

(ii) the payment trigger for a refund of 31 December of the financial year following the end of the planning horizon of the respective trunk infrastructure network in the LGIP achieves Redland City Council's policy objectives;

(iii) the amount to be paid under subsection (ii) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid.

Part 5 Conversion applications

30. Purpose of Part 5

Part 5 states the criteria to be applied by Redland City Council in assessing a conversion application to determine if development infrastructure is trunk infrastructure (***conversion criteria***).

31. Conversion criteria

(1) The criteria to be applied for deciding a conversion application are as follows:

(a) the infrastructure has capacity to service other developments in the area;

(b) the function and purpose of the infrastructure is consistent with other trunk infrastructure identified in the LGIP, the resolution or Water Netserv Plan for the area;

Editor's note: the infrastructure is taken to satisfy subsection (1)(b) if it complies with all of the applicable identified trunk infrastructure criteria in Schedule 5.

(c) the infrastructure is not consistent with non-trunk infrastructure for which a condition may be imposed under section 145 of the *Planning Act* or section 99BRDJ of the *SEQ Water Act*; and

(d) the type, size and location of the infrastructure is the most cost effective option for servicing multiple users in the area. The most cost effective option is the least cost option based upon the life cycle cost of the infrastructure required to service future urban development in the area at the desired standard of service.

32. Conversion applications

(1) If an applicant makes a conversion application, it must:

(a) comply with section 139(2) of the *Planning Act*, or equivalent provision in an act that supersedes the *Planning Act*;

(b) be provided to Council in writing using Council's prescribed form; and

(c) be accompanied by the prescribed fee.

Editor's note—The prescribed fee may include Redland City Council's costs for additional professional services in deciding the conversion application.

Part 6 Extra trunk infrastructure costs

33. Purpose of Part 6

Part 6 states the method to be applied by Redland City Council for working out extra trunk infrastructure costs.

34. Payment of extra trunk infrastructure costs

The payment of extra trunk infrastructure costs for development is to be worked out and required in accordance with Section 130 of the *Planning Act*.

Editor's note—See Subdivision 2, Division 3, Part 2, Chapter 4 of the Planning Act.

Schedule 1 Dictionary

accepted valuation see Section 26(6).

adopted charge see Section 6(1).

amended valuation *see* Section 26(4)(b).

applicable area see Section 6(4).

applicable date see Section 6(3).

applicable use see Section 6(5).

applicant's highest and best use advice see Section 26(2)(a)(ii).

applicant's valuation see Section 26(2)(a)(i).

applied adopted charge see Section 12(2)(a)12.

automatic increase see Section12(3).

basic work *means work to ensure the land is suitable for development for community facilities including site preparation (clearing, cut and fill) and connection to services.*

bedroom means an area of a building or structure which:

(a) is used, designed or intended for use for sleeping but excludes a lounge room, dining room, living room, kitchen, water closet, bathroom, laundry, garage or plant room; or

(b) can be used for sleeping such as a den, study, loft, media or home entertainment room, library, family or rumpus room or other similar space.

completion means the stage in the provision of a trunk infrastructure contribution by an applicant when Redland City Council is satisfied that the trunk infrastructure contribution is complete other than for a minor omission and a minor defect which:

(a) is not essential;

(b) does not prevent the matter from being reasonably capable of being used for its intended purpose;

(c) Redland City Council determines the applicant has a reasonable basis for not promptly rectifying; and

(d) the rectification of which will not prejudice the convenient use of the matter.

consistent land establishment cost see Section 23(1)(c).

conversion application has the meaning given in the *Planning Act*.

conversion criteria see Section 31.

cost-based estimate for required work see Section 22(2).

court area means the area of premises where the leisure, sport or recreation activity is conducted and excludes the area of the premises not used for conducting the leisure, sport or recreation activity, such as areas for spectators, office or administration, amenities or food and beverages.

CPI (an acronym for consumer price index) means the following:

(a) the consumer price index 6401.0 All Groups Brisbane published by the Australian Bureau of Statistics;

(b) if an index described in paragraph (a) ceases to be published—another similar index prescribed by Redland City Council.

Editor's note—Where the CPI has not been published for a calculation date the change in the CPI is to be determined by having regard to the index prior to the base date and the index prior to the calculation date.

current market value see Section 24(2).

demand credit see Section 16(1).

demand unit see Section 16(2).

Dependent retirement facility means premises that provide supervised accommodation and supportive care for the daily living needs of seniors that are unable to live independently. They are administered and operated under the *Commonwealth Aged Care Act 1997.*

development demand see Section 16(1).

development infrastructure has the meaning given in Schedule 2 of the *Planning Act.*

different necessary trunk infrastructure see Section 19(1)(b)

dwelling has the meaning in the *SPA* planning scheme.

Editor's note—The term 'dwelling' is defined in the SPA planning scheme to mean:

"A building or part of a building used or capable of being used as a self-contained residence which must include the following:
(a) food preparation facilities;
(b) a bath or shower;
(c) a toilet and wash basin;
(d) clothes washing facilities.

This term includes outbuildings, structures and work normally associated with a dwelling."

establishment cost for trunk infrastructure means the following:

(a) for existing infrastructure:
  (i) the current replacement cost of the infrastructure as reflected in Redland City Council's asset register; and
  (ii) the current value of the land acquired for the infrastructure; or
(b) for future infrastructure—all costs of land acquisition, financing, and design and construction, for the infrastructure.

Equivalent Persons (EP) means the basic unit of measurement used to equate an equivalent service demand to that of an average occupant of an average detached residential dwelling.

Equivalent Tenements (ET) means the basic unit of measurement used to indicate infrastructure demand for a property. The demand from each property is related to the type of development allowed on the property with a detached dwelling on a standard residential lot being 1 ET.

existing lawful use means an existing use which is lawful and already taking place on premises.

extra demand see Section 12(2)(b).

extrinsic material for the LGIP means the following:

(a) extrinsic material for the planning assumptions;
(b) extrinsic material for the applicable infrastructure network;
(c) extrinsic material for the schedule of work model.

financial year means a period of one year beginning on 1 July.

GFA (an acronym for gross floor area) has the meaning in the *SPA* planning scheme.

Editor's note—The term 'gross floor area' is defined in the SPA planning scheme to mean "The total floor area of all storeys of a building (measured from the outside of the external walls or the centre of a common wall), other than areas used for the following:

(a) building services, plant and equipment;
(b) access between levels;
(c) ground floor public lobby;
(d) a mall;
(e) the parking, loading and manoeuvring of motor vehicles;
(f) unenclosed private balconies whether roofed or not."

highest and best use advice see Section 24(3)(b)(i).

identified necessary trunk infrastructure criteria see Section 19(1)(a).

identified necessary trunk infrastructure see Section 19(1)(a).

impervious area means the area of the premises that is impervious to rainfall or overland flow.

Editor's note—Examples of areas which are not impervious to rainfall or overland flow— An area which is not sealed and comprises of compacted dirt, crusher dirt, road base, gravel, limestone or loose stone.

independent valuation expert see Section 24(3)(c).

Independent retirement facility means premises where seniors live in independent living units or serviced units, and may share common lifestyle amenities. Personal care and support services may also be available for a fee. They are regulated by the *Retirement Villages Act 1999 and/or under a Community Title or Community Strata Scheme.*

infrastructure planning instrument see Section 8.

IPA planning scheme means the *Redlands Planning Scheme 2006*.

levied charge see Section 12(1).

LGIP means the *Redland City Plan 2018 Local Government Infrastructure Plan* as amended from time to time.

local government means Redland City Council.

local government area means the area within the jurisdiction of Redland City Council.

local government infrastructure planning instrument see Section 8.

local government trunk infrastructure networks see Section 6(2)(a).

mall *excludes a shaded walk area with a cover above all or part of the area.*

Editor's note—Examples of a cover—
Shade sail, hard ceiling, roof.

market cost see Section 25(2).

offset see Section 27(a).

original land see Section 24(2)(a).

original land value see Section 24(2)(a).

other land see Section 23(1)(b).

other necessary trunk infrastructure see Section 19(b)(c).

planned cost means:

(a) for work, see Section 21(3)(a);
(b) for land, see Section 23(3)(a);

planned estimate—land see Section 23(3).

planned estimate—work see Section 21(3).

Planning Act see Section 3(1)

Planning Regulation see Section 3(2)(a).

planning scheme means the *Redland City Plan 2018*.

prescribed cost see Section 25(3).

prescribed fee means a cost recovery fee prescribed by Redland City Council.

prescribed financial contribution see Section 12(2)(c).

prescribed form means a form prescribed by Redland City Council.

prescribed proportion see Section 28(2).

prescribed trunk infrastructure see Section 19(1)(d).

previous lawful use means a previous use which was lawful at the time it was carried out and is no longer taking place on premises.

proportional value see Section 23(1)(c).

rateable value has the meaning in Section 74 (Rateable value of land) of the *Local Government Regulation 2012.*

Redland City Council's valuer's determination see Section 26(13)

refund see Section 27(b).

remaining land see Section 24(2).

remaining land value see Section 24(2)(b).

required land see Section 23(1).

required work see Section21(1).

resolution means this adopted infrastructure charges resolution (No. 3.2).

revised local government's valuation see Section 26(4).

Semi-dependent community residence means residential accommodation exclusively for no more than six (6) persons who require assistance or support with daily living needs. They are administered and operated under the *Residential Services (Accreditation) Act 2002.*

Semi-dependent retirement facility means premises where seniors live in semi-independent living units or serviced units, and share some common facilities such as central dining. Residents may receive regular support for a range of daily activities that may include housekeeping, laundry and transportation. Personal healthcare services may also be provided. They are regulated by the *Retirement Villages Act 1999*.

SEQ service provider means Redland City Council which is a SEQ service provider and withdrawn council for the Southern SEQ Distributor-Retailer Authority (previously trading as Allconnex) under the SEQ Water Act.

SEQ service provider infrastructure planning instrument see Section 8.

SEQ service provider trunk infrastructure networks see Section 6(2)(b).

SEQ Water Act means the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*.

SPA planning scheme means the Redland City Plan 2018.

Editor's note – the SPA planning scheme was aligned with the Planning Act.

specified date or period see Section 29(5)(c)(i).

suite means a number of connected rooms one of which is a bedroom in which an individual or a group of two or more related or unrelated people reside with the common intention to live together on a long term basis and who make common provision for food or other essentials for living.

trunk infrastructure has the meaning given in Schedule 2 of the *Planning Act*.

trunk infrastructure contribution see Section 19(1).

trunk infrastructure network see Section 6(2).

Schedule 2 Adopted charges

Table A: Adopted charge for reconfiguring a lot

Column 1 **Demand unit**	**Column 2** **SEQ service provider proportion of prescribed amount** **($ per demand unit)**		**Column 2** **Local government adopted charge** **($ per demand unit)**
	Sewerage trunk infrastructure network for wastewater service	**Water supply trunk infrastructure network for water service**	**Transport, public parks and land for community facilities and stormwater trunk infrastructure networks**
Lot	5,500.60	366.70	30,803.40

Table B Adopted charge for a residential use

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
Residential charge category					
Dwelling house*	1 or 2 bedroom dwelling	26,193.40	3,929.00	261.90	22,002.50
	3 or more bedroom dwelling	36,670.70	5,500.60	366.70	30,803.40
Dual occupancy	1 or 2 bedroom dwelling	26,193.40	3,929.00	261.90	22,002.50
	3 or more bedroom dwelling	36,670.70	5,500.60	366.70	30,803.40
Caretaker's accommodation	1 or 2 bedroom dwelling	26,193.40	3,929.00	261.90	22,002.50
	3 or more bedroom dwelling	36,670.70	5,500.60	366.70	30,803.40
Multiple dwelling	1 or 2 bedroom dwelling	26,193.40	3,929.00	261.90	22,002.50
	3 or more bedroom dwelling	36,670.70	5,500.60	366.70	30,803.40

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
	**Editor's note - The Planning Regulation 2017 definition for the use term 'dwelling house' includes the administrative term of 'secondary dwelling'. Where a referral agency assessment for a secondary dwelling is required under Schedule 9, Part 3, Division 2, Table 1 (Particular class 1 and 10 buildings and structures involving possible amenity and aesthetic impacts), the local government adopted charge for a 'dwelling house' will be levied for the secondary dwelling as a result of non-compliance with Item 4, Probable Solution P1 of the Amenity and Aesthetics Guideline. In such circumstances the charge will be levied following the issue of a development approval (for material change or use or building works.) The relevant charge will be as follows:* • *Where the gross floor area of the secondary dwelling is 85m² or greater and up to and including 112m² – 30% of the dwelling house charge; or* • *Where the gross floor area of the secondary dwelling is greater than 112m² - 50% of the dwelling house charge; or* • *Where in the rural zone and the lot size is 6,000m² or more and the gross floor area of the secondary dwelling is 160m² or greater – 30% of the dwelling house charge.* *This editor's note took effect on 1 February 2024.*				
Accommodation (short-term) charge category					
Hotel (residential component)	Suite with 1 or 2 bedrooms	13,096.60	1,964.40	131.00	11,001.20
	Suite with 3 or more bedrooms	18,335.20	2,750.10	183.40	15,401.70
	Bedroom that is not within a suite	13,096.60	1,964.40	131.00	11,001.20
Resort complex (residential component)	Suite with 1 or 2 bedrooms	13,096.60	1,964.40	131.00	11,001.20
	Suite with 3 or more bedrooms	18,335.20	2,750.10	183.40	15,401.70

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
	Bedroom that is not within a suite	13,096.60	1,964.40	131.00	11,001.20
Short-term accommodation	Suite with 1 or 2 bedrooms	13,096.60	1,964.40	131.00	11,001.20
	Suite with 3 or more bedrooms	18,335.20	2,750.10	183.40	15,401.70
	Bedroom that is not within a suite	13,096.60	1,964.40	131.00	11,001.20
Tourist park	For each group of 2 tent or caravan sites or less	13,096.60	1,964.40	131.00	11,001.20
	For each group of 3 tent or caravan sites	18,335.20	2,750.10	183.40	15,401.70
	1 or 2 bedroom cabin	13,096.60	1,964.40	131.00	11,001.20
	3 or more bedroom cabin	18,335.20	2,750.10	183.40	15,401.70

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
Accommodation (long-term) charge category					
Community residence	Suite with 1 or 2 bedrooms	26,193.40	3,929.00	261.90	22,002.50
	Suite with 3 or more bedrooms	36,670.70	5,500.60	366.70	30,803.40
	Bedroom that is not within a suite	26,193.40	3,929.00	261.90	22,002.50
Relocatable home park	1 or 2 bedroom relocatable dwelling site	26,193.40	3,929.00	261.90	22,002.50
	3 or more bedroom relocatable dwelling site	36,670.70	5,500.60	366.70	30,803.40
Retirement facility	Suite with 1 or 2 bedrooms	26,193.40	3,929.00	261.90	22,002.50
	Suite with 3 or more bedrooms	36,670.70	5,500.60	366.70	30,803.40
	Bedroom that is not within a suite	26,193.40	3,929.00	261.90	22,002.50

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
Rooming accommodation	Suite with 1 or 2 bedrooms	26,193.40	3,929.00	261.90	22,002.50
	Suite with 3 or more bedrooms	36,670.70	5,500.60	366.70	30,803.40
	Bedroom that is not within a suite	26,193.40	3,929.00	261.90	22,002.50

Table C Adopted charge for a non-residential use

Column 1 Non-residential use under Planning Regulation *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)				**Column 3** Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Places of assembly charge category						
Club	91.75	13.75	0.90	77.10	13.10	13.10
Community use	91.75	13.75	0.90	77.10	13.10	13.10
Function facility	91.75	13.75	0.90	77.10	13.10	13.10
Funeral parlour	91.75	13.75	0.90	77.10	13.10	13.10
Place of worship	91.75	13.75	0.90	77.10	13.10	13.10
Commercial (bulk goods) charge category						
Agricultural supplies store	183.35	27.50	1.80	154.05	13.10	13.10
Bulk landscape supplies	183.35	27.50	1.80	154.05	13.10	13.10
Garden centre	183.35	27.50	1.80	154.05	13.10	13.10
Hardware and trade supplies	183.35	27.50	1.80	154.05	13.10	13.10
Outdoor sales	183.35	27.50	1.80	154.05	13.10	13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Showroom	183.35	27.50	1.80	154.05	13.10	13.10
Commercial (retail) charge category						
Adult store	235.75	35.35	2.40	198.00	13.10	13.10
Food and drink outlet	235.75	35.35	2.40	198.00	13.10	13.10
Service industry	235.75	35.35	2.40	198.00	13.10	13.10
Service station	235.75	35.35	2.40	198.00	13.10	13.10
Shop	235.75	35.35	2.40	198.00	13.10	13.10
Shopping centre	235.75	35.35	2.40	198.00	13.10	13.10
Commercial (office) charge category						
Office	183.35	27.50	1.80	154.05	13.10	13.10
Education facility						
Child care centre	183.35	27.50	1.80	154.05	13.10	13.10
Community care centre	183.35	27.50	1.80	154.05	13.10	13.10
Educational establishment	183.35	27.50	1.80	154.05	13.10	13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Entertainment charge category						
Hotel (non-residential component)	261.90	39.30	2.60	220.00	13.10	13.10
Nightclub entertainment facility	261.90	39.30	2.60	220.00	13.10	13.10
Resort complex (non residential component)	261.90	39.30	2.60	220.00	13.10	13.10
Theatre	261.90	39.30	2.60	220.00	13.10	13.10
Indoor sport and recreational facility charge category						
Indoor sport and recreation facility	261.90	39.30	2.60	220.00	13.10	13.10
	26.15 for court areas	3.85	0.30	22.00	13.10	13.10
Other industry charge category						
Low impact industry	65.45	9.75	0.70	55.00	13.10	13.10
Medium impact industry	65.45	9.75	0.70	55.00	13.10	13.10
Research and	65.45	9.75	0.70	55.00	13.10	13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
technology industry						
Rural industry	65.45	9.75	0.70	55.00	13.10	13.10
Warehouse	65.45	9.75	0.70	55.00	13.10	13.10
Marine industry	65.45	9.75	0.70	55.00	13.10	13.10
High impact industry or special industry charge category						
High impact industry	91.75	13.75	0.90	77.10	13.10	13.10
Special industry	91.75	13.75	0.90	77.10	13.10	13.10
Low impact rural charge category						
Uses in the low impact rural charge category	The prescribed amount under the Planning Regulation and adopted charges under this resolution is nil. *Editor's note—See schedule 16, column 2 of the Planning Regulation.*					
High impact rural charge category						
Cultivating, in a confined area, aquatic animals or plants for sale	26.15	0	0.30	25.85	Nil charge	0
Intensive animal industry	26.15	0	0.30	25.85	Nil charge	0

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Intensive horticulture	26.15	0	0.30	25.85	Nil charge	0
Wholesale nursery	26.15	0	0.30	25.85	Nil charge	0
Winery	26.15	0	0.30	25.85	Nil charge	0
Essential services charge category						
Correctional facility	183.35	27.50	1.80	154.05	13.10	13.10
Emergency services	183.35	27.50	1.80	154.05	13.10	13.10
Health care service	183.35	27.50	1.80	154.05	13.10	13.10
Hospital	183.35	27.50	1.80	154.05	13.10	13.10
Residential care facility	183.35	27.50	1.80	154.05	13.10	13.10
Veterinary service	183.35	27.50	1.80	154.05	13.10	13.10
Minor uses charge category						
Uses in the minor uses charge category	The prescribed amount under Planning Regulation and adopted charges under this resolution is nil. *Editor's note—See schedule 16, column 2 of the Planning Regulation.* *Editor's note—The non-residential use 'Sales office' is deemed to be included in the 'Minor uses charge category' for the purposes of adopted charges under this resolution.*					

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**			**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**	**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage / **Water supply**	**Transport and public parks and land for community facilities**		
Other uses charge category					
Uses in the other uses charge category	The prescribed amount under the Planning Regulation and adopted charges under this resolution are those which are applicable to the charge category that the local government decides should apply for the use. *Editor's note—See schedule 16, column 2 of the Planning Regulation.*				

Schedule 3 Applicable uses under the planning scheme

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
Residential use			
Residential	Dwelling house	Dwelling house (including a Relatives Apartment)	Dwelling house
	Dual occupancy	Dual occupancy	Dual occupancy
	Caretaker's accommodation	Caretaker's dwelling	Caretaker's accommodation
	Multiple dwelling	Multiple dwelling; Apartment building	Multiple dwelling
	Other use	No defined use	Dwelling unit
Accommodation (short-term)	Hotel	Hotel (residential component);	Hotel (residential component)
	Resort complex	Tourist Accommodation	Resort complex (residential component)
	Short-term accommodation	Tourist accommodation	Short-term accommodation
	Tourist park	Tourist park	Tourist park
Accommodation (long-term)	Community residence	Aged persons and special needs housing (community residence)	Community residence
	Relocatable home park	Mobile home park	Relocatable home park
	Retirement facility	Aged persons and special needs housing (independent)	Retirement facility

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Rooming accommodation	No defined use	Rooming accommodation
	Other use	No defined use	Educational establishment (on-site accommodation); Non-resident workforce accommodation ; Rural worker's accommodation
Non-residential use			
Places of assembly	Club	No defined use	Club
	Community use	Community facility	Community use
	Function facility	Indoor recreation facility (function or convention centre)	Function facility
	Funeral parlour	Funeral parlour	Funeral parlour
	Place of worship	Place of worship	Place of worship
Commercial (bulk goods)	Agricultural supplies store	Produce store	Agricultural supplies store
	Bulk landscape supplies	Landscape supply depot	Bulk landscape supplies
	Garden centre	Garden centre	Garden centre
	Hardware and trade supplies	Display and sales activity	Hardware and trade supplies
	Outdoor sales	Display and sales activity	Outdoor sales
	Showroom	Bulky goods showroom	Showroom
Commercial (retail)	Adult store	Shop (adult store)	Adult store
	Food and drink outlet	Refreshment establishment; Drive through restaurant	Food and drink outlet

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Service industry	Service industry	Service industry
	Service station	Service station	Service station
	Shop	Shop; Retail warehouse	Shop
	Shopping centre	Shop	Shopping centre
	Other uses	Car wash facility	Car wash
Commercial (office)	Office	Commercial office	Office
Education facility	Child care centre	Child care centre	Child care centre
	Community care centre	Community facility (welfare centre, community health centre or respite care centre)	Community care centre
	Educational establishment	Education facility	Education
Entertainment	Hotel (non-residential component)	Hotel (non-residential component)	Hotel (non-residential component)
	Nightclub entertainment facility	Nightclub	Nightclub entertainment facility
	Resort complex	Indoor recreation facility (other than a theatre or cinema); Outdoor recreation facility	Resort complex
	Theatre	Indoor recreation facility (theatre or cinema)	Theatre
	Other uses	No defined use	Bar
Indoor sport and recreational	Indoor sport and recreation	Indoor recreation facility (sport and recreation)	Indoor sport and recreation

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
Industry	Low impact industry	Vehicle repair premises	Low impact industry
	Medium impact industry	General industry	Medium impact industry
	Research and technology industry	No defined use	Research and technology industry
	Rural industry	Rural enterprise	Rural industry
	Warehouse	Warehouse	Warehouse
	Marine industry	Marine services (other than a marina or ferry terminal)	Marine industry
	Other uses	Vehicle depot	Transport depot
High impact industry	High impact industry	Heavy industry	High impact industry
	Special industry	High impact industry	Special industry
Low impact rural	Animal husbandry	Agriculture (livestock production and dairying)	Animal husbandry
	Cropping	Agriculture (horticulture)	Cropping
	Permanent plantation	Forestry	Permanent plantation
	Wind farm	Utility installation (wind farm)	Renewable energy facility
High impact rural	Cultivating, in a confined area, aquatic animals and plants for sale	Intensive agriculture (aquaculture)	Aquaculture
	Intensive animal industry	Intensive agriculture (livestock production)	Intensive animal industry
	Intensive horticulture	Intensive agriculture (horticulture)	Intensive horticulture

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Wholesale nursery	No defined use	Wholesale nursery
	Winery	General industry (food processing)	Winery
Essential services	Correctional facility	Institution	Correctional facility
	Emergency services	Emergency services	Emergency services
	Health care services	Health care centre	Health care services
	Hospital	Hospital	Hospital
	Residential care facility	Aged persons and special needs housing (residential care facility)	Residential care facility
	Veterinary service	Veterinary surgery	Veterinary service
Other uses	Air services	Airport	Air services
	Animal keeping	Animal keeping	Animal keeping
	Car park	Vehicle parking station	Parking station
	Crematorium	Funeral parlour (crematorium)	Crematorium
	Extractive industry	Extractive industry	Extractive industry
	Major sport, recreation and entertainment facility	No defined use	Major sport, recreation and entertainment facility
	Motor sport	No defined use	Motor sport
	Non-resident workforce accommodation	No defined use	Non-resident workforce accommodation
	Outdoor sport and recreation	Outdoor recreation facility (including ancillary club)	Outdoor sport and recreation

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Port service	Marine services	Port services
	Tourist attraction	No defined use	Tourist attraction
	Utility installation	Utility installation; Minor utility; Passenger terminal (other than a port)	Utility installation
	Any other use not listed in column 2, including a use that is unknown	Brothel; Outdoor dining; Small lot house	Brothel; Environment facility; Major electricity infrastructure; Nature-based tourism; Substation
Minor uses	Advertising device	No defined use	No defined use
	Cemetery	Cemetery	Cemetery
	Home based business	Home business; Bed and breakfast	Home based business
	Landing	Marine services	Landing
	Market	Shop (market)	Market
	Outdoor lighting	No defined use	No defined use
	Park	Park	Park
	Roadside stall	Roadside stall	Roadside stall
	Sales office	Display dwelling; Estate sales office	Sales office
	Telecommunications facility	Telecommunications facility	Telecommunications facility
	Temporary use	Temporary use	Temporary use
	Other use	No defined use	Outstation

Schedule 4 Applied adopted charges for particular uses

Column 1 **Charges category under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 3** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*	**Column 4** **Applied local government adopted charge ($ per demand unit)**	**Column 5** **Applied SEQ service provider proportion of prescribed amount ($ per demand unit)**
Accommodation (long-term)	Aged persons and special needs housing (being semi-dependent retirement villages, nursing homes, respite centres, hostels, group homes and the like as defined in the planning scheme)	Community residence (being semi dependent as defined in this resolution) or Retirement facility (being semi-dependent as defined in this resolution)	9,895 per suite (with 1 or 2 bedrooms)	2,630 per suite (with 1 or 2 bedrooms)
			13,854 per suite (with 3 or more bedrooms)	3,683 per suite (with 3 or more bedrooms)
			9,895 per bedroom (for a bedroom which is not within a suite)	2,630 per bedroom (for a bedroom which is not within a suite)
	Aged persons and special needs housing (being dependent retirement villages, nursing homes, respite centres, hostels, group homes and the like as defined in the planning scheme)	Retirement facility (being dependent as defined in this resolution)	8,625 per suite (with 1 or 2 bedrooms)	2,293 per suite (with 1 or 2 bedrooms)
			12,075 per suite (with 3 or more bedrooms)	3,210 per suite (with 3 or more bedrooms)
			8,625 per bedroom (for a bedroom which is not within a suite)	2,293 per bedroom (for a bedroom which is not within a suite)
Commercial (bulk goods)	Produce store (if in the Rural Non-urban Zone) where not connected to a SEQ service provider trunk infrastructure network	Agricultural supplies store (if in the Rural Non-urban Zone) where not connected to a SEQ service provider trunk infrastructure network	63.30 per m^2 GFA plus 0 per impervious m^2 for stormwater	Nil

Column 1 **Charges category under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 3** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*	**Column 4** **Applied local government adopted charge ($ per demand unit)**	**Column 5** **Applied SEQ service provider proportion of prescribed amount ($ per demand unit)**
	Produce store (if in the Rural Non-urban Zone) where connected to a SEQ service provider trunk infrastructure network	Agricultural supplies store (if in the Rural Non-urban Zone) where connected to a SEQ service provider trunk infrastructure network	62.10 per m^2 GFA plus 0 per impervious m^2 for stormwater	0.63 per m^2 GFA

Editor's note – The rates in this schedule are derived from typical charge for the respective use types calculated using the former Planning Scheme Policy 3 Contributions and Security Bonding (Redland Planning Scheme version 4.1) and indexed periodically.

Schedule 5 Identified trunk infrastructure criteria for conversion applications

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
Local government trunk infrastructure networks	
Transport trunk infrastructure network	**Local roads trunk infrastructure** Trunk infrastructure for the local roads network includes land and work limited to the following infrastructure items identified in the LGIP: (a) new and upgraded major roads being arterial, sub-arterial and major collector roads; and (b) within a major road, associated intersections, traffic lights, islands, signage, barriers, road marking, lighting, bridges, culverts, kerb and channel, local road drainage, pedestrian footpaths and cycleways within the road reserve and on road cycleways provided in accordance with Redland City Council guidelines. Trunk infrastructure for the local roads network does not include land and work for the following: (a) upgrades of a State-controlled road; (b) upgrades of a major road that is primarily related to serving a development of a premises, such as an acceleration or deceleration lane, turn lanes or traffic signals that primarily serve traffic entering or exiting the development project; (c) an existing trunk road infrastructure item; (d) upgrades of a local government road (non major road) other than a major road; (e) upgrades of a non major road, other than work for an intersection of a major road and a non major road if the work expands the capacity of the major road; (f) road infrastructure that is limited to performing one of the following functions: (i) road infrastructure that is internal to a development; or (ii) road infrastructure that connects a development to the external road infrastructure network.

<table>
<tr><th>Column 1
Trunk infrastructure network</th><th>Column 2
Identified trunk infrastructure criteria</th></tr>
<tr><td colspan="2">Local government trunk infrastructure networks</td></tr>
<tr><td></td><td>
Cycleways trunk infrastructure

Trunk infrastructure for the cycleways and shared pathway network includes land and work for primary and strategic on-road and off-road linkages limited to the following infrastructure items identified in the LGIP:

(a) Primary Cycle and Pedestrian Network; and
<table>
<tr><th colspan="2">PRIMARY CYCLING AND PEDESTRIAN NETWORK</th></tr>
<tr><th>Network Type</th><th>Network Component</th></tr>
<tr><td>On-Road</td><td>Road Corridor linkages:</td></tr>
<tr><td></td><td>• Within major Council roads being arterial, sub-arterial and major collector roads</td></tr>
<tr><td></td><td>• Dedicated cycle lanes which provide a framework to connect principal and major centers city-wide</td></tr>
<tr><td></td><td>• South East Queensland Principal Cycle Network (Redland City) within local road reserves</td></tr>
<tr><td>Off-Road</td><td>Road Corridor Linkages</td></tr>
<tr><td></td><td>• Within major Council roads being arterial, sub-arterial and major collector roads</td></tr>
<tr><td></td><td>• Shared path links to connect principal and major centers</td></tr>
<tr><td></td><td>Road Corridor & Open Space Linkages</td></tr>
<tr><td></td><td>• South East Queensland Principal Cycle Network (Redland City) within local road reserves</td></tr>
<tr><td></td><td>• Moreton Bay Cycleway</td></tr>
<tr><td></td><td>• Strategic tourist routes</td></tr>
<tr><th colspan="2">LOCAL CYCLING AND PEDESTRIAN NETWORK</th></tr>
<tr><th>Network Type</th><th>Network Component</th></tr>
<tr><td>On-Road</td><td>Road Corridor linkages:</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Column 1
Trunk infrastructure network</th><th>Column 2
Identified trunk infrastructure criteria</th></tr>
<tr><td colspan="2">Local government trunk infrastructure networks</td></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>Dedicated cycle lanes connecting township and suburb catchments</td></tr>
<tr><td></td><td>Dedicated on-road cycle lanes connecting local and district shopping centers, secondary schools and key employment nodes</td></tr>
<tr><td>Off-Road</td><td>Road Corridor Linkages:</td></tr>
<tr><td></td><td>Shared paths connecting township and suburb catchments</td></tr>
</table>
(b) associated lighting, culverts, bridges, directional information signage and surface marking.

Trunk infrastructure for the cycleways and shared pathway network does not include the following on-road and off-road cycleway and pedestrian infrastructure:

(a) cycleways and pedestrian pathways within the road reserve of a State controlled road;

(b) an existing trunk cycleway or shared pathway infrastructure item;

(c) cycleway and shared pathway infrastructure that is limited to performing one of the following functions:

(i) cycleway and shared pathway infrastructure that is internal to a development; or

(ii) cycleway and shared pathway infrastructure that connects a development to the external cycleway and shared pathway infrastructure network.</td></tr>
<tr><td></td><td>Public transport (bus stops)

Trunk infrastructure for the bus stops network includes work limited to the following infrastructure items identified in the LGIP:

(a) within major Council roads being arterial, sub-arterial and major collector roads, associated bay, shelter, gutter mesh, electrical connection, seating, and transport information signage provided in accordance with Redland City Council guidelines</td></tr>
</table>

Column 1 Trunk infrastructure network	Column 2 Identified trunk infrastructure criteria
Local government trunk infrastructure networks	
	and Disability Standards for Accessible Public Transport; and (b) serving a minimum catchment of 800 EP within 400m of the bus stop. Trunk infrastructure for the bus stops network does not include work for the following: (a) an existing trunk bus stop infrastructure item; (b) public transport infrastructure that is limited to performing one of the following functions: (i) public transport infrastructure that is internal to a development; or (ii) public transport infrastructure that connects a development to the external public transport network.
Public parks and land for community facilities trunk infrastructure network	**Public parks trunk infrastructure** Trunk infrastructure for the public parks network being land and work for destination, community, neighbourhood and sporting parks for formal and informal recreation and sporting purposes limited to the infrastructure items identified in the LGIP. Trunk infrastructure for the public parks network does not include land and works for the following: (a) land and work for parks which exceed the desired standards of service stated in the LGIP; (b) an existing park infrastructure item; (c) parks infrastructure that is limited to performing one of the following functions: (i) parks infrastructure that is internal to a development; or (ii) parks infrastructure that connects a development to the external parks network.
	Land for community facilities trunk infrastructure Trunk infrastructure for the land for community facilities network including land and basic work associated with site

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
Local government trunk infrastructure networks	
	clearing and connection to services for community facilities limited to the infrastructure items identified in the LGIP. Trunk infrastructure for the land for community facilities network does not include land and basic work for the following: (a) an existing community facilities infrastructure item; or (b) land and basic work for community facilities infrastructure that performs one of the following functions: (i) land and basic work for community facilities infrastructure that is internal to a development; or (ii) land and basic work for community facilities infrastructure that connects a development to the external land for community facilities network.
Stormwater trunk infrastructure network	**Stormwater trunk infrastructure** Trunk infrastructure for the stormwater network being land and work limited to the following items identified in the LGIP: (a) stormwater infrastructure with capacity to service multiple premises not subject to the same or related development approval; (b) piped drainage necessary to service an upstream post development urbanised catchment greater than 1ha in size and associated manholes, culverts, inlets, outlets, and scour protection; and (c) regional stormwater quality improvement devices, retention basins, detention basins and gross pollutant traps. Trunk infrastructure for the stormwater network does not include land and work for the following: (a) trunk infrastructure already included in local road network; (b) an existing stormwater infrastructure item;

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
Local government trunk infrastructure networks	
	(c) minor stormwater piped drainage less than the minimum size stated in QUDM to be contributed to local governments; (d) inter-allotment drainage; (e) bank stabilisation, erosion protection and revegetation which is the direct result of the increase in demand caused by the development; (f) stormwater infrastructure that performs one of the following functions: (i) stormwater infrastructure that is internal to a development; or (ii) stormwater infrastructure that connects a development to the external stormwater infrastructure network.

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
SEQ service provider trunk infrastructure networks	
Water supply trunk infrastructure network	Water supply trunk infrastructure Trunk infrastructure for the water supply network including land and work limited to the following items identified in the LGIP: (a) water treatment plants; (b) the following distribution mains which satisfy the function and purpose of the water supply trunk infrastructure network: (i) for the Mainland and Southern Moreton Bay Islands, all mains of 300 mm diameter or more and specific mains of smaller diameter required to complete the interconnection of the trunk network; (ii) for the North Stradbroke Island townships, mains of 200 mm diameter or more connecting water treatment plants to reservoir complexes or township boundaries, and mains connecting

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
SEQ service provider trunk infrastructure networks	
	reservoir complexes and high level zones (either pump boosted zones or elevated reservoir zones); and (c) for a trunk distribution mains: (i) associated pump stations and fittings; (ii) associated pressure reducing and sustaining valves; (iii) associated monitoring systems; and (d) firefighting devices; and (e) storages. Trunk infrastructure for the water supply network does not include land and work for the following: (a) minor water reticulation mains less than 300 mm diameter on the mainland and 200 mm diameter on North Stradbroke Island; (b) an existing water supply infrastructure item; (c) water supply infrastructure that performs one of the following functions: (i) water supply infrastructure that is internal to a development; or (ii) water supply infrastructure that connects a development to the external water supply infrastructure network.
Sewerage trunk infrastructure network	**Sewerage trunk infrastructure** Trunk infrastructure for the sewerage network including land and work limited to the following items identified in the LGIP: (a) rising mains not associated with private sewerage pump stations; and (b) reuse transport mains; and (c) gravity sewers on the mainland which service a minimum 800 ET; and

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
SEQ service provider trunk infrastructure networks	
	(d) gravity sewers on the mainland which provide a connecting function between an upstream trunk maintenance structure and downstream trunk maintenance structure; and (e) gravity sewers on North Stradbroke Island which service a minimum 400 ET; and (f) gravity sewers on North Stradbroke Island which provide a connecting function between an upstream trunk maintenance structure and downstream trunk maintenance structure; and (g) pump stations (excluding private pump stations), manholes and fittings associated with a trunk gravity sewer; and (h) odour and corrosion control systems; and (i) monitoring systems associated with a trunk item; and (j) sewerage treatment plants, storage facilities, release systems and associated monitoring systems. Trunk infrastructure for the sewerage network does not include land and work for the following: (a) minor sewage reticulation mains augmenting another gravity sewer as specified under subparagraphs (d) or (f) above; (b) an existing sewer infrastructure item; (c) sewerage infrastructure that performs one of the following functions: (i) sewerage infrastructure that is internal to a development; or (ii) sewerage infrastructure that connects a development to the external sewerage infrastructure network.

Schedule 6 Planned cost for trunk infrastructure networks

Column 1 Trunk infrastructure network	Column 2 Land	Column 3 Work
Local government trunk infrastructure networks		
Local road network	The value of the land cost stated in the LGIP for the transport network.	The value of the required work less the value of any existing road infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the transport network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.
Cycleways network	The value of the land cost stated in the LGIP for the transport network.	The value of the required work less the value of any existing cycleway and shared path infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the transport network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.
Public transport (bus stops)	The value of the land cost stated in the LGIP for the transport network.	The value of the required work less the value of any existing public transport (bus stop) infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the transport network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.

Column 1 Trunk infrastructure network	Column 2 Land	Column 3 Work
Local government trunk infrastructure networks		
Public parks network	The value of the land cost stated in the LGIP for the Public parks network.	The value of the required work less the value of any existing public parks infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the public parks network and this resolution: (a) if only land preparation is required—the value of the site preparation; (b) if otherwise—the value of: (i) direct construction and embellishment cost; and (ii) construction on cost stated in Schedule 7.
Land for community facilities network	The value of the land cost stated in the LGIP for the land for community facilities network.	The value of the required basic work stated in the LGIP for land for community facilities network and this resolution: (a) site preparation; and connection to services (direct construction cost); (b) construction on cost stated in Schedule 7.
Stormwater network	The value of the land cost stated in the LGIP for the stormwater network.	The value of the required work less the value of any existing stormwater infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the stormwater network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.

Column 1 **Trunk infrastructure network**	**Column 2** **Land**	**Column 3** **Work**
SEQ service provider trunk infrastructure networks		
Water supply network	The value of the land cost stated in the LGIP for the water supply network.	The value of the required work less the value of any existing water supply infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the water supply network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.
Sewerage network	The value of the land cost stated in the LGIP for the sewerage network.	The value of the required work less the value of any existing sewerage infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the sewerage network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.

Schedule 7 Maximum construction on costs for work

Column 1 **Trunk infrastructure network**	**Column 2** **Maximum construction on costs for work** **(Percentage of the construction cost for the work)**
Local government trunk infrastructure networks	
Local road network	11
Cycleways network	11
Public parks network	11
Land for community facilities network	11
Stormwater network	11
SEQ service provider trunk infrastructure networks	
Water supply network	11
Sewerage network	11

Attachment 1 – Amendments to Adopted Infrastructure Charges Resolution (No. 3.2) 2023

Introduction

The following document details the proposed changes to the Adopted Infrastructure Charges Resolution (No. 3.2) 2023.

Not all sections of the Adopted Infrastructure Charges Resolution are proposed to be amended.

Any consequential amendments required to formatting, numbering etc. will be undertaken as required and will not be specifically noted in the amendments below.

Conventions

In this document all proposed changes to the Adopted Infrastructure Charges Resolution are highlighted in yellow.

Where sections are highlighted in yellow and have a strikethrough line, this indicates where text/numbers are proposed to be deleted.

~~Deleted text appears like this.~~

Where sections are highlighted in yellow but do not have a strikethrough line this indicates where new text/numbers are proposed to be inserted.

Inserted words appear like this.

Where a section or numbered item has been deleted or a new item inserted subsequent sections will need to be renumbered appropriately.

Redland City Council

Adopted Infrastructure Charges Resolution (No. 3.~~2~~3) ~~20232025~~

Redland City Council

Adopted Infrastructure Charges Resolution (No. 3.~~23~~) ~~2023~~2025

Contents

Part 1 Introduction ***1***

1. Short title 1
2. Commencement 1
3. *Planning Act* 2016 1
4. Purpose 1
5. Interpretation 2

Part 2 Adopted charges ***3***

6. Purpose of Part 2 3
7. Adopted charges 3
8. Trunk infrastructure networks for the adopted charges 3
9. Applicable date for the adopted charges 4
10. Applicable area for the adopted charges 4
11. Applicable uses for the adopted charges 4

Part 3 Levied charges ***5***

12. Purpose of Part 3 5
13. Applicable development for the levied charge 5
14. Working out the levied charge 6
15. Working out the applied adopted charge 7
16. Working out the extra demand 7
17. Working out the discount for the prescribed financial contribution 9
18. Working out the automatic increase 10

Part 4 Offset and refund for trunk infrastructure ***11***

19. Purpose of Part 4 11
20. Working out the establishment cost 12
21. Initial calculation of the establishment cost for required work 12
22. Cost-based estimate of the establishment cost for required work 13
23. Initial calculation of the establishment cost for required land 15
24. Current market value of required land 17
25. Recalculation of the establishment cost for required work 20

26. Recalculation of the establishment cost for required land 25

27. Application of an offset and refund 29

28. Details of an offset and refund 29

29. Timing of an offset and refund 29

Part 5 Conversion applications *33*

30. Purpose of Part 5 33

31. Conversion criteria 33

32. Conversion applications 33

Part 6 Extra trunk infrastructure costs *34*

33. Purpose of Part 6 34

34. Payment of extra trunk infrastructure costs 34

Schedule 1 Dictionary *35*

Schedule 2 Adopted charges *42*

Schedule 3 Applicable uses under the planning scheme *54*

Schedule 4 Applied adopted charges for particular uses *61*

Schedule 5 Identified trunk infrastructure criteria for conversion applications *63*

Schedule 6 Planned cost for trunk infrastructure networks *71*

Schedule 7 Maximum construction on costs for work *74*

Redland City Council

Adopted Infrastructure Charges Resolution (No. 3.23) 20232025

Part 1 Introduction

1. Short title

This resolution may be cited as Redland City Council Adopted Infrastructure Charges Resolution (No. 3.23) 20232025 (***the resolution***).

2. Commencement

This resolution has effect on and from 20 September 202317 December 2025.[1]

3. *Planning Act* 2016

(1) This resolution is a charges resolution made under the *Planning Act 2016* (***Planning Act***) by Redland City Council as the following:

(a) the local government, for the local government trunk infrastructure networks;

(b) the SEQ service provider, for the SEQ service provider trunk infrastructure networks.

Editor's note—See Section 113 of the Planning Act.

(2) This resolution is to be read in conjunction with the following:

(a) the *Planning Regulation 2017* (***Planning Regulation***);

(b) the *IPA* planning scheme and the *SPA* planning scheme.

(3) This resolution is attached to but does not form part of the *IPA* or *SPA* planning scheme.

Editor's note—See Section 118(1) of the Planning Act.

4. Purpose

The purpose of this resolution is to state the following:

(1) the adopted charges for providing the local government trunk infrastructure networks and SEQ service provider trunk infrastructure networks for development;

[1] The making of this resolution by the local government was first uploaded to the Council's website on 20 September 2023 17 December 2025.

(a) the charges to be levied by Redland City Council for development for the demand placed on Redland City Council trunk infrastructure networks and SEQ service provider trunk infrastructure networks;

(b) matters relevant to the working out of an offset and refund for a trunk infrastructure contribution for Redland City Council trunk infrastructure networks and SEQ service provider trunk infrastructure networks for development;

(c) how the payment of extra trunk infrastructure costs for development is to be worked out and required.

5. Interpretation

(1) The dictionary in Schedule 1 defines words used in this resolution.

(2) A word not defined in this resolution which is defined in the *Planning Act* has the meaning given in the *Planning Act*.

(3) A word not defined in this resolution or the *Planning Act* has the meaning given to it by the edition of the Macquarie Dictionary that is current at the date this resolution takes effect, subject to Section 14A of the *Acts Interpretation Act 1954* and Section 14 of the *Statutory Instruments Act 1992*.

Editor's note—Section 14A(1) of the Acts Interpretation Act 1954, which provides that in the interpretation of a provision of an Act the interpretation that will best achieve the purpose of the Act is to be preferred to any other interpretation, applies to a statutory instrument under Section 14 of the Statutory Instruments Act 1992.

(4) The extrinsic material for the *local government infrastructure planning instrument* (LGIP) is to be used as an aid in the interpretation of this resolution where it assists in resolving any ambiguity in the operative provisions (in particular in the interpretation of Parts 4 and 5).

Part 2 Adopted charges

6. Purpose of Part 2

Part 2 states the following:

(1) the adopted infrastructure charges for providing trunk infrastructure networks for development (***adopted charge***);

(2) the ***trunk infrastructure networks***, which are the following:

(a) the trunk infrastructure for the transport, public parks and land for community facilities and stormwater infrastructure network (***local government trunk infrastructure networks***);

(b) the trunk infrastructure for the SEQ service provider's water service and wastewater service (***SEQ service provider's trunk infrastructure networks***);

(3) the date the adopted charges take effect (***applicable date***);

(4) the part of the local government area to which the adopted charges apply (***applicable area***);

(5) the uses to which the adopted charges apply (***applicable use***).

7. Adopted charges

The adopted charges are stated in Schedule 2 and Schedule 4 for the following:

(1) for the local government, for providing the local government trunk infrastructure networks;

(2) for the SEQ service provider, for providing the SEQ service provider trunk infrastructure networks.

Editor's note—See Section 113(1) of the Planning Act.

8. Trunk infrastructure networks for the adopted charges

The trunk infrastructure networks are specified in an ***infrastructure planning instrument*** which comprises the following:

(1) the *local government infrastructure planning instrument*—the (LGIP);

(2) the SEQ service provider infrastructure planning instrument—the following:

(a) the SEQ service provider's water netserv plan under the SEQ Water Act;

(b) Redland City Council's LGIP, if subsection (a) is not applicable.

Editor's note—Section 14B(1) of the Acts Interpretation Act 1954, which provides that the interpretation of a provision of an Act, consideration may be given to extrinsic material capable of assisting in the interpretation, applies to a statutory instrument under Section 14 of the Statutory Instruments Act 1992.

9. Applicable date for the adopted charges

(1) The applicable date for the adopted charges is the day this resolution has effect.

Editor's note—See Section 113(4) of the Planning Act.

(2) For the avoidance of doubt the adopted infrastructure charges for providing trunk infrastructure networks in effect immediately before the making of this resolution remain in effect immediately before the applicable date.

10. Applicable area for the adopted charges

(1) The applicable area for the adopted charges is all of the local government area.

Editor's note— See Section 114(2) of the Planning Act.

11. Applicable uses for the adopted charges

(1) The applicable uses under the *IPA* planning scheme and the *SPA* planning scheme to which the adopted charges apply are stated in Schedule 3.

(2) Redland City Council is to include a use under the *IPA* planning scheme and the *SPA* planning scheme which is included in the 'Other uses' charge category in Schedule 3, column 1 in a charge category permitted under the *Planning Regulation*, Schedule 16, based on an assessment of the use and the demand placed upon the trunk infrastructure networks.

(3) Redland City Council has indicatively included the uses under the *IPA* planning scheme and *SPA* planning scheme in Schedule 3, column 3 and column 4 which are identified as an 'Other use' in Schedule 3, column 2 in the charge category permitted under the *Planning Regulation*, Schedule16, stated in Schedule 3, column 1, subject to an assessment of the use and the demand placed upon the trunk infrastructure networks.

Editor's note—See Schedule 16 of the Planning Regulation.

Part 3 Levied charges

12. Purpose of Part 3

Part 3 states the following:

(1) the applicable development for which adopted charges may be levied by Redland City Council for development for the demand placed upon the respective trunk infrastructure network by the development (***levied charge***);

(2) the method to be applied by Redland City Council for working out the levied charge including the following:

(a) the adopted charge to be applied (***applied adopted charge***);

(b) the extra demand placed upon the respective trunk infrastructure network which will be generated by the development (***extra demand***);

(c) the discount to be applied for a financial contribution (***prescribed financial contribution***):

(i) provided for in relation to a trunk infrastructure network under a planning scheme policy of Redland City Council;

(ii) required by a condition of a previous development approval given by Redland City Council before 1 July 2011 and which has not lapsed;

(iii) which has been paid to Redland City Council or otherwise satisfied under an infrastructure agreement between the applicant for the previous development approval and Redland City Council for the provision of land, work or money for a trunk infrastructure network;

(iv) which has not been reimbursed or otherwise previously applied against another financial contribution; and

(v) where the demand placed upon the trunk infrastructure network for which the financial contribution was paid has not been taken up by an existing lawful use or previous lawful use for which the financial contribution was paid;

(3) the method to be applied by Redland City Council for working out the increase in the levied charge from the day the levied charge is levied to the day the levied charge is paid (***automatic increase***).

13. Applicable development for the levied charge

(1) A levied charge may be levied for the following development:

(a) reconfiguring a lot;

(b) material change of use of premises;

(c) carrying out of building work.

Editor's note—See Section 119 of the Planning Act and Section 52(3)(a) of the Planning Regulation.

(2) A levied charge is not to be levied for the following:

(a) development in the following:

(i) a priority development area under the *Economic Development Act 2012*;

(ii) core port land under the Transport Infrastructure Act 1994;

(iii) an airport site under the *Airports Act 1996*;

(b) work or use of premises authorised under the Mineral Resources Act 1989, the Petroleum Act 1923, the Petroleum and Gas (Production and Safety) Act 2004 or the Greenhouse Gas Storage Act 2009;

(c) development by a department, or part of a department, under a designation;

(d) development for a non-State school under a designation.

Editor's note—See Section 113(3) of the Planning Act.

Editor's note—For Section 13(2)(d), 'non-State school' is defined in Section 6 of the Education (Accreditation of Non-State Schools) Act 2017.

14. Working out the levied charge

(1) The levied charge for the development is to be worked out by Redland City Council as follows:

LC = (AC x *ED) - D*

Where:

LC is the levied charge for the development, which cannot be less than zero.

AC is the applied adopted charge for the development worked out under Section 15.

ED is the extra demand placed on trunk infrastructure generated by the development, worked out under Section 16.

D is the discount for the prescribed financial contribution worked out under Section 17.

(2) The levied charge is to be worked out for the respective trunk infrastructure network as follows:

(a) for each of the local government trunk infrastructure networks as identified in the LGIP; and

(b) for each of the SEQ service provider trunk infrastructure networks.

15. Working out the applied adopted charge

The applied adopted charge for the development is to be worked out by Redland City Council for the respective trunk infrastructure network by applying the following:

(1) the applied adopted charge for particular uses in Schedule 4, if Redland City Council considers that it should be applied having regard to the extra demand placed upon the respective trunk infrastructure network which will be generated by the development; or

(2) the adopted charge in Schedule 2, if subsection (b) does not apply.

16. Working out the extra demand

(1) The extra demand placed on trunk infrastructure that is generated by the development is to be worked out by Redland City Council for the respective trunk infrastructure network as follows:

ED = DD - DC

Where:

ED is the extra demand placed on trunk infrastructure that is generated by the development.

DD is the demand placed upon the respective trunk infrastructure network which will be generated by the development (***development demand***).

DC is the demand placed upon the respective trunk infrastructure network generated by previous development prescribed in subsection (3) if applicable (***demand credit***).

(2) The development demand is worked out using the relevant unit of calculation for an adopted charge for the development in Schedule 2 and Schedule 4 (***demand unit***).

(3) The demand credit for previous development is to be worked out using the following:

(a) for a proposed material change of use or building work, the greater of the following:

(i) if the premises is subject to an existing use which is lawful and already taking place on the premises (***existing lawful use***) that places demand upon the respective trunk infrastructure network, the demand generated for the existing lawful use using the applicable demand units for the use;

(ii) if the premises is subject to a previous use which was lawful at the time it was carried out and is no longer taking place on the premises (***previous lawful use***) that placed demand upon the respective trunk infrastructure network, the demand generated for the previous lawful use using the applicable demand units for the use;

(b) for a proposed reconfiguring a lot or vacant land for a proposed material change of use or building work, the demand generated for each existing lot

of the premises which is serviced by the respective trunk infrastructure network;

(c) for demand generated by other development on the premises if at the time of working out the demand credit the other development may be lawfully carried out without the need for a further development permit (including, without limitation, a development permit for development other than a material change of use of premises), using the applicable demand units for the other development.

Editor's note—See Section 120(2) of the Planning Act.

(4) The demand credit under subsection (3) is to be worked out by Redland City Council prior to the time for the giving of the relevant approval to which the levied charge applies as follows:

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) an applicant which is seeking the demand credit is to:

(i) give a notice in the prescribed form to Redland City Council which provides evidence of the existing lawful use or previous lawful use and the calculation of the demand credit; and

(ii) pay the prescribed fee;

Editor's note—The prescribed fee may include the Redland City Council's costs for determining the demand credit.

(b) Redland City Council is to:

(i) determine if a demand credit is applicable to the development;

(ii) work out the demand credit if applicable; and

(iii) allocate the demand credit to the part of the premises where:

A. in the case of a demand credit referred to in subsection (3)(a)(i), the part of the premises where the existing lawful use physically is taking place;

B. in the case of a demand credit referred to in subsection (3)(a)(ii), the part of the premises where the previous lawful use physically took place;

C. in the case of a demand credit referred to in subsection (3)(b), the part of the premises where the existing lot physically is located;

D. in the case of a demand credit referred to in subsection (3)(c), the part of the premises where the relevant development physically may occur; and

(iv) give a notice to the applicant stating the outcome of Redland City Council's determination.

Editor's note—The notice may be given in an infrastructure charges notice.

(5) A demand credit is only to be provided to a maximum amount equal to the development demand.

17. Working out the discount for the prescribed financial contribution

(1) The amount of the discount for the prescribed financial contribution is to be worked out by Redland City Council as follows:

D = PFC - (AC x DC)

Where:

D is the discount which cannot be less than zero.

PFC is the amount of the prescribed financial contribution.

AC is the applied adopted charge for the proposed development worked out under Section 15a.

DC is the demand credit if applicable worked out under Section 16.

(2) The discount for the prescribed financial contribution is to be worked out by Redland City Council prior to the time for the giving of the relevant approval to which the levied charge applies as follows:

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) an applicant which is seeking the discount for the prescribed financial contribution is to:

(i) give a notice in the prescribed form to Redland City Council which provides evidence of the prescribed financial contribution and the calculation of the discount; and

(ii) pay the prescribed fee;

Editor's note—The prescribed fee may include the Redland City Council's costs for determining the discount for the prescribed financial contribution.

(b) Redland City Council is to:

(i) determine if the discount for a prescribed financial contribution is applicable to the development;

(ii) work out the discount for the prescribed financial contribution if applicable; and

(iii) give a notice to the applicant stating the outcome of Redland City Council's determination.

Editor's note—The notice may be given in an infrastructure charges notice.

18. Working out the automatic increase

(1) The automatic increase of the levied charge is to be worked out by Redland City Council as the amount which is equal to the increase calculated by using the index stated in the *Planning Act*.

Editor's note—See Section 114(3)(b), (4), (5) and (6) of the Planning Act.

Editor's note—For a levied charge payable under an adopted infrastructure charges notice, see Section 648D(9)(a) of the Sustainable Planning Act 2009 as in force immediately before 4 July 2014..

Editor's note—For a levied charge payable under an infrastructure charges notice under the Sustainable Planning Act 2009, see Section 631(3)(b) and (4) of the Sustainable Planning Act 2009 as in force on 4 July 2014.

(2) However the amount of the automatic increase of the levied charge must not be more than the amount of the increase prescribed by the *Planning Act*.

Editor's note—See Section 114(3)(b), (4), (5) and (6) of the Planning Act.

Editor's note—For a levied charge payable under an adopted infrastructure charges notice, see Section 648D(9)(b) and (10) (of the Sustainable Planning Act 2009 as in force immediately before 4 July 2014.

Editor's note—For a levied charge payable under an infrastructure charges notice under the Sustainable Planning Act 2009, see Section 631(5) and (6) of the Sustainable Planning Act 2009 as in force on 4 July 2014.

Part 4 Offset and refund for trunk infrastructure

19. Purpose of Part 4

Part 4 states the following matters relevant to the working out of an offset or refund for the provision of trunk infrastructure for the respective trunk infrastructure network for development:

(1) the method to be applied by Redland City Council for working out the establishment cost of trunk infrastructure for an offset or refund where an applicant is required under a condition of a relevant approval to provide land or work for the following trunk infrastructure (***trunk infrastructure contribution***):

Editor's note— See Section 116 of the Planning Act.

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) ***identified necessary trunk infrastructure***—development infrastructure which is identified in the respective infrastructure planning instrument;

Editor's note—See Section 128(1)(a) of the Planning Act.

(b) ***different necessary trunk infrastructure***—development infrastructure which:

(i) is an alternative to the identified necessary trunk infrastructure; and

(ii) (B) delivers the same desired standards of service for the network of development infrastructure stated in the respective infrastructure planning instrument;

Editor's note—See Section 128(1)(b) of the Planning Act.

(c) (***other necessary trunk infrastructure***—development infrastructure which is not identified necessary trunk infrastructure or different necessary trunk infrastructure that satisfies the conversion criteria and is necessary to service development;

Editor's note—See Section 128(2) of the Planning Act.

(d) ***prescribed trunk infrastructure***—development infrastructure which is not identified necessary trunk infrastructure, different necessary trunk infrastructure or other necessary trunk infrastructure that becomes trunk infrastructure under the *Planning Act* by way of a conversion application;

Editor's note—See Section 142(3) of the Planning Act.

(2) whether an offset or refund applies and if so the details of the offset and refund and the timing of the offset and refund.

20. Working out the establishment cost

The establishment cost for a trunk infrastructure contribution is to be worked out by Redland City Council using the following:

(1) for the initial calculation of the establishment cost for required work—the method in Section 21;

(2) for the initial calculation of the establishment cost for required land—the method in Section 23;

(3) for the recalculation of the establishment cost for required work calculated—the method in Section 25;

(4) for the recalculation of the establishment cost for required land—the method in Section 26.

Editor's note—See Section 116 of the Planning Act.

21. Initial calculation of the establishment cost for required work

(1) The establishment cost for a trunk infrastructure contribution for work (***required work***) is to be worked out by Redland City Council using any of the following:

(a) the planned estimate—work;

(b) a ***cost-based estimate*** of the establishment cost for the required work using the method in Section 22;

(c) an estimate of the establishment cost for the trunk infrastructure contribution reasonably determined by Redland City Council.

(2) Redland City Council is to have regard to the following matters when deciding whether to use the planned estimate for the work, in working out the establishment cost for the required work:

(a) for identified necessary trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of the item of identified necessary trunk infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of the item of identified necessary trunk infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(b) for different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required work stated in the extrinsic material for the LGIP;

(c) for identified necessary trunk infrastructure, different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the standards and requirements for the required work;

(ii) the impact the required work has on the development potential and value of the premises the subject of the relevant approval.

Editor's note—A relevant approval is a development approval under the Planning Act.

Editor's note—The method used by Redland City Council is to be stated in the infrastructure charges notice.

(3) The planned estimate of the required work *(**planned estimate—work**)* if:

(a) the required work are the whole of an item of identified necessary trunk infrastructure—is the ***planned cost*** being the amount of the value of the item stated in Schedule 6;

(b) the required work are part of an item of identified necessary trunk infrastructure—is the estimate of the proportion of the planned cost of the item of identified necessary trunk infrastructure applicable to the trunk infrastructure contribution having regard to the method used by Redland City Council to work out the planned cost of the item of identified trunk infrastructure stated in the LGIP; and

(c) the required work are different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure—is the estimate of the planned cost of the infrastructure having regard to the method used by Redland City Council to work out the planned cost of the identified necessary trunk infrastructure for the network of development infrastructure stated in the LGIP.

22. Cost-based estimate of the establishment cost for required work

(1) This section is to apply where the establishment cost for the required work is to be worked out by Redland City Council using a cost-based estimate.

(2) The ***cost-based estimate*** for the required work is to:

(a) be determined by using first principles estimating based on the following:

(i) the scope (as determined by Redland City Council) of the required work which includes the following:

A. the standard to which the required work are to be provided;

B. the location of the required work;

C. the quantity of the required work;

(ii) Redland City Council's design and construction requirements for the required work;

(b) exclude the following:

(i) a cost of the planning of the required work;

(ii) a cost of providing temporary infrastructure;

(iii) a cost of providing other infrastructure which is not part of the required work;

(iv) a cost of the decommissioning, removal and rehabilitation of infrastructure identified in subsections (2)(b)(iii) and (2)(b)(iii);

(v) a part of the required work provided by:

A. Redland City Council; or

B. a person, other than the applicant or a person engaged by the applicant;

(vi) a cost to the extent that GST is payable and an input tax credit can be claimed for the required work;

(vii) a cost attributable directly or indirectly to the failure of an applicant or a person engaged by the applicant to perform and fulfil a relevant approval for the required work;

Editor's note—A relevant approval is a development approval under the Planning Act.

(viii) a cost caused or contributed to by a negligent or wilful act or omission by the applicant or a person engaged by the applicant;

(ix) a cost of providing development infrastructure which is only made necessary by the development and does not contribute to the function of the required work;

(x) a cost of providing trunk infrastructure which relates to another development infrastructure network;

(xi) a cost of providing development infrastructure which is replacing existing infrastructure with different infrastructure in another development infrastructure network;

(xii) a cost of providing development infrastructure in excess of the desired standards of service for the network of development infrastructure stated in the LGIP;

(xiii) a cost of existing development infrastructure which services or is planned to service existing or future demand that is replaced by the required work;

(xiv) a cost of maintaining an infrastructure asset where required by a condition of approval;

(xv) a cost associated with risk and contingencies for the required work.

23. Initial calculation of the establishment cost for required land

(1) The establishment cost for a trunk infrastructure contribution for land ***(required land)*** is to be worked out by Redland City Council using one of the following, in the following order:

(a) the planned estimate—land;

(b) the establishment cost for other land previously accepted by Redland City Council ***(other land)*** which, in its opinion, is reasonably consistent with the required land ***(consistent land establishment cost)***—if Redland City Council decides to not use the planned estimate—land, having regard to matters stated in subsection (2);

Editor's note—In forming its opinion on whether the other land is reasonably consistent with the required land, the Redland City Council may have regard to the matters including, but not limited to the following:

- *planning scheme requirements (e.g. zoning, overlays and the LGIP);*
- *infrastructure requirements for the same network as the required land;*
- *timing of the valuation previously accepted;*
- *methodology used to value the other land;*
- *valuation considerations and development constraints which were taken into account in determining the value of the other land.*

(c) the proportion of the rateable value of the parcel of land (of which the required land forms part) ***(proportional value)*** current at the time of working out the establishment cost—if Redland City Council decides to not use a consistent land establishment cost because:

(i) no other land has been previously accepted by Redland City Council;

(ii) Redland City Council does not consider other land is reasonably consistent with the required land;

(d) the current market value of the required land using the method in Section 24—if Redland City Council decides the current market value is more accurate than the proportional value.

(2) Redland City Council is to have regard to the following matters when deciding whether to use the planned estimate—land in working out the establishment cost for the required land:

(a) for identified necessary trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of the item of identified necessary trunk

infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of the item of identified necessary trunk infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(b) for different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the suitability of the method used by Redland City Council to work out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(ii) the relevance of matters which were taken into account and assumptions made in working out the planned cost of items of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required land stated in the extrinsic material for the LGIP;

(c) for identified necessary trunk infrastructure, different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure:

(i) the standards and requirements for the required land;

(ii) the impact the required land has on the development potential and value of the premises the subject of the relevant approval.

Editor's note—A relevant approval is a development approval under the Planning Act.

Editor's note—The method used by Redland City Council is to be stated in the infrastructure charges notice.

(3) The planned estimate for the required land is the estimate of the establishment cost determined as follows ***(planned estimate—land)***, if:

(a) the required land is the whole of an item of identified necessary trunk infrastructure—is the ***planned cost*** being the amount of the value of the item stated in Schedule 6;

(b) the required land is part of an item of identified necessary trunk infrastructure—is the estimate of the proportion of the planned cost of the item of identified necessary trunk infrastructure applicable to the required land having regard to the method used by Redland City Council to work out the planned cost of the item of identified necessary trunk infrastructure stated in the extrinsic material for the LGIP; and

(c) the required land is different necessary trunk infrastructure, other necessary trunk infrastructure or prescribed trunk infrastructure—is the estimate of the planned cost of the infrastructure having regard to the method used by Redland City Council to work out the planned cost of items

of identified necessary trunk infrastructure for the network of development infrastructure applicable to the required land stated in the extrinsic material for the LGIP.

24. Current market value of required land

(1) This section is to apply where the establishment cost for required land is to be worked out by Redland City Council using the current market value of the required land.

(2) The ***current market value*** of the required land is to be determined by using the before and after method of valuation by:

(a) firstly, determining the value ***(original land value)*** of the original land of which the required land forms part ***(original land)*** before the required land is transferred to Redland City Council;

Editor's note—Where the required land is identified in the LGIP, the original land is to be valued:

- *as if the required land had never been identified;*
- *identifying and considering all relevant constraints;*
- *disregarding any change in the value (e.g. through development opportunities) caused, or contributed to, by the identification of the required land in the LGIP; and*
- *on the basis of the highest and best use of the original land by development that is subject to code assessment and strictly complies with all acceptable outcomes.*

Editor's note—Where the required land is not identified in the LGIP, the original land is to be valued:

- *identifying and considering all relevant constraints;*
- *disregarding any perceived change in value caused or contributed by development within the Emerging Community Zone which occurs prior to the Council's approval of a structure plan pursuant to Planning Scheme Policy 5 of the planning scheme; and*
- *on the basis of the highest and best use of the original land by development that is subject to code assessment and strictly complies with all acceptable outcomes.*

(b) secondly, determining the value ***(remaining land value)*** of the land that is not to be transferred to Redland City Council ***(remaining land)***; and

Editor's note— Where the development approval under which the required land is required is for a material change of use of premises, the remaining land is to be valued:

- *identifying and considering all relevant constraints;*
- *where the approved development of the remaining land is:*
  - *the highest and best use of the land—on the basis of the approved development;*
  - *not the highest and best use of the land—on the basis of development that is subject to code assessment and strictly*

complies with all acceptable outcomes disregarding any change in the value (e.g. through development opportunities) caused, or contributed to, by the required land.

Editor's Note—Where the development approval under which the required land is required is not for a material change of use of premises, the remaining land is to be valued:

- *identifying and considering all relevant constraints;*
- *disregarding any change in the value (e.g. through development opportunities) caused, or contributed to, by the required land;*
- *disregarding any perceived change in value caused or contributed by development within the Emerging Community Zone which occurs prior to the Council's approval of a structure plan pursuant to Planning Scheme Policy 5 of the planning scheme; and*
- *on the basis of the highest and best use of the remaining land by development that is subject to code assessment and strictly complies with all acceptable outcomes.*

(c) thirdly, subtracting the remaining land value from the original land value.

(3) The before and after method of valuation is to be undertaken in accordance with the following requirements:

(a) the valuation is to be carried out to determine the current market value that would have applied on the day that is:

(i) where the required land is identified in the LGIP—the day on which the development application, which is the subject of a condition requiring the required land to be provided, first became properly made; or

where the required land is not identified in the LGIP—the day on which the development application, which is the subject of a condition requiring the required land to be provided, was approved;

(b) the valuation is to:

(i) include a report by an appropriately qualified town planner regarding the highest and best use of the original land and the remaining land ***(highest and best use advice)***, which the independent valuation expert has relied on to form an opinion about the value;

Editor's note—The highest and best use of the original land is to be based on development that is subject to code assessment and strictly complies with all acceptable outcomes.

Editor's note—The highest and best use of the remaining land is to be:

- *where the development approval under which the required land is required is for a material change of use of premises–the approved development;*

- *where the development approval under which the required land is required is not for a material change of use of premises– development that is subject to code assessment and strictly complies with all acceptable outcomes.*

(ii) identify the area of the land that is above the Q100 flood level and the area that is below the Q100 flood level;

(iii) identify and consider all other real and relevant constraints including, but not limited to:

A. vegetation protection;

B. ecological values including riparian buffers and corridors;

C. stormwater or drainage corridors;

D. slope;

E. bushfire and landslide hazards;

F. heritage;

G. airport environs;

H. coastal erosion;

I. extractive resources;

J. flooding;

K. land use buffer requirements;

L. tenure related constraints;

M. restrictions such as easements, leases, licences and other dealings whether or not registered on title; and

(iv) contain relevant sales evidence and clear analysis of how those sales and any other information was relied upon in forming the valuation assessment;

(c) the land must be valued using different rates for the unconstrained (developable) component of the land and the constrained (undevelopable) components of the land. More than one rate may apply to unconstrained areas of land or constrained areas of land.

Editor's note—Examples for section 24(3)(c) include but are not limited to:

- *Example 1 – if the area of land to be valued includes land constrained to being used for a recreation park and conservation area it may be appropriate to have separate constrained (undevelopable) rates for the recreation park area and the conservation area.*
- *Example 2 – if the area of land to be valued includes areas of land suitable for residential use and areas constrained to being used for*

major collector road purposes it will be appropriate to use an unconstrained (developable) rate for the residential land and a constrained (undevelopable) rate for the major collector road land.

(d) the valuation is to be undertaken by a certified practising valuer who must act professionally as a neutral and independent expert ***(independent valuation expert)***.

25. Recalculation of the establishment cost for required work

Market cost

(1) The establishment cost for required work may be recalculated by Redland City Council at the request of the applicant by using the market cost for the required work which is to be worked out in accordance with this Section 25.

Editor's note—See Section 137 of the Planning Act.

(2) The ***market cost*** for the required work is the estimate of the cost of the design and construction of the required work stated in the contract for construction for the required work:

(a) including the following:

(i) the direct construction cost or the direct embellishment cost of plant, material and labour for the required work for the required work;

(ii) the indirect construction cost or the indirect embellishment cost for the required work limited to the contractor overheads related to the required work which do not exceed the maximum indirect construction cost and the maximum embellishment cost stated in Schedule 7;

(iii) project costs for the required work which do not exceed the maximum on costs stated in Schedule 7 for the following:

A. the cost of survey for the required work;

B. the cost of geotechnical and other engineering and environmental investigations for the construction of the required work;

C. the cost of only detailed design for the required work;

D. the cost of project management, engineering supervision and contract administration for the required work;

(b) excluding the following:

(i) a cost of the planning of the required work;

(ii) a cost of providing temporary infrastructure;

(iii) a cost of providing other infrastructure which is not part of the required work;

(iv) a cost of the decommissioning, removal and rehabilitation of infrastructure identified in subsections (ii) and (iii);

(v) a part of the required work provided by:

A. Redland City Council; or

B. a person, other than the applicant or a person engaged by the applicant;

(vi) a cost to the extent that GST is payable and an input tax credit can be claimed for the required work;

(vii) a cost attributable directly or indirectly to the failure of an applicant or a person engaged by the applicant to perform and fulfil a relevant approval for the required work;

Editor's note—A relevant approval is a development approval under the Planning Act.

(viii) a cost caused or contributed to by a negligent or wilful act or omission by the applicant or a person engaged by the applicant;

(ix) a cost of providing development infrastructure which is only made necessary by the development and does not contribute to the function of the required work;

(x) a cost of providing trunk infrastructure which relates to another development infrastructure network;

(xi) a cost of providing development infrastructure which is replacing existing infrastructure with different infrastructure in another development infrastructure network;

(xii) a cost of providing development infrastructure in excess of the desired standards of service for the network of development infrastructure stated in the LGIP;

(xiii) a cost of existing development infrastructure which services or is planned to service existing or future demand that is replaced by the required work;

(xiv) a cost of maintaining an infrastructure asset where required by a condition of approval;

(xv) a cost associated with risk and contingencies for the required work;

(xvi) a cost associated with a margin or profit.

Determining the market cost

(3) Redland City Council is to, prior to the applicant starting the construction of the required work, determine the market cost for the required work as follows:

(a) the applicant is to:

(i) for a trunk infrastructure contribution up to $~~5,000~~100,000 (exclusive of GST) and buying off a prequalified supplier arrangement or the marketplace—obtain at least one written quotation for the work and;

(ii) for a trunk infrastructure contribution more than $~~5,000~~100,000 (exclusive of GST) but not more than $~~200,000~~450,000 (exclusive of GST) and buying off a prequalified supplier arrangement or the marketplace—obtain:

A. at least three written quotations for the work;

B. evidence that the supplier or contractor has appropriate insurances, licences, work health and safety and quality assurance systems in place;

(iii) for a trunk infrastructure contribution more than $~~200,000~~450,000 (exclusive of GST)—undertake a competitive tender process for the work;

(b) the applicant is to:

(i) for a trunk infrastructure contribution up to $~~200,000~~450,000 (exclusive of GST), give to Redland City Council a notice in the prescribed form which states the following:

A. the quotations process under subsections (a)(i) and (ii) have been conducted;

B. the quotation/s received;

C. the evidence of the appropriate insurances, licences, work health and safety and quality assurance systems of the supplier or contractor;

D. the applicant's preferred quotation under subsection (a)(ii);

E. the applicant's reason for the preferred quotation under subsection (a)(ii);

F. the terms of the construction contract for the work;

G. a plan for each development infrastructure network clearly showing the extent of the work for which an offset is sought;

H. the applicant's calculation of the market cost for the work;

(ii) for a trunk infrastructure contribution more than $~~200,000~~450,000 (exclusive of GST), give to Redland City Council a notice in the prescribed form which states the following:

A. a competitive tender process required under subsection (a)(iii) has been conducted;

B. the tenders received;

C. the applicant's preferred tenderer;

D. the applicant's reason for the preferred tenderer;

E. the terms of the construction contract for the work;

F. a plan for each development infrastructure network clearly showing the extent of the work for which an offset is sought;

G. the applicant's calculation of the market cost for the work; and

(iii) pay the prescribed fee;

Editor's note—The prescribed fee may include Redland City Council's costs for determining the market cost.

(c) Redland City Council may, within 15 business days of the date the notice under subsection (b) is received by Redland City Council, give a notice to the applicant which states that the applicant is to provide a document to enable Redland City Council to determine the market cost including without limitation the following:

(i) details in respect of a construction contract for the required work; and

(ii) a plan for each development infrastructure network clearly showing the scope of the required work for which the recalculated establishment cost is sought;

(d) the applicant is to comply with a notice given by Redland City Council to the applicant under subsection(c);

(e) Redland City Council is to as soon as reasonably practicable determine the market cost acting reasonably having regard to the matters in subsections (a) to (d);

(f) Redland City Council, after determining the market cost, is to as soon as reasonably practicable:

(i) give to the applicant a notice which states the following:

A. Redland City Council's calculation of the market cost for the required work and the reason for any difference from the applicant's calculation;

B. the establishment cost for the required work; and

(ii) issue an amended infrastructure charges notice.

(4) To avoid any doubt, Redland City Council may issue the amended infrastructure charges notice using the establishment cost in Section 25(3)(f)(i)B even where it is lower than the original establishment cost.

Adjustment of the establishment cost

(5) Redland City Council is to, after the completion of the construction of the required work and prior to the date for the payment of a levied charge, determine an adjustment to the establishment cost as follows:

(a) this subsection only applies to a cost of required work ***(prescribed cost)*** if the cost:

(i) would have formed part of the market cost used to work out the establishment cost for the required work; and

(ii) was not included in the market cost used to work out the establishment cost or was included in the market cost used to work out the establishment cost but was for an amount less than the prescribed cost;

(b) the applicant, prior to 15 business days after the applicant has completed the required work:

(i) may give to Redland City Council a single written notice which is to state the following:

A. that the applicant requests that Redland City Council adjust the establishment cost to take account of the prescribed cost;

B. all information reasonably necessary to establish the calculation of the prescribed cost and that the cost is a prescribed cost, including evidence satisfactory to Redland City Council, to demonstrate that the prescribed cost has been incurred by the applicant;

C. the applicant's calculation of the prescribed cost; and

(ii) must pay the prescribed fee if subsection (i) applies;

Editor's note—The prescribed fee may include Redland City Council's costs for determining whether the establishment cost is to be adjusted.

(c) Redland City Council may, within 15 business days of the date the notice under subsection (b) is received, give a notice to the applicant which states that the applicant is to provide to Redland City Council a document to enable it to determine the value of an adjusted establishment cost;

(d) the applicant is to comply with a notice given by Redland City Council to the applicant under subsection (3)(C);

(e) Redland City Council is to as soon as reasonably practicable determine whether the establishment cost is to be adjusted acting reasonably having regard to the matters in subsections (a) to (d);

(f) Redland City Council, after determining whether the establishment cost is to be adjusted, is to as soon as reasonably practicable:

(i) give to the applicant a notice which states the following:

A. Redland City Council's calculation of the adjusted establishment cost for the required work and the reason for any difference from the applicant's calculation;

B. the establishment cost for the required work; and

(ii) issue an amended infrastructure charges notice.

Dispute process

(6) An applicant, within 10 business days of the date of a notice under subsections (3)(f) or (5)(f):

(a) may give to Redland City Council a notice in the prescribed form stating that it disputes Redland City Council's recalculation of the establishment cost for the required work; and

(b) must pay the prescribed fee if subsection (a) applies.

Editor's note—The prescribed fee may include Redland City Council's costs for the dispute process including the cost of the independent registered quantity surveyor.

(7) Redland City Council and the applicant are to take the following action to resolve the dispute:

(a) Redland City Council is to appoint an independent registered quantity surveyor to determine the establishment cost for the required work in accordance with this section;

(b) Redland City Council and the applicant are to cooperate in good faith with the independent registered quantity surveyor;

(c) Redland City Council and the applicant are to accept the independent registered quantity surveyor's determination of the establishment cost for the required work;

(d) Redland City Council is to, as soon as reasonably practicable:

(i) give to the applicant a notice which states the establishment cost for the required work determined by the independent registered quantity surveyor; and

(ii) issue an amended infrastructure charges notice.

26. Recalculation of the establishment cost for required land

Current market value

(1) The establishment cost for required land may be recalculated by Redland City Council at the request of the applicant by using the current market value of the

required land determined by using the before and after method of valuation prescribed in Section 24 in accordance with this Section 26.

Editor's note—See Section 137 of the Planning Act.

Applicant's submission of current market value

(2) The applicant is to give to Redland City Council the following:

(a) a notice in the prescribed form requesting the recalculation of the establishment cost for the required land which is accompanied by the following:

(i) a valuation of the required land undertaken by an independent valuation expert ***(applicant's valuation)***;

(ii) a report prepared by an appropriately qualified town planner regarding the highest and best use of the original land and the remaining land on which the applicant's valuation is based ***(applicant's highest and best use advice)***;

(b) the prescribed fee.

Editor's note—The prescribed fee may include Redland City Council's costs of the recalculation process including the costs of the independent valuation expert nominated by Redland City Council and the town planner engaged by Redland City Council.

Redland City Council's determination of current market value

(3) Within 20 business days after the notice and accompanying documents under subsection (2) are received, Redland City Council is to:

(a) accept the applicant's valuation; or

(b) refer the applicant's valuation to an independent valuation expert nominated by Redland City Council to:

(i) assess whether the applicant's valuation is consistent with the current market value; and

(ii) assess whether the applicant's valuation is correctly determined using the before and after method of valuation prescribed in Section 24.

Editor's note—Redland City Council may request additional information from the applicant in order to undertake the assessment.

(4) If Redland City Council's nominated independent valuation expert's determination is that the applicant's valuation is not consistent with the current market value or is not correctly determined using the before and after method of valuation prescribed in Section 24 then the independent valuation expert must:

(a) provide the reasons for the independent valuation expert's determination; and

(b) provide a valuation using the before and after method of valuation stated in Section 24 (***amended valuation***).

(5) Redland City Council is to decide whether to:

(a) accept the applicant's valuation; or

(b) propose an amended valuation based on subsection (4)(b).

(6) If Redland City Council accepts the applicant's valuation, it is to:

(a) give written notice to the applicant stating that it has agreed to the applicant's valuation (***accepted valuation***);

(b) index the establishment cost for the required land using the CPI from the date of the accepted valuation to the date stated in the amended infrastructure charges notice; and

(c) issue an amended infrastructure charges notice to the applicant stating the establishment cost for the required land.

Amended valuation

(7) If Redland City Council proposes an amended valuation, it is to give a written notice to the applicant stating:

(a) that it rejects the applicant's valuation and give reasons for doing so; and

(b) the proposed amended valuation.

(8) Within 20 business days of receipt of Redland City Council's written notice proposing the amended valuation under subsection (7), the applicant must give written notice to Redland City Council that it:

(a) accepts the amended valuation; or

(b) rejects the amended valuation and its reasons for doing so.

(9) If the applicant accepts the amended valuation, Redland City Council must:

(a) index the establishment cost for the land infrastructure using the CPI from the date of the amended valuation to the date stated in the amended infrastructure charges notice; and

(b) give an amended infrastructure charges notice to the applicant stating the establishment cost of the land infrastructure.

(10) If the applicant rejects the amended valuation, then within 20 business days after receipt of a notice under subsection (8)(b), Redland City Council is to refer the applicant's valuation to a further independent valuation expert nominated by Redland City Council from its list of certified practising valuers as per subsection (12).

Final independent valuation

(11) Redland City Council may not refer the applicant's valuation to an independent valuation expert for final determination if the applicant has not paid to Redland City Council the prescribed fee under subsection (2)(b) including the costs of the independent valuation expert nominated by Redland City Council and the town planner engaged by Redland City Council.

(12) If Redland City Council refers the applicant's valuation to a further independent valuation expert, Redland City Council is to:

(a) give written notice to the applicant that it rejects the applicant's valuation and give reasons for doing so;

(b) give written notice to the applicant stating that it has referred the applicant's valuation to an independent valuation expert;

(c) give the following to the independent valuation expert:

(i) the applicant's valuation and the applicant's highest and best use advice;

(ii) the highest and best use advice prepared by an appropriately qualified town planner engaged by Redland City Council regarding the highest and best use of the original land and the remaining land if Redland City Council does not accept the applicant's highest and best use advice;

(iii) the valuation of the required land, if Redland City Council used the before and after method of valuation prescribed in Section 24 for the initial calculation of the establishment cost for the required land and considers that it is relevant to the independent valuation expert's assessment.

(13) Within 20 business days after the independent valuation expert has been given the information under subsection (12)(c) the independent valuation expert is to (a ***Redland City Council's valuer's determination***):

(a) provide the independent valuation expert's determination in relation to the matters stated in subsection (3)(a); and

(b) if the independent valuation expert's determination is that the applicant's valuation is not consistent with the current market value or is not correctly determined using the before and after method of valuation prescribed in Section 24:

(i) provide the reasons for the independent valuation expert's determination; and

(ii) provide a valuation using the before and after method of valuation stated in Section 24.

(14) Within 10 business days after its receipt of the relevant subsequent Redland City Council's valuer's determination, Redland City Council is to give written notice to the applicant stating that it adopts the applicable valuer's determination (***revised local government's valuation***).

(15) If Redland City Council adopts the revised local government's valuation, Redland City Council is to:

(a) index the establishment cost for the required land using the CPI from the date of the revised local government's valuation to the date stated in the amended infrastructure charges notice; and

(b) issue an amended infrastructure charges notice to the applicant stating the establishment cost for the required land.

27. Application of an offset and refund

The following apply if a trunk infrastructure contribution services or is planned to service premises other than premises the subject of the relevant approval and an adopted charge applies to the development the subject of the relevant approval:

Editor's note—A relevant approval is a development approval under the Planning Act.

(a) an ***offset***—where the establishment cost for the trunk infrastructure contribution is equal to or less than the levied charge;

(b) a ***refund***—where the establishment cost for the trunk infrastructure contribution is more than the levied charge.

28. Details of an offset and refund

(1) If an offset applies, the establishment cost for the trunk infrastructure contribution is to be worked out by Redland City Council in accordance with Section 20.

(2) If a refund applies, the refund amount will be the establishment cost for the trunk infrastructure contribution less the levied charge for the development worked out in accordance with Section 14.

29. Timing of an offset and refund

(1) An applicant entitled to an offset or refund for the trunk infrastructure contribution is to:

(a) give to Redland City Council a notice in the prescribed form which states the following:

(i) the date the trunk infrastructure contribution the subject of an offset or refund was lawfully completed;

(ii) that the trunk infrastructure contribution has been provided in accordance with the relevant approval for the trunk infrastructure contribution;

Editor's note—A relevant approval is a development approval under the Planning Act.

(b) for a refund—in addition to subsection (a), if the applicant is not the owner of the premises the subject of the relevant approval requiring the trunk infrastructure contribution, give to Redland City Council a written consent of the owner at the time the notice is given agreeing to the payment of the

refund amount being made to the applicant, unless the applicant demonstrates to the reasonable satisfaction of Redland City Council that:

(i) the owner of the premises has unreasonably withheld consent; or

(ii) because of the number of owners, it is impracticable to get their consent; and

(c) pay the prescribed fee.

Editor's note—The prescribed fee may include Redland City Council's costs for determining the matters in subsection (1)(a) and (b).

(2) Redland City Council is to as soon as is reasonably practicable after receiving a notice under subsection (1):

(a) determine whether the trunk infrastructure contribution has satisfied the matters in subsection (1)(a); and

(b) give to the applicant a notice stating the outcome of Redland City Council's determination.

(3) Redland City Council, if satisfied of the matters in subsection (1)(a), is to unless otherwise provided for in an infrastructure agreement:

(a) for an offset—set off the establishment cost for the trunk infrastructure contribution against the levied charge when the levied charge stated in the infrastructure charges notice is payable under the *Planning Act*;

(b) for a refund—give the refund to the applicant giving the notice under subsection (1)(a) when stated in the infrastructure charges notice.

(4) Redland City Council has adopted a policy position in relation to the determination in an infrastructure charges notice of when a refund is to be given by Redland City Council to achieve the following policy objectives:

(a) to seek to integrate Redland City Council's land use and infrastructure plans;

(b) to implement the respective infrastructure planning instruments as the basis for Redland City Council's trunk infrastructure funding;

(c) to implement infrastructure funding which is equitable and accountable and financially sustainable for Redland City Council.

(5) Redland City Council's policy position in relation to the determination in an infrastructure charges notice of when a refund is to be given by Redland City Council and related matters is as follows:

(a) for a trunk infrastructure contribution for identified necessary trunk infrastructure or different necessary trunk infrastructure which is provided before or in the planned date or period for the trunk infrastructure contribution stated in the LGIP:

(i) the following payment triggers achieve Redland City Council's policy objectives:

A. for a refund which is an amount that is $1 million or less—the refund may be given by 31 December of the financial year following the end of the relevant planned date or period for the trunk infrastructure contribution;

B. for a refund which is an amount that is more than $1 million but not more than $10 million—the refund may be given annually over 3 financial years in equal payments by 31 December in each year commencing in the year following the end of the relevant planned date or period for the trunk infrastructure contribution;

C. for a refund which is more than $10 million—the refund may be given annually over 5 financial years in equal payments by 31 December in each year commencing in the year following the end of the relevant planned date or period for the trunk infrastructure contribution;

(ii) each amount to be paid under in subsection (i) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid;

(b) for a trunk infrastructure contribution for identified necessary trunk infrastructure or different necessary trunk infrastructure which is provided after the planned date or period for the trunk infrastructure contribution stated in the LGIP:

(i) the following payment triggers achieve Redland City Council's policy objectives:

A. or a refund which is an amount that is $1 million or less—the refund may be given by 31 December of the financial year following the completion of the trunk infrastructure contribution;

B. for a refund which is an amount that is more than $1 million but not more than $10 million—the refund may be given annually over 3 financial years in equal payments by 31 December in each year commencing in the year following the completion of the trunk infrastructure contribution;

C. or a refund which is more than $10 million—the refund may be given annually over 5 financial years in equal payments by 31 December in each year commencing in the year following the completion of the trunk infrastructure contribution;

(ii) each amount to be paid under subsection (i) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid;

(c) for a trunk infrastructure contribution for other necessary trunk infrastructure:

(i) Redland City Council is to estimate the period in which the trunk infrastructure contribution would have been planned to be

provided had it been included in the LGIP having regard to the method used by Redland City Council to work out the relevant planned date or period of items of identified trunk infrastructure for the network of development infrastructure stated in the LGIP (***specified date or period***);

(ii) Redland City Council is to upon the completion of the trunk infrastructure contribution include the trunk infrastructure as existing trunk infrastructure in the respective infrastructure planning instrument;

(iii) the following payment triggers achieve Redland City Council's policy objectives:

A. for a refund which is an amount that is $1 million or less—the refund may be given 31 December of the financial year following the end of the specified date or period for the trunk infrastructure contribution;

B. for a refund which is an amount that is more than $1 million but not more than $10 million—the refund may be given annually over 3 financial years in equal payments by 31 December in each year commencing in the year following the end of the specified date or period for the trunk infrastructure contribution;

C. for a refund which is more than $10 million—the refund may be given annually over 5 financial years in equal payments by 31 December in each year commencing in the year following the end of the specified date or period for the trunk infrastructure contribution;

(iv) each amount to be paid under subsection (iii) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid;

(d) for a trunk infrastructure contribution for prescribed trunk infrastructure:

(i) Redland City Council is to upon the completion of the trunk infrastructure contribution include the trunk infrastructure as existing trunk infrastructure in the respective infrastructure planning instrument;

(ii) the payment trigger for a refund of 31 December of the financial year following the end of the planning horizon of the respective trunk infrastructure network in the LGIP achieves Redland City Council's policy objectives;

(iii) the amount to be paid under subsection (ii) is to be increased by the CPI from the date of the infrastructure charges notice for the refund to the date that the amount is paid.

Part 5 Conversion applications

30. Purpose of Part 5

Part 5 states the criteria to be applied by Redland City Council in assessing a conversion application to determine if development infrastructure is trunk infrastructure (***conversion criteria***).

31. Conversion criteria

(1) The criteria to be applied for deciding a conversion application are as follows:

(a) the infrastructure has capacity to service other developments in the area;

(b) the function and purpose of the infrastructure is consistent with other trunk infrastructure identified in the LGIP, the resolution or Water Netserv Plan for the area;

Editor's note: the infrastructure is taken to satisfy subsection (1)(b) if it complies with all of the applicable identified trunk infrastructure criteria in Schedule 5.

(c) the infrastructure is not consistent with non-trunk infrastructure for which a condition may be imposed under section 145 of the *Planning Act* or section 99BRDJ of the *SEQ Water Act*; and

(d) the type, size and location of the infrastructure is the most cost effective option for servicing multiple users in the area. The most cost effective option is the least cost option based upon the life cycle cost of the infrastructure required to service future urban development in the area at the desired standard of service.

32. Conversion applications

(1) If an applicant makes a conversion application, it must:

(a) comply with section 139(2) of the *Planning Act*, or equivalent provision in an act that supersedes the *Planning Act*;

(b) be provided to Council in writing using Council's prescribed form; and

(c) be accompanied by the prescribed fee.

Editor's note—The prescribed fee may include Redland City Council's costs for additional professional services in deciding the conversion application.

Part 6 Extra trunk infrastructure costs

33. Purpose of Part 6

Part 6 states the method to be applied by Redland City Council for working out extra trunk infrastructure costs.

34. Payment of extra trunk infrastructure costs

The payment of extra trunk infrastructure costs for development is to be worked out and required in accordance with Section 130 of the *Planning Act*.

Editor's note—See Subdivision 2, Division 3, Part 2, Chapter 4 of the Planning Act.

Schedule 1 Dictionary

accepted valuation see Section 26(6).

adopted charge see Section 6(1).

amended valuation *see* Section 26(4)(b).

applicable area see Section 6(4).

applicable date see Section 6(3).

applicable use see Section 6(5).

applicant's highest and best use advice see Section 26(2)(a)(ii).

applicant's valuation see Section 26(2)(a)(i).

applied adopted charge see Section 12(2)(a)12.

automatic increase see Section12(3).

basic work *means work to ensure the land is suitable for development for community facilities including site preparation (clearing, cut and fill) and connection to services.*

bedroom means an area of a building or structure which:

(a) is used, designed or intended for use for sleeping but excludes a lounge room, dining room, living room, kitchen, water closet, bathroom, laundry, garage or plant room; or

(b) can be used for sleeping such as a den, study, loft, media or home entertainment room, library, family or rumpus room or other similar space.

completion means the stage in the provision of a trunk infrastructure contribution by an applicant when Redland City Council is satisfied that the trunk infrastructure contribution is complete other than for a minor omission and a minor defect which:

(a) is not essential;

(b) does not prevent the matter from being reasonably capable of being used for its intended purpose;

(c) Redland City Council determines the applicant has a reasonable basis for not promptly rectifying; and

(d) the rectification of which will not prejudice the convenient use of the matter.

consistent land establishment cost see Section 23(1)(c).

conversion application has the meaning given in the *Planning Act*.

conversion criteria see Section 31.

cost-based estimate for required work see Section 22(2).

court area means the area of premises where the leisure, sport or recreation activity is conducted and excludes the area of the premises not used for conducting the leisure, sport or recreation activity, such as areas for spectators, office or administration, amenities or food and beverages.

CPI (an acronym for consumer price index) means the following:

(a) the consumer price index 6401.0 All Groups Brisbane published by the Australian Bureau of Statistics;

(b) if an index described in paragraph (a) ceases to be published—another similar index prescribed by Redland City Council.

Editor's note—Where the CPI has not been published for a calculation date the change in the CPI is to be determined by having regard to the index prior to the base date and the index prior to the calculation date.

current market value see Section 24(2).

demand credit see Section 16(1).

demand unit see Section 16(2).

Dependent retirement facility means premises that provide supervised accommodation and supportive care for the daily living needs of seniors that are unable to live independently. They are administered and operated under the *Commonwealth Aged Care Act 1997.*

development demand see Section 16(1).

development infrastructure has the meaning given in Schedule 2 of the *Planning Act.*

different necessary trunk infrastructure see Section 19(1)(b)

dwelling has the meaning in the *SPA* planning scheme.

Editor's note—The term 'dwelling' is defined in the SPA planning scheme to mean:

"A building or part of a building used or capable of being used as a self-contained residence which must include the following:
(a) food preparation facilities;
(b) a bath or shower;
(c) a toilet and wash basin;
(d) clothes washing facilities.

This term includes outbuildings, structures and work normally associated with a dwelling."

establishment cost for trunk infrastructure means the following:

(a) for existing infrastructure:
  (i) the current replacement cost of the infrastructure as reflected in Redland City Council's asset register; and
  (ii) the current value of the land acquired for the infrastructure; or
(b) for future infrastructure—all costs of land acquisition, financing, and design and construction, for the infrastructure.

Equivalent Persons (EP) means the basic unit of measurement used to equate an equivalent service demand to that of an average occupant of an average detached residential dwelling.

Equivalent Tenements (ET) means the basic unit of measurement used to indicate infrastructure demand for a property. The demand from each property is related to the type of development allowed on the property with a detached dwelling on a standard residential lot being 1 ET.

existing lawful use means an existing use which is lawful and already taking place on premises.

extra demand see Section 12(2)(b).

extrinsic material for the LGIP means the following:

(a) extrinsic material for the planning assumptions;
(b) extrinsic material for the applicable infrastructure network;
(c) extrinsic material for the schedule of work model.

financial year means a period of one year beginning on 1 July.

GFA (an acronym for gross floor area) has the meaning in the *SPA* planning scheme.

Editor's note—The term 'gross floor area' is defined in the SPA planning scheme to mean "The total floor area of all storeys of a building (measured from the outside of the external walls or the centre of a common wall), other than areas used for the following:

(a) building services, plant and equipment;
(b) access between levels;
(c) ground floor public lobby;
(d) a mall;
(e) the parking, loading and manoeuvring of motor vehicles;
(f) unenclosed private balconies whether roofed or not."

highest and best use advice see Section 24(3)(b)(i).

identified necessary trunk infrastructure criteria see Section 19(1)(a).

identified necessary trunk infrastructure see Section 19(1)(a).

impervious area means the area of the premises that is impervious to rainfall or overland flow.

Editor's note—Examples of areas which are not impervious to rainfall or overland flow— An area which is not sealed and comprises of compacted dirt, crusher dirt, road base, gravel, limestone or loose stone.

independent valuation expert see Section 24(3)(c).

Independent retirement facility means premises where seniors live in independent living units or serviced units, and may share common lifestyle amenities. Personal care and support services may also be available for a fee. They are regulated by the *Retirement Villages Act 1999 and/or under a Community Title or Community Strata Scheme.*

infrastructure planning instrument see Section 8.

IPA planning scheme means the *Redlands Planning Scheme 2006*.

levied charge see Section 12(1).

LGIP means the *Redland City Plan 2018 Local Government Infrastructure Plan* as amended from time to time.

local government means Redland City Council.

local government area means the area within the jurisdiction of Redland City Council.

local government infrastructure planning instrument see Section 8.

local government trunk infrastructure networks see Section 6(2)(a).

mall *excludes a shaded walk area with a cover above all or part of the area.*

Editor's note—Examples of a cover—
Shade sail, hard ceiling, roof.

market cost see Section 25(2).

offset see Section 27(a).

original land see Section 24(2)(a).

original land value see Section 24(2)(a).

other land see Section 23(1)(b).

other necessary trunk infrastructure see Section 19(b)(c).

planned cost means:

(a) for work, see Section 21(3)(a);
(b) for land, see Section 23(3)(a);

planned estimate—land see Section 23(3).

planned estimate—work see Section 21(3).

Planning Act see Section 3(1)

Planning Regulation see Section 3(2)(a).

planning scheme means the *Redland City Plan 2018*.

prescribed cost see Section 25(3).

prescribed fee means a cost recovery fee prescribed by Redland City Council.

prescribed financial contribution see Section 12(2)(c).

prescribed form means a form prescribed by Redland City Council.

prescribed proportion see Section 28(2).

prescribed trunk infrastructure see Section 19(1)(d).

previous lawful use means a previous use which was lawful at the time it was carried out and is no longer taking place on premises.

proportional value see Section 23(1)(c).

rateable value has the meaning in Section 74 (Rateable value of land) of the *Local Government Regulation 2012.*

Redland City Council's valuer's determination see Section 26(13)

refund see Section 27(b).

remaining land see Section 24(2).

remaining land value see Section 24(2)(b).

required land see Section 23(1).

required work see Section21(1).

resolution means this adopted infrastructure charges resolution (No. 3.2).

revised local government's valuation see Section 26(4).

Semi-dependent community residence means residential accommodation exclusively for no more than six (6) persons who require assistance or support with daily living needs. They are administered and operated under the *Residential Services (Accreditation) Act 2002.*

Semi-dependent retirement facility means premises where seniors live in semi-independent living units or serviced units, and share some common facilities such as central dining. Residents may receive regular support for a range of daily activities that may include housekeeping, laundry and transportation. Personal healthcare services may also be provided. They are regulated by the *Retirement Villages Act 1999*.

SEQ service provider means Redland City Council which is a SEQ service provider and withdrawn council for the Southern SEQ Distributor-Retailer Authority (previously trading as Allconnex) under the SEQ Water Act.

SEQ service provider infrastructure planning instrument see Section 8.

SEQ service provider trunk infrastructure networks see Section 6(2)(b).

SEQ Water Act means the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*.

SPA planning scheme means the Redland City Plan 2018.

Editor's note – the SPA planning scheme was aligned with the Planning Act.

specified date or period see Section 29(5)(c)(i).

suite means a number of connected rooms one of which is a bedroom in which an individual or a group of two or more related or unrelated people reside with the common intention to live together on a long term basis and who make common provision for food or other essentials for living.

trunk infrastructure has the meaning given in Schedule 2 of the *Planning Act*.

trunk infrastructure contribution see Section 19(1).

trunk infrastructure network see Section 6(2).

Schedule 2 Adopted charges

Table A: Adopted charge for reconfiguring a lot

Column 1 **Demand unit**	**Column 2** **SEQ service provider proportion of prescribed amount ($ per demand unit)**		**Column 2** **Local government adopted charge ($ per demand unit)**
	Sewerage trunk infrastructure network for wastewater service	**Water supply trunk infrastructure network for water service**	**Transport, public parks and land for community facilities and stormwater trunk infrastructure networks**
Lot	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40

Table B Adopted charge for a residential use

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
Residential charge category					
Dwelling house*	1 or 2 bedroom dwelling	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	3 or more bedroom dwelling	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40
Dual occupancy	1 or 2 bedroom dwelling	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	3 or more bedroom dwelling	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40
Caretaker's accommodation	1 or 2 bedroom dwelling	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	3 or more bedroom dwelling	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40
Multiple dwelling	1 or 2 bedroom dwelling	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	3 or more bedroom dwelling	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
	**Editor's note - The Planning Regulation 2017 definition for the use term 'dwelling house' includes the administrative term of 'secondary dwelling'. Where a referral agency assessment for a secondary dwelling is required under Schedule 9, Part 3, Division 2, Table 1 (Particular class 1 and 10 buildings and structures involving possible amenity and aesthetic impacts), the local government adopted charge for a 'dwelling house' will be levied for the secondary dwelling as a result of non-compliance with Item 4, Probable Solution P1 of the Amenity and Aesthetics Guideline. In such circumstances the charge will be levied following the issue of a development approval (for material change or use or building works.) The relevant charge will be as follows:* • *Where the gross floor area of the secondary dwelling is 85m² or greater and up to and including 112m² – 30% of the dwelling house charge; or* • *Where the gross floor area of the secondary dwelling is greater than 112m² - 50% of the dwelling house charge; or* • *Where in the rural zone and the lot size is 6,000m² or more and the gross floor area of the secondary dwelling is 160m² or greater – 30% of the dwelling house charge.* *This editor's note ~~will take~~ took effect on 1 February 2024.*				
Accommodation (short-term) charge category					
Hotel (residential component)	Suite with 1 or 2 bedrooms	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
	Suite with 3 or more bedrooms	~~16,206.65~~ 18,335.20	~~2,430.85~~ 2,750.10	~~162.10~~ 183.40	~~13,613.70~~ 15,401.70
	Bedroom that is not within a suite	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
Resort complex (residential component)	Suite with 1 or 2 bedrooms	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
	Suite with 3 or more bedrooms	~~16,206.65~~ 18,335.20	~~2,430.85~~ 2,750.10	~~162.10~~ 183.40	~~13,613.70~~ 15,401.70

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
	Bedroom that is not within a suite	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
Short-term accommodation	Suite with 1 or 2 bedrooms	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
	Suite with 3 or more bedrooms	~~16,206.65~~ 18,335.20	~~2,430.85~~ 2,750.10	~~162.10~~ 183.40	~~13,613.70~~ 15,401.70
	Bedroom that is not within a suite	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
Tourist park	For each group of 2 tent or caravan sites or less	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
	For each group of 3 tent or caravan sites	~~16,206.65~~ 18,335.20	~~2,430.85~~ 2,750.10	~~162.10~~ 183.40	~~13,613.70~~ 15,401.70
	1 or 2 bedroom cabin	~~11,576.25~~ 13,096.60	~~1,736.25~~ 1,964.40	~~115.80~~ 131.00	~~9,724.20~~ 11,001.20
	3 or more bedroom cabin	~~16,206.65~~ 18,335.20	~~2,430.85~~ 2,750.10	~~162.10~~ 183.40	~~13,613.70~~ 15,401.70

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
Accommodation (long-term) charge category					
Community residence	Suite with 1 or 2 bedrooms	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	Suite with 3 or more bedrooms	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40
	Bedroom that is not within a suite	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
Relocatable home park	1 or 2 bedroom relocatable dwelling site	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	3 or more bedroom relocatable dwelling site	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40
Retirement facility	Suite with 1 or 2 bedrooms	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	Suite with 3 or more bedrooms	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40
	Bedroom that is not within a suite	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50

Column 1 **Residential use under Planning Regulation** *Editor's note— See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Prescribed amount under Planning Regulation** *Editor's note— See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*		**Column 3** **SEQ service provider proportion of prescribed amount ($)**		**Column 4** **Local government adopted charge ($)**
	Demand unit	**($ per demand unit)**	**Sewerage trunk infrastructure network for wastewater service**	**Water supply trunk infrastructure network for water service**	
Rooming accommodation	Suite with 1 or 2 bedrooms	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50
	Suite with 3 or more bedrooms	~~32,413.50~~ 36,670.70	~~4,862.00~~ 5,500.60	~~324.10~~ 366.70	~~27,227.40~~ 30,803.40
	Bedroom that is not within a suite	~~23,152.45~~ 26,193.40	~~3,472.85~~ 3,929.00	~~231.50~~ 261.90	~~19,448.10~~ 22,002.50

Table C Adopted charge for a non-residential use

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Places of assembly charge category						
Club	~~81.10~~ 91.75	~~12.20~~ 13.75	~~0.80~~ 0.90	~~68.10~~ 77.10	~~11.60~~ 13.10	~~11.60~~ 13.10
Community use	~~81.10~~ 91.75	~~12.20~~ 13.75	~~0.80~~ 0.90	~~68.10~~ 77.10	~~11.60~~ 13.10	~~11.60~~ 13.10
Function facility	~~81.10~~ 91.75	~~12.20~~ 13.75	~~0.80~~ 0.90	~~68.10~~ 77.10	~~11.60~~ 13.10	~~11.60~~ 13.10
Funeral parlour	~~81.10~~ 91.75	~~12.20~~ 13.75	~~0.80~~ 0.90	~~68.10~~ 77.10	~~11.60~~ 13.10	~~11.60~~ 13.10
Place of worship	~~81.10~~ 91.75	~~12.20~~ 13.75	~~0.80~~ 0.90	~~68.10~~ 77.10	~~11.60~~ 13.10	~~11.60~~ 13.10
Commercial (bulk goods) charge category						
Agricultural ~~supply~~ supplies store	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Bulk landscape supplies	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Garden centre	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Hardware and trade supplies	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Outdoor sales	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Showroom	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Commercial (retail) charge category						
Adult store	235.75	35.35	2.40	198.00	13.10	13.10
Food and drink outlet	~~208.35~~ 235.75	~~31.25~~ 35.35	~~2.10~~ 2.40	~~175.00~~ 198.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Service industry	~~208.35~~ 235.75	~~31.25~~ 35.35	~~2.10~~ 2.40	~~175.00~~ 198.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Service station	~~208.35~~ 235.75	~~31.25~~ 35.35	~~2.10~~ 2.40	~~175.00~~ 198.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Shop	~~208.35~~ 235.75	~~31.25~~ 35.35	~~2.10~~ 2.40	~~175.00~~ 198.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Shopping centre	~~208.35~~ 235.75	~~31.25~~ 35.35	~~2.10~~ 2.40	~~175.00~~ 198.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Commercial (office) charge category						
Office	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Education facility						
Child care centre	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Community care centre	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Educational establishment	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Entertainment charge category						
Hotel (non-residential component)	~~231.45~~ 261.90	~~34.70~~ 39.30	~~2.30~~ 2.60	~~194.45~~ 220.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Nightclub entertainment facility	~~231.45~~ 261.90	~~34.70~~ 39.30	~~2.30~~ 2.60	~~194.45~~ 220.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Resort complex (non residential component)	~~231.45~~ 261.90	~~34.70~~ 39.30	~~2.30~~ 2.60	~~194.45~~ 220.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Theatre	~~231.45~~ 261.90	~~34.70~~ 39.30	~~2.30~~ 2.60	~~194.45~~ 220.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Indoor sport and recreational facility charge category						
Indoor sport and recreation facility	~~231.45~~ 261.90	~~34.70~~ 39.30	~~2.30~~ 2.60	~~194.45~~ 220.00	~~11.60~~ 13.10	~~11.60~~ 13.10
	~~23.10~~ 26.15 for court areas	~~3.50~~ 3.85	~~0.20~~ 0.30	~~19.40~~ 22.00	~~11.60~~ 13.10	~~11.60~~ 13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
~~Industry~~ Other industry charge category						
Low impact industry	~~57.90~~ 65.45	~~8.70~~ 9.75	~~0.60~~ 0.70	~~48.60~~ 55.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Medium impact industry	~~57.90~~ 65.45	~~8.70~~ 9.75	~~0.60~~ 0.70	~~48.60~~ 55.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Research and technology industry	~~57.90~~ 65.45	~~8.70~~ 9.75	~~0.60~~ 0.70	~~48.60~~ 55.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Rural industry	~~57.90~~ 65.45	~~8.70~~ 9.75	~~0.60~~ 0.70	~~48.60~~ 55.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Warehouse	~~57.90~~ 65.45	~~8.70~~ 9.75	~~0.60~~ 0.70	~~48.60~~ 55.00	~~11.60~~ 13.10	~~11.60~~ 13.10
Marine industry	~~57.90~~ 65.45	~~8.70~~ 9.75	~~0.60~~ 0.70	~~48.60~~ 55.00	~~11.60~~ 13.10	~~11.60~~ 13.10
High impact industry or special industry charge category						
High impact industry	~~81.10~~ 91.75	~~12.20~~ 13.75	~~0.80~~ 0.90	~~68.10~~ 77.10	~~11.60~~ 13.10	~~11.60~~ 13.10
Special industry	~~81.10~~ 91.75	~~12.20~~ 13.75	~~0.80~~ 0.90	~~68.10~~ 77.10	~~11.60~~ 13.10	~~11.60~~ 13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Low impact rural charge category						
Uses in the low impact rural charge category	The prescribed amount under the Planning Regulation and adopted charges under this resolution is nil. *Editor's note—See schedule 16, column 2 of the Planning Regulation.*					
High impact rural charge category						
Cultivating, in a confined area, aquatic animals or plants for sale	~~23.10~~ 26.15	0	~~0.20~~ 0.30	~~22.90~~ 25.85	Nil charge	0
Intensive animal industry	~~23.10~~ 26.15	0	~~0.20~~ 0.30	~~22.90~~ 25.85	Nil charge	0
Intensive horticulture	~~23.10~~ 26.15	0	~~0.20~~ 0.30	~~22.90~~ 25.85	Nil charge	0
Wholesale nursery	~~23.10~~ 26.15	0	~~0.20~~ 0.30	~~22.90~~ 25.85	Nil charge	0
Winery	~~23.10~~ 26.15	0	~~0.20~~ 0.30	~~22.90~~ 25.85	Nil charge	0
Essential services charge category						
Correctional facility	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Emergency services	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10

Column 1 **Non-residential use under Planning Regulation** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation 2017.*	**Column 2** **Trunk infrastructure networks other than stormwater ($ per demand unit of m² of GFA)**				**Column 3** **Stormwater trunk infrastructure network ($ per demand unit of m² of impervious area)**	
	Prescribed amount under Planning Regulation *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**SEQ service provider proportion of prescribed amount**		**Local government adopted charge**	**Prescribed amount under Planning Regulation** *Editor's note—See Table 1, Column 2 of Schedule 16 of the Planning Regulation 2017.*	**Local government adopted charge**
		Sewerage	**Water supply**	**Transport and public parks and land for community facilities**		
Health care service	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Hospital	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Residential care facility	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Veterinary services	~~162.05~~ 183.35	~~24.30~~ 27.50	~~1.60~~ 1.80	~~136.15~~ 154.05	~~11.60~~ 13.10	~~11.60~~ 13.10
Minor uses charge category						
Uses in the minor uses charge category	The prescribed amount under Planning Regulation and adopted charges under this resolution is nil. *Editor's note—See schedule 16, column 2 of the Planning Regulation.* *Editor's note—The non-residential use 'Sales office' is deemed to be included in the 'Minor uses charge category' for the purposes of adopted charges under this resolution.*					
Other uses charge category						
Uses in the other uses charge category	The prescribed amount under the Planning Regulation and adopted charges under this resolution are those which are applicable to the charge category that the local government decides should apply for the use. *Editor's note—See schedule 16, column 2 of the Planning Regulation.*					

Schedule 3 Applicable uses under the planning scheme

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
Residential use			
Residential	Dwelling house	Dwelling house (including a Relatives Apartment)	Dwelling house
	Dual occupancy	Dual occupancy	Dual occupancy
	Caretaker's accommodation	Caretaker's dwelling	Caretaker's accommodation
	Multiple dwelling	Multiple dwelling; Apartment building	Multiple dwelling
	Other use	No defined use	Dwelling unit
Accommodation (short-term)	Hotel	Hotel (residential component);	Hotel (residential component)
	Resort complex	Tourist Accommodation	Resort complex (residential component)
	Short-term accommodation	Tourist accommodation	Short-term accommodation
	Tourist park	Tourist park	Tourist park
Accommodation (long-term)	Community residence	Aged persons and special needs housing (community residence)	Community residence
	Relocatable home park	Mobile home park	Relocatable home park
	Retirement facility	Aged persons and special needs housing (independent)	Retirement facility

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Rooming accommodation	No defined use	Rooming accommodation
	Other use	No defined use	Educational establishment (on-site accommodation); Non-resident workforce accommodation ; Rural worker's accommodation
Non-residential use			
Places of assembly	Club	No defined use	Club
	Community use	Community facility	Community use
	Function facility	Indoor recreation facility (function or convention centre)	Function facility
	Funeral parlour	Funeral parlour	Funeral parlour
	Place of worship	Place of worship	Place of worship
Commercial (bulk goods)	Agricultural supplies store	Produce store	Agricultural supplies store
	Bulk landscape supplies	Landscape supply depot	Bulk landscape supplies
	Garden centre	Garden centre	Garden centre
	Hardware and trade supplies	Display and sales activity	Hardware and trade supplies
	Outdoor sales	Display and sales activity	Outdoor sales
	Showroom	Bulky goods showroom	Showroom
Commercial (retail)	Adult store	Shop (adult store)	Adult store
	Food and drink outlet	Refreshment establishment; Drive through restaurant	Food and drink outlet

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Service industry	Service industry	Service industry
	Service station	Service station	Service station
	Shop	Shop; Retail warehouse	Shop
	Shopping centre	Shop	Shopping centre
	Other uses	~~Shop (adult store);~~ Car wash facility	~~Adult store;~~ Car wash
Commercial (office)	Office	Commercial office	Office
Education facility ~~other than an educational establishment for the Flying Start for Queensland Children Program~~	Child care centre	Child care centre	Child care centre
	Community care centre	Community facility (welfare centre, community health centre or respite care centre)	Community care centre
	Educational establishment	Education facility ~~(if not for the Flying Start for Queensland Children Program)~~	Education ~~establishment~~ facility~~(if not for the Flying Start for Queensland Children Program)~~
~~Educational establishment for the Flying Start for Queensland Children Program~~	~~Educational establishment~~	~~Education facility (if for the Flying Start for Queensland Children Program)~~	~~Education establishment (if for the Flying Start for Queensland Children Program)~~
Entertainment	Hotel (non-residential component)	Hotel (non-residential component)	Hotel (non-residential component)
	Nightclub entertainment facility	Nightclub	Nightclub entertainment facility
	Resort complex	Indoor recreation facility (other than a theatre or cinema); Outdoor recreation facility	Resort complex

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Theatre	Indoor recreation facility (theatre or cinema)	Theatre
	Other uses	No defined use	Bar
Indoor sport and recreational	Indoor sport and recreation	Indoor recreation facility (sport and recreation)	Indoor sport and recreation
Industry	Low impact industry	Vehicle repair premises	Low impact industry
	Medium impact industry	General industry	Medium impact industry
	Research and technology industry	No defined use	Research and technology industry
	Rural industry	Rural enterprise	Rural industry
	Warehouse	Warehouse	Warehouse
	Marine industry	Marine services (other than a marina or ferry terminal)	Marine industry
	Other uses	Vehicle depot	Transport depot
High impact industry	High impact industry	Heavy industry	High impact industry
	Special industry	High impact industry	Special industry
Low impact rural	Animal husbandry	Agriculture (livestock production and dairying)	Animal husbandry
	Cropping	Agriculture (horticulture)	Cropping
	Permanent plantation	Forestry	Permanent plantation
	Wind farm	Utility installation (wind farm)	Renewable energy facility

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
High impact rural	Cultivating, in a confined area, aquatic animals and plants for sale	Intensive agriculture (aquaculture)	Aquaculture
	Intensive animal industry	Intensive agriculture (livestock production)	Intensive animal industry
	Intensive horticulture	Intensive agriculture (horticulture)	Intensive horticulture
	Wholesale nursery	No defined use	Wholesale nursery
	Winery	General industry (food processing)	Winery
Essential services	Correctional facility	Institution	Correctional facility
	Emergency services	Emergency services	Emergency services
	Health care services	Health care centre	Health care services
	Hospital	Hospital	Hospital
	Residential care facility	Aged persons and special needs housing (residential care facility)	Residential care facility
	Veterinary services	Veterinary surgery	Veterinary services
Other uses	Air services	Airport	Air services
	Animal keeping	Animal keeping	Animal keeping
	Car park	Vehicle parking station	Parking station
	Crematorium	Funeral parlour (crematorium)	Crematorium
	Extractive industry	Extractive industry	Extractive industry

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Major sport, recreation and entertainment facility	No defined use	Major sport, recreation and entertainment facility
	Motor sport	No defined use	Motor sport
	Non-resident workforce accommodation	No defined use	Non-resident workforce accommodation
	Outdoor sport and recreation	Outdoor recreation facility (including ancillary club)	Outdoor sport and recreation
	Port service	Marine services	Port services
	Tourist attraction	No defined use	Tourist attraction
	Utility installation	Utility installation; Minor utility; Passenger terminal (other than a port)	Utility installation
	Any other use not listed in column 2, including a use that is unknown	Brothel; Outdoor dining; Small lot house	Brothel; Environment facility; Major electricity infrastructure; Nature-based tourism; Substation
Minor uses	Advertising device	No defined use	No defined use
	Cemetery	Cemetery	Cemetery
	Home based business	Home business; Bed and breakfast	Home based business
	Landing	Marine services	Landing
	Market	Shop (market)	Market
	Outdoor lighting	No defined use	No defined use
	Park	Park	Park
	Roadside stall	Roadside stall	Roadside stall

Column 1 **Charge category under the *Planning Regulation*** *Editor's note—See Table 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 3** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 4** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*
	Sales office	Display dwelling; Estate sales office	Sales office
	Telecommunications facility	Telecommunications facility	Telecommunications facility
	Temporary use	Temporary use	Temporary use
	Other use	No defined use	Outstation

Schedule 4 Applied adopted charges for particular uses

Column 1 **Charges category under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 3** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*	**Column 4** **Applied local government adopted charge ($ per demand unit)**	**Column 5** **Applied SEQ service provider proportion of prescribed amount ($ per demand unit)**
Accommodation (long-term)	Aged persons and special needs housing (being semi-dependent retirement villages, nursing homes, respite centres, hostels, group homes and the like as defined in the planning scheme)	Community residence (being semi dependent as defined in this resolution) or Retirement facility (being semi-dependent as defined in this resolution)	~~8,903~~ 9,895 per suite (with 1 or 2 bedrooms)	~~2,366~~ 2,630 per suite (with 1 or 2 bedrooms)
			~~12,464~~ 13,854 per suite (with 3 or more bedrooms)	~~3,313~~ 3,683 per suite (with 3 or more bedrooms)
			~~8,903~~ 9,895 per bedroom (for a bedroom which is not within a suite)	~~2,366~~ 2,630 per bedroom (for a bedroom which is not within a suite)
	Aged persons and special needs housing (being dependent retirement villages, nursing homes, respite centres, hostels, group homes and the like as defined in the planning scheme)	Retirement facility (being dependent as defined in this resolution)	~~7,760~~ 8,625 per suite (with 1 or 2 bedrooms)	~~2,063~~ 2,293 per suite (with 1 or 2 bedrooms)
			~~10,864~~ 12,075 per suite (with 3 or more bedrooms)	~~2,888~~ 3,210 per suite (with 3 or more bedrooms)
			~~7,760~~ 8,625 per bedroom (for a bedroom which is not within a suite)	~~2,063~~ 2,293 per bedroom (for a bedroom which is not within a suite)
Commercial (bulk goods)	Produce store (if in the Rural Non-urban Zone) where not connected to a SEQ service provider trunk infrastructure network	Agricultural supplies store (if in the Rural Non-urban Zone) where not connected to a SEQ service provider trunk infrastructure network	~~58.40~~ 63.30 per m^2 GFA plus 0 per impervious m^2 for stormwater	Nil

Column 1 **Charges category under the *Planning Regulation*** *Editor's note—See Table 1, Column 1 of Schedule 16 of the Planning Regulation.*	**Column 2** **Use under the *IPA* planning scheme** *Editor's note—See Redlands Planning Scheme 2006.*	**Column 3** **Use under the *SPA* planning scheme** *Editor's note—See Redland City Plan 2018.*	**Column 4** **Applied local government adopted charge ($ per demand unit)**	**Column 5** **Applied SEQ service provider proportion of prescribed amount ($ per demand unit)**
	Produce store (if in the Rural Non-urban Zone) where connected to a SEQ service provider trunk infrastructure network	Agricultural supplies store (if in the Rural Non-urban Zone) where connected to a SEQ service provider trunk infrastructure network	~~57.80~~ 62.10 per m^2 GFA plus 0 per impervious m^2 for stormwater	~~0.60~~ 0.63 per m^2 GFA

Editor's note – The rates in this schedule are derived from typical charge for the respective use types calculated using the former Planning Scheme Policy 3 Contributions and Security Bonding (Redland Planning Scheme version 4.1) and indexed periodically.

Schedule 5 Identified trunk infrastructure criteria for conversion applications

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
Local government trunk infrastructure networks	
Transport trunk infrastructure network	**Local roads trunk infrastructure** Trunk infrastructure for the local roads network includes land and work limited to the following infrastructure items identified in the LGIP: (a) new and upgraded major roads being arterial, sub-arterial and major collector roads; and (b) within a major road, associated intersections, traffic lights, islands, signage, barriers, road marking, lighting, bridges, culverts, kerb and channel, local road drainage, pedestrian footpaths and cycleways within the road reserve and on road cycleways provided in accordance with Redland City Council guidelines. Trunk infrastructure for the local roads network does not include land and work for the following: (a) upgrades of a State-controlled road; (b) upgrades of a major road that is primarily related to serving a development of a premises, such as an acceleration or deceleration lane, turn lanes or traffic signals that primarily serve traffic entering or exiting the development project; (c) an existing trunk road infrastructure item; (d) upgrades of a local government road (non major road) other than a major road; (e) upgrades of a non major road, other than work for an intersection of a major road and a non major road if the work expands the capacity of the major road; (f) road infrastructure that is limited to performing one of the following functions: (i) road infrastructure that is internal to a development; or (ii) road infrastructure that connects a development to the external road infrastructure network.

<table>
<tr><th>Column 1
Trunk infrastructure network</th><th>Column 2
Identified trunk infrastructure criteria</th></tr>
<tr><td colspan="2">Local government trunk infrastructure networks</td></tr>
<tr><td></td><td>
Cycleways trunk infrastructure

Trunk infrastructure for the cycleways and shared pathway network includes land and work for primary and strategic on-road and off-road linkages limited to the following infrastructure items identified in the LGIP:

(a) Primary Cycle and Pedestrian Network; and
<table>
<tr><th colspan="2">PRIMARY CYCLING AND PEDESTRIAN NETWORK</th></tr>
<tr><th>Network Type</th><th>Network Component</th></tr>
<tr><td>On-Road</td><td>Road Corridor linkages:</td></tr>
<tr><td></td><td>• Within major Council roads being arterial, sub-arterial and major collector roads</td></tr>
<tr><td></td><td>• Dedicated cycle lanes which provide a framework to connect principal and major centers city-wide</td></tr>
<tr><td></td><td>• South East Queensland Principal Cycle Network (Redland City) within local road reserves</td></tr>
<tr><td>Off-Road</td><td>Road Corridor Linkages</td></tr>
<tr><td></td><td>• Within major Council roads being arterial, sub-arterial and major collector roads</td></tr>
<tr><td></td><td>• Shared path links to connect principal and major centers</td></tr>
<tr><td></td><td>Road Corridor & Open Space Linkages</td></tr>
<tr><td></td><td>• South East Queensland Principal Cycle Network (Redland City) within local road reserves</td></tr>
<tr><td></td><td>• Moreton Bay Cycleway</td></tr>
<tr><td></td><td>• Strategic tourist routes</td></tr>
<tr><th colspan="2">LOCAL CYCLING AND PEDESTRIAN NETWORK</th></tr>
<tr><th>Network Type</th><th>Network Component</th></tr>
<tr><td>On-Road</td><td>Road Corridor linkages:</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Column 1
Trunk infrastructure network</th><th>Column 2
Identified trunk infrastructure criteria</th></tr>
<tr><td colspan="2">Local government trunk infrastructure networks</td></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>Dedicated cycle lanes connecting township and suburb catchments</td></tr>
<tr><td></td><td>Dedicated on-road cycle lanes connecting local and district shopping centers, secondary schools and key employment nodes</td></tr>
<tr><td>Off-Road</td><td>Road Corridor Linkages:</td></tr>
<tr><td></td><td>Shared paths connecting township and suburb catchments</td></tr>
</table>

(b) associated lighting, culverts, bridges, directional information signage and surface marking.

Trunk infrastructure for the cycleways and shared pathway network does not include the following on-road and off-road cycleway and pedestrian infrastructure:

(a) cycleways and pedestrian pathways within the road reserve of a State controlled road;

(b) an existing trunk cycleway or shared pathway infrastructure item;

(c) cycleway and shared pathway infrastructure that is limited to performing one of the following functions:

(i) cycleway and shared pathway infrastructure that is internal to a development; or

(ii) cycleway and shared pathway infrastructure that connects a development to the external cycleway and shared pathway infrastructure network.</td></tr>
<tr><td></td><td>Public transport (bus stops)

Trunk infrastructure for the bus stops network includes work limited to the following infrastructure items identified in the LGIP:

(a) within major Council roads being arterial, sub-arterial and major collector roads, associated bay, shelter, gutter mesh, electrical connection, seating, and transport information signage provided in accordance with Redland City Council guidelines</td></tr>
</table>

Column 1 Trunk infrastructure network	Column 2 Identified trunk infrastructure criteria
Local government trunk infrastructure networks	
	and Disability Standards for Accessible Public Transport; and (b) serving a minimum catchment of 800 EP within 400m of the bus stop. Trunk infrastructure for the bus stops network does not include work for the following: (a) an existing trunk bus stop infrastructure item; (b) public transport infrastructure that is limited to performing one of the following functions: (i) public transport infrastructure that is internal to a development; or (ii) public transport infrastructure that connects a development to the external public transport network.
Public parks and land for community facilities trunk infrastructure network	**Public parks trunk infrastructure** Trunk infrastructure for the public parks network being land and work for destination, community, neighbourhood and sporting parks for formal and informal recreation and sporting purposes limited to the infrastructure items identified in the LGIP. Trunk infrastructure for the public parks network does not include land and works for the following: (a) land and work for parks which exceed the desired standards of service stated in the LGIP; (b) an existing park infrastructure item; (c) parks infrastructure that is limited to performing one of the following functions: (i) parks infrastructure that is internal to a development; or (ii) parks infrastructure that connects a development to the external parks network.
	Land for community facilities trunk infrastructure Trunk infrastructure for the land for community facilities network including land and basic work associated with site

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
Local government trunk infrastructure networks	
	clearing and connection to services for community facilities limited to the infrastructure items identified in the LGIP. Trunk infrastructure for the land for community facilities network does not include land and basic work for the following: (a) an existing community facilities infrastructure item; or (b) land and basic work for community facilities infrastructure that performs one of the following functions: (i) land and basic work for community facilities infrastructure that is internal to a development; or (ii) land and basic work for community facilities infrastructure that connects a development to the external land for community facilities network.
Stormwater trunk infrastructure network	**Stormwater trunk infrastructure** Trunk infrastructure for the stormwater network being land and work limited to the following items identified in the LGIP: (a) stormwater infrastructure with capacity to service multiple premises not subject to the same or related development approval; (b) piped drainage necessary to service an upstream post development urbanised catchment greater than 1ha in size and associated manholes, culverts, inlets, outlets, and scour protection; and (c) regional stormwater quality improvement devices, retention basins, detention basins and gross pollutant traps. Trunk infrastructure for the stormwater network does not include land and work for the following: (a) trunk infrastructure already included in local road network; (b) an existing stormwater infrastructure item;

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
Local government trunk infrastructure networks	
	(c) minor stormwater piped drainage less than the minimum size stated in QUDM to be contributed to local governments; (d) inter-allotment drainage; (e) bank stabilisation, erosion protection and revegetation which is the direct result of the increase in demand caused by the development; (f) stormwater infrastructure that performs one of the following functions: (i) stormwater infrastructure that is internal to a development; or (ii) stormwater infrastructure that connects a development to the external stormwater infrastructure network.

Column 1 **Trunk infrastructure network**	**Column 2** **Identified trunk infrastructure criteria**
SEQ service provider trunk infrastructure networks	
Water supply trunk infrastructure network	Water supply trunk infrastructure Trunk infrastructure for the water supply network including land and work limited to the following items identified in the LGIP: (a) water treatment plants; (b) the following distribution mains which satisfy the function and purpose of the water supply trunk infrastructure network: (i) for the Mainland and Southern Moreton Bay Islands, all mains of 300 mm diameter or more and specific mains of smaller diameter required to complete the interconnection of the trunk network; (ii) for the North Stradbroke Island townships, mains of 200 mm diameter or more connecting water treatment plants to reservoir complexes or township boundaries, and mains connecting

Column 1 Trunk infrastructure network	Column 2 Identified trunk infrastructure criteria
SEQ service provider trunk infrastructure networks	
	reservoir complexes and high level zones (either pump boosted zones or elevated reservoir zones); and (c) for a trunk distribution mains: (i) associated pump stations and fittings; (ii) associated pressure reducing and sustaining valves; (iii) associated monitoring systems; and (d) firefighting devices; and (e) storages. Trunk infrastructure for the water supply network does not include land and work for the following: (a) minor water reticulation mains less than 300 mm diameter on the mainland and 200 mm diameter on North Stradbroke Island; (b) an existing water supply infrastructure item; (c) water supply infrastructure that performs one of the following functions: (i) water supply infrastructure that is internal to a development; or (ii) water supply infrastructure that connects a development to the external water supply infrastructure network.
Sewerage trunk infrastructure network	**Sewerage trunk infrastructure** Trunk infrastructure for the sewerage network including land and work limited to the following items identified in the LGIP: (a) rising mains not associated with private sewerage pump stations; and (b) reuse transport mains; and (c) gravity sewers on the mainland which service a minimum 800 ET; and

Column 1 Trunk infrastructure network	Column 2 Identified trunk infrastructure criteria
SEQ service provider trunk infrastructure networks	
	(d) gravity sewers on the mainland which provide a connecting function between an upstream trunk maintenance structure and downstream trunk maintenance structure; and (e) gravity sewers on North Stradbroke Island which service a minimum 400 ET; and (f) gravity sewers on North Stradbroke Island which provide a connecting function between an upstream trunk maintenance structure and downstream trunk maintenance structure; and (g) pump stations (excluding private pump stations), manholes and fittings associated with a trunk gravity sewer; and (h) odour and corrosion control systems; and (i) monitoring systems associated with a trunk item; and (j) sewerage treatment plants, storage facilities, release systems and associated monitoring systems. Trunk infrastructure for the sewerage network does not include land and work for the following: (a) minor sewage reticulation mains augmenting another gravity sewer as specified under subparagraphs (d) or (f) above; (b) an existing sewer infrastructure item; (c) sewerage infrastructure that performs one of the following functions: (i) sewerage infrastructure that is internal to a development; or (ii) sewerage infrastructure that connects a development to the external sewerage infrastructure network.

Schedule 6 Planned cost for trunk infrastructure networks

Column 1 Trunk infrastructure network	Column 2 Land	Column 3 Work
Local government trunk infrastructure networks		
Local road network	The value of the land cost stated in the LGIP for the transport network.	The value of the required work less the value of any existing road infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the transport network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.
Cycleways network	The value of the land cost stated in the LGIP for the transport network.	The value of the required work less the value of any existing cycleway and shared path infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the transport network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.
Public transport (bus stops)	The value of the land cost stated in the LGIP for the transport network.	The value of the required work less the value of any existing public transport (bus stop) infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the transport network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.

Column 1 Trunk infrastructure network	Column 2 Land	Column 3 Work
Local government trunk infrastructure networks		
Public parks network	The value of the land cost stated in the LGIP for the Public parks network.	The value of the required work less the value of any existing public parks infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the public parks network and this resolution: (a) if only land preparation is required—the value of the site preparation; (b) if otherwise—the value of: (i) direct construction and embellishment cost; and (ii) construction on cost stated in Schedule 7.
Land for community facilities network	The value of the land cost stated in the LGIP for the land for community facilities network.	The value of the required basic work stated in the LGIP for land for community facilities network and this resolution: (a) site preparation; and connection to services (direct construction cost); (b) construction on cost stated in Schedule 7.
Stormwater network	The value of the land cost stated in the LGIP for the stormwater network.	The value of the required work less the value of any existing stormwater infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the stormwater network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.

Column 1 Trunk infrastructure network	Column 2 Land	Column 3 Work
SEQ service provider trunk infrastructure networks		
Water supply network	The value of the land cost stated in the LGIP for the water supply network.	The value of the required work less the value of any existing water supply infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the water supply network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.
Sewerage network	The value of the land cost stated in the LGIP for the sewerage network.	The value of the required work less the value of any existing sewerage infrastructure which is replaced by the required work which are calculated by reference to the following stated in the LGIP for the sewerage network and this resolution: (a) direct construction cost; and (b) construction on cost stated in Schedule 7.

Schedule 7 Maximum construction on costs for work

Column 1 **Trunk infrastructure network**	**Column 2** **Maximum construction on costs for work** **(Percentage of the construction cost for the work)**
Local government trunk infrastructure networks	
Local road network	11
Cycleways network	11
Public parks network	11
Land for community facilities network	11
Stormwater network	11
SEQ service provider trunk infrastructure networks	
Water supply network	11
Sewerage network	11

15 REPORTS FROM INFRASTRUCTURE & OPERATIONS

Nil.

16 NOTICES OF INTENTION TO REPEAL OR AMEND A RESOLUTION

In accordance with *s.262 Local Government Regulation 2012.*

17 NOTICES OF MOTION

In accordance with s.6.16 Council Meeting Standing Orders.

18 URGENT BUSINESS WITHOUT NOTICE

In accordance with s.6.17 of Council Meeting Standing Orders, a Councillor may bring forward an item of urgent business if the meeting resolves that the matter is urgent.

Urgent Business Checklist	**YES**	**NO**
To achieve an outcome, does this matter have to be dealt with at a general meeting of Council?		
Does this matter require a decision that only Council make?		
Can the matter wait to be placed on the agenda for the next Council Meeting?		
Is it in the public interest to raise this matter at this meeting?		
Can the matter be dealt with administratively?		
If the matter relates to a request for information, has the request been made to the CEO or a General Manager Previously?		

19 CONFIDENTIAL ITEMS

COUNCIL MOTION

That Council considers the confidential report(s) listed below in a meeting closed to the public in accordance with section 254J of the *Local Government Regulation 2012*:

19.1 Redland Investment Corporation Governance Review

This matter is considered to be confidential under section 254J(3)(g) of the *Local Government Regulation 2012,* and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government.

Overview

To consider commercial governance arrangement with Redland Investment Corporation.

19.2 Redland Investment Corporation Director Fee Increases

This matter is considered to be confidential under section 254J(3)(g) of the *Local Government Regulation 2012,* and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government.

Overview

To obtain approval from Council to increase the Director's fees.

19.3 Redland Investment Corporation Audited Financial Statements 2024-2025

This matter is considered to be confidential under section 254J(3)(g) of the *Local Government Regulation 2012,* and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government.

Overview

To present Redland Investment Corporation's Audited Financial Statements 2024-25 to Redland City Council as required by the Service Agreement between Redland Investment Corporation and Council.

19.4 Cleveland Town Centre Revitalisation Project Update

This matter is considered to be confidential under section 254J(3)(g) of the *Local Government Regulation 2012,* and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government.

Overview

To respond, in part, to Council Resolution of 21 May 2025 in respect of the Cleveland Town Centre Revitalisation Project which requires a report to be brought back to Council on the functional scope and resourcing requirements.

19.5 Tree Clearing Prosecution

This matter is considered to be confidential under section 254J(3)(e) of the *Local Government Regulation 2012,* and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with legal advice obtained by the local government or legal proceedings involving the local government including, for example, legal proceedings that may be taken by or against the local government.

Overview

To endorse a communication strategy to increase awareness of prohibiton of tree clearing.

19.6 Strategic Quarry Options

This matter is considered to be confidential under section 254J(3)(g) of the *Local Government Regulation 2012,* and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government.

Overview

To consider future commercial options for the management of Council owned quarries.

20 MEETING CLOSURE