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14 June 2022

Our Ref: 21-753

Chief Executive Officer
Mareeba Shire Council
PO Box 154
MAREEBA QLD 4880

Attention: Mr Brian Millard – Senior Planner (BrianM@msc.qld.gov.au)

Dear Brian,

RE. DEVELOPMENT APPLICATION SEEKING A DEVELOPMENT PERMIT FOR RECONFIGURING A LOT OVER LAND AT 20 WARRIL DRIVE, KURANDA.

We refer to the above-described matter and confirm that Urban Sync Pty Ltd has been engaged by Express Build Contract Construction to submit a development application to Mareeba Shire Council for assessment with respect to the above-described land.

The proposed development seeks to subdivide the land into five (5) lots, inclusive of the creation of an access easement to allow lawful access to the new lots. In support of the application, we attach the following documents to assist with Council's assessment:

- DA Form 1 and Landowners Consent as **Attachment 1**;
- Plan of Subdivision prepared by RPS as **Attachment 2**;
- Site Searches as **Attachment 3**;
- Pre-lodgement correspondence as **Attachment 4;**
- Assessment of the applicable development codes under the *Mareeba Shire Planning Scheme 2016* as **Attachment 4;**
- Geotechnical Investigation Report prepared by ETS Geotechnical as **Attachment 6;** and
- Ecological Assessment Report prepared by Natura Pacific as **Attachment 7.**

In accordance with s51(2) of *Planning Act 2016,* landowners' consent has been provided as the Applicant is not the owner of the land. In accordance with Council's Schedule of Fees for the 2021/22 Financial Year, Councils' application fee to the amount of **$1,866.00** (see Section 4.3) will be paid upon lodgement of this application and the issuing of an invoice for this amount by Mareeba Shire Council.

We trust this application can now be progressed for assessment. Should you require any further information or clarification on any matters regarding this application, please do not hesitate to contact me using the below details.

Yours faithfully,

Matt Ingram
Senior Planner
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UrbanSync
Planning | Development

TOWN PLANNING REPORT

DEVELOPMENT APPLICATION FOR RECONFIGURING A LOT

AT

20 WARRILL DRIVE,

KURANDA

14 June 2022

CONTENTS

FIGURES

TABLES

Limitation: This report has been prepared on behalf of Urban Sync Pty Ltd for our client, Express Build Contract Construction and considers the instructions and requirements of Express Build Contract Construction with regards to the development being proposed. This report should not be relied upon by any third party and Urban Sync Pty Ltd accepts no liability or responsibility for the reliance on this report, or data contained within the report, by any third party.

Reference	Revision	Date	Prepared by	Checked by	Authorised by
21-753	1.0	14/06/2022	JRW	MDI	MDI

14/06/2022
Final Version 1.0
Urban Sync Pty Ltd
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1 EXECUTIVE SUMMARY

Express Build Contract Construction (the Applicant) seeks the requisite statutory development approval from Mareeba Shire Council (Council) to establish a five (5) lot subdivision and access easement (the proposed development) over Lot 2 on SP126546 at 20 Warril Drive, Kuranda (the site).

In a planning context, the site is located within the Rural Residential A (4,000m^2 Precinct) of the Rural Residential Zone of the *Mareeba Shire Planning Scheme 2016* (Planning Scheme), where the proposed development triggers the need for a **Code Assessable** development application to be lodged and approved by Council. Accordingly, this development application seeks the following approvals:

- **Development Permit for Reconfiguring a Lot (1 Rural Residential Lot into 5 Rural Residential Lots and Access Easement).**

This report has been undertaken to:

- Examine the physical characteristics of the site and the sites development history;
- Accurately describe the proposed development as reflected in the Plan of Subdivision prepared by RPS **(Attachment 2)**;
- Address all applicable statutory requirements triggered through the *Planning Act 2016* (PA), *Planning Regulation 2017* (PR), *State Planning Policy 2017* (SPP) and the Planning Scheme; and
- Address any 'key' planning issues and non-compliances with the applicable aspects of the Planning Scheme and other Assessment Benchmarks.

Under the Planning Scheme, the local government purpose of the Rural Residential Zone is to '*provide for residential development on large lots where local government infrastructure and services may not be provided on the basis that the intensity of development is generally dispersed'*. Based on a reasonable assessment, the Planning Scheme encourages the establishment of rural residential allotments that exceed 4,000m^2 within the Rural Residential A – 4,000m^2 Precinct of the Rural Residential zone, as is proposed as part of this application.

In terms of assessment of the proposed development, there are some departures away from the 'deemed to comply' Acceptable Outcomes. Where these departures have been identified, a performance-based assessment has been undertaken to demonstrate, based on sound planning grounds, that compliance with the corresponding Performance Outcome, and in turn the applicable code, can still be achieved. In this instance, the key assessment matters relate to slope stability, environmental features, lot frontage and rear lots. The planning report, as well as the supporting technical reports, have provided extensive commentary in response to these matters to demonstrate that the key assessment matters can be suitably addressed and managed and for this reason, the proposed development will not have an unacceptable, negative impact on the amenity of the locality or adjacent residents.

The report concludes that the proposed development has been considered and assessed on its merits, in the context of the site, adjoining neighbors, the pattern of existing and approved urban development and the design arrangements to demonstrate that compliance with the applicable assessment benchmarks and other relevant State legislation can be suitably demonstrated. For this reason, we have confidence that a complete performance-based assessment by Council will consider the project in its context, and in doing so, accept the alternative solutions being proposed. As such, the proposed development should be approved by Council subject to the imposition of reasonable and relevant conditions of approval and with the above in mind, we now submit this application to Council for assessment.

2 APPLICATION DETAILS

2.1 APPLICATION SUMMARY

Approval Sought:	**Development Permit for Reconfiguring a Lot (1 Rural Residential Lot into 5 Rural Residential Lots and Access Easement).**
Registered Landowner:	Rebecca Marie Suman and Shan Jacob Jones
Applicant:	Express Build Contract Construction C/- Urban Sync Pty Ltd PO Box 2970 CAIRNS QLD 4870
Project Description Details:	The proposed development will involve the subdivision of the site into five (5) rural residential lots and the creation of an access easement to allow lawful access to the new lots.
ASSESSMENT DETAILS	
Assessment Manager:	Mareeba Shire Council
Development Category:	Assessable Development
Assessment Category:	Code Assessable
Public Notification:	N/A
PRE-LODGEMENT CONSULTATION	
Council:	Yes
State:	N/A
RELEVANT STATE PLANNING INSTRUMENTS	
Legislation:	*Planning Act 2016 (Qld)*
Planning Policy:	Queensland State Planning Policy (July 2017)
Planning Policy State Interests:	▪ Biodiversity; and ▪ Strategic Airports and Aviation Facilities.
Regional Plan:	Far North Queensland Regional Plan 2009-2031
Regional Plan Land Use:	Regional Landscape and Rural Production Area
Development Assessment Mapping:	▪ Fish Habitat Areas; ▪ Native Vegetation Clearing ▪ Water Resources.
Referrals:	Nil

RELEVANT LOCAL PLANNING INSTRUMENTS	
Planning Scheme:	*Mareeba Shire Planning Scheme 2016*
Local Plan:	N/A
Local Plan Precinct:	N/A
Zone:	Rural Residential
Zone Precinct:	Rural Residential A – 4,000m^2 Precinct
Overlays:	▪ Environmental Significance; ▪ Hill and Slope; and ▪ Transport Infrastructure.

2.2 PLANS OF DEVELOPMENT

Drawing Title	DWG No.	Sheet No.	Prepared By	Date
Proposal Plan	PR151054-3	1	RPS	23 February 2022

2.3 SUPPORTING REPORTS

Report	Report No.	Revision	Prepared By	Date
Geotechnical Investigation Warril Drive Subdivision Kuranda	GT22-090-001R REV 2	2	ETS Geotechnical	June 2022
Ecological Assessment	NC022-006	1.0	Natura Pacific	08 April 2022

3 SITE DETAILS

3.1 SITE DESCRIPTION

Registered Landowners:	Rebecca Marie Suman and Shan Jacob Jones
Site Location:	20 Warril Drive, Kuranda
Lot and Description:	Lot 2 on SP126546
Site Area:	22,810 m²
Tenure:	Freehold
Easements:	Nil
Encumbrances:	Nil
Local Government Authority:	Mareeba Shire Council

Figure 1: Site location – 20 Warril Drive, Kuranda (Source: Queensland Globe, State of Queensland 2022).

3.2 SITE ANALYSIS

Current Use/s:	Nil.
Existing Improvements:	With the exception of a dam, the site is currently unimproved.
Topography:	The topography of the site varies, although generally falls from the western boundary at Warril Drive towards the waterway on the eastern boundary.

Waterways:	An identified waterway runs north-south along the rear boundary of the site. A dam is also located in the western portion of the site (please refer to the Ecological Assessment Report in **Attachment 7** for further detail).
Vegetation:	There is established vegetation throughout the site (please refer to the Ecological Assessment Report in **Attachment 7** for further detail).
Environmental Management & Contaminated Land:	To the best of Urban Sync's knowledge, the site is not located on the Environmental Management or Contaminated Land Registers.
Heritage Places:	The site is not an identified State or local 'Heritage Place', nor are any adjacent sites.

3.3 SURROUNDING LAND USES

Geographically, Kuranda is located approximately 36km from Mareeba and approximately 30km from Cairns Central Business District, and includes a variety of Residential, Community Facilities, Conservation and Rural zoned land. In a more local context, the site is located nearby to the following zones and land uses:

- North: Predominantly Rural Residential and Rural zoned land;
- South: Predominantly Rural Residential and Rural zoned land;
- East: Predominantly Rural Residential zoned land and some Community Facilities and Recreation & Open Space;
- West: Predominantly Rural Residential and Rural zoned land with some Recreation & Open Space.

In the context of the site, it is directly surrounded to the north, south and west by land included in the Rural Residential (A – 4,000m2 Precinct) zone (see **Figure 2**).

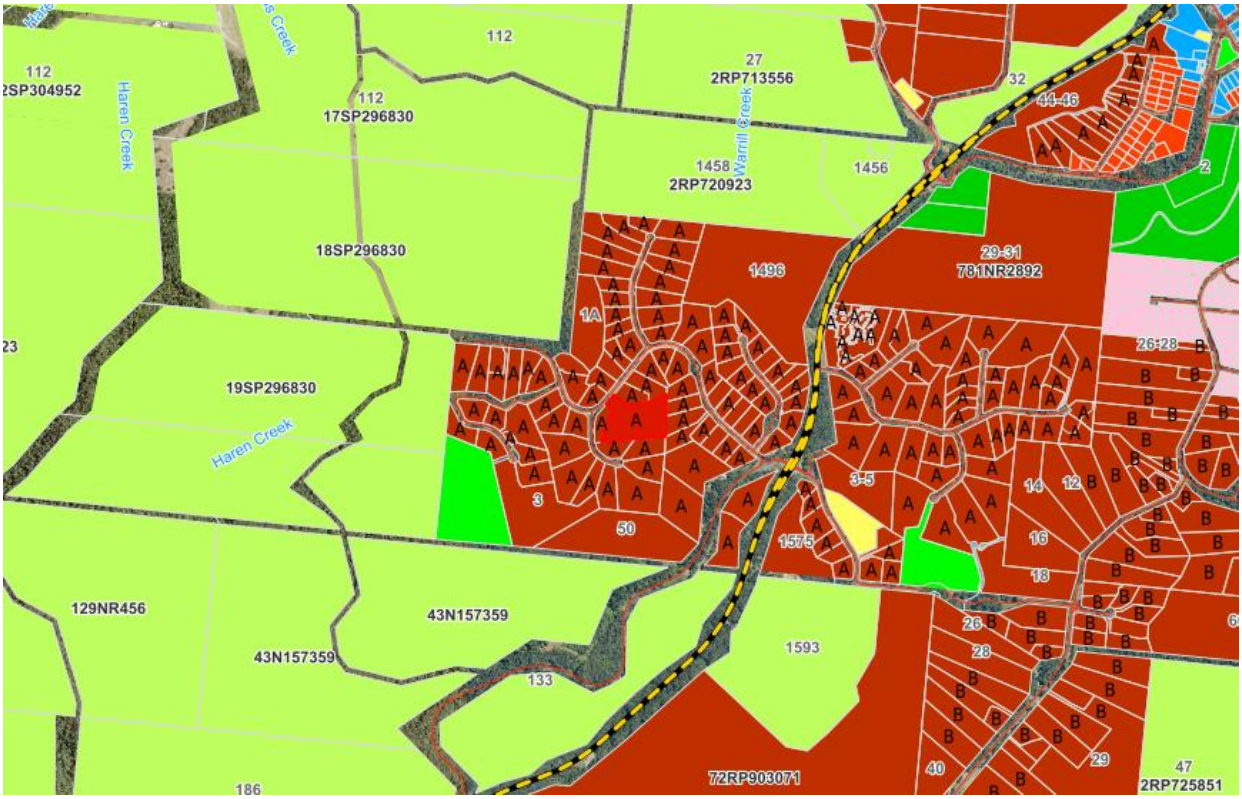


Figure 2: Surrounding Zoning Designations (Source: Mareeba Shire Council Mapping, 2022).

3.4 INFRASTRUCTURE AND SERVICES

Road Frontage:	The site has an approximate 40 metre frontage to Warril Drive, which is identified as an Access Road on Council's Road hierarchy. Warril Drive is a single lane, undivided, two-way, five (5) metre wide, sealed carriage within a 20m wide road reserve. The road reserve is not improved with kerb or channelling, nor any formalised pedestrian/bicycle pathway nor on-street parking.
Water Supply:	The site is connected to Council's reticulated water via an existing water main which traverses near the frontage of the site in Warril Drive (see **Figure 3**).
Sewerage Supply:	The site is not within an area serviced with reticulated sewerage (see **Figure 3**).
Stormwater:	The site is not within an area serviced by Council's stormwater trunk infrastructure. Stormwater appears to be discharged via sheet flow to the waterway at the rear of the site and to the onsite dam.
Electricity & Telecommunications:	The site is connected to both electricity (overhead) and telecommunications services (underground).

Figure 3: Location of Existing Services (Source: Mareeba Shire Council – Council Services Mapping 2022)

4 DEVELOPMENT BACKGROUND

4.1 RELEVANT APPROVALS

A search of Council's online DA Enquiry System has determined that there are no existing approvals in effect on the site.

4.2 PRELODGEMENT MEETINGS

Pre-lodgement advice was sought from Council on the 24 February 2022 regarding the plan of subdivision and specific requirements relating to setbacks, ecological assessment, earthworks, and other associated components. The Applicant has considered this advice and this advice development application has been prepared accordingly.

A copy of the pre-lodgement correspondence has been provided in **Attachment 4.**

4.3 BREAKDOWN OF APPLICATION FEES

The application fee of **$1,866.00** was calculated as follows:

- **Reconfiguring a Lot (up to 3-10 lots)** = $1,866.00 (per application).

5 DEVELOPMENT PROPOSAL

5.1 GENERAL DESCRIPTION

This development application seeks the requisite statutory development approval from Council to establish a five (5) lot subdivision and access easement over Lot 2 on SP126546 at 20 Warril Drive, Kuranda. Accordingly, this development application seeks the following approvals:

- **Development Permit for Reconfiguring a Lot (1 Rural Residential Lot into 5 Rural Residential Lots and Access Easement).**

5.2 PROPOSAL DETAILS

The proposed development involves the creation of five (5) new Rural Residential zoned allotments and an access easement, generally as depicted in the plan of subdivision prepared by RPS provided in **Attachment 2** and as summarised below in **Table 1**.

Please note: the proposed building envelope for Lot '21' and Lot '23' will be revised in accordance with the recommendations outlined in the Geotechnical Assessment report provided in **Attachment 6** and the Ecological Assessment Report provided in **Attachment 7**. Due to the specific nature of these changes, they will be identified at the time of survey so they can be accurately located. The updated building envelopes reflecting the requirements of the Geotechnical Assessment and the Ecological Assessment will be provided to Council as part of the survey plan endorsement submission and we expect that Council would condition that these changes be made.

Table 1: Subdivision Statistics

Reconfiguring a Lot Proposal					
Number of Existing Lots	One (1)		**Number of Proposed Lots**		Five (5)
Parkland	Nil	**Easements**	One – Access and Services[1]	**Covenants**	Nil

Proposed Reconfiguration Arrangements					
Current			**Proposed**		
Description	**Area**	**Road Frontage**	**Lot Number**	**Area**	**Road Frontage (Approximate)**
Lot 2 on SP126546	22,810 m²	40m to Warril Drive	20	4,071 m²	33m to Warril Drive; and Access Easement
			21	4,764 m²	No Street frontage (Access via easement)
			22	4,696 m²	No Street frontage (Access via easement)
			23	4,061m²	No Street frontage (Access via easement)
			24	5,217 m²	No Street frontage (Access via easement)

[1]Furtehr easements for drainage may be required. If required, they will be identified in a future operational works application with modifications to the plan of subdivision made at that time.

5.3 STAGING

The proposed development will not be staged.

5.4 ENGINEERING AND INFRASTRUCTURE PROVISION

5.4.1 Water Supply

Each lot will connect to the existing water main in Warril Drive. All new works will be undertaken in accordance with the FNQROC Development Manual and be documented in a future Operational Works application.

5.4.2 Sewerage Supply

Each lot will be serviced by an on-site effluent system. Please refer to the Geotechnical Investigation Report provided in **Attachment 6** for further details regarding wastewater treatment options for each lot.

5.4.3 Electricity and Telecommunications

Electricity and telecommunications services will be extended to each lot from the existing services in Warril Drive in accordance with Ergon and NBN's requirements.

5.4.4 Stormwater Drainage (Quantity)

Stormwater from proposed Lots '22','23' and '24' will be discharged via appropriate stormwater management measures (to ensure a no-worsening) to the existing waterway located at the rear of the site. Stormwater from proposed Lots '20' and '21' will discharge stormwater to the existing on-site dam.

All stormwater works will be undertaken in accordance with the FNQROC Development Manual and will be documented, including a Stormwater Management Plan, in a future Operational Works application.

Note: Any drainage easements that are required i.e., for the dam spillway or otherwise, will be identified as part of the Stormwater Management Plan and detailed in the future Operational Works application with modifications to the plan of subdivision (if required) made at that time.

5.4.5 Stormwater Drainage (Quality)

In accordance with the *State Planning Policy 2017,* as the proposed development does not include six (6) or more lots, no stormwater quality measures are proposed for the operational phase. Compliance can be conditioned for the construction and operational phase.

5.4.6 Bulk Earthworks

The proposed development will involve some earthworks to facilitate the construction of the driveway within the access easement (please refer to the Geotechnical Investigation Report provided in **Attachment 6** for further details regarding earthworks). All earthworks will be documented in a future Operational Works application and undertaken in accordance with the FNQROC Development Manual.

Note: To limit the amount of earthworks that need to be undertaken on the site, no earthworks are proposed on the new lots or within the proposed building envelopes. Any such earthworks (if required) will be undertaken by future owners as part of the construction of a Dwelling House.

5.4.7 Erosion and Sediment Control

An erosion and sediment control plan will be prepared and implemented for the construction phase of the proposed development and will be documented in a future Operational Works application.

5.5 ACCESS

A proposed access crossover and driveway within the access easement wide will provide access to Lots 21-24 from Warril Drive. The width of the concrete driveway is yet to be determined, although is expected to be 5.5m wide. Full

details will be provided/documented in a future Operational Works application and undertaken in accordance with the FNQROC Development Manual. Access to Lot 20 will be direct from Warril Drive.

5.6 INFRASTRUCTURE CHARGES ESTIMATE

Chapter 4 – Infrastructure of the PA outlines provisions for local governments to prescribe infrastructure charges for demands placed on trunk infrastructure where a Local Government Infrastructure Plans (LGIP) is included as part of the Planning Scheme and is adopted by resolution. These provisions have been reflected in Mareeba Shire Council Infrastructure Charges Resolution (No. 1) 2021 which came into effect from 1 July 2021.

The site is in the Rural Residential A (4,000m^2 Precinct) of the Rural Residential Zone of the Mareeba Shire Council Local Government Area. In accordance with Council's AICR, Infrastructure Charges are applicable to the development calculated as follows and shown in **Table 2** below:

- Charges based on the proposed development (see Councils AICR); less:
- Discounts for the existing allotments/existing lawful uses; and
- Discounts for infrastructure that does not service the site.

Table 2: Calculation of Infrastructure Charges (Subdivision)

Category	Use Charge	Unit of Measure	Charge Rate	No of Units	Amount
Proposal					
Residential	Dwelling House – 3 or more-bedroom dwelling	Per dwelling	$15,811.20[1]	5	**$79,056.00[1]**
Credit					
Residential	Dwelling House – 3 or more bedroom dwelling	Per dwelling	$15,811.20[1]	1	**$15,811.20[1]**
TOTAL					**$63,244.80[1]**

[1]In accordance with 4.1(d) of the *Mareeba Shire Council Infrastructure Charges Resolution (No. 1) 2021*, there is a 20% reduction to the infrastructure charges where the site is not connected to Council's reticulated sewer network and this credit has been applied to the figures in the above table.

6 LEGISLATIVE REQUIREMENTS

6.1 PLANNING ACT 2016

6.1.1 Confirmation that the Proposed Development is not Prohibited

The proposed development is not prohibited. This has been established by considering all the relevant State and local instruments which can provide prohibitions under the PA, including Schedule 10, Parts 2-5, Parts 10-11 and Parts 16 and 20 of the *Planning Regulation 2017* ('PR').

6.1.2 Assessment Manager

The Assessment Manager for this development application is Mareeba Shire Council, as determined by Schedule 8 of the PR.

6.1.3 Category of Development

The proposed development involves the Reconfiguring a Lot in respect to '*creating lots by subdividing another lot*' and *'creating an easement giving access to a lot from a constructed road'*. The proposed development is located within the Rural Residential Zone (Rural Residential A – 4,000m^2 Precinct) where reconfiguring a lot is made assessable and requires a development approval under the Planning Scheme. In accordance with s43(1) of the PA, the proposed development is therefore, **'Assessable Development'.**

6.1.4 Level of Assessment

The proposed development triggers **Code Assessment**.

6.1.5 Statutory Considerations for Assessable Development

The proposed development is Code Assessable and as such, the assessment must only be carried out against the assessment benchmarks relevant to the development, as identified in the categorising instrument for the development, being the Planning Scheme. When assessing the application, the relevant considerations of the Assessment Manager in making the decision are in accordance with Sections 59, 60(2), and 62 of the PA and Sections 25-28 of the PR. Specifically, section 60(2) of the PA states for a Code Assessable application, the Assessment Manager:

a) *"Must decide to approve the application to the extent the development complies with all of the assessment benchmarks;*

b) *May decide to approve the application even if it does not comply with some of the assessment benchmarks, provided for example, a decision to approve resolves a conflict between the assessment benchmarks;*

c) *May impose development conditions on a development approval; and*

d) *May, to the extent the development does not comply with some or all the assessment benchmarks,* ***decide to refuse the application, only if compliance cannot be achieved by imposing development conditions****"* (emphasis added)

6.2 FAR NORTH QUEENSLAND REGIONAL PLAN

The site is located within the 'Regional Landscape and Rural Production Area' Regional Land Use Category of the Far North Queensland 2009-2031 (see **Attachment 3**). The Minister has identified that the planning scheme, specifically the Strategic Framework, appropriately advances the FNQRP 2009-2031. Hence, compliance with the FNQRP is demonstrated through the compliance with the Planning Scheme (refer to this report and attachments for demonstration of this compliance).

6.3 STATE PLANNING POLICY

The State Planning Policy (SPP) came into effect on July 2017 under the PA. Part E of the SPP includes an array of State interests and associated assessment benchmarks which need to be considered during the development assessment process, where these State interests have not already been appropriately reflected within the relevant planning

scheme. A review of the SPP mapping indicates that the proposed development/site is subject to several State interests, as outlined below (see also **Attachment 3**):

- Biodiversity (MSES-Regulated Vegetation (Category R); and MSES – Regulated Vegetation (Intersecting a watercourse); and
- Strategic Airports and Aviation Facilities (Aviation Facility)

In accordance with Section 2.1 of the Planning Scheme, the Minister has identified that the Planning Scheme appropriately advances all relevant aspects of the State Planning Policy except for the Coastal Environment (Environment and Heritage), Natural Hazards (Coastal Hazards), and Strategic Ports (Infrastructure) which are deemed not relevant to the Mareeba Shire Council Local Government Area. However, the Planning Scheme predates the 2017 SPP. As a result, we are of the view that the 2017 SPP has not been integrated into the Planning Scheme. Despite this, upon review of the '*Understanding the State Planning Policy – July 2017*', there were no changes made to any of the above listed State interests in the 2017 SPP that would result in these State interests being substantially different from earlier version of the SPP that is integrated into the Planning Scheme. Accordingly, all applicable State interests have been appropriately reflected in the Planning Scheme and in turn, compliance with the SPP is demonstrated through compliance with the Planning Scheme (refer to this report and attachments for demonstration of this compliance).

6.4 REFERRALS & STATE DEVELOPMENT ASSESSMENT PROVISIONS

A review of the DA mapping system indicates that the site is subject to the following matters of State interest (see **Attachment 3**):

- Fish Habitat Areas (Queensland waterways for waterway barrier works);
- Native Vegetation Clearing (Category X Regulated Vegetation, and Category R Regulated Vegetation); and
- Water Resources (Water resources planning area boundaries)

As such, in consultation with Schedule 10 of the PR, it is confirmed that the proposed development will not trigger referral to the State Government.

6.5 PLANNING SCHEME (MAREEBA SHIRE PLANNING SCHEME 2016)

6.5.1 Applicable Planning Scheme Overlays

The site is affected by the following Planning Scheme overlays:

- Environmental Significance (Regulated Vegetation; MSES – Waterway Buffer; MSES- Waterway);
- Hill and Slope (Hill and Slope); and
- Transport Infrastructure (Road Hierarchy – Access)

6.5.2 Applicable Planning Scheme Codes

Table 4 below lists the applicable codes of the Planning Scheme the proposed development is subject to assessment against.

Table 3: Applicable Planning Scheme Codes for Assessment

Scheme Component	Comment
Zone Code	
Rural Residential Zone Code	Refer to **Attachment 5 and Section 6.6.2**

Overlay Codes	
Environmental Significance Overlay Code; Hill and Slope Overlay Code; and Transport Infrastructure Overlay Code.	Refer to **Attachment 5** and **Section 6.6.3**
Development Codes	
Reconfiguring a lot Code; Landscaping Code; Parking and Access Code; and Works, Services and Infrastructure Code.	Refer to **Attachment 5** and **Section 6.6.4**

6.6 PLANNING SCHEME ASSESSMENT

Based on a reasonable assessment, the Planning Scheme generally encourages the creation of lots that exceed 4,000m^2 within the Rural Residential A – 4,000m^2 Precinct of the Rural Residential Zone. However, assessment needs to consider and ensure that all site features, constraints and development impacts can be suitably managed. Accordingly, the proposed development needs to be considered and assessed on its merits, in the context of the site, adjoining neighbours, the pattern of existing and approved urban development, and the design arrangements proposed. Based on this understanding, Urban Sync undertook a full assessment of the proposed development against the applicable codes of the Planning Scheme and this assessment is included in **Attachment 5** and summarised below.

In this instance, the proposed development presents some non-compliances with the deemed to comply acceptable outcomes that need to be suitably addressed. The assessment in **Attachment 5** and the commentary in section 7 below demonstrates how the proposed development will suitably address these matters and provides a performance-based assessment to demonstrate, based on sound planning grounds, that compliance with the corresponding Performance Outcome and in turn, the applicable code, can still be achieved. With this in mind, we have confidence that a complete performance-based assessment by Council will consider the project in its context, and in doing so, accept the alternative solutions being proposed.

6.6.1 Strategic Framework

The proposed development is Code Assessable and hence, in accordance with s45(3) of the PA, no assessment against the Strategic Framework is required.

6.6.2 Rural Residential Zone Code

The proposed development complies with or can be conditioned to comply with the Rural Residential Zone Code. To demonstrate full compliance with the code, a full assessment of the code has been provided in **Attachment 5.**

6.6.3 Overlay Codes

Environmental Significance Overlay Code

The proposed development complies or can be conditioned to comply with the Environmental Significance Overlay Code. To demonstrate this compliance, a full assessment against the code has been provided in **Attachment 5.** In further support of this assessment, please refer to the Ecological Assessment Report provided in **Attachment 7.**

Hill and Slope Overlay Code

The proposed development complies or can be conditioned to comply with the Hill and Slope Overlay Code. To demonstrate compliance, a full assessment against this code has been provided in **Attachment 5.** In further support of this assessment, please refer to the Geotechnical Assessment Report provided in **Attachment 6.**

Transport Infrastructure Overlay Code

The proposed development is not located within proximity to an active or inactive rail corridor and as such, does not conflict with the Transport Infrastructure Overlay Code. Therefore, an assessment against the Transport Infrastructure Overlay Code is not considered necessary and for this reason, has not been undertaken.

6.6.4 Development Codes

Parking and Access Code

The proposed development complies or can be conditioned to comply with the Parking and Access Code. To demonstrate compliance, a full assessment against this code has been provided in **Attachment 5.**

Landscaping Code

The proposed development involves no landscaping and as such, the proposed development will not conflict with the Landscaping Code. Therefore, a full assessment against this code is not considered necessary and for this reason has not been undertaken.

Reconfiguring a Lot Code

The proposed development complies or can be conditioned to comply with the Reconfiguring a Lot Code. To demonstrate compliance, a full assessment against this code has been provided in **Attachment 5.**

Works, Services and Infrastructure Code

The proposed development complies or can be conditioned to comply with the Works, Services and Infrastructure Code. To demonstrate compliance, a full assessment against this code has been provided in Attachment 5.

7 DISCUSSION – KEY PLANNING MATTERS

This section of the report provides additional commentary in support of the key matters considered relevant to the assessment of this development application. In this this instance, these matters relate to lot frontage and rear lots.

7.1 LOT FRONTAGE

The Reconfiguring a Lot code seeks to ensure that all new subdivisions result in lots that are of a size suitable for their intended use, are responsive to land constraints, contribute to a high standard of amenity, provides lawful and practical access arrangements and can be connected to all necessary infrastructure and services.

Acceptable Outcome AO1 of the Reconfiguring a Lot code lists the 'deemed to comply' lot frontages for the Rural Residential Zone as 40m. None of the lots have a 40m frontage to a constructed road and as such, an assessment against the performance outcome is required. PO1 of the Reconfiguring a Lot code states that:

"Lots include an area and frontage that:

(a) Is consistent with the design of lots in the surrounding area;

Planning Commentary:

The proposed lots cannot achieve the required 40m frontage to a constructed road due to the shape of the parent allotment. That said, with the exception of Lot 22, all lots achieve a frontage of more than 32m to Warril Drive and/or the access easement. Moreover, there are a large number of allotments in the immediate locality which, due to the shape of the parent allotment at the time they were subdivided, also have frontages less than the deemed to comply 40m. As such, the proposed lots are not inconsistent with the frontage widths of other lots in the immediate locality.

(b) Allows the desired amenity of the zone to be achieved;

Planning Commentary:

In a planning sense, assessment of 'amenity' is not clearly attributed to land or to a site and can mean slightly different outcomes for existing and future residents. The varying degrees of amenity are informed by the planning controls applying to the site under consideration and the notion of 'reasonableness'. It is also important to consider that undertaking development will more often than not affect existing amenity. What is unacceptable in a planning context, is a 'detrimental' effect to an unreasonable/unacceptable extent according to the **reasonable expectation** of the adjacent landholders. While the subjective views of those whose amenity may be affected by a proposed development are not to be ignored, the assessment must weigh up standards of comfort and enjoyment which are to be expected by ordinary people of plain, sober and simple notion not effected by some special sensitivity or eccentricity. The weight to be accorded to subjective views can only be judged in the light of all the evidence about the subject.

The proposed development includes lot sizes that are compliant with the Planning Scheme and as such, is not providing a density over and above that envisioned for the site by the Planning Scheme. The proposed development also includes building envelopes that are of a size sufficient to accommodate land uses envisioned for the Rural Residential Zone. For these reasons, the proposed lot frontages will not result in any amenity impacts (that cannot be managed) over and above that which should, by the community, be reasonably expected to occur on the site once it is developed to its full potential in accordance with the Planning Scheme zoning designation.

(c) Is able to accommodate all buildings, structures and works associated with the intended land use;

Planning Commentary:

The proposed lot sizes are compliant with the Planning Scheme and include building envelopes of a suitable size to accommodate building/structures/works associated with the intended land use of the Rural Residential Zone.

(d) Allow the site to be provided with sufficient access;

Planning Commentary:

An access easement has been provided to ensure suitable access to Lots 21-24. The driveway within the access easement will be constructed in accordance with the FNQROC Development Manual and will allow sufficient room for access, passing and services.

(e) Considers the proximity of the land to:

i. Centres;

ii. Public transport services; and

iii. Open space.

Planning Commentary:

Not considered applicable to a Rural Residential subdivision.

(f) Allows for the protection of environmental features

Planning Commentary:

The Ecological Assessment Report provided in **Attachment 7** demonstrates that the proposed development has provided a suitable level of protection to the environmental features on the site.

(g) Accommodate site constraints."

Planning Commentary:

The Geotechnical Investigation Report as **Attachment 6** and Ecological Assessment Report provided in **Attachment 7** have identified the site constraints and provided recommendations, in the way of modifications to the proposed building envelopes, to ensure the proposed development suitably addresses the key site constraints (slope and environment).

7.2 REAR LOTS

Acceptable Outcome AO8.1 to AO8.5 presents requirements regarding the creation of rear lots, of which the proposed development cannot comply with all of the 'deemed to comply' requirements. As such, an assessment against the performance outcome is required. PO8 of the Reconfiguring a Lot code states:

"Rear lots are designed to:

(a) Provide a high standard of amenity for residents and other users of the site;

Planning Commentary:

In a planning sense, assessment of 'amenity' is not clearly attributed to land or to a site and can mean slightly different outcomes for existing and future residents. The varying degrees of amenity are informed by the planning controls applying to the site under consideration and the notion of 'reasonableness'. It is also important to consider that undertaking development will more often than not affect existing amenity. What is unacceptable in a planning context, is a 'detrimental' effect to an unreasonable/unacceptable extent according to the **reasonable expectation** of the adjacent landholders. While the subjective views of those whose amenity may be affected by a proposed development are not to be ignored, the assessment must weigh up standards of comfort and enjoyment which are to be expected by ordinary people of plain, sober and simple notion not effected by some special sensitivity or eccentricity. The weight to be accorded to subjective views can only be judged in the light of all the evidence about the subject.

The proposed development includes lot sizes that are compliant with the Planning Scheme and as such, is not providing a density over and above that envisioned for the site by the Planning Scheme. The proposed

development also includes building envelopes that are of a size sufficient to accommodate land uses envisioned for the Rural Residential Zone. For these reasons, the proposed development, even with the inclusion of rear lots, will not result in any amenity impacts (that cannot be managed) over and above that which should, by the community, be reasonably expected to occur on the site once it is developed to its full potential in accordance with the Planning Scheme zoning designation.

(b) Provide a high standard of amenity for adjoining properties;

Planning Commentary:

See (a) above.

(c) Not adversely affect the safety and efficiency of the road from which access is gained."

Planning Commentary

The proposed development can be conditioned to ensure it does not result in any unacceptable, adverse impacts to the safety or efficiency of Warril Drive.

8 CONCLUSION

This report supports a development application made by Express Build Contract Construction who seek the requisite statutory development approvals from Mareeba Shire Council to establish a five (5) lot subdivision and access easement over Lot 2 on SP126546 at 20 Warril Drive, Kuranda. Accordingly, this development application has sought the following development approval from Council:

- **Development Permit for Reconfiguring a Lot (1 Rural Residential Lot into 5 Rural Residential Lots and an Access Easement)**

This report has described the proposed development, identified the applicable statutory and legislative requirements of Mareeba Shire Council under their Planning Scheme, the *Mareeba Shire Planning Scheme 2016,* as well as those at the State level under the *Planning Act 2016*, *Planning Regulation 2017*, *State Planning Policy 2017* as well as all other, relevant State legislation and requirements, and in doing so, demonstrated the suitability of the proposed development.

The report has established that based on a reasonable assessment, the Planning Scheme encourages the establishment of rural residential allotments that exceed 4,000m^2 within the Rural Residential A – 4,000m^2 Precinct of the Rural residential zone, as is proposed as part of this application and that the proposed development will result in a development density that does not exceed that envisioned by the Planning Scheme to occur on the site.

In terms of assessment of the proposed development, there are some departures away from the 'deemed to comply' Acceptable Outcomes, although where these departures have been identified, a performance-based assessment has been undertaken to demonstrate, based on sound planning grounds, that compliance with the corresponding Performance Outcome and in turn, the applicable code, can still be achieved. The report concludes that the key assessment matters relating to slope stability, environmental features, lot frontages and rear lots have, in this instance, been suitably addressed to ensure that the proposed development will not have an unacceptable, negative impacts on the amenity of the locality or adjacent residents.

With this in mind, we have confidence that a complete performance-based assessment by Council will consider the project in its context, and in doing so, accept the alternative solutions being proposed and for this reason, should be approved by Council subject to the imposition of reasonable and relevant conditions of approval.

ATTACHMENT 1

DA FORM 1 & LANDOWNERS CONSENT

DA Form 1 – Development application details

Approved form (version 1.3 effective 28 September 2020) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) **and** parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008.* For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: *All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).*

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (*individual or company full name*)	Express Build Contract Construction
Contact name *(only applicable for companies)*	C/- Matt Ingram of Urban Sync Pty Ltd
Postal address *(P.O. Box or street address)*	PO Box 2970
Suburb	Cairns
State	Queensland
Postcode	4870
Country	Australia
Contact number	(07) 4051 6946
Email address *(non-mandatory)*	admin@urbansync.com.au
Mobile number *(non-mandatory)*	
Fax number *(non-mandatory)*	
Applicant's reference number(s) *(if applicable)*	21-753

2) Owner's consent
2.1) Is written consent of the owner required for this development application?
☒ Yes – the written consent of the owner(s) is attached to this development application ☐ No – proceed to 3)

PART 2 – LOCATION DETAILS

3) Location of the premises *(complete 3.1) or 3.2), and 3.3) as applicable)*

***Note**: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.*

3.1) Street address and lot on plan

☒ Street address **AND** lot on plan (*all lots must be listed*), ***or***

☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises *(appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).*

a)	Unit No.	Street No.	Street Name and Type	Suburb
		20	Warril Drive	Kuranda
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4881	2	SP126546	Mareeba Shire Council
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)

3.2) Coordinates of premises *(appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)*

***Note**: Place each set of coordinates in a separate row.*

☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) *(if applicable)*
		☐ WGS84 ☐ GDA94 ☐ Other:	

☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) *(if applicable)*
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	

3.3) Additional premises

☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application

☒ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

☒ In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:	Unknown waterway at rear of site

☐ On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:	
Name of port authority for the lot:	

☐ In a tidal area

Name of local government for the tidal area *(if applicable)*:	
Name of port authority for tidal area *(if applicable)*:	

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:	

☐ Listed on the Environmental Management Register (EMR) under the *Environmental Protection Act 1994*	
EMR site identification:	
☐ Listed on the Contaminated Land Register (CLR) under the *Environmental Protection Act 1994*	
CLR site identification:	

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see DA Forms Guide.

☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application

☒ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

☐ Material change of use ☒ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

5 Lot Subdivision and Access Easement

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.*

☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☐ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*

☐ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application

☒ Not required

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	☐ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☒ Yes – complete division 2
Operational work	☐ Yes – complete division 3
Building work	☐ Yes – complete *DA Form 2 – Building work details*

Division 1 – Material change of use

***Note**: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.*

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition *(include each definition in a new row)*	Number of dwelling units *(if applicable)*	Gross floor area (m^2) *(if applicable)*

8.2) Does the proposed use involve the use of existing buildings on the premises?
☐ Yes
☐ No

Division 2 – Reconfiguring a lot

***Note**: This division is only required to be completed if any part of the development application involves reconfiguring a lot.*

9.1) What is the total number of existing lots making up the premises?	
1	
9.2) What is the nature of the lot reconfiguration? *(tick all applicable boxes)*	
☒ Subdivision *(complete 10))*	☐ Dividing land into parts by agreement *(complete 11))*
☐ Boundary realignment *(complete 12))*	☒ Creating or changing an easement giving access to a lot from a constructed road *(complete 13))*

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created	5			

10.2) Will the subdivision be staged?	
☐ Yes – provide additional details below ☒ No	
How many stages will the works include?	
What stage(s) will this development application apply to?	

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m^2)	Lot on plan description	Area (m^2)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? *(attach schedule if there are more than two easements)*				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? *(e.g. pedestrian access)*	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

***Note**: This division is only required to be completed if any part of the development application involves operational work.*

14.1) What is the nature of the operational work?		
☐ Road work	☐ Stormwater	☐ Water infrastructure
☐ Drainage work	☐ Earthworks	☐ Sewage infrastructure
☐ Landscaping	☐ Signage	☐ Clearing vegetation
☐ Other – please specify:		
14.2) Is the operational work necessary to facilitate the creation of new lots? *(e.g. subdivision)*		
☐ Yes – specify number of new lots:		
☐ No		
14.3) What is the monetary value of the proposed operational work? *(include GST, materials and labour)*		
$		

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application
Mareeba Shire Council
16) Has the local government agreed to apply a superseded planning scheme for this development application?
☐ Yes – a copy of the decision notice is attached to this development application
☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
☒ No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?
***Note**: A development application will require referral if prescribed by the* Planning Regulation 2017.

☒ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the *Planning Act 2016*:**

☐ Clearing native vegetation
☐ Contaminated land *(unexploded ordnance)*
☐ Environmentally relevant activities (ERA) *(only if the ERA has not been devolved to a local government)*
☐ Fisheries – aquaculture
☐ Fisheries – declared fish habitat area
☐ Fisheries – marine plants
☐ Fisheries – waterway barrier works
☐ Hazardous chemical facilities
☐ Heritage places – Queensland heritage place *(on or near a Queensland heritage place)*
☐ Infrastructure-related referrals – designated premises
☐ Infrastructure-related referrals – state transport infrastructure
☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
☐ Infrastructure-related referrals – near a state-controlled road intersection
☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
☐ Koala habitat in SEQ region – key resource areas
☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
☐ Ports – Brisbane core port land – hazardous chemical facility
☐ Ports – Brisbane core port land – taking or interfering with water
☐ Ports – Brisbane core port land – referable dams
☐ Ports – Brisbane core port land – fisheries
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*
☐ SEQ development area
☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
☐ Tidal works or works in a coastal management district
☐ Reconfiguring a lot in a coastal management district or for a canal
☐ Erosion prone area in a coastal management district
☐ Urban design
☐ Water-related development – taking or interfering with water
☐ Water-related development – removing quarry material *(from a watercourse or lake)*
☐ Water-related development – referable dams
☐ Water-related development –levees *(category 3 levees only)*
☐ Wetland protection area

Matters requiring referral to the **local government:**

☐ Airport land
☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government)*

☐ Heritage places – Local heritage places

Matters requiring referral to the **Chief Executive of the distribution entity or transmission entity:**
☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:
- The **Chief Executive of the holder of the licence**, if not an individual
- The **holder of the licence**, if the holder of the licence is an individual

☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the **Brisbane City Council:**
☐ Ports – Brisbane core port land

Matters requiring referral to the **Minister responsible for administering the *Transport Infrastructure Act 1994*:**
☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
☐ Ports – Strategic port land

Matters requiring referral to the **relevant port operator**, if applicant is not port operator**:**
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the **Chief Executive of the relevant port authority:**
☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the **Gold Coast Waterways Authority:**
☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the **Queensland Fire and Emergency Service:**
☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

18) Has any referral agency provided a referral response for this development application?

☐ Yes – referral response(s) received and listed below are attached to this development application
☒ No

Referral requirement	Referral agency	Date of referral response

Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application *(if applicable).*

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules

☒ I agree to receive an information request if determined necessary for this development application
☐ I do not agree to accept an information request for this development application

***Note**: By not agreeing to accept an information request I, the applicant, acknowledge:*
- *that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties*
- *Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.*

Further advice about information requests is contained in the DA Forms Guide.

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? *(e.g. a preliminary approval)*

☐ Yes – provide details below or include details in a schedule to this development application
☒ No

List of approval/development application references	Reference number	Date	Assessment manager
☐ Approval ☐ Development application			
☐ Approval ☐ Development application			

21) Has the portable long service leave levy been paid? *(only applicable to development applications involving building work or operational work)*

☐ Yes – a copy of the receipted QLeave form is attached to this development application
☐ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid
☐ Not applicable *(e.g. building and construction work is less than $150,000 excluding GST)*

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

☐ Yes – show cause or enforcement notice is attached
☒ No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

☐ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below
☒ No

***Note**: Application for an environmental authority can be found by searching "ESR/2015/1791" as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.*

Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			

☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

☐ Yes – *Form 69: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application
☒ No

***Note**: See www.business.qld.gov.au for further information about hazardous chemical notifications.*

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

***Note**: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.*

2. See https://www.qld.gov.au/environment/land/vegetation/applying for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☐ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☒ No

***Note**: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.*

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes – the development application involves premises in the koala habitat area in the koala priority area

☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area

☒ No

***Note**: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.des.qld.gov.au for further information.*

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the *Water Act 2000***?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

***Note**: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.*

DA templates are available from https://planning.dsdmip.qld.gov.au/. If the development application involves:

- *Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1*
- *Taking or interfering with water in a watercourse, lake or spring: complete DA Form1 Template 2*
- *Taking overland flow water: complete DA Form 1 Template 3.*

Waterway barrier works

23.7) Does this application involve **waterway barrier works?**

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from https://planning.dsdmip.qld.gov.au/. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants?**

☐ Yes – an associated *resource* allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☒ No

***Note**: See guidance materials at www.daf.qld.gov.au for further information.*

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

***Note**: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.*

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

***Note**: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.*

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application
☒ No

***Note**: See guidance materials at www.dnrme.qld.gov.au for further information.*

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

☐ Yes – the following is included with this development application:
- ☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work *(only required if application involves prescribed tidal work)*
- ☐ A certificate of title

☒ No

***Note**: See guidance materials at www.des.qld.gov.au for further information.*

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

☐ Yes – details of the heritage place are provided in the table below
☒ No

***Note**: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.*

Name of the heritage place:		Place ID:	

Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

☐ Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
☒ No

Decision under section 62 of the *Transport Infrastructure Act 1994*

23.15) Does this development application involve new or changed access to a state-controlled road?

☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
☒ No

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation
23.16) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?
☐ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered ☒ No ***Note**: See guidance materials at www.planning.dsdmip.qld.gov.au for further information.*

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 ***Note**: See the Planning Regulation 2017 for referral requirements*	☒ Yes
If building work is associated with the proposed development, Parts 4 to 6 of *DA Form 2 – Building work details* have been completed and attached to this development application	☐ Yes ☒ Not applicable
Supporting information addressing any applicable assessment benchmarks is with the development application ***Note**: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning Report Template.*	☒ Yes
Relevant plans of the development are attached to this development application ***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*	☒ Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (*see 21*)	☐ Yes ☒ Not applicable

25) Applicant declaration
☒ By making this development application, I declare that all information in this development application is true and correct ☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001* ***Note**: It is unlawful to intentionally provide false or misleading information.*
Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website. Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where: • such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or • required by other legislation (including the *Right to Information Act 2009*); or • otherwise required by law. This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002.*

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: | Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment *Note: For completion by assessment manager if applicable*			
Description of the work			
QLeave project number			
Amount paid ($)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

Individual owner's consent for making a development application under the *Planning Act 2016*

I,

REBECCA MARIE SUMAN and SHAN JACOB JONES

as owner of the premises identified as follows:

20 Warril Drive, Kuranda (Lot 2 on SP126546)

consent to the making of a development application under the *Planning Act 2016* by:

Urban Sync Pty Ltd on behalf of Express Build Contract Construction

on the premises described above for:

Development Permit for Reconfiguring a Lot (1 Residential Lot into 5 Residential Lots) and creation of an Access Easement.

Name: Rebecca Suman & Shan Jones

……

Shan Jones Rebecca Suman

……

Signature

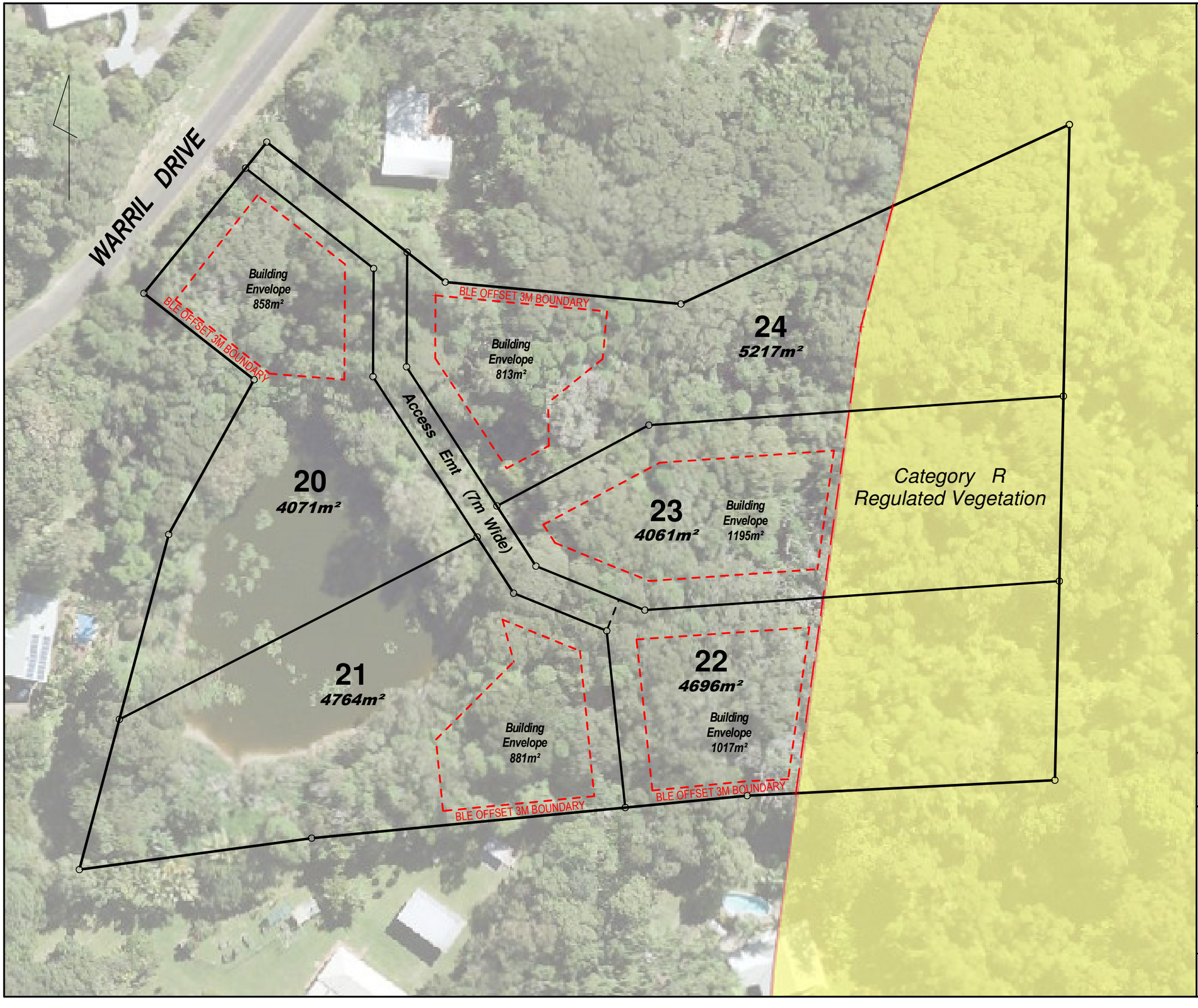
08/06/22

……

Date

ATTACHMENT 2

PLANS OF SUBDIVISION (PREPARED BY RPS)



IMPORTANT NOTE

1. This plan was prepared for the sole purposes of the client for the specific purpose of producing a detail plan. This plan is strictly limited to the purpose and does not apply directly or indirectly and will not be used for any other application, purpose, use or matter. The plan is presented without the assumption of a duty of care to any other person (other than the Client) ("Third Party") and may not be relied on by Third Party.

2. RPS Australia East Pty Ltd will not be liable (in negligence or otherwise) for any direct or indirect loss, damage, liability or claim arising out of or incidental to:
   A. Third Party publishing, using or relying on the plan;
   B. RPS Australia East Pty Ltd relying on information provided to it by the Client or a Third Party where the information is incorrect, incomplete, inaccurate, out-of-date or unreasonable;
   C. any inaccuracies or other faults with information or data sourced from a Third Party;
   D. RPS Australia East Pty Ltd relying on surface indicators that are incorrect or inaccurate;
   E. the Client or any Third Party not verifying information in this plan where recommended by RPS Australia East Pty Ltd;
   F. lodgement of this plan with any local authority against the recommendation of RPS Australia East Pty Ltd;
   G. the accuracy, reliability, suitability or completeness of any approximations or estimates made or referred to by RPS Australia East Pty Ltd in this plan.

3. Without limiting paragraph 1 or 2 above, this plan may not be copied, distributed, or reproduced by any process unless this note is clearly displayed on the plan.

4. Scale shown is correct for the original plan and any copies of this plan should be verified by checking against the bar scale.

5. The title boundaries as shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey.

6. Regulated Vegeation mapping derived from Qld Glove 20/01/22.

7. Plan is for discussion purposes only.

Contour Interval: 1m
Index Contour: 5m

0 20 40
metres

SCALE 1:750 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE (A3).

AMENDMENTS

A:	INIT:	AMEND DESCRIPTION

PROJECT MANAGER: D Garget	CHECKED:
SURVEYED: N/A	DRAFTING CHECKED:
DRAWN: DG	CAD REF: PR128305 Kuranda Proposal_2.mjo
SHEET SIZE: A3	SHEET 1 OF SHEETS 1

RPS Australia East Pty Ltd
ACN 140 292 762

135 Abbott St
PO Box 1949
CAIRNS QLD 4870

T +61 7 4031 1336
F +61 7 4031 2942
W rpsgroup.com.au

Urban Sync
Planning | Development

PROPOSAL PLAN

Plan of Lots 20-24

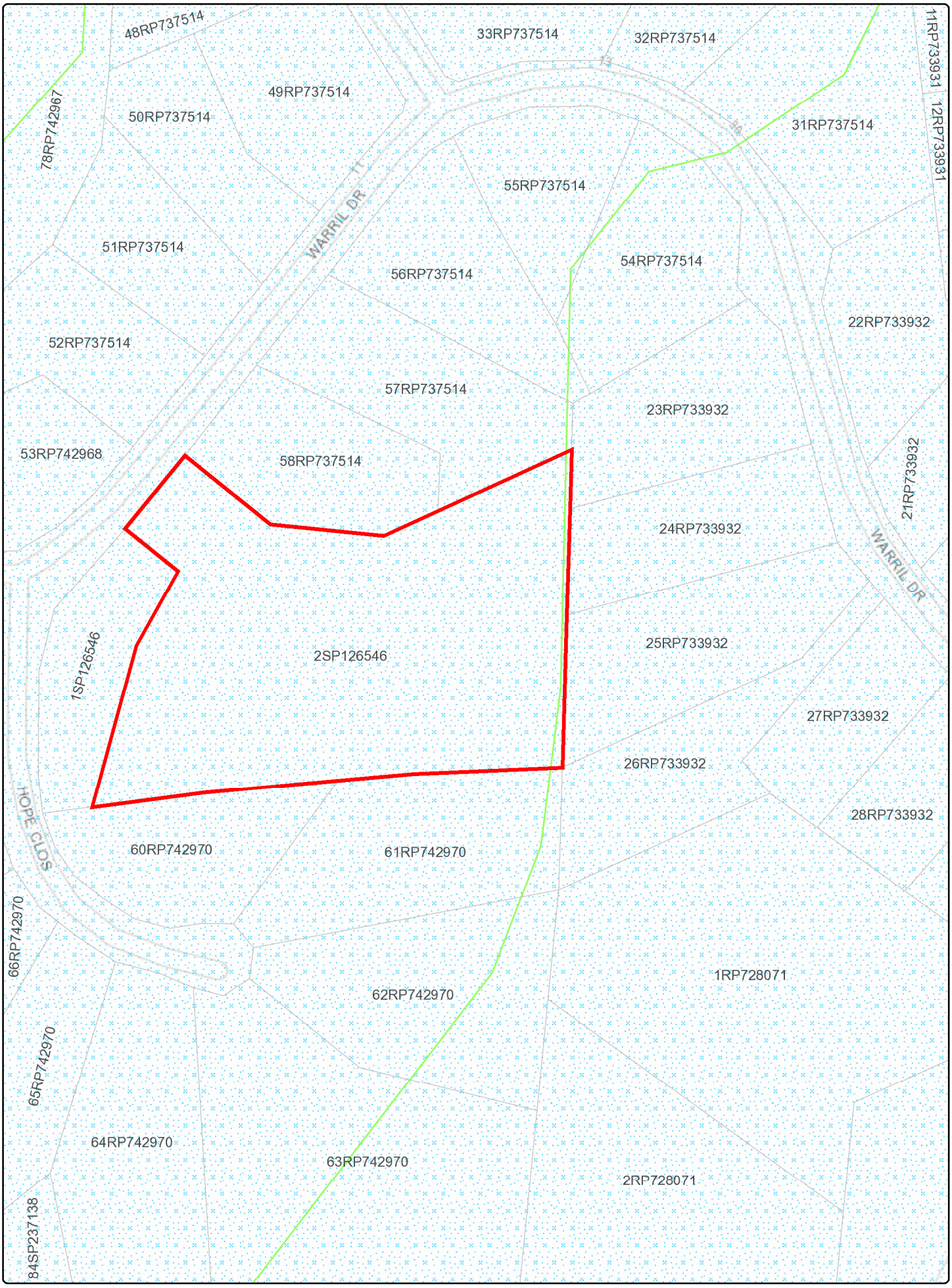
Cancelling Lot 2 on SP126546

Warril Drive
KURANDA
Mareeba Shire

SCALE	DATE	DRAWING NO.	ISSUE
1:750	23/02/22	PR151054-3	

ATTACHMENT 3

SITE SEARCHES



DA Mapping System – Print Screen

Date: 29/03/2022

0 30 60 90 120

Metres

Queensland Government

N

Disclaimer:
This map has been generated from the information supplied to the Queensland Government for the purposes of the Development Assessment Mapping System. Note that this is a print screen only. The map generated has been prepared with due care based on the best available information at the time of publication. The State of Queensland holds no responsibility for any errors, inconsistencies or omissions within this document. Any decisions made by other parties based on this document are solely the responsibility of those parties. This information is supplied subject to the full terms and conditions available on the department's website.

Queensland Government

Legend

Drawn Polygon Layer

Override 1

Cadastre

Cadastre

Queensland waterways for waterway barrier works

1 - Low

2 - Moderate

3 - High

4 - Major

Water resource planning area boundaries

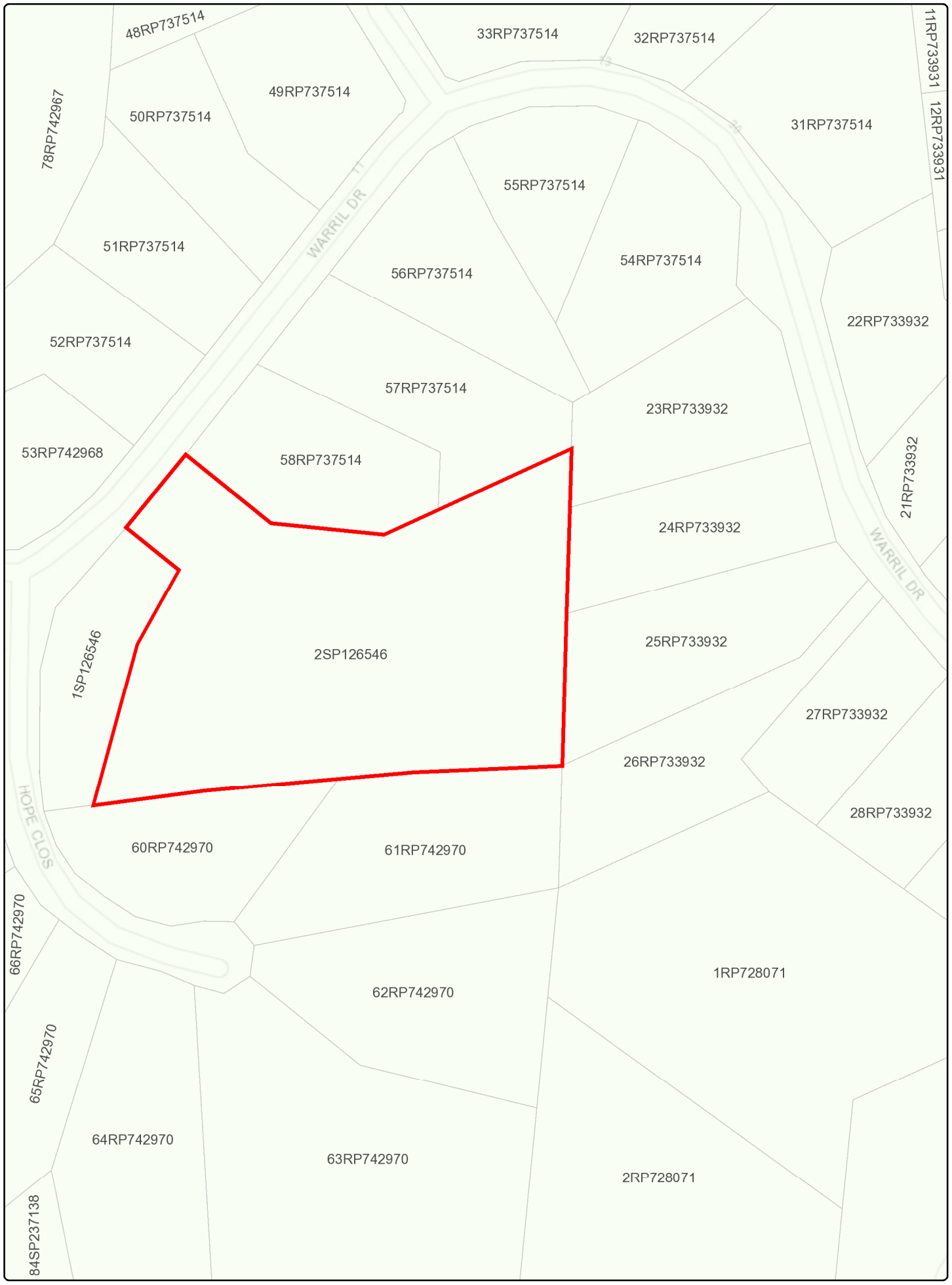
Water resource planning area boundaries

DA Mapping System – Print Screen

Date: 29/03/2022

Queensland Government

Queensland Government



DA Mapping System – Print Screen

Date: 29/03/2022

0 30 60 90 120

Metres

Queensland Government

N

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Queensland Government

Legend

Drawn Polygon Layer

Override 1

Cadastre

Cadastre

SEQRP 2009-2031 development area (superseded)

Local Development Area

Regional Development Area

Regional biodiversity corridor (SEQ, NQ)

Regional biodiversity corridor (SEQ, NQ)

Regional greenspace network (SEQ)

Regional greenspace network (SEQ)

Regionally significant scenic amenity (SEQ)

Regionally significant scenic amenity (SEQ)

Townsville Urban Area (NQ)

Townsville Urban Area (NQ)

Renewable Energy Investigation Area (Planning - NQ)

Renewable Energy Investigation Area (Planning - NQ)

Strategic Environmental Area (Planning - NQ)

Strategic Environmental Area

Strategic Environmental Area - Designated Precinct

Priority Agricultural Area (Planning -

Priority Agricultural Area (Planning -

Regional Biodiversity Value (SEQ, NQ)

Regional Biodiversity Value (SEQ, NQ)

Regional land use categories (SEQ, WBB, MIW, FNQ)

Urban Footprint

Rural Living Area

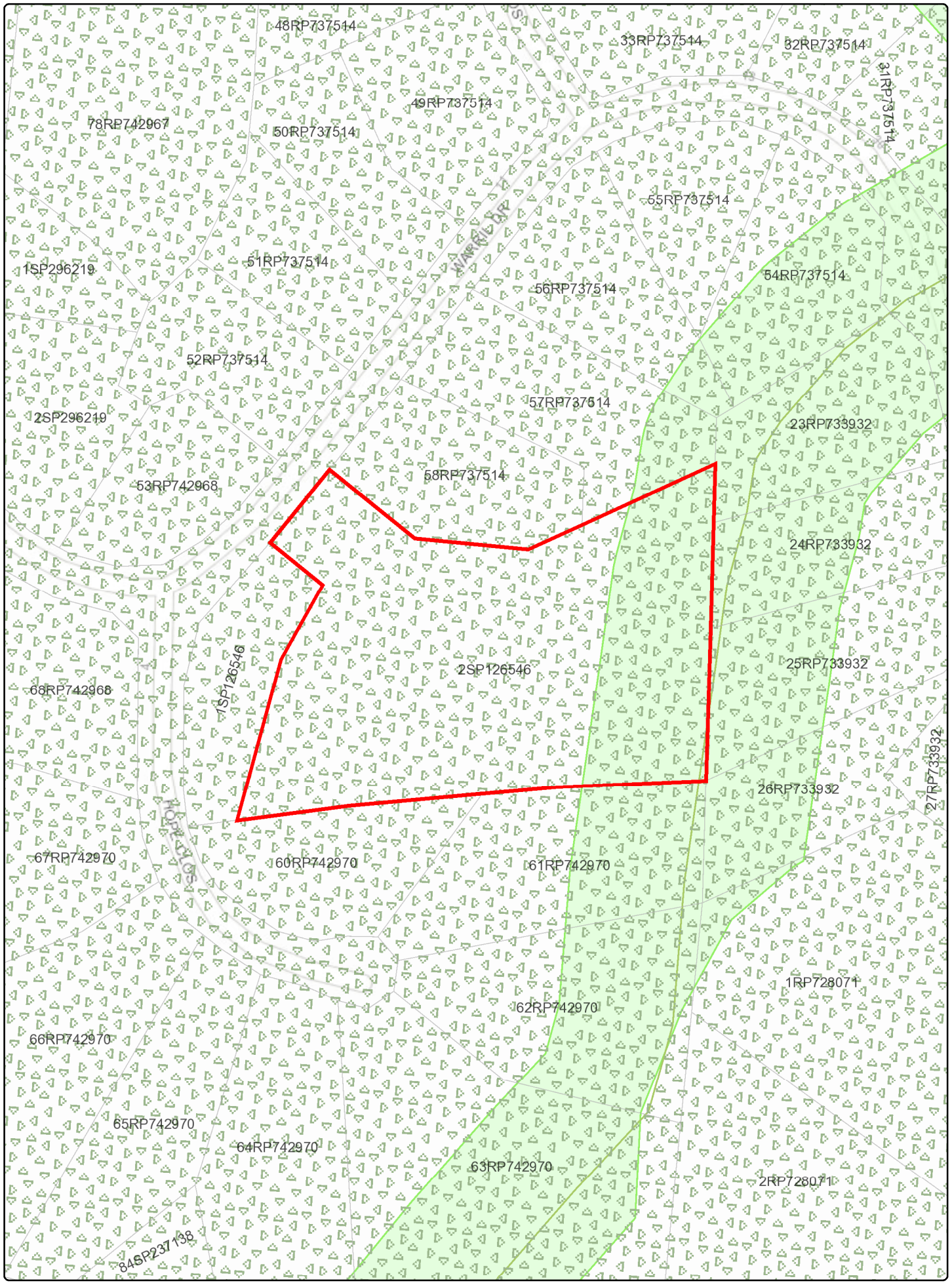
Regional Landscape and Rural Production Area

DA Mapping System – Print Screen

Date: 29/03/2022

Queensland Government

Queensland Government



State Planning Policy

Making or amending a local planning instrument and designating land for community infrastructure

Date: 29/03/2022

Queensland Government

0 30 60 90 120

Metres

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This map has been prepared with due care based on the best available information at the time of publication. However, the State of Queensland (acting through the department) makes no representations, either express or implied, that the map is free from errors, inconsistencies or omissions. Reliance on information contained in this map is the sole responsibility of the user. The State disclaims responsibility for any loss, damage or inconvenience caused as a result of reliance on information or data contained in this map.

Legend

Drawn Polygon Layer

Override 1

Cadastre

Cadastre

Aviation facility

Location

Building restricted area - Zone A

Building restricted area - Zone A/B

Building restricted area - Area of interest

MSES - Regulated vegetation (intersecting a watercourse)

MSES - Regulated vegetation (intersecting a watercourse)

MSES - Regulated vegetation (category R)

MSES - Regulated vegetation (category R)

Date: 29/03/2022

State Planning Policy

Making or amending a local planning instrument and designating land for community infrastructure

Queensland Government

ATTACHMENT 4

PRE-LODGEMENT CORRESPONDANCE

From: Carl Ewin <CarlE@msc.qld.gov.au>
Sent: Thursday, 3 March 2022 11:17 AM
To: Matt Ingram <matt@urbansync.com.au>
Cc: Brian Millard <BrianM@msc.qld.gov.au>
Subject: RE: Warril Drive - Pre-lodgment Comments

Hi Matt,

I'm happy for the lesser extent survey.

Clearing should be kept to a minimum though, and it may be a good idea to propose some veg covenants to ensure no further clearing occurs.

Regards,

Carl Ewin
Planning Officer

Mareeba SHIRE COUNCIL

Phone: 1300 308 461 | **Direct:** 07 4086 4656 | **Fax:** 07 4092 3323
Email: carle@msc.qld.gov.au | **Website:** www.msc.qld.gov.au
65 Rankin St, Mareeba | PO Box 154, Mareeba, Queensland, Australia, 4880

From: Matt Ingram <matt@urbansync.com.au>
Sent: Thursday, 3 March 2022 9:48 AM
To: Carl Ewin <CarlE@msc.qld.gov.au>
Cc: Brian Millard <BrianM@msc.qld.gov.au>
Subject: RE: Warril Drive - Pre-lodgment Comments

Hi Mate

Page 765 to 775 of your Planning Scheme establishes the guidelines for ecological assessments. I provide an extract from our environmental consultants (Natura) advice and fee estimate:

"Considering that the site is only 2 hectares, and the resulting development should have relatively low impact to ecological values, I don't think it really warrants the full 4 day /4 night fauna surveys that they describe in Schedule 6".

Instead, Natura are proposing a 1 day field survey of flora AND fauna (1 consultant looking at flora and 1 at fauna) and a 2 day and 2 night baited camera trap configuration. Their view is this will be sufficient to prepare a comprehensive ecological assessment for this site.

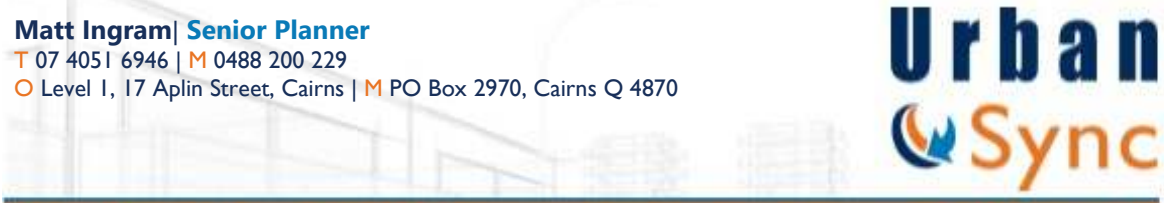
As this approach differs from that established in the Planning Scheme, we are looking for some acceptance of this revised site specific scope before we charge of on this approach.

Please let me know your thoughts.

Give me a call if you need any additional info/have any Q's.

Kind Regards

Matt Ingram| **Senior Planner**
T 07 4051 6946 | M 0488 200 229
O Level 1, 17 Aplin Street, Cairns | M PO Box 2970, Cairns Q 4870



From: Matt Ingram
Sent: Monday, 28 February 2022 4:08 PM
To: Carl Ewin <CarlE@msc.qld.gov.au>
Cc: Brian Millard <BrianM@msc.qld.gov.au>
Subject: RE: Warril Drive - Pre-lodgment Comments

Hi Carl

Thank you very much for the below, detailed feedback and the quick turnaround.

We will get the required reporting underway and I will come back to you with any more Q's as required as this one progresses.

Kind Regards

Matt Ingram| **Senior Planner**
T 07 4051 6946 | M 0488 200 229
O Level 1, 17 Aplin Street, Cairns | M PO Box 2970, Cairns Q 4870

From: Carl Ewin <CarlE@msc.qld.gov.au>
Sent: Monday, 28 February 2022 12:49 PM
To: Matt Ingram <matt@urbansync.com.au>
Cc: Brian Millard <BrianM@msc.qld.gov.au>
Subject: RE: Warril Drive - Pre-lodgment Comments

Hey Matt, yeah going good up here mate. Hope you guys are all good down the hill.

The proposal is consistent with the intent of the Rural Res (Precinct A) however I provide the following info to both respond to your queries and highlight some other concerns:

- QDC setbacks apply in this zone, so although the 5m setbacks will be good, they could build closer technically.

- The entire lot is situated within a mapped Ecological Corridor, so an ecological assessment will be triggered under PO8 of the Enviro Sig Overlay Code. This ecological assessment can address any encroachment into the 20m waterway setback. You're lucky this isn't impact assessable or you'd have 1,000 submissions. Stream order for the watercourse down the back is "1".

- We would like a geo-tech assessment and potentially a bulk earthworks plan to be submitted, just to get an idea of how the landscape will be required to be altered to accommodate the building envelopes. The proposed building envelopes for Lots 20 and 24 are very steep (like a 6m fall over 25 metres – see attached Lidar contour map with 25cm intervals). The operational works component of this development will be huge. There's going to need to be a lot of earthworks done, erosion and sediment control addressed, drainage easements and stormwater flow paths put in (including for the dam spillway which will need to cross the driveway), potentially retaining walls requiring engineering. I reckon they should look into the feasibility of this side of things before proceeding with an RoL application. We have a project in Mareeba at the moment for a 1 into 4 on undulating land and between the extensive op works, retaining walls, sheer amount of concrete required and the $150K ergon bill, the project is looking to be unfeasible.

- Not too concerned about the landscaping code, but the more vegetation that is retained the better.

- Not too concerned about the PO8 of the RoL code, its infill after all and nothing new for Kuranda.

- Happy with the 7m wide access strip, however we'd likely seek advice from our Tech Services Dept on the driveway grade and width to ensure its practical and doesn't pose any safety concerns so this should be investigated.

Cheers,

Carl Ewin
Planning Officer

Mareeba SHIRE COUNCIL
Phone: 1300 308 461 | **Direct:** 07 4086 4656 | **Fax:** 07 4092 3323
Email: carle@msc.qld.gov.au | **Website:** www.msc.qld.gov.au
65 Rankin St, Mareeba | PO Box 154, Mareeba, Queensland, Australia, 4880

From: Matt Ingram <matt@urbansync.com.au>
Sent: Thursday, 24 February 2022 12:04 PM
To: Carl Ewin <carle@msc.qld.gov.au>
Cc: Justin Phipps <Justin@urbansync.com.au>
Subject: Warril Drive - Pre-lodgment Comments

Hi Mate

Hope your well!!

We chatted about this one late year, albeit briefly.

Please see attached concept plan for the subdivision. Some brief comments below form me r.e. pre-lodgement corro.

- Will ensure BLE on Lots 20-22 and 24 are setback 5m from the adjacent lots to the south per the rural res code unless you don't see any issues with current
- Mapped vegetation (per planning scheme overlay) is free from development, although BLE's on Lots 22 and 23 encroach within 20m (AO2 of the environmental significance overlay code) Is this ok? Will this trigger enviro inputs?
- I think we are ok, although per AO3.1 of the environmental significance overlay code, what is the stream order of the adjacent waterway?
- AO4.3 of the environmental significance overlay code – BLE on Lots 22 and 23 are within the 100m buffer and all stormwater from these lots will end up in the waterway, will this need enviro or engineering inputs regarding stormwater quality to address PO4?
- Will we need an ecological report to address PO8 of the environmental significance overlay code
- Will we need a geo-tech report to address PO1 of the Hill and slope overlay?
- We will provide an on-site effluent report
- Intent is that vegetation that will be retained on site will address the landscaping code – please confirm
- I'm comfortable we can address PO8 of the RaL Code i.e., 4 rear lots not 2, although happy for your thoughts
- Have a 7m wide access strip. Is this suitable or will Council require the deemed to comply 8m?

Anything else you want to add I'm all ears. Give me a buzz to discuss if easier/needed.

Kind Regards

Matt Ingram| Senior Planner
T 07 4051 6946 | M 0488 200 229
O Level 1, 17 Aplin Street, Cairns | M PO Box 2970, Cairns Q 4870

Urban Sync

Town Planning Feasibility | Development Applications | Approvals Management

ATTACHMENT 5

CODE ASSESSMENT (*MAREEBA SHIRE PLANNING SCHEME 2016*)

Application

(1) This code applies to assessing development where:
  (a) Located in the Rural Residential Zone; and
  (b) It is identified in the assessment criteria column of an assessment table in Part 5 of the planning scheme.

Criteria for assessment

Table 6.2.10.3 – Rural Residential Zone Code – for Self-Assessable and Assessable Development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREMENTS AND ASSESSABLE DEVELOPMENT			
HEIGHT			
PO1 Building height takes into consideration and respects the following: (a) the height of existing buildings on adjoining premises; (b) the development potential, with respect to height, on adjoining premises; (c) the height of buildings in the vicinity of the site; (d) access to sunlight and daylight for the site and adjoining sites; (e) privacy and overlooking; and (f) site area and street frontage length.	**AO1** Development has a maximum building height of: (a) 8.5 metres; and (b) 2 storeys above ground level.	**N/A**	Not applicable to reconfiguring a lot as no buildings are proposed.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
OUTBUILDINGS AND RESIDENTIAL SCALE			
PO2 Domestic outbuildings: (a) do not dominate the lot on which they are located; and (b) are consistent with the scale and character of development in the Rural residential zone.	**AO2.1** On lots less than 2 hectares, domestic outbuildings do not exceed: (a) 150m2 in gross floor area; and (b) 5.5 metres above natural ground level.	**N/A**	See AO1 above.
	AO2.2 On lots greater than 2 hectares, domestic outbuildings do not exceed: (a) 200m2 in gross floor area; and (b) 8.5 metres above natural ground level.	**N/A**	See AO1 above.
SITING			
PO3 Development is sited in a manner that considers and respects: (a) the siting and use of adjoining premises; (b) access to sunlight and daylight for the site and adjoining sites; (c) privacy and overlooking; (d) opportunities for casual surveillance of adjoining public spaces; (e) air circulation and access to natural breezes; (f) appearance of building bulk; and (g) relationship with road corridors.	**AO3** Buildings and structures include a minimum setback of: (a) 40 metres from a frontage to a State controlled Road; (b) 6 metres from a frontage to any other road; (c) 10 metres from a boundary to an adjoining lot in the 2 hectare precinct, 1 hectare precinct or the Rural zone or Conservation zone; (d) 5 metres from a boundary to an adjoining lot in the 4,000m2 precinct; and (e) 3 metres from a side or rear boundary otherwise.	**YES**	The proposed building envelopes have provided setbacks that comply with the Queensland Development Code to ensure future buildings and structures provide setbacks that will ensure compliance with the performance outcome.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
ACCOMMODATION DENSITY			
PO4 The density of Accommodation activities: (a) contributes to housing choice and affordability; (b) respects the nature and density of surrounding land use; (c) does not cause amenity impacts beyond the reasonable expectation of accommodation density for the zone; and (d) is commensurate to the scale and frontage of the site.	**AO4** Development provides a maximum density for Accommodation activities of 1 dwelling or accommodation unit per lot.	**YES**	Each proposed new lot is designed to accommodate a future proposed density of 1 dwelling/per lot.
FOR ASSESSABLE DEVELOPMENT			
SITE COVER			
PO5 Buildings and structures occupy the site in a manner that: (a) makes efficient use of land; (b) is consistent with the bulk and scale of surrounding buildings; and (c) appropriately balances built and natural features.	**AO5** No acceptable outcome is provided.	**YES**	The proposed building envelopes have been sized to ensure future buildings and structures are provided at a scale that is consistent with the character of the area and will therefore, ensure compliance with the performance outcome.
BUILDING DESIGN			
PO6 Building facades are appropriately designed to: (a) include visual interest and architectural variation; (b) maintain and enhance the character of the surrounds;	**AO6** No acceptable outcome is provided.	**N/A**	See AO1 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(c) provide opportunities for casual surveillance; (d) include a human scale; and (e) encourage occupation of outdoor space.			
PO7 Development complements and integrates with the established built character of the Rural residential zone, having regard to: (a) roof form and pitch; (b) eaves and awnings; (c) building materials, colours and textures; and (d) window and door size and location.	**AO7** No acceptable outcome is provided.	**N/A**	See AO1 above.
NON-RESIDENTIAL DEVELOPMENT			
PO8 Non-residential development: (a) is consistent with the scale of existing development; (b) does not detract from the amenity of nearby residential uses; (c) does not impact on the orderly provision of non-residential development in other locations in the shire; and (d) directly supports the day to day needs of the immediate residential community; or (e) has a direct relationship to the land on which the use is proposed.	**AO8** No acceptable outcome is provided.	**N/A**	The proposed development does not include non-residential development.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
AMENITY			
PO9 Development must not detract from the amenity of the local area, having regard to: (a) noise; (b) hours of operation; (c) traffic; (d) advertising devices; (e) visual amenity; (f) privacy; (g) lighting; (h) odour; and (i) emissions.	**AO9** No acceptable outcome is provided.	**YES**	The proposed development does not involve a density that exceeds that permitted on the site. As such, it will not result in any amenity impacts over and above that which should be reasonably expected to occur on the site given its zoning.
PO10 Development must take into account and seek to ameliorate any existing negative environmental impacts, having regard to: (a) noise; (b) hours of operation; (c) traffic; (d) advertising devices; (e) visual amenity; (f) privacy; (g) lighting; (h) odour; and (i) emissions.	**AO10** No acceptable outcome is provided.	**YES**	See PO9 above.

Application

(1) This code applies to assessing development where:
  (a) Land the subject of development is affected by a constraint category identified on the **Environmental significance Overlay Maps (OM-004a-z)**; and
  (b) It is identified in the assessment criteria column of an assessment table in Part 5 of the planning scheme.

Note: Biodiversity and Water Quality are appropriately reflected in Overlay Map 4 and are required to be mapped by State Government in response to Environment and Heritage State Interests.

Criteria for assessment

Table 8.2.4.3A – Environmental Significance Overlay Code – for Self-Assessable and Assessable Development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR SELF-ASSESSABLE AND ASSESSABLE DEVELOPMENT			
REGULATED VEGETATION			
PO1 Vegetation clearing in areas mapped as 'Regulated vegetation' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** is avoided unless: (a) it is demonstrated that the area does not support regulated vegetation as mapped; (b) the loss or reduction in regulated vegetation is for community infrastructure and associated access facilities that cannot be avoided; (c) wildlife interconnectivity is maintained or enhanced at a local and regional scale; and (d) the loss or reduction in regulated vegetation is minimised and any residual impacts are offset. *Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.*	**AO1.1** No clearing of native vegetation is undertaken within areas of 'Regulated vegetation' identified on the **Environmental Significance Overlay Maps (OM-004a-o)**.	**YES**	The proposed subdivision, including the placement of a building envelope on each of the five (5) proposed lots, has been designed to avoid clearing of the mapped Category R Regulated Vegetation at the rear of the site (see also the Plan of Subdivision in **Attachment 2**). For further detail, please also refer to the Ecological Assessment Report provided in **Attachment 7.**

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
Note—Refer to Ecological corridors identified on SFM001-009 in consideration of wildlife connectivity at a regional scale.			
PO2 Development on sites adjacent to areas of 'Regulated vegetation' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** protects the environmental significance of regulated vegetation and: (a) does not interrupt, interfere, alter or otherwise impact on underlying natural ecosystem processes such as water quality, hydrology, geomorphology and biophysical processes; (b) does not negatively impact the movement of wildlife at a local or regional scale; and (c) avoids noise, light, vibration or other edge affects, including weed and pest incursion on identified environmental values. *Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.* *Note—Refer to Ecological corridors identified on SFM001-009 in consideration of wildlife connectivity at a regional scale.*	**AO2.1** Development (excluding roads, earthworks, drainage infrastructure and underground infrastructure) is not located within 20 metres of 'Regulated vegetation' areas identified on the **Environmental Significance Overlay Maps (OM-004a-o)**.	**YES**	Please refer to the Ecological Assessment Report provided in **Attachment 7** which demonstrates that the proposed development will not have any unacceptable impacts on the on-site vegetation which ensures compliance with the performance outcome.
REGULATED VEGETATION INTERSECTING A WATERCOURSE			
PO3 Vegetation clearing in areas mapped as 'Regulated vegetation intersecting a watercourse', identified as 'Waterway' and 'Waterway buffer' on the **Environmental Significance - Waterway Overlay Maps (OM-004p-z)** is avoided unless wildlife interconnectivity between habitats is maintained or enhanced at a local and regional scale, to	**Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)** **AO3.1** A minimum setback in accordance with **Table 8.2.4.3B** is provided between development and the top of the high bank of a 'Waterway' identified on the **Environmental Significance - Waterway Overlay Maps (OM-004p-z)**.	**YES**	According to Table 8.2.4.3B, the required setback/buffer distance from the identified waterway (first order watercourse/drainage feature) on the site is 10m from the top of high bank. The proposed development (building envelopes) will achieve this setback.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
the extent that migration or normal movement of significant species between habitats or normal gene flow between populations is not inhibited. *Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.* *Note—Refer to Ecological corridors identified on SFM001-009 in consideration of wildlife connectivity at a regional scale.*			For further detail, please refer to the Ecological Assessment Report provided in **Attachment 7** where additional setbacks for Lot 23 have been proposed.
	AO3.2 No clearing of native vegetation is undertaken within the minimum setback identified at **AO3.1**.	**YES**	See AO3.1 above. The proposed layout retains all vegetation along the waterway at the rear of the site
WATERWAYS AND WETLANDS			
PO4 'High ecological significance wetlands' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** and 'Waterways' on **Environmental Significance - Waterway Overlay Maps (OM-004p-z)** and are protected by: (a) maintaining adequate separation distances between waterways/wetlands and development; (b) maintaining and enhancing aquatic and terrestrial habitat including vegetated corridors to allow for native fauna (terrestrial and aquatic) movement; (c) maintaining waterway bank stability by minimising bank erosion and slumping; (d) maintaining water quality by providing buffers to allow filtering of sediments, nutrients and other pollutants; and	**Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)** **AO4.1** A minimum setback in accordance with **Table 8.2.4.3B** is provided between development and the top of the high bank of a 'Waterway' identified on the **Environmental Significance - Waterway Overlay Maps (OM-004p-z)**.	**YES**	See AO3.1 above.
	Where within a 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o) **AO4.2** A minimum buffer of 200 metres is provided between development and the edge of a 'High ecological significance wetland' identified on the **Environmental Significance Overlay Maps (OM-004a-o)**.	**N/A**	The site does not contain an identified 'High ecological significance wetland'.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(e) retaining and improving existing riparian vegetation and existing vegetation associated with a wetland. *Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.*	**Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z) or 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o)** **AO4.3** no stormwater is discharged to a 'Waterway' on **Environmental Significance - Waterway Overlay Maps (OM-004p-z)** or 'High ecological significance wetland' identified on the **Environmental Significance Overlay Maps (OM-004a-o)**. *Note— An alternative outcome is required to demonstrate that the ecological impacts of stormwater discharge to a 'Waterway' or 'High ecological significance wetland' are mitigated in accordance with PO3 through appropriate stormwater management / treatment (where possible).*	**YES**	Due to the topography of the site, Lots 22-24 will discharge stormwater to the waterway at the rear of the site and accordingly, an assessment against PO4 is required to demonstrate compliance: (a) All building envelopes will provide appropriate setback/buffer distances from the waterway (+40m); (b) Please refer to the Ecological Assessment Report provided in **Attachment 7** which demonstrates that the proposed development will not have any unacceptable impacts on the on-site vegetation which would impact fauna movement; (c) The geo-technical report in **Attachment 6** and Ecological Assessment Report in **Attachment 7** have provided recommendations and changes to the proposed building envelopes to ensure they are suitably setback from all adjacent waterways/gullies etc.; (d) All building envelopes will provide appropriate setback/buffer distances from the waterway (+40m) which will allow for the treatment of stormwater prior to it entering the waterway; (e) The site is not affected by a mapped wetland.
	Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z) or 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o) **AO4.4**	**YES**	See PO4 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	No wastewater is discharged to a 'Waterway' on **Environmental Significance - Waterway Overlay Maps (OM-004p-z)** or 'High ecological significance wetland' identified on the **Environmental Significance Overlay Map (OM-004a-z)**. *Note— A alternative outcome is required to demonstrate that the ecological impacts of wastewater discharge to a 'Waterway' or 'High ecological significance wetland' are mitigated in accordance with PO3 through appropriate wastewater management / treatment (where possible).*		
FOR ASSESSABLE DEVELOPMENT			
WILDLIFE HABITAT			
PO5 Development within a 'Wildlife habitat' area identified on the **Environmental Significance Overlay Maps (OM-004a-o)**: (a) protects and enhances the habitat of Endangered, Vulnerable and Near Threatened (EVNT) species and local species of significance; (b) incorporates siting and design measures to protect and retain identified ecological values and underlying ecosystem processes within or adjacent to the development site; (c) maintains or enhances wildlife interconnectivity at a local and regional scale; and (d) mitigates the impact of other forms of potential disturbance (such as presence of vehicles, pedestrian use, increased exposure to domestic animals, noise and lighting impacts) to protect	**AO5.1** No acceptable outcome is provided	**N/A**	The site does not contain an identified 'Wildlife Habitat' on the Environmental Significance Overlay Mapping.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
critical life stage ecological processes (such as feeding, breeding or roosting). *Note—Development applications must identify any EVNT species or their habitats that may be affected by the proposal. In particular, applications are to identify and describe how the development avoids adverse impacts on ecological processes within or adjacent to the development area.* *Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.*			
LEGALLY SECURED OFFSET AREAS			
PO6 Development within a 'Legally secured offset area' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** or other known Legally Secured Offset Area is consistent with the binding requirements of the offset and does not prejudice, undermine, or negatively impact the inherent ecological values, including all naturally occurring native flora, fauna and their habitat within the Legally Secured Offset Area. Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.	**AO6.1** No acceptable outcome is provided.	**N/A**	The proposed development is not located within a 'Legally secured offset area' identified on the Environmental Significance Overlay Map.
PROTECTED AREAS			

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
PO7 Development within a 'Protected area' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** is consistent with the values of the Protected Area and: (a) supports the inherent ecological and community values of the Protected Area asset; (b) maintains or enhances wildlife interconnectivity at a local and regional scale; and (c) does not prejudice, undermine, or negatively impact the inherent ecological values, including all naturally occurring native flora, fauna and their habitat within the Protected Area. *Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.*	**AO7.1** No acceptable outcome is provided	**N/A**	The proposed development does not occur within an identified 'Protected Area' on the Environmental Significance Overlay Map.
ECOLOGICAL CORRIDORS AND HABITAT LINKAGES			
PO8 Development located: a) in the Conservation zone, Emerging community zone, Recreation and open space zone, Rural zone or Rural residential zone; and b) within an 'Ecological corridor' or a 'Habitat linkage' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** does not compromise the provision of habitat connectivity of the corridor/linkage, having regard to:	**AO8** No acceptable outcome is provided.	**YES**	Please refer to the Ecological Assessment Report provided in **Attachment 7** which demonstrates that the proposed development will not have any unacceptable impacts on the on-site vegetation which would impact fauna movements.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
a) the environmental values of the area of the site identified in the 'Ecological corridor' or 'Habitat linkage'; b) the environmental values of adjoining and nearby land within the 'Ecological corridor' or 'Habitat linkage'; c) the extent of any modification proposed to the natural environment including (but not limited to) vegetation and topography; d) the location and design of proposed improvements that may impact on the functions of the 'Ecological corridor' or 'Habitat linkage' including (but not limited to) buildings, structures, fences, lighting, vehicle movement areas and infrastructure services; and e) the ability for the 'Ecological corridor' or 'Habitat linkage' to be enhanced to improve ecological connectivity. *Note – A supporting Ecological Assessment Report prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports may be appropriate to demonstrate compliance with PO8.*			

Application

(1) This code applies to assessing development where:
  (a) Land the subject of development is located within a 'Hill and Slope Area' identified on the **Hill and slope Overlay Maps (OM-008a-o)**; and
  (b) It is identified in the assessment criteria column of an assessment table in Part 5 of the planning scheme.

Note: Natural Hazards are appropriately reflected in Overlay Map 3, 6, and 8 and are required to be mapped by State Government in response to Hazard and Safety State Interests.

Criteria for assessment

Table 8.2.8.3 – Hill and Slope Overlay Code – for Self-Assessable and Assessable Development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR SELF-ASSESSABLE AND ASSESSABLE DEVELOPMENT			
SLOPE STABILITY			
PO1 Where clearing of vegetation, building work or filling or excavation occurs on land within a 'Hill and slope area' identified on the **Hill and slope overlay maps (OM-008a-o)**, a geotechnical report is prepared in accordance with Planning Scheme Policy 5 - Preparation of Geotechnical Reports that demonstrates: (a) the long term stability of the development site; (b) development will not be adversely affected by landslide activity originating on sloping land above the development site; and (c) development will not adversely affect other property outside the development site through landslide activity or alterations to surface or groundwater.	**AO1.1** No acceptable outcome is provided.	**YES**	Please refer to the Geotechnical Investigation Report provided in **Attachment 6** which demonstrates compliance with the performance outcome.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
PO2 Development is designed and located to ensure that the use can appropriately function in the 'Hill and slope area' identified on the **Hill and slope overlay maps (OM-008a-o)** having regard to: (a) the nature and scale of the proposed use; (b) the gradient of the land; (c) the extent of land disturbance proposed; (d) stormwater discharge and its potential for erosion.	**AO2.1** Development for a Child care centre or Educational establishment is not located on land in a 'Hill and slope area' identified on the **Hill and slope overlay maps (OM-008a-o).**	**N/A**	The proposed development does not include a Child Care Centre or Educational Establishment.
	AO2.2 Development is not located on land with a gradient of greater than 25%.	**YES**	Please refer to the Geotechnical Investigation Report provided in **Attachment 6** which demonstrates compliance with the performance outcome.
	AO2.3 No lot less than 2,000m^2 is created in a 'Hill and slope area' identified on the **Hill and slope overlay maps (OM-008a-o).** *Note – Where a minimum lot size of less than 2,000m^2 applies under the Reconfiguring a lot code, the lot size requirements of the Hill and slope overlay code prevail.*	**YES**	The proposed development does not propose to create a lot less than 4,000m^2.
COMMUNITY INFRASTRUCTURE AND ESSENTIAL SERVICES			
PO3 Community infrastructure and essential services located within a 'Hill and slope area' identified on the **Hill and slope overlay maps (OM-008a-o)** are able to function effectively during and immediately after landslide events.	**AO3.1** No acceptable outcome is provided.	**N/A**	The proposed development does not include the provision of community infrastructure or essential services.

Application

This code applies to assessing development where it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the Planning Scheme.

Criteria for assessment

Table 9.4.3.3A – Parking and Access Code – For accepted development subject to requirements and assessable development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREMENTS AND ASSESSABLE DEVELOPMENT			
CAR PARKING SPACES			
PO1 Development provides sufficient car parking to accommodate the demand likely to be generated by the use, having regard to the: (a) nature of the use; (b) location of the site; (c) proximity of the use to public transport services; (d) availability of active transport infrastructure; and (e) accessibility of the use to all members of the community.	**AO1** The number of car parking spaces provided for the use is in accordance with **Table 9.4.3.3B**. *Note—Car parking spaces provided for persons with a disability are to be considered in determining compliance with AO1.*	**N/A**	Not considered applicable to an application for reconfiguring a lot.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
VEHICLE CROSSOVERS			
PO2 Vehicle crossovers are provided to: (a) ensure safe and efficient access between the road and premises; (b) minimize interference with the function and operation of roads; and (c) minimise pedestrian to vehicle conflict.	**AO2.1** Vehicular access to/from Council roads is designed and constructed in accordance with the Standard drawings in Planning Scheme Policy 4 - FNQROC Regional Development Manual.	**YES**	Compliance can be conditioned for the access crossover to the driveway within the access easement.
	AO2.2 Development on a site with two or more road frontages provides vehicular access from: (a) the primary frontage where involving Community activities or Sport and recreation activities, unless the primary road frontage is a State-controlled road; or (b) from the lowest order road in all other instances.	**N/A**	The site does not contain two or more road frontages.
	AO2.3 Vehicular access for particular uses is provided in accordance with **Table 9.4.3.3E**.	**N/A**	The proposed development does not include any of the specific uses listed in Table 9.4.3.3.E.
PO3 Access, maneuvering and car parking areas include appropriate pavement treatments having regard to: (a) the intensity of anticipated vehicle movements; (b) the nature of the use that they service; and (c) the character of the surrounding locality.	**AO3.1** Access, maneuvering and car parking areas include pavements that are constructed in accordance with **Table 9.4.3.3C**.	**YES**	Compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ASSESSABLE DEVELOPMENT			
PARKING AREA LOCATION AND DESIGN			
PO4 Car parking areas are located and designed to: (a) ensure safety and efficiency in operation; and (b) be consistent with the character of the surrounding locality.	**AO4.1** Car parking spaces, access and circulation areas have dimensions in accordance with AS/NZS 2890.1 Off-street car parking.	**N/A**	Not considered applicable to an application for reconfiguring a lot.
	AO4.2 Disabled access and car parking spaces are located and designed in accordance with AS/NZS 2890.6 Parking facilities - Off-street parking for people with disabilities.	**N/A**	See AO4.1 above.
	AO4.3 The car parking area includes designated pedestrian routes that provide connections to building entrances.	**N/A**	See AO4.1 above.
	AO4.4 Parking and any set down areas are: (a) wholly contained within the site; (b) visible from the street where involving Commercial activities, Community activities, Industrial activities or a use in the Recreation and open space zone; (c) are set back behind the main building line where involving a Dual occupancy, Multiple dwelling, Residential care facility or Retirement facility; and (d) provided at the side or rear of a building in all other instances.	**N/A**	See AO4.1 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
SITE ACCESS AND MANOEUVRING			
PO5 Access to, and manoeuvring within, the site is designed and located to: (a) ensure the safety and efficiency of the external road network; (b) ensure the safety of pedestrians; (c) provide a functional and convenient layout; and (d) accommodate all vehicles intended to use the site.	**AO5.1** Access and manoeuvrability is in accordance with : (a) AS28901 – Car Parking Facilities (Off Street Parking); and (b) AS2890.2 – Parking Facilities (Off-street Parking) Commercial Vehicle Facilities. *Note—Proposal plans should include turning circles designed in accordance with AP34/95 (Austroads 1995) Design Vehicles and Turning Path Templates.*	**N/A**	Not considered applicable to an application for reconfiguring a lot.
	AO5.2 Vehicular access has a minimum sight distance in accordance with Part 5 of AUSTROADS.	**YES**	Compliance can be conditioned.
	AO5.3 Vehicular access is located and designed so that all vehicles enter and exit the site in a forward gear.	**N/A**	Not considered applicable to an application for reconfiguring a lot.
	AO5.4 Pedestrian and cyclist access to the site: (a) is clearly defined; (b) easily identifiable; and (c) provides a connection between the site frontage and the entrance to buildings and end of trip facilities (where provided).	**N/A**	Warril Drive is identified as an access road within a rural residential area and does not contain any formalised pedestrian or cycling infrastructure. It would be considered unreasonably to impose this requirement on the proposed development.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
PO6 Development that involves an internal road network ensures that it's design: (a) ensure safety and efficiency in operation; (b) does not impact on the amenity of residential uses on the site and on adjoining sites, having regard to matters of: (i) hours of operation; (ii) noise (iii) light; and (iv) odour; (c) accommodates the nature and volume of vehicle movements anticipated to be generated by the use; (d) allows for convenient access to key on-site features by pedestrians, cyclists and motor vehicles; and (e) in the Rural zone, avoids environmental degradation.	**AO6.1** Internal roads for a Tourist park have a minimum width of: (a) 4 metres if one way; or (b) 6 metres if two way.	**N/A**	The proposed development does not include a Tourist Park.
	AO6.2 For a Tourist park, internal road design avoids the use of cul-de-sacs in favour of circulating roads, where unavoidable, cul-de-sacs provide a full turning circle for vehicles towing caravans having: (a) a minimum approach and departure curve radius of 12 metres; and (b) a minimum turning circle radius of 8 metres.	**N/A**	See AO6.1 above.
	AO6.3 Internal roads are imperviously sealed and drained, apart from those for an Energy and infrastructure activity or Rural activity.	**YES**	The internal driveway (road) will be sealed and compliance can be conditioned.
	AO6.4 Speed control devices are installed along all internal roads, apart from those for an Energy and infrastructure activity or Rural activity, in accordance with Complete Streets.	**YES**	Compliance can be conditioned.
	AO6.5 Internal roads, apart from those for an Energy and infrastructure activity or Rural activity, are illuminated in accordance with AS 4282 (as amended) - Control of Obtrusive effects of outdoor lighting.	**N/A**	Compliance can be conditioned if lighting for the driveway is required.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO6.6 Where involving an accommodation activity, internal roads facilitate unobstructed access to every dwelling, accommodation unit, accommodation site and building by emergency services vehicles.	**YES**	Each allotment will be able to be accessed via emergency services.
	AO6.7 For an Energy and infrastructure activity or Rural activity, internal road gradients: (a) are no steeper than 1:5; or (b) are steeper than 1:5 and are sealed.	**N/A**	The proposed development does not include an energy and infrastructure activity or rural activity.
SERVICING			
PO7 Development provides access, maneuvering and servicing areas on site that: (a) accommodate a service vehicle commensurate with the likely demand generated by the use; (b) do not impact on the safety or efficiency of internal car parking or maneuvering areas; (c) do not adversely impact on the safety or efficiency of the road network; (d) provide for all servicing functions associated with the use; and	**AO7.1** All unloading, loading, service and waste disposal areas are located: (a) on the site; (b) to the side or rear of the building, behind the main building line; (c) not adjacent to a site boundary where the adjoining property is used for a sensitive use.	**N/A**	Not considered applicable to an application for reconfiguring a lot.
	AO7.2 Unloading, loading, service and waste disposal areas allow service vehicles to enter and exit the site in a forward gear.	**N/A**	See AO7.1 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(e) are located and designed to minimise their impacts on adjoining sensitive land uses and streetscape quality.	**AO7.3** Development provides a servicing area, site access and maneuvering areas to accommodate the applicable minimum servicing vehicle specified in **Table 9.4.3.3B**.	**N/A**	See AO7.1 above.
MAINTENANCE			
PO8 Parking areas are used and maintained for their intended purpose.	**AO8.1** Parking areas are kept and used exclusively for parking and are maintained in a suitable condition for parking and circulation of vehicles.	**N/A**	Not considered applicable to an application for reconfiguring a lot.
	AO8.2 All parking areas will be compacted, sealed, drained, line marked and maintained until such time as the development ceases.	**N/A**	See AO8.1 above.
END OF TRIP FACILITIES			
PO9 Development within the Centre zone; Industry zone or Emerging community zone provides facilities for active transport users that: (a) meet the anticipated demand generated from the use; (b) comprise secure and convenient bicycle parking and storage; and	**AO9.1** The number of bicycle parking spaces provided for the use is in accordance with **Table 9.4.3.3D**.	**N/A**	Not considered applicable to an application for reconfiguring a lot.
	AO9.2 End of trip facilities are provided in accordance with **Table 9.4.3.3D**.	**N/A**	See AO9.1 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(c) provide end of trip facilities for all active transport users.			
IF FOR EDUCATIONAL ESTABLISHMENT OR CHILD CARE CENTRE WHERE INVOLVING MORE THAN 100 VEHICLE MOVEMENTS PER DAY OR RENEWABLE ENERGY FACILITY, SPORT AND RECREATION ACTIVITIES, OR TOURIST PARK.			
P10 The level of traffic generated by the development on the surrounding local road network must not result in unacceptable impacts on adjacent land and local road users.	**AO10.1** A traffic impact report is prepared by a suitably qualified person that identifies: (a) the expected traffic movements to be generated by the facility; (b) any associated impacts on the road network; and (c) any works that will be required to address the identified impacts.	**N/A**	The proposed development does not include an educational establishment, child care centre, renewable energy facility, sport and recreation activities, or tourist park.
IF FOR EDUCATIONAL ESTABLISHMENT OR CHILD CARE CENTRE WHERE INVOLVING MORE THAN 100 VEHICLE MOVEMENTS PER DAY OR RENEWABLE ENERGY FACILITY, SPORT AND RECREATION ACTIVITIES, OR TOURIST PARK.			
PO11 The level of traffic generated by the development on the surrounding local road network must not result in unacceptable impacts on adjacent land and local road users.	**AO11.1** A traffic impact report is prepared by a suitably qualified person that identifies: (a) the expected traffic movements to be generated by the facility; (b) any associated impacts on the road network; and (c) any works that will be required to address the identified impacts.	**N/A**	See AO10.1 above.

Application

(1) This code applies to assessing development where:
  (a) For Reconfiguring a Lot; and
  (b) It is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

Criteria for assessment

Table 9.4.4.3A – Reconfiguring a Lot Code – for Assessable Development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
AREA AND FRONTAGE OF LOTS			
PO1 Lots include an area and frontage that: (a) Is consistent with the design of lots in the surrounding area; (b) Allows the desired amenity of the zone to be achieved; (c) Is able to accommodate all buildings, structures and works associated with the intended land use; (d) Allow the site to be provided with sufficient access; (e) Considers the proximity of the land to: i. Centres; ii. Public transport services; and iii. Open space. (f) Allows for the protection of environmental features; and (g) Accommodate site constraints.	**AO1** Lots provide a minimum area and frontage in accordance with **Table 9.4.4.3B.**	**YES**	According to Table 9.4.4.3.B, the required minimum lot size and dimension for the Rural Residential (4,000m^2 precinct) is 4,000m^2 and 40m minimum frontage. The proposed subdivision will create five (5) lots, all above 4,000m^2, and is therefore, fully compliant with the minimum area required under Table 9.4.4.3.B. As all lots do not have a 40m frontage, an assessment demonstrating compliance with PO1 is required. Please refer to section 7.1 of the Planning Report for this assessment.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
EXISTING BUILDINGS AND EASEMENTS			
PO2 Reconfiguring a Lot which contains existing land uses or existing buildings and structures ensures: (a) New lots are of sufficient area and dimensions to accommodate existing land uses, buildings and structures; and (b) Any continuing use is not compromised by the reconfiguration.	**AO2.1** Each land use and associated infrastructure is contained within its individual lot.	**YES**	Each of the five (5) proposed lots are of a sufficient size and configuration to appropriately accommodate land use (Rural Residential) via the provision of a building envelope, and associated infrastructure.
	AO2.2 All lots containing existing buildings and structures achieve the setback requirements of the relevant zone.	**N/A**	The site does not contain any existing buildings/structures.
PO3 Reconfiguring a Lot which contains an existing easement ensures: (a) Future buildings, structures and accessways are able to be sited to avoid the easement; and (b) The reconfiguration does not compromise the purpose of the easement or the continued operation of any infrastructure contained within the easement.	**AO3** No acceptable outcome is provided.	**N/A**	The site does not contain an existing easement.
BOUNDARY REALIGNMENT			
PO4 The boundary realignment retains all attendant and existing infrastructure connections and potential connections	**AO4** No acceptable outcome is provided	**N/A**	The proposed development is for a subdivision, not a boundary realignment.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ASSESSABLE DEVELOPMENT			
PO5 Access to a reconfigured lot (including driveways and paths) must not have an adverse impact on: (a) Safety; (b) Drainage; (c) Visual amenity; (d) Privacy of adjoining premises; and (e) Service provision.	**AO5** No acceptable outcome is provided.	**YES**	The proposed development complies with the performance outcome as is outlined below: a) The stability of the access location and driveway for the proposed development will be outlined in a future Operational Works application; b) Drainage requirements associated with the access and driveway will also be outlined in a future Operational Works application; c) The driveway is for the most part, located centrally to the site which will ensure it is not visible from surrounding areas. That said, there is potentially a small portion of the driveway that will be visible from the allotment to the north and it is proposed to install landscaping on the northern boundary in this section of the driveway to reduce any potential visual impacts on the allotment as a result of the driveway; d) As above for (c); and e) The driveway will not impact the provision of al required services to the allotments and this will be demonstrated in a future Operational Works application.
PO6 Reconfiguring a Lot ensures that access to a lot can be provided that: (a) Is consistent with that provided in the surrounding area;	**AO6** Vehicle crossover and access is provided in accordance with the design guidelines and specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	**YES**	Compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(b) Maximise efficiency and safety; and (c) Is consistent with the nature of the intended use of the lot. Note – the Parking and Access code should be considered in demonstrating compliance with PO6.			
PO7 Roads in the Industry zone are designed having regard to: (a) The intended use of the lots; (b) The existing use of surrounding land; (c) The vehicular servicing requirements of the intended use; and (d) The movement and turning requirements of B-Double vehicles. Note – the Parking and Access code should be considered in demonstrating compliance with PO6.	**AO7** No acceptable outcome is provided.	**N/A**	The proposed development is not located within the Industry Zone.
REAR LOTS			
PO8 Rear lots are designed to: (a) Provide a high standard of amenity for residents and other users of the site; (b) Provide a high standard of amenity for adjoining properties; and (c) Not adversely affect the safety and efficiency of the road from which access is gained.	**AO8.1** Rear lots are designed to facilitate development that adjoins or overlooks a park or open space.	**YES**	The proposed development includes rear lots and does not comply with the deemed to comply acceptable outcomes. As such, an assessment demonstrating compliance with PO8 is required. Please refer to section 7.2 of the Planning Report for this assessment.
	AO8.2 No more than two rear lots are created behind any lot with a road frontage.	**YES**	
	AO8.3	**YES**	

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	Access to lots is via an access strip with a minimum width of: (a) 4 metres where in the Low density residential zone or Medium density residential zone; or (b) 8 metres otherwise.		
	AO8.4 A single access strip is provided to a rear lot along one side of the lot with direct frontage to the street. Note – Figure A provides further guidance in relation to the desired outcome.	**YES**	
	AO8.5 No more than 1 in 10 lots created in a new subdivision are rear lots.	**YES**	
	AO8.6 Rear lots are not created in the Centre zone or the Industry zone.	**YES**	The site is not located within the Centre or Industry Zone.
CRIME PREVENTION AND COMMUNITY SAFETY			
PO9 Development includes design features which enhance public safety and seek to prevent opportunities for crime, having regard to: (a) Sightlines; (b) The existing and intended pedestrian movements network; (c) The existing and intended land use pattern; and	**AO9** No acceptable outcome is provided.	**YES**	The proposed development incorporates consideration of safety and provides adequate sightlines, appropriate space to facilitate the intended land use pattern (rural residential), and avoidance of potential entrapment locations. Further compliance can be conditioned where deemed reasonable and relevant.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(d) Potential entrapment locations.			
PEDESTRIAN AND CYCLE MOVEMENT NETWORK			
PO10 Reconfiguring a lot must assist in the implementation of a Pedestrian and Cycle movement network to achieve safe, attractive and efficient pedestrian and cycle networks.	**AO10** No acceptable outcome is provided.	**ALTERNATIVE SOLUTION SOUGHT**	Warril Street and the surrounding Rural Residential locality has minimal to no provision of formalised pedestrian or cycling infrastructure. Therefore, the provision of pedestrian or cyclists infrastructure in this instance, would be considered unreasonable.
PUBLIC TRANSPORT NETWORK			
PO11 Where a site includes or adjoins a future public transport corridor or future public transport site identified through a structure planning process, development: (a) Does not prejudice the future provision of the identified infrastructure; (b) Appropriately treats the common boundary with the future corridor; and (c) Provides opportunities to integrate with the adjoining corridor where it will include an element which will attract pedestrian movement.	**AO11** No acceptable outcome is provided.	**N/A**	The site does not include nor adjoins a future public transport corridor or future public transport site.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
RESIDENTIAL SUBDIVISION			
PO12 Residential lots are: (a) Provided in a variety of sizes to accommodate housing choice and diversity; and (b) Located to increase variety and avoid large areas of similar lot sizes.	**AO12** No acceptable outcome is provided.	**YES**	The proposed development includes lots between 4,061m^2 to 5,217m^2 each with an appropriate building envelope on which to establish a variety of housing/accommodation options which ensures compliance with the performance outcome.
RURAL RESIDENTIAL ZONE			
PO13 New lots are only created in the Rural residential zone where land is located within the 4,000m^2 precinct, the 1-hectare precinct or the 2-hectare precinct.	**AO13** No acceptable outcome is provided.	**YES**	All proposed lots are greater than 4,000m^2 in area.
ADDITIONAL PROVISIONS FOR GREENFIELD DEVELOPMENT ONLY			
PO14 The subdivision design provides the new community with a local identity by responding to: (a) Site context; (b) Site characteristics; (c) Setting; (d) Landmarks; (e) Natural features; and (f) Views.	**AO14** No acceptable outcome is provided.	**N/A**	The proposed development does not include greenfield development.
PO15	**AO15**	**N/A**	See PO10 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
The road networks is designed to provide a high level of connectivity, permeability and circulation for local vehicles, public transport, pedestrians and cyclists.	No acceptable outcome provided.		
PO16 The road network is designed to: (a) Minimise the number of cul-de-sacs; (b) Provide walkable catchments for all residents in cul-de-sacs; and (c) Include open cul-de-sacs heads. Note – Figure B provides further guidance in relation to the desired outcome.	**AO16** No acceptable outcome provided.	**N/A**	See PO10 above.
PO17 Reconfiguring a Lot provides safe and convenient access to the existing or future public transport network.	**AO17** The subdivision locates 90% of lots within 400 metres walking distance of a future public transport route.	**N/A**	See PO10 above.
PO18 The staging of the lot reconfiguration prioritises delivery of link roads to facilitate efficient bus routes.	**AO18** No acceptable outcome provided.	**N/A**	See PO10 above.
PO19 Provision is made for sufficient open space to:	**AO19.1** A minimum of 10% of the site area is dedicated as open space.	**N/A**	See PO10 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(a) Meet the needs of the occupiers of the lots and to ensure that the environmental and scenic values of the area are protected; (b) Retain riparian corridors, significant vegetation, and habitat areas and provides linkages between those areas; and (c) Meet regional, district and neighbourhood open space requirements.	**AO19.2** A maximum of 30% of the proposed open space can consist of land identified as significant vegetation or riparian corridor buffer.		
PO20 A network of parks and community land is provided: (a) To support a full range of recreational and sporting activities; (b) To ensure adequate pedestrian, cycle and vehicle access; (c) Which is supported by appropriate infrastructure and embellishments; (d) To facilitate links between public open spaces; (e) Which is co-located with other existing or proposed community infrastructure; (f) Which is consistent with the preferred open space network; and (g) Which includes a diversity of settings.	**AO20** No acceptable outcome is provided.	**N/A**	See PO10 above.

Application

This code applies to assessing development where it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the Planning Scheme.

Criteria for assessment

Table 9.4.5.3 – Works, services and infrastructure code – For accepted development subject to requirements and assessable development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREMENTS AND ASSESSABLE DEVELOPMENT			
WATER SUPPLY			
PO1 Each lot has an adequate volume and supply of water that: (a) meets the needs of users; (b) is adequate for fire-fighting purposes; (c) ensures the health, safety and convenience of the community; and (d) minimises adverse impacts on the receiving environment.	**AO1.1** Development is connected to a reticulated water supply system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located: (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated water supply service area.	**YES**	See section 5.4.1 of the Planning Report and compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO1.2 Development, where located outside a reticulated water supply service area and in the Conservation zone, Rural zone or Rural residential zone is provided with: (a) a bore or bores are provided in accordance with the Design Guidelines set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; or (b) on-site water storage tank/s: (i) with a minimum capacity of 90,000L; (ii) fitted with a 50mm ball valve with a camlock fitting; and (iii) which are installed and connected prior to the occupation or use of the development.	**N/A**	See AO1.1 above.
WASTEWATER DISPOSAL			
PO2 Each lot provides for the treatment and disposal of effluent and other waste water that: (a) meets the needs of users; (b) is adequate for fire-fighting purposes; (c) ensures the health, safety and convenience of the community; and (d) minimises adverse impacts on the receiving environment.	**AO2.1** Development is connected to a reticulated sewerage system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located: (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated sewerage service area.	**N/A**	See AO2.2 below.
	AO2.2 An effluent disposal system is provided in accordance with ASNZ 1547 On-Site Domestic Wastewater	**YES**	See Section 5.4.2 of the Planning Report and compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	Management (as amended) where development is located: (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated sewerage service area.		
STORMWATER INFRASTRUCTURE			
PO3 Stormwater infrastructure is designed and constructed to collect and convey the design storm event to a lawful point of discharge in a manner that mitigates impacts on life and property.	**AO3.1** Where located within a Priority infrastructure area or where stormwater infrastructure is available, development is connected to Council's stormwater network in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	**N/A**	See AO3.2 below.
	AO3.2 On-site drainage systems are constructed: (a) to convey stormwater from the premises to a lawful point of discharge; and (b) in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	**YES**	Compliance can be conditioned.
ELECTRICITY SUPPLY			
PO4 Each lot is provided with an adequate supply of electricity.	**AO4** The premises: (a) is connected to the electricity supply network; or (b) has arranged a connection to the transmission grid; or	**YES**	See Section 5.4.3 of the Planning Report and compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	(c) where not connected to the network, an independent energy system with sufficient capacity to service the development (at near average energy demands associated with the use) may be provided as an alternative to reticulated electricity where: (i) it is approved by the relevant regulatory authority; and (ii) it can be demonstrated that no air or noise emissions; and (iii) it can be demonstrated that no adverse impact on visual amenity will occur.		
TELECOMMUNICATIONS INFRASTRUCTURE			
PO5 Each lot is provided with an adequate supply of telecommunication infrastructure.	**AO5** Development is provided with a connection to the national broadband network or telecommunication services.	**YES**	See AO4 above.
EXISTING PUBLIC UTILITY SERVICES			
PO6 Development and associated works do not affect the efficient functioning of public utility mains, services or installations.	**AO6** Public utility mains, services are relocated, altered or repaired in association with the works so that they continue to function and satisfy the relevant Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	**YES**	Compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
EXCAVATION OR FILLING			
PO7 Excavation or filling must not have an adverse impact on the: (a) streetscape; (b) scenic amenity; (c) environmental values; (d) slope stability; (e) accessibility; or (f) privacy of adjoining premises.	**AO7.1** Excavation or filling does not occur within 1.5 metres of any site boundary.	**YES**	The proposed development will involve some earthworks to facilitate the construction of the driveway within the access easement (please refer to the Geotechnical Investigation Report provided in **Attachment 6** for further details regarding earthworks). All earthworks will be documented in a future Operational Works application and undertaken in accordance with the FNQROC Development Manual and compliance with this aspect of the code can, therefore, be conditioned.
	AO7.2 Excavation or filling at any point on a lot is to be no greater than 1.5 metres above or below natural ground level.	**YES**	See AO7.1 above.
	AO7.3 Earthworks batters: (a) are no greater than 1.5 metres in height; (b) are stepped with a minimum width 2 metre berm; (c) do not exceed a maximum of two batters and two berms (not greater than 3.6 metres in total height) on any one lot; (d) have a slope no greater than 1 in 4; and (e) are retained.	**YES**	See AO7.1 above.
	AO7.4	**YES**	See AO7.1 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	Soil used for filling or spoil from excavation is not stockpiled in locations that can be viewed from: (a) adjoining premises; or (b) a road frontage, for a period exceeding 1 month from the commencement of the filling or excavation.		
	AO7.5 All batters and berms to be constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	**YES**	See AO7.1 above.
	AO7.6 Retaining walls have a maximum height of 1.5 metres and are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	**YES**	See AO7.1 above.
	AO7.7 Excavation or filling at any point on a lot is to include measures that protect trees at the foot or top of cut or fill batters by the use of appropriate retaining methods and sensitive earth removal or placement and in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	**YES**	See AO7.1 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ASSESSABLE DEVELOPMENT			
TRANSPORT NETWORK			
PO8 The development has access to a transport network of adequate standard to provide for the safe and efficient movement of vehicles, pedestrians and cyclists.	**AO8.1** Vehicle access, crossovers, road geometry, pavement, utilities and landscaping to the frontage/s of the site are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	**YES**	Compliance can be conditioned.
	AO8.2 Development provides footpath pavement treatments in accordance with Planning Scheme Policy 9 – Footpath Paving.	**N/A**	Warril Drive is identified as an access road within a Rural Residential area and does not contain any existing formalised pedestrian or cycling infrastructure. It would be considered unreasonably to impose this requirement on the proposed development.
PUBLIC INFRASTRUCTURE			
PO9 The design, construction and provision of any infrastructure that is to be dedicated to Council is cost effective over its life cycle and incorporates provisions to minimise adverse impacts.	**AO9** Development is in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	**YES**	Compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
STORMWATER QUALITY			
PO10 Development has a non-worsening effect on the site and surrounding land and is designed to: (a) optimise the interception, retention and removal of waterborne pollutants, prior to the discharge to receiving waters; (b) protect the environmental values of waterbodies affected by the development, including upstream, on-site and downstream waterbodies; (c) achieve specified water quality objectives; (d) minimise flooding; (e) maximise the use of natural channel design principles; (f) maximise community benefit; and (g) minimise risk to public safety.	**AO10.1** The following reporting is prepared for all Material change of use or Reconfiguring a lot proposals: (a) a Stormwater Management Plan and Report that meets or exceeds the standards of design and construction set out in the Queensland Urban Drainage Manual (QUDM) and the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; and (b) an Erosion and Sediment Control Plan that meets or exceeds the Soil Erosion and Sedimentation Control Guidelines (Institute of Engineers Australia), including: (i) drainage control; (ii) erosion control; (iii) sediment control; and (iv) water quality outcomes.	**YES**	Compliance can be conditioned with both documents to be provided as part of a future Operational Works application.
	AO10.2 For development on land greater than 2,500m^2 or that result in more than 5 lots or more than 5 dwellings or accommodation units, a Stormwater Quality Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) is prepared that demonstrates that the development: (a) meets or exceeds the standards of design and construction set out in the Urban Stormwater Quality Planning Guideline and the Queensland Water Quality Guideline;	**N/A & YES**	See section 5.4.5 of the Planning Report.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	(b) is consistent with any local area stormwater water management planning; (c) accounts for development type, construction phase, local climatic conditions and design objectives; and (d) provides for stormwater quality treatment measures reflecting land use constraints, such as soil type, landscape features (including landform), nutrient hazardous areas, acid sulfate soil and rainfall erosivity.		
PO11 Storage areas for stormwater detention and retention: (a) protect or enhance the environmental values of receiving waters; (b) achieve specified water quality objectives; (c) where possible, provide for recreational use; (d) maximise community benefit; and (e) minimise risk to public safety.	**AO11** No acceptable outcome is provided.	**N/A**	No stormwater detention is required or proposed.
EXCAVATION OR FILLING			
PO12 Traffic generated by filling or excavation does not impact on the amenity of the surrounding area.	**AO12.1** Haul routes used for transportation of fill to or from the site only use major roads and avoid residential areas.	**YES**	Compliance can be conditioned.
	AO12.2 Transportation of fill to or from the site does not occur: (a) within peak traffic times; and	**YES**	See AO12.1 above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	(b) before 7am or after 6pm Monday to Friday; (c) before 7am or after 1pm Saturdays; and (d) on Sundays or Public Holidays.		
PO13 Air pollutants, dust and sediment particles from excavation or filling, do not cause significant environmental harm or nuisance impacts.	**AO13.1** Dust emissions do not extend beyond the boundary of the site.	**YES**	Compliance can be conditioned.
	AO13.2 No other air pollutants, including odours, are detectable at the boundary of the site.	**YES**	See AO13.1 above.
	AO13.3 A management plan for control of dust and air pollutants is prepared and implemented.	**YES**	See AO13.1 above.
PO14 Access to the premises (including driveways and paths) does not have an adverse impact on: (a) safety; (b) drainage; (c) visual amenity; and (d) privacy of adjoining premises.	**AO14** Access to the premises (including all works associated with the access): (a) must follow as close as possible to the existing contours; (b) be contained within the premises and not the road reserve, and (c) are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	**YES**	Compliance can be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
WEED AND PEST MANAGEMENT			
PO15 Development prevents the spread of weeds, seeds or other pests into clean areas or away from infested areas.	**AO15** No acceptable outcome is provided.	**YES**	Compliance can be conditioned.
CONTAMINATED LAND			
PO16 Development is located and designed to ensure that users and nearby sensitive land uses are not exposed to unacceptable levels of contaminants	**AO16** Development is located where: (a) soils are not contaminated by pollutants which represent a health or safety risk to users; or (b) contaminated soils are remediated prior to plan sealing, operational works permit, or issuing of building works permit.	**YES**	To the best of Urban Sync's knowledge, the site is not located on the Environmental Management or Contaminated Land Registers.
FIRE SERVICES IN DEVELOPMENTS ACCESSED BY COMMON PRIVATE TITLE			
PO17 Fire hydrants are located in positions that will enable fire services to access water safely, effectively and efficiently.	**AO17.1** Fire hydrants are located in accessways or private roads held in common private title at a maximum spacing of: (a) 120 metres for residential development; and (b) 90 metres for any other development.	**N/A**	The proposed development does not involve any common private title.
	AO17.2 Fire hydrants are located at all intersections of accessways or private roads held in common private title.	**N/A**	See AO17.1 above.

ATTACHMENT 6

GEOTECHNICAL INVESTIGATION REPORT (PREPARED BY ETS GEOTECHNICAL)

EXPRESS BUILD PTY LTD

GEOTECHNICAL INVESTIGATION
WARRIL DRIVE SUBDIVISION
KURANDA

REPORT NO: GT22-090-001R REV 2

JUNE 2022

REVISION 2

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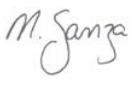
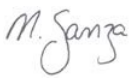
1	L. Jones	R.Rackley	Final	M. Ganza		3/06/22	4449
2	L. Jones	R.Rackley	Amend Paragraph - Final	M. Ganza		6/06/22	4449

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1.0 INTRODUCTION

ETS Geotechnical (ETS) has conducted a geotechnical investigation for a proposed five (5) lot residential subdivision (i.e. one lot into five lots). This geotechnical investigation has been undertaken to address the requirements in Mareeba Shire Council's, SC6.6 Planning Scheme Policy 5 – Geotechnical Reports, for proposed developments comprising hillslopes. The investigation will support a development application for a proposed subdivision and was commissioned by Urban Sync.

The site is located on Warril Drive, Kuranda and is currently registered as Lot 2 on SP126546. GT22-090-001 DWG presents a locality plan of the subject site. The proposed development involves subdividing Lot 2, which has a total area of approximately 22,809m^2, into five allotments designated as Lot 20 to Lot 24 in Drawing No. GT22-090-002 DWG (presented in Appendix A).

The geotechnical investigation was undertaken in accordance with ETS proposal GT22-090-001P Rev. 1, dated 18th March 2022. The scope of the geotechnical investigation included: -

1. Evaluation of the subsurface conditions across the site including the presence of groundwater.
2. Comment on the global stability of the existing and developed slopes within the subdivision and the upslope terrain directly adjacent to the subdivision (to the limit of the survey plans and appropriate to the scale of the development).
3. Assessment of the landslide risk potential for the proposed development with regards to earth / debris flow in accordance with the Australian Geomechanics Society Landslide Risk Management Concepts and Guidelines, 2007, based on a slope survey and investigation.
4. Comment on the suitability of the proposed residential building envelope locations.
5. Determination of the available land disposal areas and likely sizing for the required onsite wastewater treatment systems for each allotment.
6. Comment on the stability of the existing dam wall with respect to the construction of an access driveway, which is proposed to traverse the eastern length of the existing dam wall.

7. Earthworks recommendations for the subdivision development.

8. Discussion on observed geotechnical issues that may need further investigation and/or assessment.

2.0 FIELD WORK

Fieldwork was conducted by ETS on the 1st April 2022 and included a visual assessment of the property, and its surrounds. Prior to the commencement of the fieldwork, a desktop assessment of the current slope conditions and the proposed developed conditions of the allotment was undertaken. Seven (7) test pits were excavated to a target depth of 2.5m (or refusal) using a 5.5t excavator at locations selected by ETS. A drilling rig could not be used to excavate the boreholes due to restricted access, which included steep slopes and dense vegetation. In addition to the test pits, nine (9) Dynamic Cone Penetrometer (DCP) tests (P1 to P9) were carried out to assist in determining the consistency and density of the subsurface materials.

The visual assessment included observations and mapping of the general site topography, identification of features such as previous landslips, gullies, rock outcropping and boulders, and confirming the documented slope angles of the ground surfaces from the survey plan.

The test locations and proposed subdivisional boundary configuration are illustrated in Drawing No. GT22-090-002 DWG in Appendix A of this report.

3.0 SITE CONDITIONS & OBSERVATIONS

3.1 Visual Assessment

The site is located on the southern side of Warril Drive. The vegetation at the site consists of thick rainforest vegetation. Each of the five allotments generally comprise moderate to steep slopes. It is of particular note that, with the exception of the construction of an access driveway, no vegetation clearing or earthworks are proposed to be undertaken as a part of the subdivision development within each of the proposed allotments. The observed site features and existing slopes specific to each allotment are as follows:

Lot 20

Lot 20 predominantly features a moderate natural hillslope that dips between 12° and 18° in a south-easterly direction and is generally covered by thick rainforest vegetation. The southern region of this allotment encompasses the northern half of the existing dam.

No obvious signs of deep-seated instability were observed in the areas of the natural hill slope within the proposed allotment.

Lot 21

Lot 21 predominantly features a gentle natural hillslope that dips between 0° and 5° in a north-westerly direction and is generally covered by thick rainforest vegetation. The southern region of this allotment includes a 4m deep seasonal gully that slopes between 70° and 80° in a southern direction. The northern region of Lot 21 encompasses the southern half of the existing dam.

No obvious signs of deep-seated instability were observed in the areas of the natural hill slope within the proposed allotment, some areas of erosion were noted within the seasonal gully.

The southern boundary of the proposed building envelope currently extends into the seasonal gully. It is recommended that the building envelope be moved 2m north from the crest of the seasonal gully.

Lot 22

Lot 22 predominantly features a moderately sloping natural hillslope that dips between 10° and 14° in an easterly direction and is generally covered by thick rainforest vegetation. The eastern half of this allotment lies within the Regulated Vegetation buffer zone.

No obvious signs of deep-seated instability were observed in the areas of the natural hill slope within the proposed allotment.

Lot 23

Lot 23 predominantly features a moderately sloping natural hillslope that dips between 5° and 12° in a north-easterly direction and is generally covered by thick rainforest vegetation. The northern region of this allotment includes a shallow channeled runoff at the crest of a significant seasonal gully. The seasonal gully is approximately 10 metres in vertical height and dips steeply at between 35º and 45º. The eastern portion of this allotment lies within the Regulated Vegetation buffer zone.

No obvious signs of deep-seated instability were observed in the areas of the natural hill slope within the proposed allotment, some areas of erosion were noted within the seasonal gully.

Lot 24

The predominant feature of Lot 24 is a deep gully that comprises mostly very steep natural hillslope that dips between 30° and 36° in a southerly direction. The lower third of the natural gully embankment consists of extreme to cliff slope gradients that dip between 60° and 70°. The crest region of the gully comprises gentle to moderate natural slopes that dip between 8° and 20° in an east-south-easterly direction. At the time of the investigation, the entire allotment was covered by thick rainforest vegetation.

No obvious signs of deep-seated instability were observed in the areas of the natural hill slope within the proposed allotment, some areas of erosion were noted within the seasonal gully.

Two (2) building envelopes within the allotment were nominated for assessment by the customer. The first building envelope was situated in the western extent of the allotment, close to where the gully commences and adjacent the proposed access

road for the subdivision. The second building envelope, located in the eastern extent of the allotment, was situated at the crest of the very steep gully and is situated close to the Regulated Vegetation buffer zone.

3.2 Subsurface Conditions

The 1:250,000 Geological Map of Cairns (1964) shows that the site is underlain by the Palaeozoic Barron River Metamorphics comprising slate, phyllite, quartzite, chert, greywacke (metamorphic equivalent of the Hodgkinson Formation).

Using a 5.5 tonne mini-excavator, seven (7) test pits were excavated to depths of between 1.8m and 2.3m (depth of refusal) in the sloping regions of the proposed allotments. Typically, Clayey SILT soil materials were encountered overlying extremely weathered siltstone materials which were consistent with the expected colluvial / residual geological conditions for the site.

The test pit and DCP data indicated that an upper horizon of stiff Clayey SILT overlies a very stiff to hard Clayey SILT. It is envisaged that a weathered material (siltstone) profile exists throughout the allotment beneath the colluvial soils at depths of between 1.8m and 4.0m.

At the time of investigation, the ground water table was not encountered at the locations investigated. However, it should be noted, that groundwater levels are affected by climatic conditions and by soil permeability, therefore groundwater levels may vary with time.

The test pit logs and DCP results are presented in Appendix B.

4.0 LANDSLIDE RISK ASSESSMENT

A landslide risk assessment of the existing and developed slopes has been conducted in accordance with the Australian Geomechanics Society Landslide Risk Management Concepts and Guidelines, 2007 and is a qualitative risk assessment for risk to property. A copy of this document can be found at www.australiangeomechanics.org. Appendix C of the document describes the terminology used.

As previously noted, with the exception of the construction of an access driveway, no vegetation clearing or earthworks are proposed to be undertaken as a part of the subdivision development within each of the proposed allotments. It is envisaged that the access driveway will comprise both areas of cut and fill within sloping regions at the site.

Provided the control measures in Tables 1 to 7 are implemented, and all recommendations contained in this report are adopted, the development is assessed in accordance with Appendix A – Qualitative Measures of Consequences to Property, as having a **LOW** risk of damage to property. This level of risk is typically considered acceptable to local and state government authorities as well as potential residential landowners.

TABLE 1: Qualitative Assessment of Risk to Property – Lot 20

Potential Hazard	Element at Risk	Initial Risk Rating			Engineering Control Measures to Reduce Risk	Controlled Risk Rating		
		Likelihood of Occurrence	Consequence	Qualitative Risk		Likelihood of Occurrence	Consequence	Qualitative Risk
Landslide in the natural soil slopes damaging residential structures	Residential structures & driveway	Unlikely	Minor	Low	- A site specific slope stability assessment shall be undertaken by the future property owner.	Unlikely	Minor	Low

TABLE 2: Qualitative Assessment of Risk to Property – Lot 21

Potential Hazard	Element at Risk	Initial Risk Rating			Engineering Control Measures to Reduce Risk	Controlled Risk Rating		
		Likelihood of Occurrence	Consequence	Qualitative Risk		Likelihood of Occurrence	Consequence	Qualitative Risk
Landslide in the natural soil slopes damaging residential structures	Residential structures & driveway	Possible	Minor	Moderate	- The southern building envelope boundary must be relocated a minimum of 3m to the north of the crest of the existing seasonal gully running adjacent to and parallel with the southern boundary. - A site specific slope stability assessment shall be undertaken by the future property owner.	Unlikely	Minor	Low

TABLE 3: Qualitative Assessment of Risk to Property – Lot 22

Potential Hazard	Element at Risk	Initial Risk Rating			Engineering Control Measures to Reduce Risk	Controlled Risk Rating		
		Likelihood of Occurrence	Consequence	Qualitative Risk		Likelihood of Occurrence	Consequence	Qualitative Risk
Landslide in the natural soil slopes damaging residential structures	Residential structures & driveway	Unlikely	Minor	Low	- A site specific slope stability assessment shall be undertaken by the future property owner.	Unlikely	Minor	Low

TABLE 4: Qualitative Assessment of Risk to Property – Lot 23

Potential Hazard	Element at Risk	Initial Risk Rating			Engineering Control Measures to Reduce Risk	Controlled Risk Rating		
		Likelihood of Occurrence	Consequence	Qualitative Risk		Likelihood of Occurrence	Consequence	Qualitative Risk
Landslide in the natural soil slopes damaging residential structures	Residential structures & driveway	Possible	Medium	Moderate	- The northern building envelope boundary must be relocated a minimum of 9m to the south of its existing location. - A site specific slope stability assessment shall be undertaken by the future property owner.	Unlikely	Medium	Low

TABLE 5: Qualitative Assessment of Risk to Property – Lot 24 Eastern Building Envelope

Potential Hazard	Element at Risk	Initial Risk Rating			Engineering Control Measures to Reduce Risk	Controlled Risk Rating		
		Likelihood of Occurrence	Consequence	Qualitative Risk		Likelihood of Occurrence	Consequence	Qualitative Risk
Landslide in the natural soil slopes damaging residential structures	Residential structures	Likely	Medium	High	- Slope stabilisation in the form of soil nails must be applied to the extreme sloping region of the existing seasonal gully. - A site specific slope stability assessment shall be undertaken by the future property owner.	Unlikely	Medium	Low
Landslide in the natural soil slopes damaging residential structures	Access driveway	Possible	Minor	Moderate	- Implementation of an engineer designed retaining wall or slope stabilisation (soil nails).	Unlikely	Medium	Low

TABLE 6: Qualitative Assessment of Risk to Property – Lot 24 Western Building Envelope

Potential Hazard	Element at Risk	Initial Risk Rating			Engineering Control Measures to Reduce Risk	Controlled Risk Rating		
		Likelihood of Occurrence	Consequence	Qualitative Risk		Likelihood of Occurrence	Consequence	Qualitative Risk
Landslide in the natural soil slopes damaging residential structures	Residential structures & driveway	Unlikely	Minor	Low	- A site specific slope stability assessment shall be undertaken by the future property owner.	Unlikely	Minor	Low

TABLE 7: Qualitative Assessment of Risk to Property – Existing Dam Embankment

Potential Hazard	Element at Risk	Initial Risk Rating			Engineering Control Measures to Reduce Risk	Controlled Risk Rating		
		Likelihood of Occurrence	Consequence	Qualitative Risk		Likelihood of Occurrence	Consequence	Qualitative Risk
Landslide in the dam embankment	Residential structures	Unlikely	Medium	Low	- Significant cut earthworks to the dam embankment are not to be undertaken as a part of the construction of the access driveway. - The access driveway is to be primarily constructed using fill. - All filling is to be limited to the outside (north-eastern side) of the dam embankment. - Earthworks should be undertaken in accordance with the recommendations provided in this report (refer Section 5.3)	Unlikely	Medium	Low

5.0 ENGINEERING ASSESSMENT & RECOMMENDATIONS

5.1 Slope Stability

A global slope stability analysis has been completed on six (6) inferred cross sections (i.e., cross sections A-A', B-B', etc.) using the Limit Equilibrium Analysis software program *Slide* and adopting the geotechnical design parameters presented in Table 8. This stability analysis was undertaken to assess the natural hillslopes up to and including the allotment above the proposed development in order to determine the global effects of the proposed subdivisional development. As mentioned in Section 3.1, no signs of large-scale instability were observed during the site walkover of the proposed development area, nor upslope of the development area (which was limited to a visual assessment in thick rainforest vegetation).

The cross sections that were investigated are presented on drawing number GT22-090-002 DWG in Appendix A.

Based on the borehole logs, DCP results and experience with similar materials, the geotechnical parameters listed in Table 8 were adopted for the analysis. In addition, it has been well documented that the presence of vegetation to slopes provides reinforcement through the stabilising effects of tree roots. Root reinforced soil provides additional cohesion to the subsoil and is known as "root cohesion". From Hubble et al. 2010, root reinforced soil can add an additional 10kPa cohesion to the upper 2m soil profile and 5kPa cohesion to the soil profile between 2m and 4m depths. The study considers the additional 10kPa and 5kPa values for cohesion as conservative.

For this analysis, an upper soil layer with a root cohesion value of 5kPa has been adopted.

TABLE 8: Geotechnical Design Parameters

Material – Description	Consistency	φ'	c' kPa	c' + c_r kPa	γ_d kN/m^3
Clayey SILT (ML)	Stiff	26	6	11	20
Clayey SILT (ML)	Very Stiff	27	7	12	21
Clayey SILT (ML)	Hard	28	8	13	21
Extremely Weathered Siltstone (XW)	-	30	15	-	22

Where:-

φ' Effective Friction Angle
c' Effective Cohesion (kPa)
γ_d Dry Density (kN/m^3)
c_r Root Cohesion (from vegetation)
c' + c_r Total Cohesion within upper 2m soil layer

An Ru value of 0.3 was adopted for the saturated soil conditions represented in the analysis.

Two (2) cases were considered for each cross section:-

1. Dry (Normal) conditions – no groundwater table within the slope.
2. Saturated (Extreme) conditions as might be developed during periods of prolonged rainfall. For saturated conditions it has been assumed that any soil above 1.0m becomes saturated but the soils and rock below remains at natural moisture content.

Surcharge loads of 20kPa were applied to represent a double story residential structure in accordance with AS2870-2011. Residential structures constructed outside the scope of AS2870 have not been considered in this assessment. The dimensions of the current and developed profiles used in the slope stability analysis were based on contour survey plans that were provided by the customer and further discussions between the customer and ETS.

The results of the stability analysis are summarised in Table 9, the SLIDE output images are displayed in Appendix D.

TABLE 9: Summary of Slope Stability Analysis

Case	Calculated Factor of Safety	
	Dry Conditions	Saturated Conditions
Section A-A' – Lot 20 Current Profile	3.380	3.373
Section A-A' – Lot 20 Developed Profile	2.724	2.714
Section B-B' – Lot 21 Current Profile	1.331	1.306
Section B-B' – Lot 21 Developed Profile	1.331	1.306
Section C-C' – Lot 23 Current Profile	1.358	1.349
Section C-C' – Lot 23 Developed Profile	1.358	1.349
Section D-D' – Lot 24 East Current Profile	1.277	1.268
Section D-D' – Lot 24 East Developed Profile	1.100	1.091
Section D-D' – Lot 24 East Developed Profile (Embankment Stabilised with Soil Nails)	1.487	1.485
Section E-E' – Lot 24 West Current Profile	2.284	2.269
Section E-E' – Lot 24 West Developed Profile	1.791	1.756
Section F-F' – Dam Embankment Current Profile	2.437	2.427
Section F-F' – Dam Embankment Developed Profile	1.531	1.320

In general terms the factor of safety (FOS) is calculated by dividing the forces resisting instability (i.e. the strength of the soil/rock or the strength of discontinuities within the soil/rock) by the forces driving instability (i.e. the weight of the soil/rock, plus groundwater/seepage, plus surcharges/loads on the slope). A calculated FOS of 1.0 indicates the forces are balanced, whereas a calculated factor of safety <1.0 indicates instability will likely occur.

Generally, for normal operating conditions a long term FOS of 1.5 is considered to be acceptable. For short term "extreme" conditions it may be acceptable to design for a FOS of about 1.3.

The global stability analysis results presented in Table 9 demonstrates that the factor of safety for both dry and saturated conditions are within acceptable levels for both the current and developed profiles for Lot 20 and Lot 24 (West). A stability analysis

was not performed on Lot 22 due to its similar sloping and subsurface conditions to Lot 20 and it is therefore also considered to comprise acceptable factors of safety.

Lots 21 and 23 exhibit marginally stable slope conditions at the seasonal gullies situated at each allotment respectively. The building envelope boundaries for these allotments are recommended to be revised and moved to a safe distance to accommodate future residential development (refer to Section 5.2).

Lot 24 (East) comprised factors of safety that are not within the acceptable levels for residential development. Due to allotment boundary limitations at this location, the building envelope boundaries are unable to be relocated. In order for this building envelope to be adopted for the development, slope stabilisation measures must be implemented. A developed model utilising soil nails to the extreme slope conditions in the lower portion of the embankment has been presented as an example.

A global stability analysis was also performed on the existing dam wall embankment. An access road is proposed to be constructed which will span a portion of the dam wall crest and outer embankment. The stability analysis results indicate that adequate factors of safety are achieved for both dry and saturated conditions in the undeveloped and developed scenarios. It should be noted that in order to maintain the integrity of the dam embankment wall, the proposed access road must be primarily constructed using fill. Significant cut earthworks into the dam embankment wall will likely be detrimental to the both the integrity and the stability of the existing embankment.

As is the case for all hillside development in the Kuranda region, some instability of batters should be expected. This may be in the form of minor slumps, slips or erosion within the soils during or after prolonged periods of rainfall. This instability is generally accepted in the Far North QLD region and must be accepted by all parties involved in residential development on the allotments.

5.2 Suitability of Building Envelope Locations

The suitability, from a geotechnical perspective, of the nominated building envelope locations for each proposed allotment has been undertaken as a part of this investigation. The following recommendations are provided:

Lot 20

The nominated building envelope is suitable in its current form and no alterations are required.

Lot 21

A seasonal gully approximately 3.8m deep dipping at approximately 70º runs parallel with and directly adjacent to the southern boundary of the allotment. The nominated southern building envelope boundary in its current form spans the seasonal gully. The seasonal gully profile is considered marginally stable in its current state. It is therefore recommended that the southern building envelope boundary is moved three (3) metres to the north of the northern crest of the seasonal gully. This is to ensure no additional surcharge loads are imposed on the ground surfaces in this region which may cause instability.

The revised building envelope for Lot 21 is visually presented on GT22-090-003 DWG in Appendix A.

Lot 22

The nominated building envelope is suitable in its current form and no alterations are required.

Lot 23

The northernmost building envelope boundary runs parallel with a deep seasonal gully and is located just over the crest on the downside of the gully. The seasonal gully approximately 10m deep and dips between 35º and 45º. The seasonal gully profile is considered marginally stable in its current state and it is recommended that the northernmost building envelope boundary is moved nine (9) metres to the south. Again, this is to ensure no additional surcharge loads are imposed on the ground surfaces in this region which may cause instability.

The revised building envelope for Lot 23 is visually presented on GT22-090-004 DWG in Appendix A.

Lot 24 – Eastern Building Envelope

As noted in Section 3.1, the predominant feature of the allotment at the eastern building envelope location is a deep gully (approximately 10m in vertical height) that comprises mostly very steep natural hillslope that dips between 30° and 36° in a southerly direction. The lower third of the natural gully embankment consists of extreme to cliff slope gradients that dip between 60° and 70°. A considerable portion of this building envelope covers the upper 'very steep' region.

For the entire building envelope to be considered suitable for development, significant slope stabilisation measures, such as soil nails, would be required to be constructed in the lower half of the gully embankment. Furthermore, it is envisaged that a portion of the access driveway for this location would also require the construction of a retaining wall.

Further geotechnical investigation and design would be required should this location be adopted for development.

Lot 24 – Western Building Envelope

The nominated building envelope is suitable in its current form and no alterations are required.

Should any alterations be made to the current and / or recommended building envelopes for the proposed allotments, the changes should be revised by ETS.

5.3 Earthworks Recommendations

The following general procedures are suggested for site preparation and earthworks to be performed:

- Strip & remove topsoil, soil containing significant amounts of organic materials, 'uncontrolled' filling and also any deleterious soft, wet or highly compressible materials if encountered at foundation levels;
- Any exposed founding cohesive soils should be compacted to a minimum dry density ratio of 98% using Standard compaction and moisture treated to a moisture range of -2% (dry) to +2% (wet) of OMC;
- Any exposed subgrade soils, at or close to foundation level, should be sealed or covered as soon as practicable, in order to reduce the opportunity for desiccation cracking (due to drying and shrinking), or softening and swelling (due to wetting) with moist conditions;
- Where the foundation levels are to be raised or subgrade materials are to be excavated (i.e. remove & replace), the foundation soils should be prepared as detailed above;
- Approved filling should be undertaken by placing fill in uniform horizontal layers not exceeding 200mm loose thickness and compacted to achieve a dry density ratio of at least 98% using Standard compaction for cohesive soil or to at least 65% density index for sand. The moisture content of any cohesive soil fill materials should be maintained at -2% to +2% of OMC, during and after compaction;
- Fill material should be placed at least two (2) metres beyond the design profile and then trimmed to the design profile.
- Where unsuitable materials are to be excavated it is recommended these are removed from the site and approved select fill is placed and compacted in the excavation.
- Any sloped fill (embankment) areas should be benched to "key in" the select fill material and optimise compaction. The benches should slope back at 1V:5H and be at least 0.5m wide, refer to Figure 1.

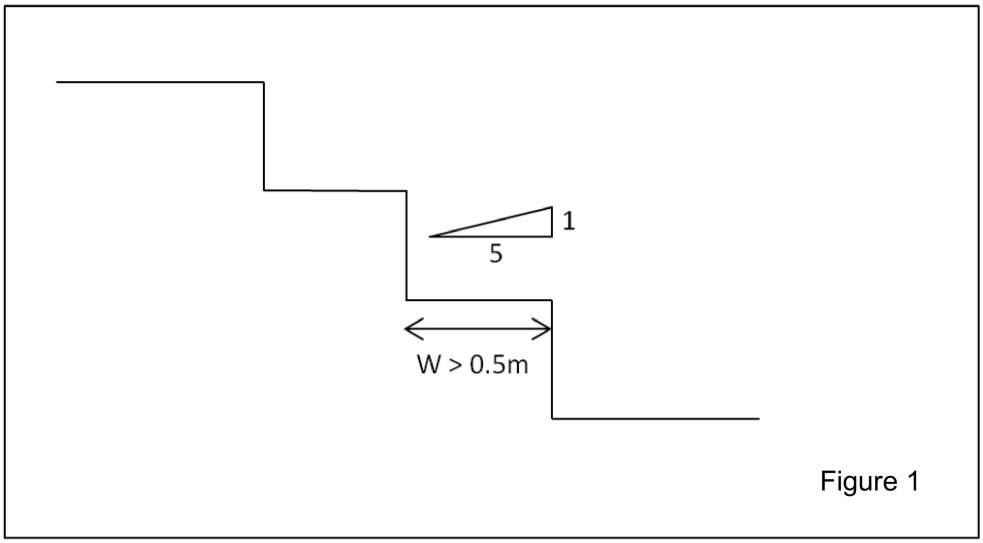

Figure 1

- Approved filling (general fill) should be a well graded material free from organic materials, have a Liquid Limit less than or equal to 35%, and should not contain any individual particles greater than 150mm in size.
- In order for fill material to be considered 'controlled' any earthworks that are undertaken beneath any of the proposed structures or pavements are to be performed under full time 'Level 1' inspection and testing as described and in accordance with AS3798:2007.

The above procedures will necessitate geotechnical inspections and testing to be advised during earthworks operations.

5.4 Onsite Effluent Wastewater Disposal

An onsite sewerage assessment (OSA) has been carried out across the proposed subdivision to assess the suitability of installing onsite wastewater treatment systems for each of the proposed allotments. This OSA addresses the requirements under AS/NZS1547:2012 for a proposed residence on each proposed allotment.

Each allotment has a defined "building envelope" and subsequent owners must construct the dwelling within its confines. The shape, type and precise location of each house are unknown at this stage.

Estimation of Daily Flow

Typical domestic wastewater flow design allowances are presented in Appendix H of AS1547:2012. The typical wastewater design flow for a residential dwelling with a reticulated water supply is 150 L/person/day.

For the purpose of this report, it has been assumed that four (4) bedroom domestic dwellings are to be built on the subject allotments.

As per AS1547:2012, Table J1 "All Waste Septic Tank Operational Capacities", the population equivalent of seven (7) persons has been chosen for a four (4) bedroom domestic dwelling. The following table presents calculations of design daily flow for all wastes.

Classification	*No. Persons*	*Flow (L/person/day)*	*Total Flow (L/day)*
Persons in a 4 bedroom house	7	150	1,050

For design of an effluent land disposal system the total wastewater design daily flow rate should be taken as 1,050 litres per day, or 5.25 equivalent persons (EP), for each proposed dwelling.

Potable Water Supply

Each of the proposed residential allotments will access potable water from the reticulated town water supply.

Separation Distances

The Queensland Plumbing & Wastewater Code specifies horizontal and vertical separation distances between specific features and wastewater land application areas. Some of these features were observed during the OSA and consist of an existing dam, minor gullies and seasonal creeks, and weathered rock. There are currently no buildings or structures on the site.

Table T2 from the Code recommends the following horizontal separation distances for wastewater land application areas.

Feature	Separation Distance Down slope	Separation Distance Up slope	Separation Distance Level
Property boundaries, pedestrian paths and walkways, recreation areas, footings of buildings, retaining wall footings.	2 metres	4 metres	2 metres
In ground swimming pools	6 metres	6 metres	6 metres
In ground potable water tank*	6 metres	6 metres	6 metres

***Note:** For primary effluent the separation distance from an in-ground potable water tank must be 15 metres.

Table T5 from the Code recommends the following horizontal and vertical separation distances for wastewater land application areas.

Feature	Recommended Separation Distance
Top of bank of permanent water course; Top of bank of intermittent water course; Top of bank of a lake, bay or estuary Top water level of a surface water source used for agriculture, aquaculture or stock purposes; Easement boundary of unlined open stormwater drainage channel or drain.	Primary effluent: 50 metres (horizontal) Secondary effluent: 30 metres (horizontal). Advanced secondary effluent: 10 metres (horizontal).
Bore or a dam used or likely to be used for human and or domestic consumption	Primary Effluent: 50 metres (horizontal). Secondary Effluent: 30 metres (horizontal). Advanced Secondary Effluent: 10 metres (horizontal).
Unsaturated soil depth to a permanent water table/ rock or hard pan.	Primary Effluent: 1.2 metres (vertical). Secondary Effluent: 0.6 metres (vertical). Advanced Secondary Effluent: 0.3 metres (vertical).

The horizontal and vertical separation distances as recommended in the Code can only be achieved for advanced secondary effluent on the site.

Soil Profile & Soil Permeability

Soil properties were determined in accordance with AS/NZS1547:2012 Appendix E. Representative soil samples were retrieved from excavated test pits undertaken across the entire subdivision area during the investigation. Textural classification testing revealed the soils in this area comprise Clay Loams and Silty Clay Loams.

The soil types that have been identified across the subdivision are Category 4 soils and this is used to assist in selecting the type of land application system. These soil types have been determined based on visual, tactile and laboratory inspection of the in-situ soil. Table L1 in Appendix L of AS/NZS1547:2012 allocates these soils with an indicative permeability ranging from 0.12 to 0.5 metres per day; this will require verification for each individual allotment at the building application stage.

Wastewater Treatment Options

An emphasis was placed on the following considerations in making the selection of the available onsite wastewater treatment options for each allotment:

- Horizontal and vertical separation distances required by the Code and legislation.
- Soil type.
- Climatic conditions.
- Location of gully's / seasonal watercourses / creeks / dam's.
- Local Council requirements.

Due to horizontal and vertical separation distances not being able to be achieved to environmental features, in this case the distance from gully's / seasonal watercourses / creeks / dam / weathered rock for a Primary or Secondary Treatment System. It is recommended that an Advanced Secondary Wastewater Treatment System be installed. The effluent from the wastewater treatment system can then be disposed of to land.

Method of Disposal

Table K1 in Appendix K of AS/NZS1547:2012 identifies land application systems that are considered suitable for different site, soil and climatic factors. The most suitable land application systems that may be used on this site are conventional absorption trenches or beds. Due to the limited available land area for each site, both surface / subsurface irrigation, ETA/ETS trenches / beds are not recommended.

Effluent Land Disposal Area

As per AS/NZS 1547:2012 Section L4.2 *Sizing*. - L = Q / (DLR * W)

Advanced Secondary Treatment with Conventional Absorption Trenches/Bed

Q = design daily flow in L/day =	1,050
DLR = Design Loading Rate mm/day =	20
W = Width (m) =	3m
L = length (m) =	12m
Total Area (m^2)	**35**

Trench and bed configurations shall comply with the specified typical dimensions detailed in AS/NZS1547:2012, Table L2. A number of different trench or bed configurations may be adopted and will be dependent on the land area/s available for the disposal area on each allotment.

A reserve area of the same size is also available within each allotment. The areas allocated have been graphically illustrated on GT22-090-005 DWG to GT22-090-010 DWG in Appendix A.

The recommended locations for wastewater disposal will not have any significant impact on slope stability at the site.

An individual, site specific onsite sewerage assessment shall be completed for each allotment prior to any construction of dwellings on the subject allotments.

6.0 CONCLUSION

Based on the results of the investigation, the development has been assessed in accordance with the AGS Guidelines, Appendix A – Qualitative Measures of Consequences to Property, to have a **LOW** risk of damage to property provided the control measures in Tables 1 to 7 are implemented, along with adopting the recommendations contained in this report. This level of risk is typically considered to be acceptable to local and state government authorities and also potential residential landowners.

7.0 LIMITATIONS

We have prepared this report for the use of **EXPRESS BUILD PTY LTD** for design purposes in accordance with generally accepted geotechnical engineering practices. 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 **EXPRESS BUILD PTY LTD** or their design consultants, i.e., Architect & Civil/Structural Engineers. It may not contain sufficient information for the purposes of other parties or for other uses.

Your attention is drawn to the document - "Understand the Limitations of Your Geotechnical Report", which is included in Appendix E of this report. This document has been prepared to advise you of what your realistic expectations of this report should be, and to present you with recommendations on how to minimise the risks associated with the ground works for this project. The document is not intended to reduce the level of responsibility accepted by ETS, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.

APPENDIX A – DRAWINGS & FIGURES

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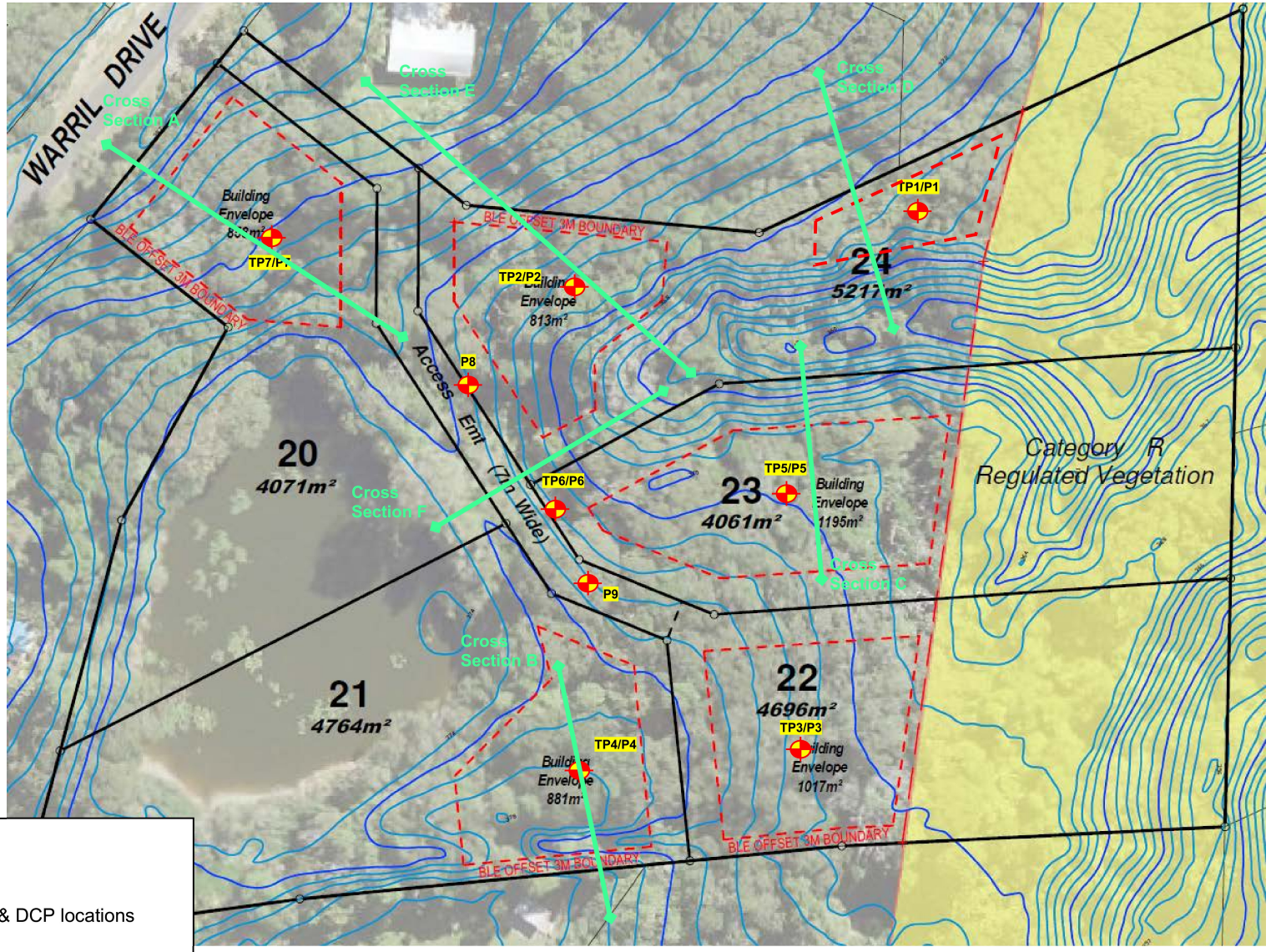
TITLE:
LOCALITY PLAN
Lot 2 Warril Drive
Kuranda QLD 4881

PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 13/05/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-001 DWG



Legend

Test Pit & DCP locations

ETS GEOTECHNICAL

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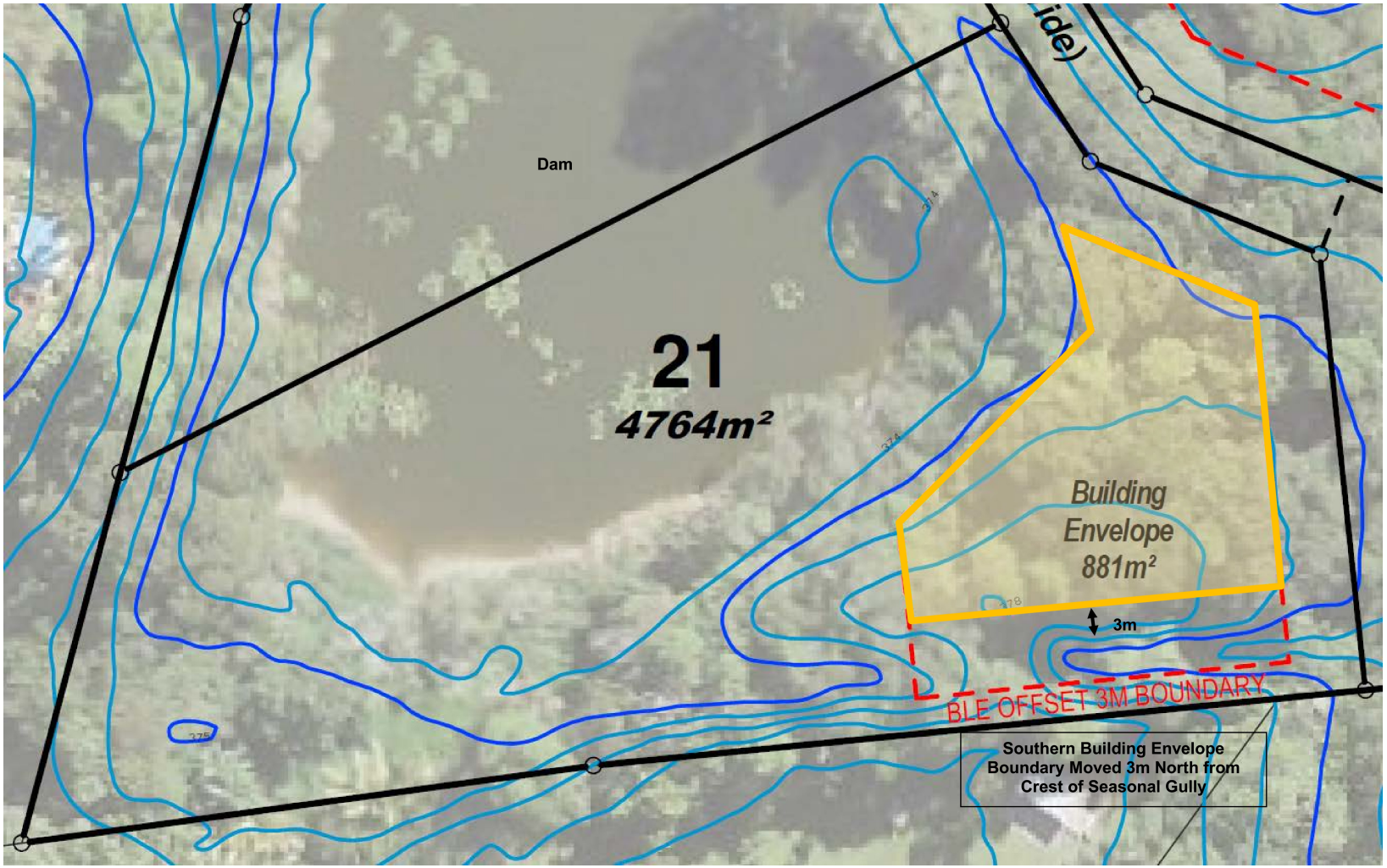
GEOTECHNICAL INVESTIGATION
Test Location Plan
Warril Drive
Kuranda QLD 4881

PROJECT NO: GT22-090	**SCALE:** NTS	**DRAWN BY:** DG
DATE: 6/04/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-002 DWG



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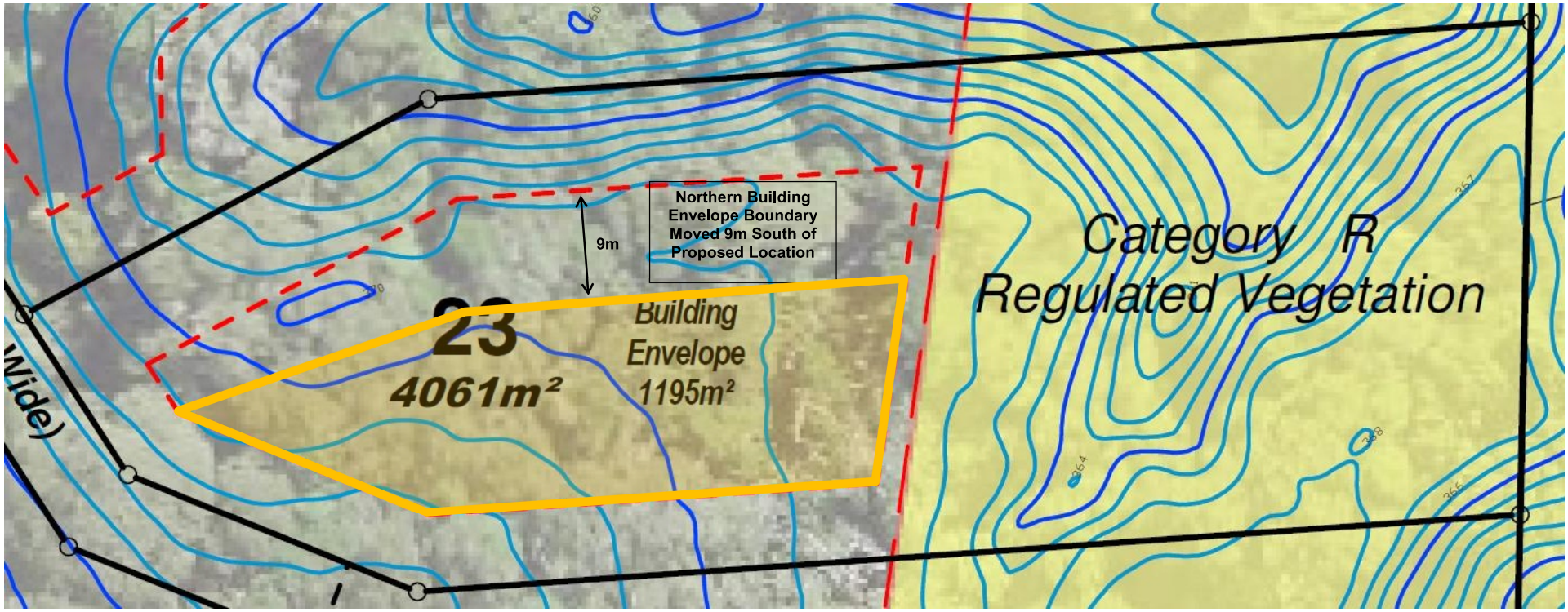
TITLE:
RECOMMENDED REVISED BUILDING ENVELOPE
Lot 21 Warril Drive Subdivision
Kuranda QLD 4878

PROJECT NO.: GT22-090	**SCALE:** NTS	**DRAWN BY:** DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-003 DWG



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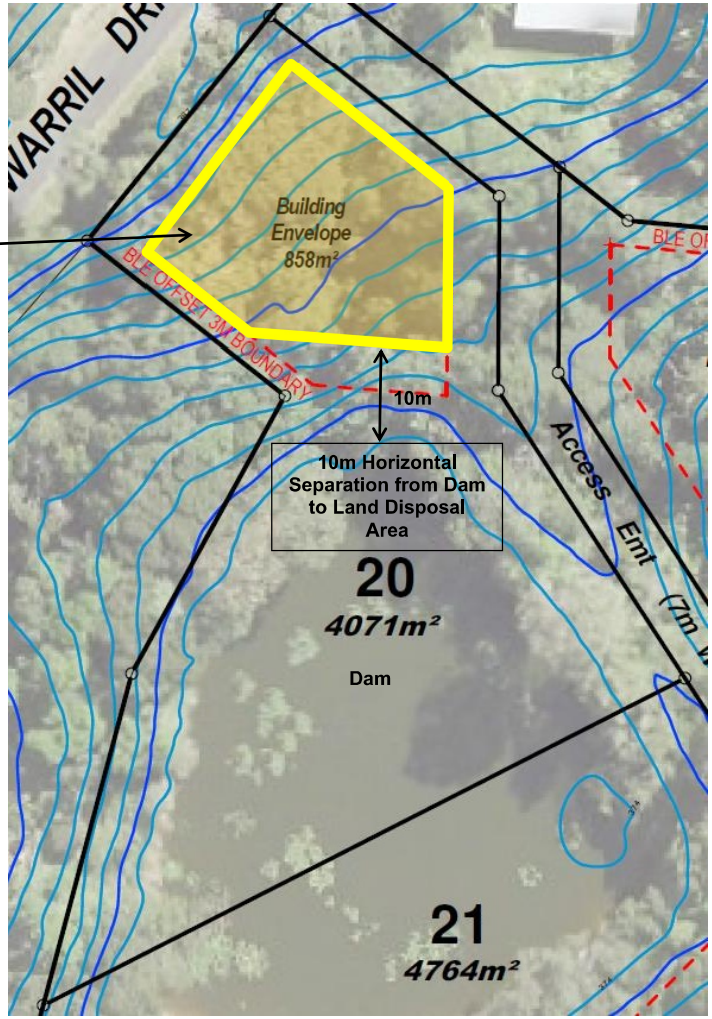
TITLE:
RECOMMENDED REVISED BUILDING ENVELOPE
Lot 23 Warril Drive Subdivision
Kuranda QLD 4878

PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-004 DWG

Advanced Secondary Treatment – Available Land Disposal Area



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TITLE:
AVAILABLE LAND DISPOSAL AREA
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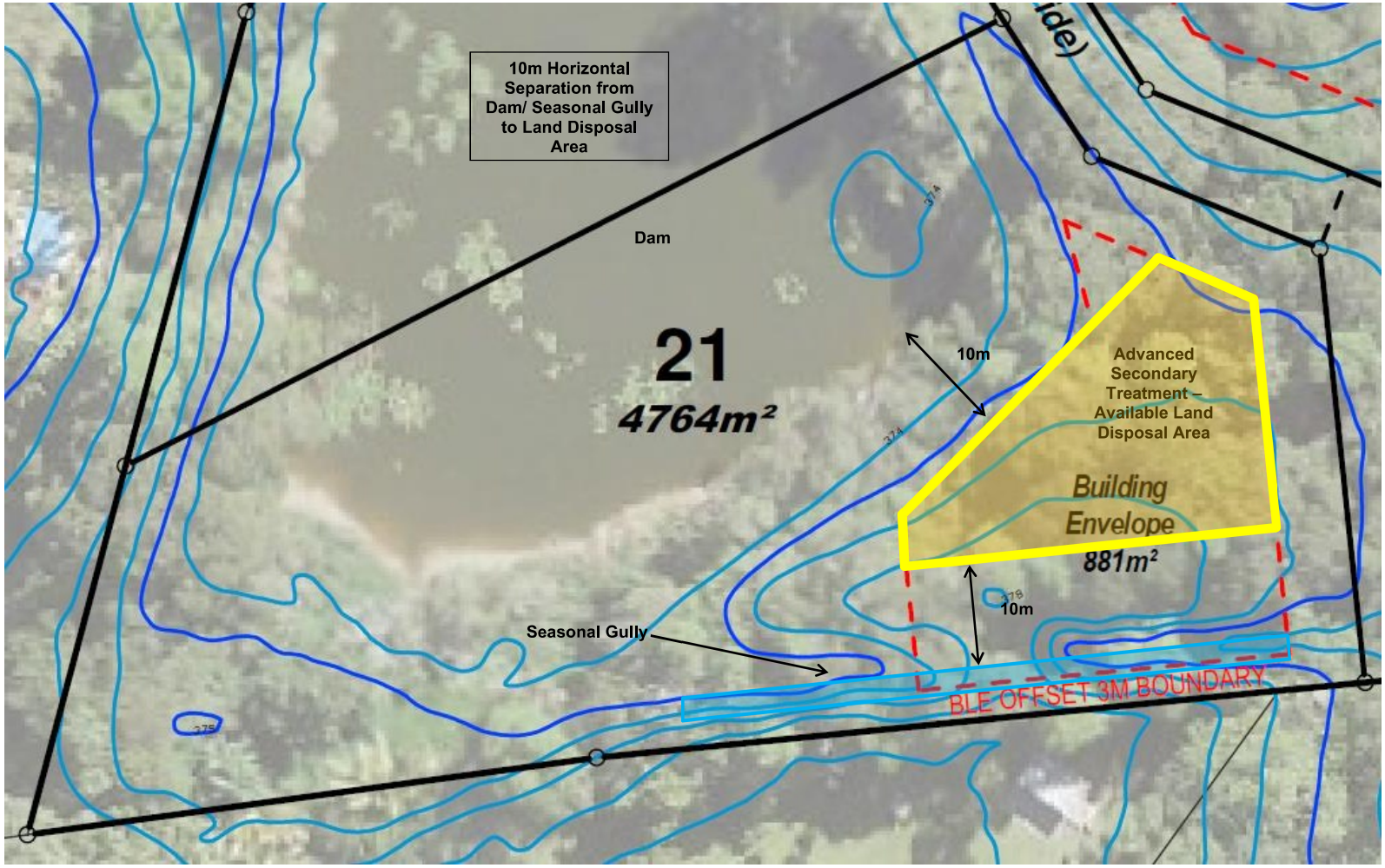
PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-005 DWG



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TITLE:
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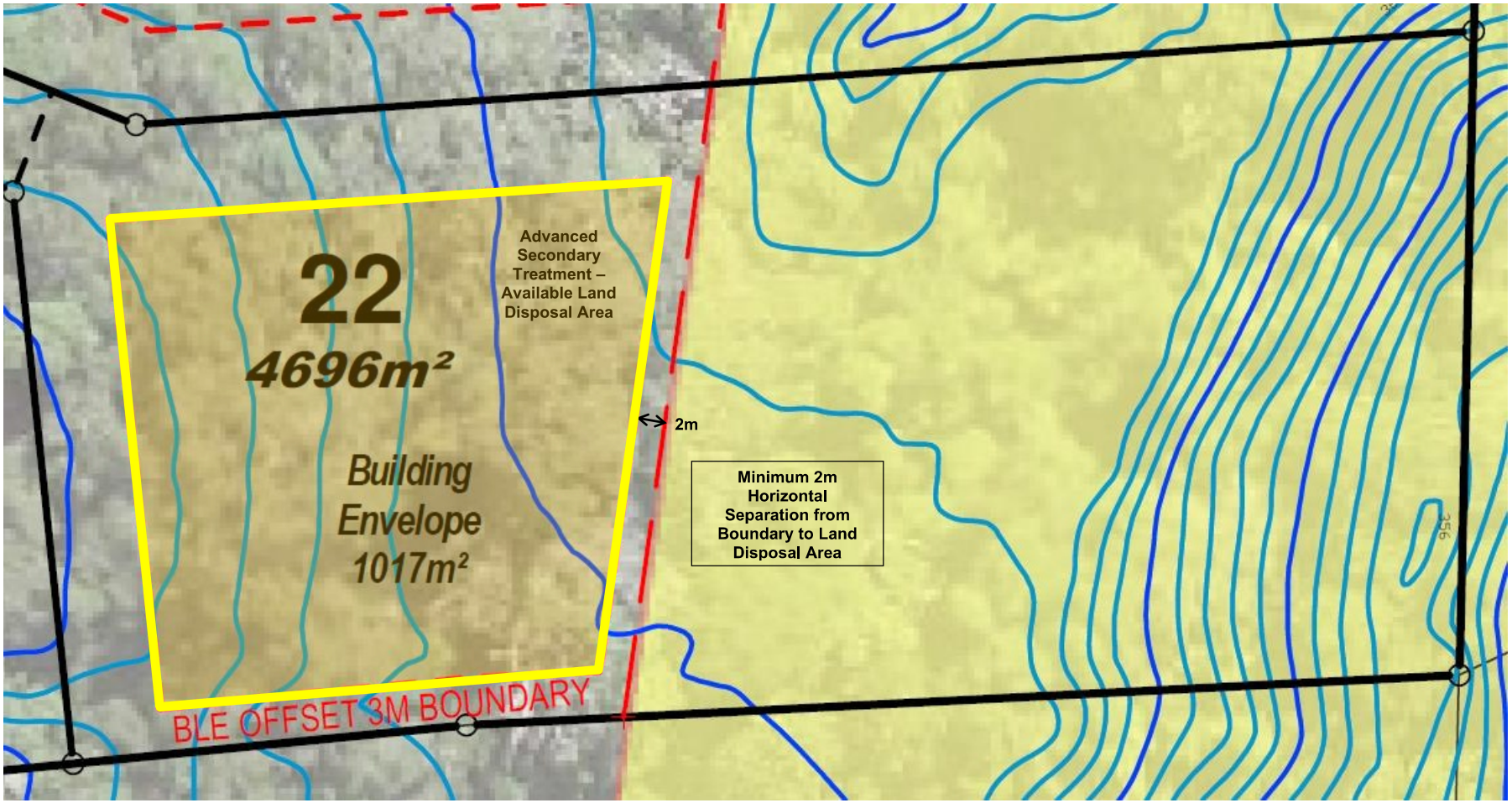
PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-006 DWG



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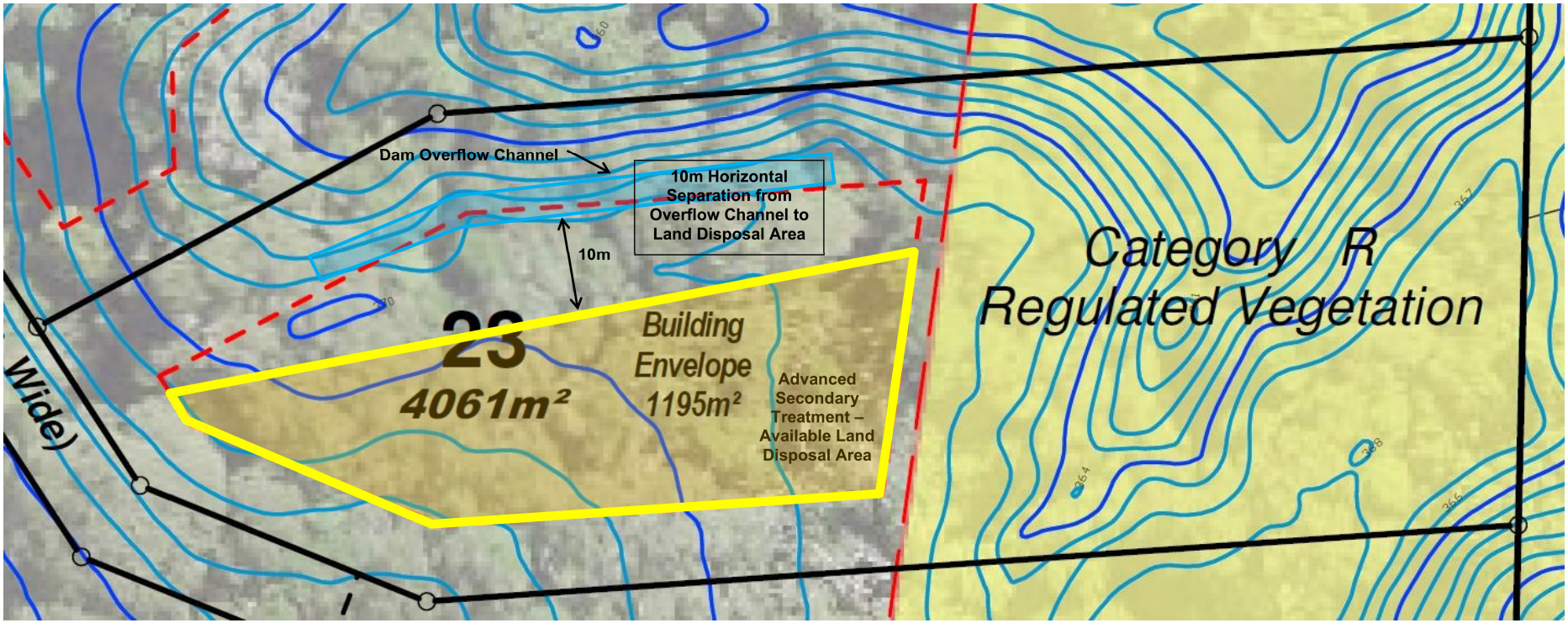
TITLE:
AVAILABLE LAND DISPOSAL AREA
Lot 22 Warril Drive Subdivision
Kuranda QLD 4878

PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-007 DWG



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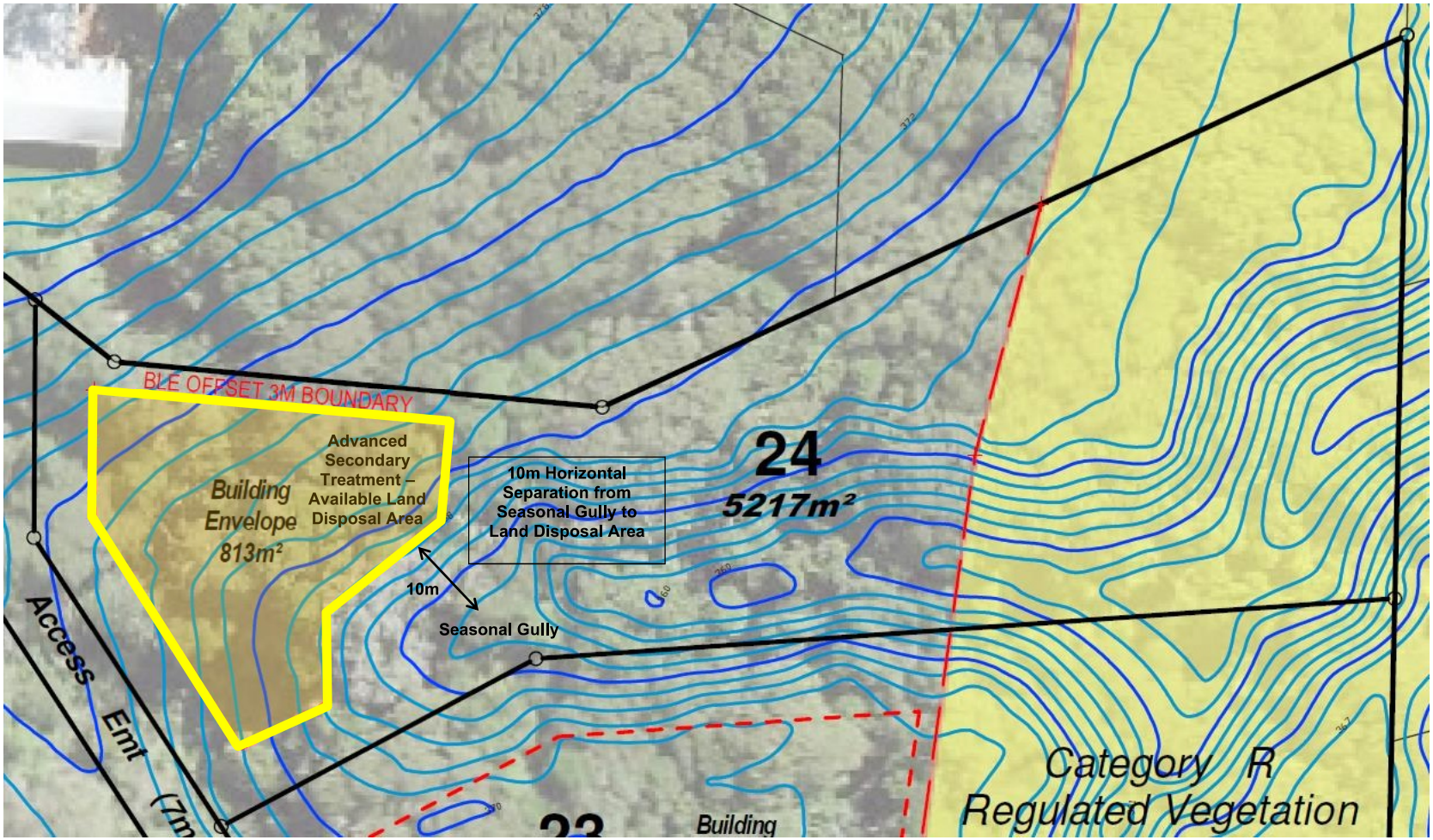
TITLE:
AVAILABLE LAND DISPOSAL AREA
Lot 23 Warril Drive Subdivision
Kuranda QLD 4878

PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-008 DWG



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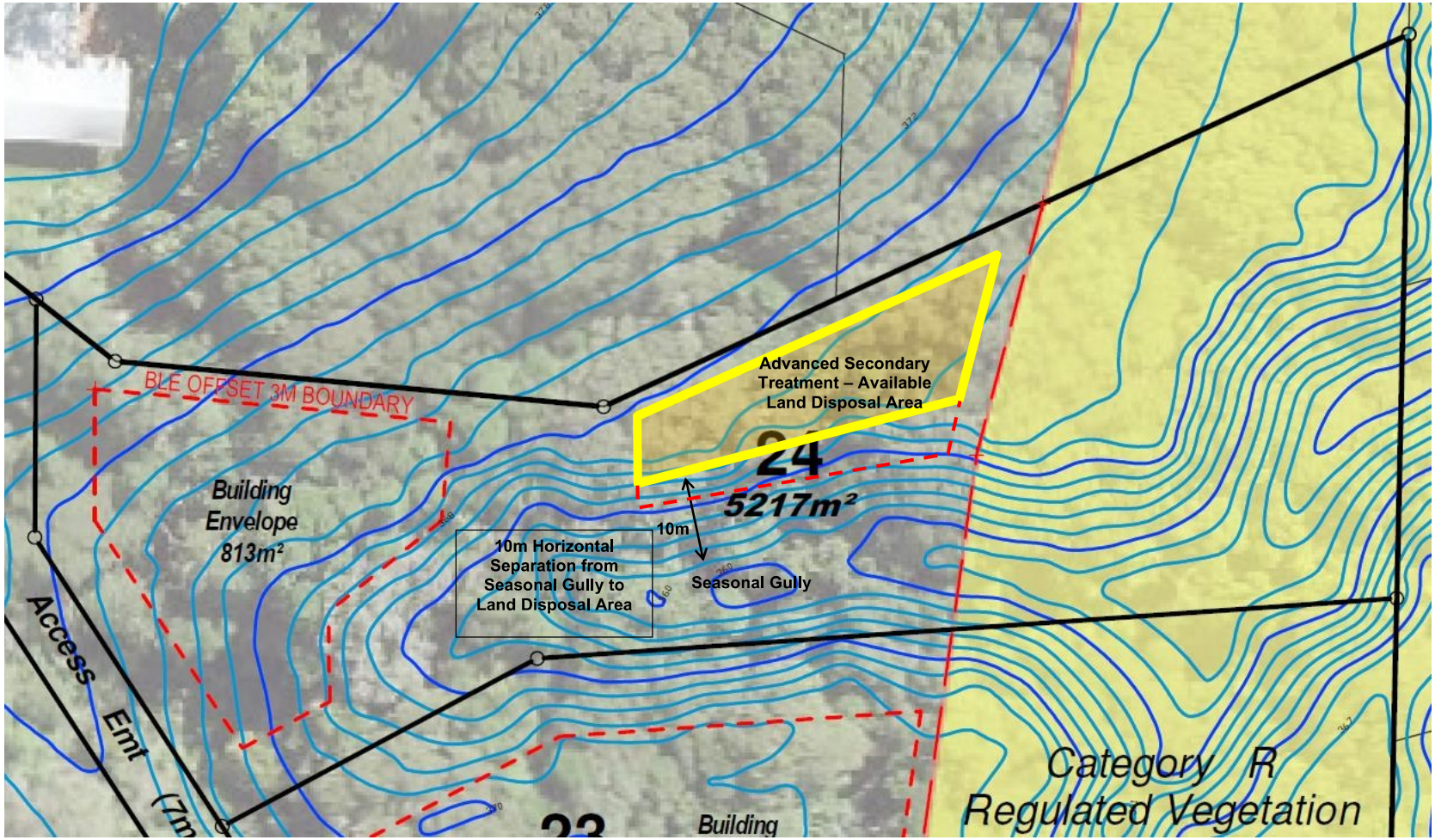
TITLE:
AVAILABLE LAND DISPOSAL AREA
Lot 24 Warril Drive Subdivision
Kuranda QLD 4878

PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-009 DWG



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TITLE:
AVAILABLE LAND DISPOSAL AREA
Lot 24A Warril Drive Subdivision
Kuranda QLD 4878

PROJECT NO.:	SCALE:	DRAWN BY:
GT22-090	NTS	DG
DATE: 3/06/22	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: Urban Sync Pty Ltd

DRAWING NO.: GT22-090-010 DWG

APPENDIX B – BOREHOLE LOGS & DCP RESULTS

HOLE NO.:	TP1	**SHEET :**	1 OF 1
CUSTOMER:	Urban Sync	**JOB NO :**	GT22-090
PROJECT:	Kuranda Subdivision	**DATE:**	1/4/22
LOGGED BY:	LJ	**REVIEWED BY:**	DG
MACHINE:	5.5 tonne Excavator	**RL:**	-
PIT DIMENSIONS:	3.00 m LONG	**COORDINATES:**	-

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 300mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0	E	Not Encountered	B 0.50 - 0.60 m	ML		TOPSOIL: Clayey SILT: brown, low plasticity, with fine to large roots.	M	St		PP=200kPa
0.5				ML		Clayey SILT: yellow, low plasticity, trace of fine to medium roots.				PP=180kPa
1.0				ML		...yellow mottled red.				PP=200kPa
1.5				ML		...yelow mottled pale grey and red.		VSt		PP=300kPa
2.0										
2.5						TEST TP1 TERMINATED AT 2.50 m Target depth				
3.0										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	TP2	**SHEET :**	1 OF 1
CUSTOMER:	Urban Sync	**JOB NO :**	GT22-090
PROJECT:	Kuranda Subdivision	**DATE:**	1/4/22
LOGGED BY:	LJ	**REVIEWED BY:**	DG
MACHINE:	5.5 tonne Excavator	**RL:**	-
PIT DIMENSIONS:	3.00 m LONG	**COORDINATES:**	-

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 300mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0	E	Not Encountered	B 0.60 - 0.70 m	ML		TOPSOIL: Clayey SILT: brown, low plasticity, with fine to large roots.	M	St		PP=160kPa
0.5				ML		Clayey SILT: red, low plasticity, trace of fine roots.				PP=250kPa
1.0				ML		...red mottled yellow.		VSt		PP=300kPa
1.5						Extremely Weathered siltstone: orange mottled red and grey.	D			
2.0						TEST TP2 TERMINATED AT 1.90 m Refusal on weathered rock				
2.5										
3.0										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	TP3	**SHEET :**	1 OF 1
CUSTOMER:	Urban Sync	**JOB NO :**	GT22-090
PROJECT:	Kuranda Subdivision	**DATE:**	1/4/22
LOGGED BY:	LJ	**REVIEWED BY:**	DG
MACHINE:	5.5 tonne Excavator	**RL:**	-
PIT DIMENSIONS:	3.00 m LONG	**COORDINATES:**	-

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 300mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0	E	Not Encountered	B 0.60 - 0.70 m	ML		TOPSOIL: Clayey SILT: yellow-brown, low plasticity, with fine to medium sized roots.	M	St		PP=160kPa
				ML		Clayey SILT: orange mottled yellow, low plasticity, trace of fine roots.				
0.5				GM		GRAVEL: grey, coarse grained, with cobbles.		VSt		PP=280kPa
				ML		Clayey SILT: red mottled yellow, low plasticity.				
1.0										
1.5										PP=300kPa
2.0										
2.5						TEST TP3 TERMINATED AT 2.50 m Target depth				
3.0										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	TP4	**SHEET :**	1 OF 1
CUSTOMER:	Urban Sync	**JOB NO :**	GT22-090
PROJECT:	Kuranda Subdivision	**DATE:**	1/4/22
LOGGED BY:	LJ	**REVIEWED BY:**	DG
MACHINE:	5.5 tonne Excavator	**RL:**	-
PIT DIMENSIONS:	3.00 m LONG	**COORDINATES:**	-

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 300mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0	E	Not Encountered		ML		TOPSOIL: Clayey SILT: brown, low plasticity, with fine to coarse grained gravel, with fine to large roots.	M	VSt		PP=300kPa
				ML		Clayey SILT: orange mottled yellow, low plasticity, trace of fine to large roots.				PP=300kPa
0.5			B 0.60 - 0.70 m							PP=450kPa
						...orange mottled red, yellow and pale grey.				
1.0										
1.5				ML				H		PP>600kPa
2.0										
2.5						TEST TP4 TERMINATED AT 2.50 m Target depth				
3.0										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
▽ standing water level
►— inflow
—◁ partial loss
—◄ complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	TP5	**SHEET :**	1 OF 1
CUSTOMER:	Urban Sync	**JOB NO :**	GT22-090
PROJECT:	Kuranda Subdivision	**DATE:**	1/4/22
LOGGED BY:	LJ	**REVIEWED BY:**	DG
MACHINE:	5.5 tonne Excavator	**RL:**	-
PIT DIMENSIONS:	3.00 m LONG	**COORDINATES:**	-

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 300mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0	E	Not Encountered	B 0.70 - 0.80 m	ML		TOPSOIL: Clayey SILT: brown, low plasticity, with fine to coarse grained gravel, with fine to large roots.	M	VSt		PP=200kPa
						Clayey SILT: orange mottled yellow, low plasticity, trace of fine to large roots.				PP=300kPa
0.5										
										PP=450kPa
1.0				ML						PP=500kPa
1.5								H		PP=500kPa
2.0										
2.5						TEST TP5 TERMINATED AT 2.50 m Target depth				
3.0										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	TP6	**SHEET :**	1 OF 1
CUSTOMER:	Urban Sync	**JOB NO :**	GT22-090
PROJECT:	Kuranda Subdivision	**DATE:**	1/4/22
LOGGED BY:	LJ	**REVIEWED BY:**	DG
MACHINE:	5.5 tonne Excavator	**RL:**	-
PIT DIMENSIONS:	3.00 m LONG	**COORDINATES:**	-

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 300mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0	E	Not Encountered	B 0.60 - 0.70 m	ML		TOPSOIL: Clayey SILT: mottled brown and red, low plasticity, with fine to coarse grained gravel, with fine to large roots.	M	St		PP=160kPa
						Clayey SILT: orange mottled red, yellow, and pale grey, low plasticity, trace of fine roots.				PP=200kPa
0.5										PP=250kPa
1.0				ML				VSt		PP=300kPa
1.5										
2.0										
2.5						TEST TP6 TERMINATED AT 2.50 m Target depth				
3.0										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	TP7	**SHEET :**	1 OF 1
CUSTOMER:	Urban Sync	**JOB NO :**	GT22-090
PROJECT:	Kuranda Subdivision	**DATE:**	1/4/22
LOGGED BY:	LJ	**REVIEWED BY:**	DG
MACHINE:	5.5 tonne Excavator	**RL:**	-
PIT DIMENSIONS:	3.00 m LONG	**COORDINATES:**	-

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 300mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0	E	Not Encountered	B 0.50 - 0.60 m	ML		TOPSOIL: Clayey SILT: grey brown, low plasticity, with fine to large roots.	M	VSt		PP=200kPa
				ML		Clayey SILT: orange mottled red, yellow and purple, low plasticity, trace of fine to coarse grained gravel.				PP=280kPa
0.5										PP=330kPa
1.0										PP=330kPa
1.5						Extremely Weathered siltstone: orange mottled red, purple and grey.	D			
2.0						TEST TP7 TERMINATED AT 1.60 m Refusal on weathered rock				
2.5										
3.0										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

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CAIRNS QLD 4870

Dynamic Cone Penetrometer Report

Client :	**Urban Sync**	Report Number:	**GT22-090-001 DCP**
Client Address:	**PO Box 2970. Cairns QLD 4870**	Report Date:	**4/04/2022**
Job Number :	**GT22-090**	Order Number:	**-**
Project :	**Warril Drive Subdivision, Kuranda GI**	Test Method:	**AS1289.6.3.2**
Location :	**Warril Drive, Kuranda**		

Sample Number :	-		-		-		-	
Test Number :	**P1**		**P2**		**P3**		**P4**	
Date Tested :	**01/04/2022**		**01/04/2022**		**01/04/2022**		**01/04/2022**	
Lot Number :	-		-		-		-	
Sample Location :	**Refer to Test Plan** - - -		**Refer to Test Plan** - - -		**Refer to Test Plan** - - -		**Refer to Test Plan** - - -	
Soil Condition :	**Moist**		**Moist**		**Moist**		**Moist**	
Soil Description :	**Refer to BH Logs**		**Refer to BH Logs**		**Refer to BH Logs**		**Refer to BH Logs**	
	Depth	Blows	Depth	Blows	Depth	Blows	Depth	Blows
	0.00 - 0.10	**1**	0.00 - 0.10	**2**	0.00 - 0.10	**1**	0.00 - 0.10	**2**
	0.10 - 0.20	**2**	0.10 - 0.20	**4**	0.10 - 0.20	**2**	0.10 - 0.20	**4**
	0.20 - 0.30	**2**	0.20 - 0.30	**5**	0.20 - 0.30	**3**	0.20 - 0.30	**3**
	0.30 - 0.40	**1**	0.30 - 0.40	**7**	0.30 - 0.40	**8**	0.30 - 0.40	**6**
	0.40 - 0.50	**3**	0.40 - 0.50	**6**	0.40 - 0.50	**6**	0.40 - 0.50	**5**
	0.50 - 0.60	**3**	0.50 - 0.60	**7**	0.50 - 0.60	**6**	0.50 - 0.60	**5**
	0.60 - 0.70	**4**	0.60 - 0.70	**9**	0.60 - 0.70	**8**	0.60 - 0.70	**5**
	0.70 - 0.80	**6**	0.70 - 0.80	**12**	0.70 - 0.80	**8**	0.70 - 0.80	**6**
	0.80 - 0.90	**5**	0.80 - 0.90	**9**	0.80 - 0.90	**7**	0.80 - 0.90	**6**
	0.90 - 1.00	**4**	0.90 - 1.00	**10**	0.90 - 1.00	**9**	0.90 - 1.00	**6**
	1.00 - 1.10	**3**	1.00 - 1.10	**11**	1.00 - 1.10	**9**	1.00 - 1.10	**6**
	1.10 - 1.20	**3**	1.10 - 1.20	**10**	1.10 - 1.20	**9**	1.10 - 1.20	**5**
	1.20 - 1.30	**3**	1.20 - 1.30	**10**	1.20 - 1.30	**8**	1.20 - 1.30	**7**
	1.30 - 1.40	**3**	1.30 - 1.40	**14**	1.30 - 1.40	**9**	1.30 - 1.40	**7**
	1.40 - 1.50		1.40 - 1.50		1.40 - 1.50		1.40 - 1.50	
	1.50 - 1.60		1.50 - 1.60		1.50 - 1.60		1.50 - 1.60	
	1.60 - 1.70		1.60 - 1.70		1.60 - 1.70		1.60 - 1.70	
	1.70 - 1.80		1.70 - 1.80		1.70 - 1.80		1.70 - 1.80	
	1.80 - 1.90		1.80 - 1.90		1.80 - 1.90		1.80 - 1.90	
	1.90 - 2.00		1.90 - 2.00		1.90 - 2.00		1.90 - 2.00	
	2.00 - 2.10		2.00 - 2.10		2.00 - 2.10		2.00 - 2.10	
	2.10 - 2.20		2.10 - 2.20		2.10 - 2.20		2.10 - 2.20	
	2.20 - 2.30		2.20 - 2.30		2.20 - 2.30		2.20 - 2.30	
	2.30 - 2.40		2.30 - 2.40		2.30 - 2.40		2.30 - 2.40	
	2.40 - 2.50		2.40 - 2.50		2.40 - 2.50		2.40 - 2.50	
	2.50 - 2.60		2.50 - 2.60		2.50 - 2.60		2.50 - 2.60	
	2.60 - 2.70		2.60 - 2.70		2.60 - 2.70		2.60 - 2.70	
	2.70 - 2.80		2.70 - 2.80		2.70 - 2.80		2.70 - 2.80	
	2.80 - 2.90		2.80 - 2.90		2.80 - 2.90		2.80 - 2.90	
	2.90 - 3.00		2.90 - 3.00		2.90 - 3.00		2.90 - 3.00	
Remarks :								

Accredited for compliance with ISO/IEC 17025 - Testing

APPROVED SIGNATORY

Ryan Rackley

Geotechnical Engineer
Cairns Laboratory
NATA Accreditation No. 20026

FORM NUMBER

FM-RP-110-4

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REDLYNCH QLD 4870

23 Knight Street
CAIRNS QLD 4870

Dynamic Cone Penetrometer Report

Client :	**Urban Sync**	Report Number:	**GT22-090-001 DCP**
Client Address:	**PO Box 2970. Cairns QLD 4870**	Report Date:	**4/04/2022**
Job Number :	**GT22-090**	Order Number:	**-**
Project :	**Warril Drive Subdivision, Kuranda GI**	Test Method:	**AS1289.6.3.2**
Location :	**Warril Drive, Kuranda**		

Sample Number :	-		-		-		-	
Test Number :	**P5**		**P6**		**P7**		**P8**	
Date Tested :	**01/04/2022**		**01/04/2022**		**01/04/2022**		**01/04/2022**	
Lot Number :	-		-		-		-	
Sample Location :	**Refer to Test Plan** - - -		**Refer to Test Plan** - - -		**Refer to Test Plan** - - -		**Refer to Test Plan** - - -	
Soil Condition :	**Moist**		**Moist**		**Moist**		**Moist**	
Soil Description :	**Refer to BH Logs**		**Refer to BH Logs**		**Refer to BH Logs**		**Refer to BH Logs**	
	Depth	Blows	Depth	Blows	Depth	Blows	Depth	Blows
	0.00 - 0.10	**2**	0.00 - 0.10	**2**	0.00 - 0.10	**1**	0.00 - 0.10	**1**
	0.10 - 0.20	**2**	0.10 - 0.20	**2**	0.10 - 0.20	**4**	0.10 - 0.20	**2**
	0.20 - 0.30	**3**	0.20 - 0.30	**4**	0.20 - 0.30	**3**	0.20 - 0.30	**5**
	0.30 - 0.40	**4**	0.30 - 0.40	**3**	0.30 - 0.40	**6**	0.30 - 0.40	**3**
	0.40 - 0.50	**7**	0.40 - 0.50	**5**	0.40 - 0.50	**6**	0.40 - 0.50	**6**
	0.50 - 0.60	**9**	0.50 - 0.60	**3**	0.50 - 0.60	**5**	0.50 - 0.60	**4**
	0.60 - 0.70	**11**	0.60 - 0.70	**3**	0.60 - 0.70	**6**	0.60 - 0.70	**4**
	0.70 - 0.80	**11**	0.70 - 0.80	**3**	0.70 - 0.80	**5**	0.70 - 0.80	**4**
	0.80 - 0.90	**14**	0.80 - 0.90	**3**	0.80 - 0.90	**6**	0.80 - 0.90	**3**
	0.90 - 1.00	**14**	0.90 - 1.00	**3**	0.90 - 1.00	**7**	0.90 - 1.00	**3**
	1.00 - 1.10	**13**	1.00 - 1.10	**3**	1.00 - 1.10	**8**	1.00 - 1.10	**3**
	1.10 - 1.20	**11**	1.10 - 1.20	**3**	1.10 - 1.20	**16**	1.10 - 1.20	**4**
	1.20 - 1.30	**9**	1.20 - 1.30	**3**	1.20 - 1.30	**12**	1.20 - 1.30	**5**
	1.30 - 1.40	**10**	1.30 - 1.40	**3**	1.30 - 1.40	**12**	1.30 - 1.40	**4**
	1.40 - 1.50		1.40 - 1.50		1.40 - 1.50		1.40 - 1.50	
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	2.60 - 2.70		2.60 - 2.70		2.60 - 2.70		2.60 - 2.70	
	2.70 - 2.80		2.70 - 2.80		2.70 - 2.80		2.70 - 2.80	
	2.80 - 2.90		2.80 - 2.90		2.80 - 2.90		2.80 - 2.90	
	2.90 - 3.00		2.90 - 3.00		2.90 - 3.00		2.90 - 3.00	
Remarks :								

Accredited for compliance with ISO/IEC 17025 - Testing

APPROVED SIGNATORY

Ryan Rackley

Geotechnical Engineer
Cairns Laboratory
NATA Accreditation No. 20026

FORM NUMBER

FM-RP-110-4

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Dynamic Cone Penetrometer Report

Client :	**Urban Sync**	Report Number:	**GT22-090-001 DCP**
Client Address:	**PO Box 2970. Cairns QLD 4870**	Report Date:	**4/04/2022**
Job Number :	**GT22-090**	Order Number:	**-**
Project :	**Warril Drive Subdivision, Kuranda GI**	Test Method:	**AS1289.6.3.2**
Location :	**Warril Drive, Kuranda**		

Sample Number :	-						
Test Number :	**P9**						
Date Tested :	**01/04/2022**						
Lot Number :	-						
Sample Location :	**Refer to Test Plan** - - -						
Soil Condition :	**Moist**						
Soil Description :	**Refer to BH Logs**		**Refer to BH Logs**		**Refer to BH Logs**		**Refer to BH Logs**	
	Depth	Blows	Depth	Blows	Depth	Blows	Depth	Blows
	0.00 - 0.10	**1**	0.00 - 0.10		0.00 - 0.10		0.00 - 0.10	
	0.10 - 0.20	**2**	0.10 - 0.20		0.10 - 0.20		0.10 - 0.20	
	0.20 - 0.30	**2**	0.20 - 0.30		0.20 - 0.30		0.20 - 0.30	
	0.30 - 0.40	**2**	0.30 - 0.40		0.30 - 0.40		0.30 - 0.40	
	0.40 - 0.50	**2**	0.40 - 0.50		0.40 - 0.50		0.40 - 0.50	
	0.50 - 0.60	**5**	0.50 - 0.60		0.50 - 0.60		0.50 - 0.60	
	0.60 - 0.70	**4**	0.60 - 0.70		0.60 - 0.70		0.60 - 0.70	
	0.70 - 0.80	**5**	0.70 - 0.80		0.70 - 0.80		0.70 - 0.80	
	0.80 - 0.90	**6**	0.80 - 0.90		0.80 - 0.90		0.80 - 0.90	
	0.90 - 1.00	**6**	0.90 - 1.00		0.90 - 1.00		0.90 - 1.00	
	1.00 - 1.10	**5**	1.00 - 1.10		1.00 - 1.10		1.00 - 1.10	
	1.10 - 1.20	**9**	1.10 - 1.20		1.10 - 1.20		1.10 - 1.20	
	1.20 - 1.30	**6**	1.20 - 1.30		1.20 - 1.30		1.20 - 1.30	
	1.30 - 1.40	**5**	1.30 - 1.40		1.30 - 1.40		1.30 - 1.40	
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	2.20 - 2.30		2.20 - 2.30		2.20 - 2.30		2.20 - 2.30	
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	2.60 - 2.70		2.60 - 2.70		2.60 - 2.70		2.60 - 2.70	
	2.70 - 2.80		2.70 - 2.80		2.70 - 2.80		2.70 - 2.80	
	2.80 - 2.90		2.80 - 2.90		2.80 - 2.90		2.80 - 2.90	
	2.90 - 3.00		2.90 - 3.00		2.90 - 3.00		2.90 - 3.00	
Remarks :								

Accredited for compliance with ISO/IEC 17025 - Testing

APPROVED SIGNATORY

Ryan Rackley

Geotechnical Engineer
Cairns Laboratory
NATA Accreditation No. 20026

FORM NUMBER

FM-RP-110-4

APPENDIX C – PHOTOS

PHOTOGRAPH 1: Test Pit 7 location on Lot 20

PHOTOGRAPH 2: Test Pit 7 on Lot 20

PHOTOGRAPH 3: Spoil from Test Pit 7 on Lot 20

PHOTOGRAPH 4: Test Pit 4 location on Lot 21

PHOTOGRAPH 5: Test Pit 4 on Lot 21

PHOTOGRAPH 6: Spoil from Test Pit 4 on Lot 21

PHOTOGRAPH 7: Test Pit 3 location on Lot 22

PHOTOGRAPH 8: Spoil from Test Pit 3 on Lot 22

PHOTOGRAPH 9: Test Pit 5 location on Lot 23

PHOTOGRAPH 10: Test Pit 5 on Lot 23

PHOTOGRAPH 11: Spoil from Test Pit 5 on Lot 23

PHOTOGRAPH 12: Test Pit 1 location on Lot 24

PHOTOGRAPH 13: Spoil fromTest Pit 1 on Lot 24

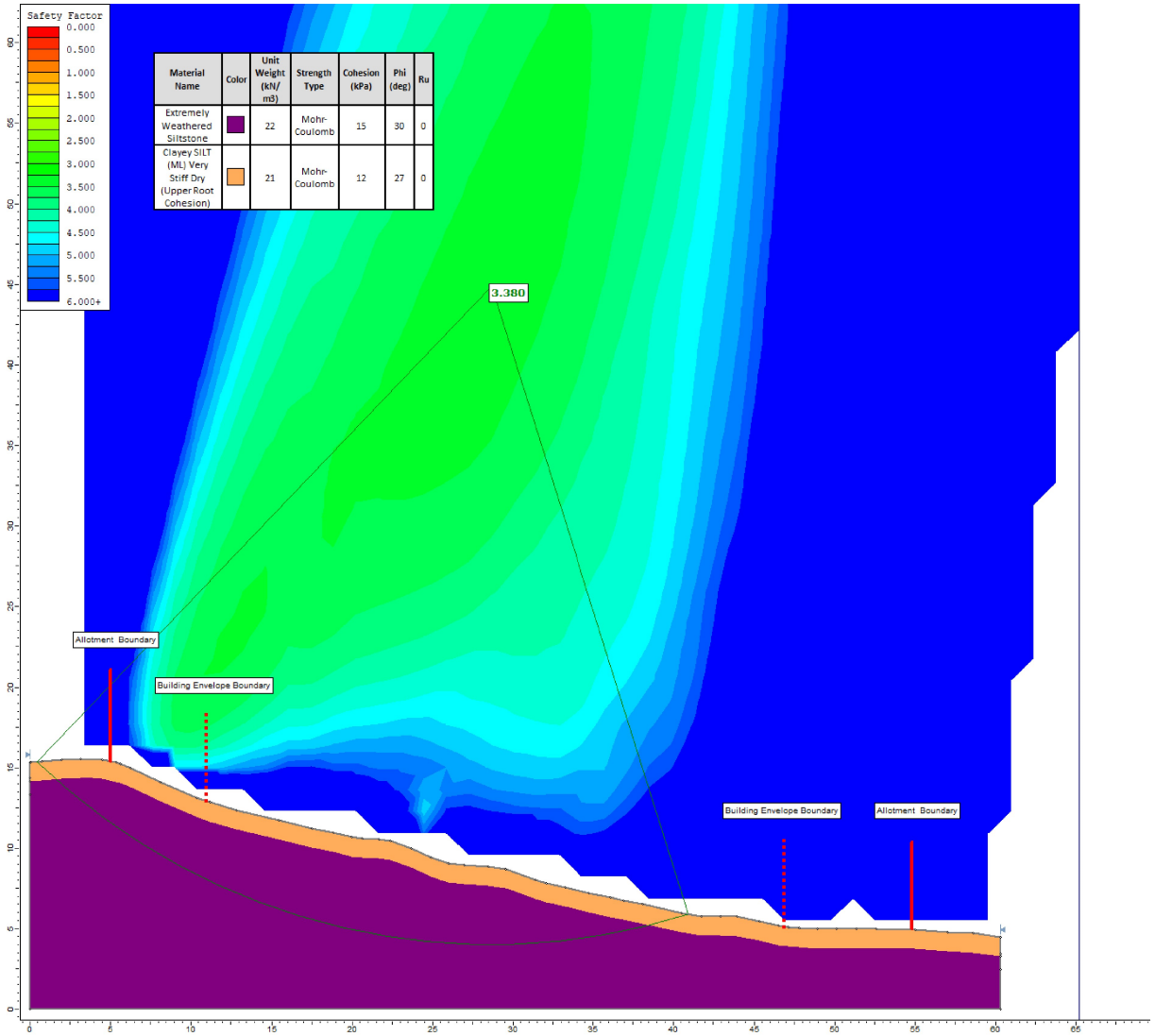
PHOTOGRAPH 14: Test Pit 1 on Lot 24

PHOTOGRAPH 15: Test Pit 2 location on Lot 24

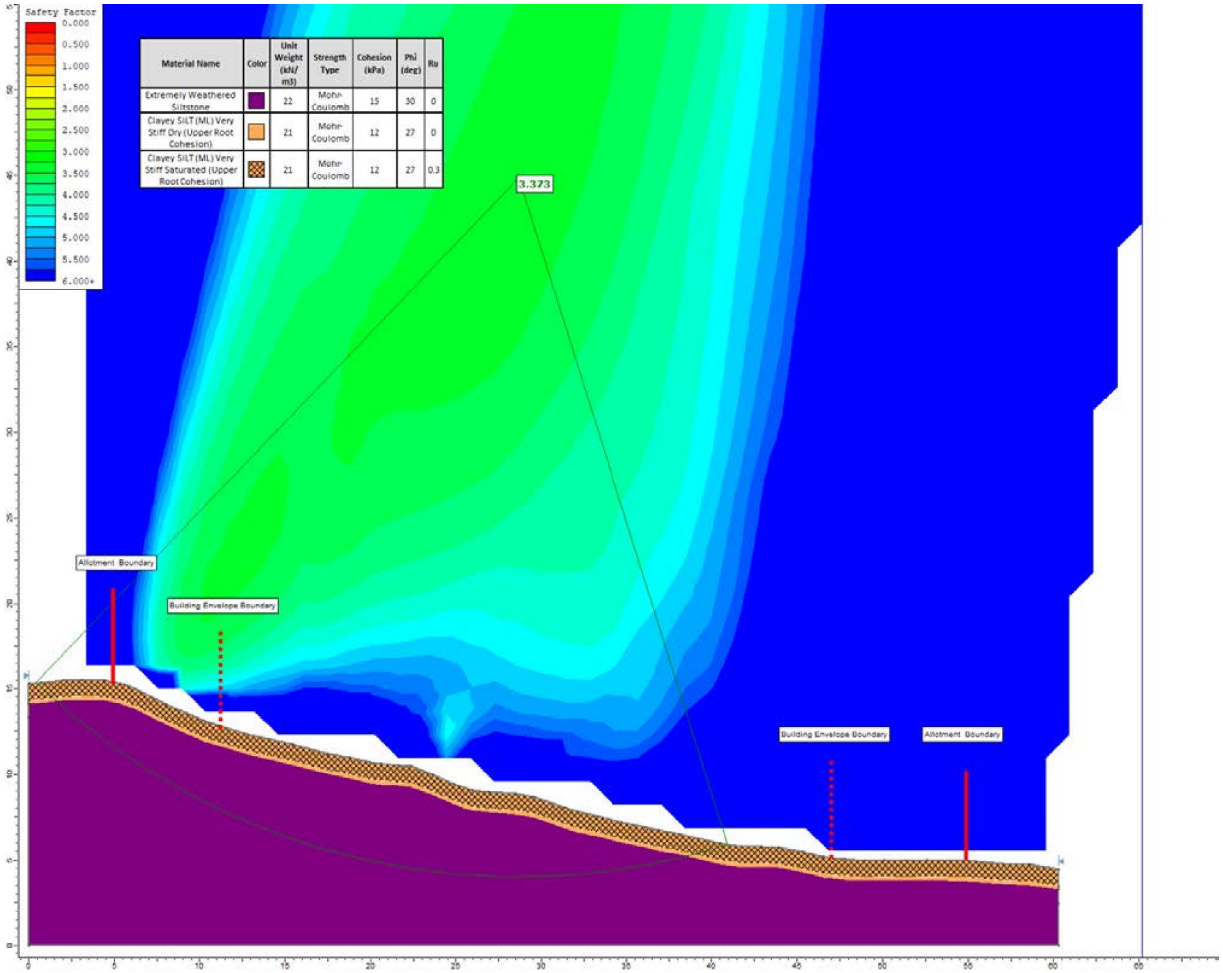
PHOTOGRAPH 16: Spoil from Test Pit 2 on Lot 24

PHOTOGRAPH 17: Test Pit 2 on Lot 24

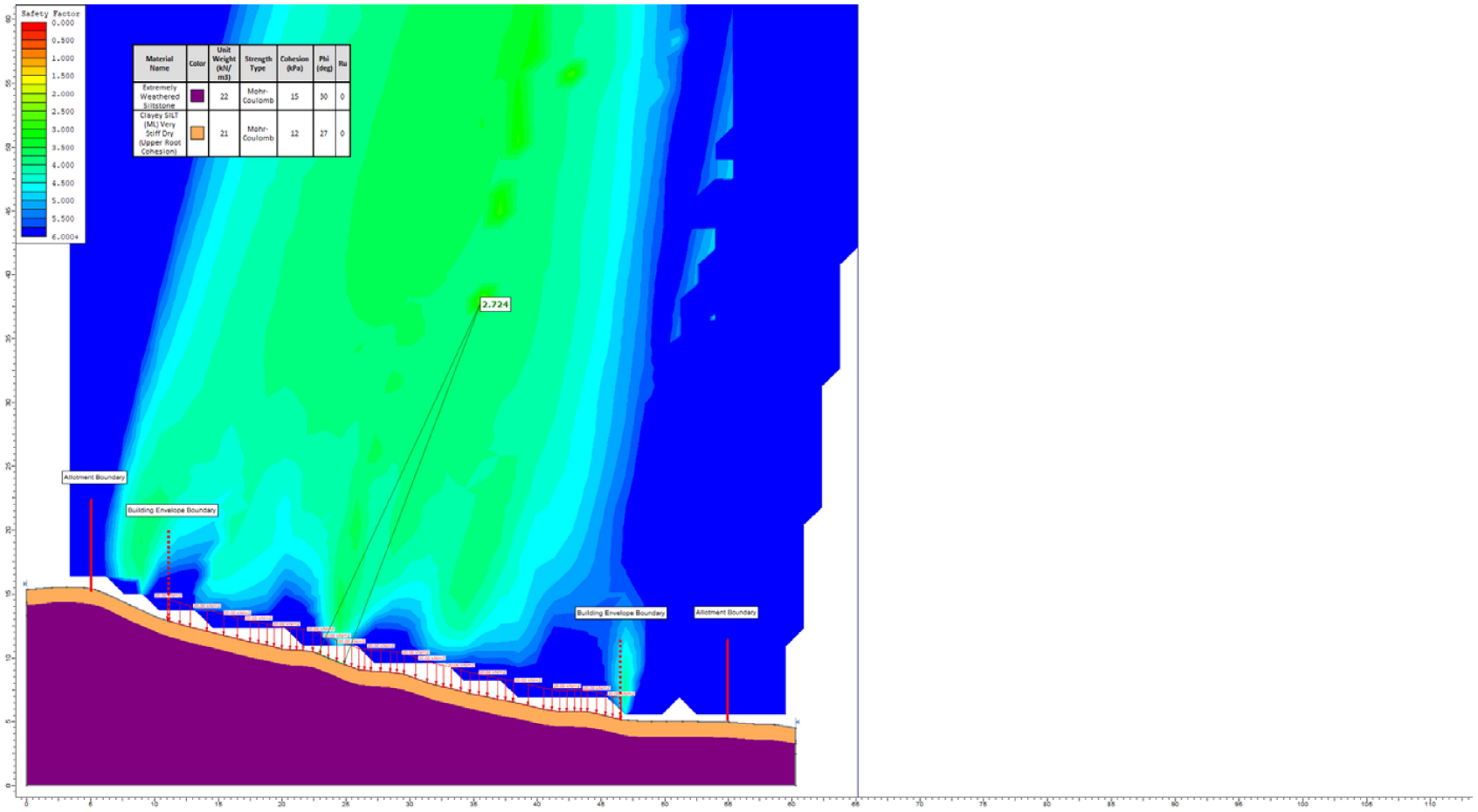
APPENDIX D – SLIDE OUTPUT



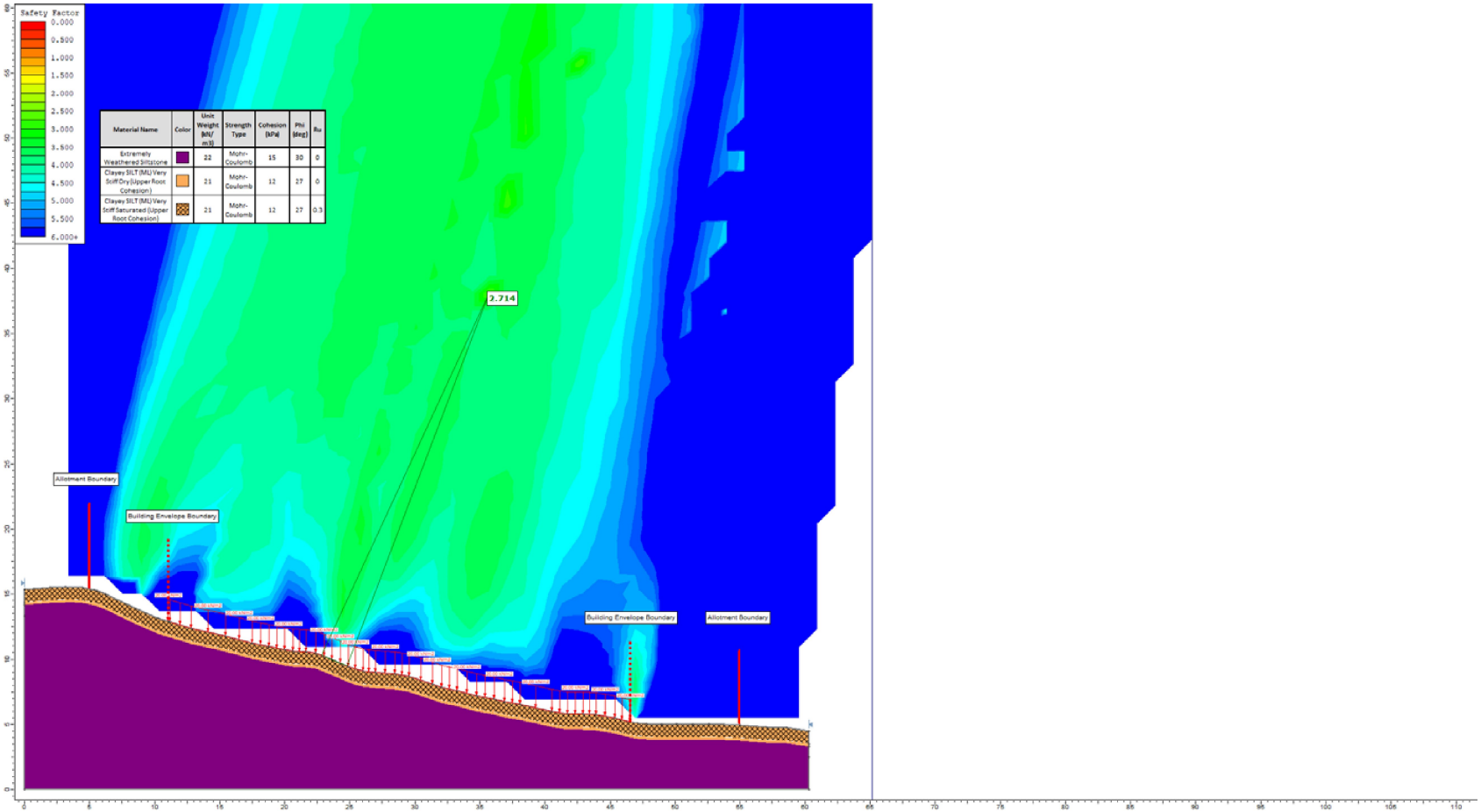
Section A-A' – Lot 20, Current - Dry



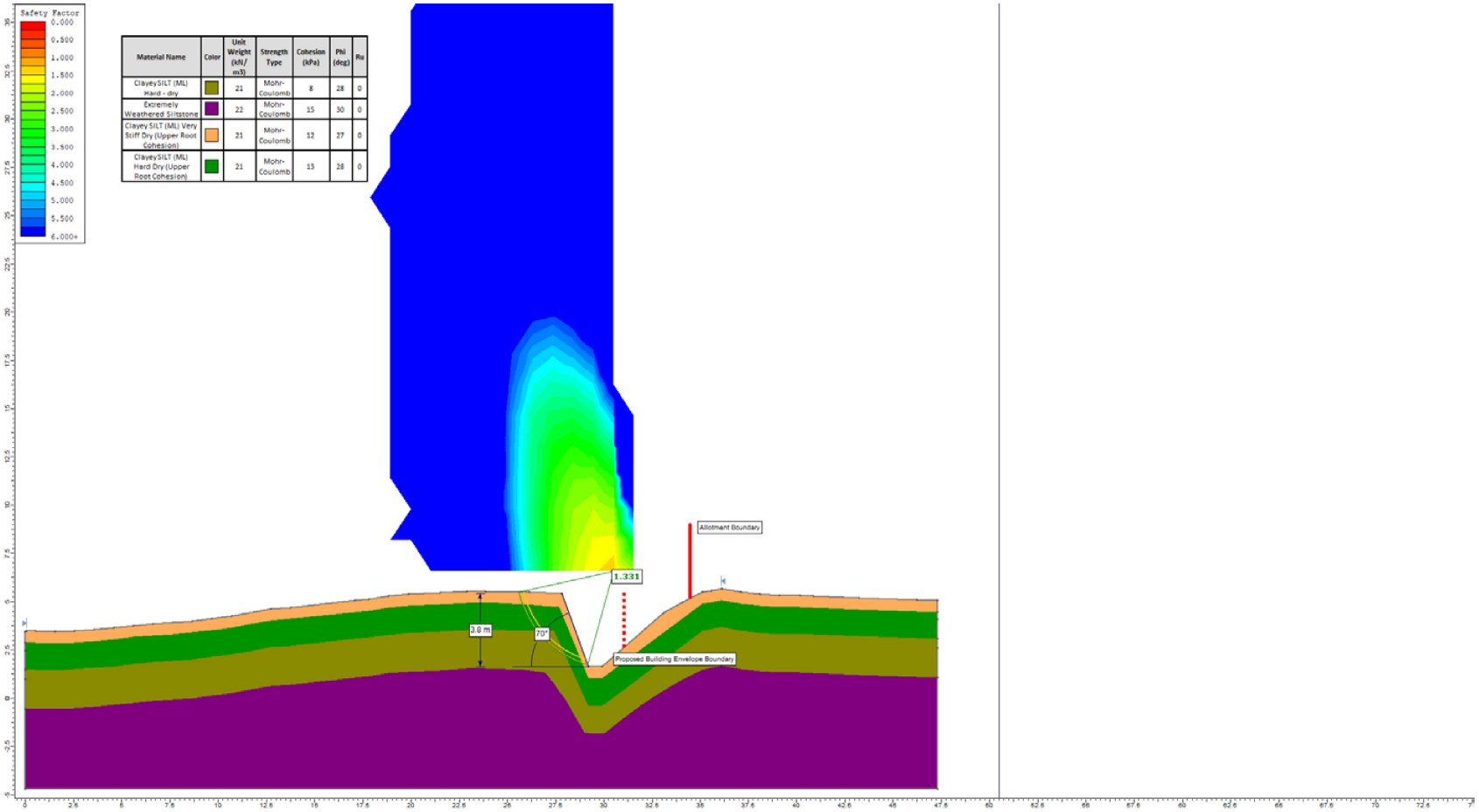
Section A-A' – Lot 20, Current - Saturated



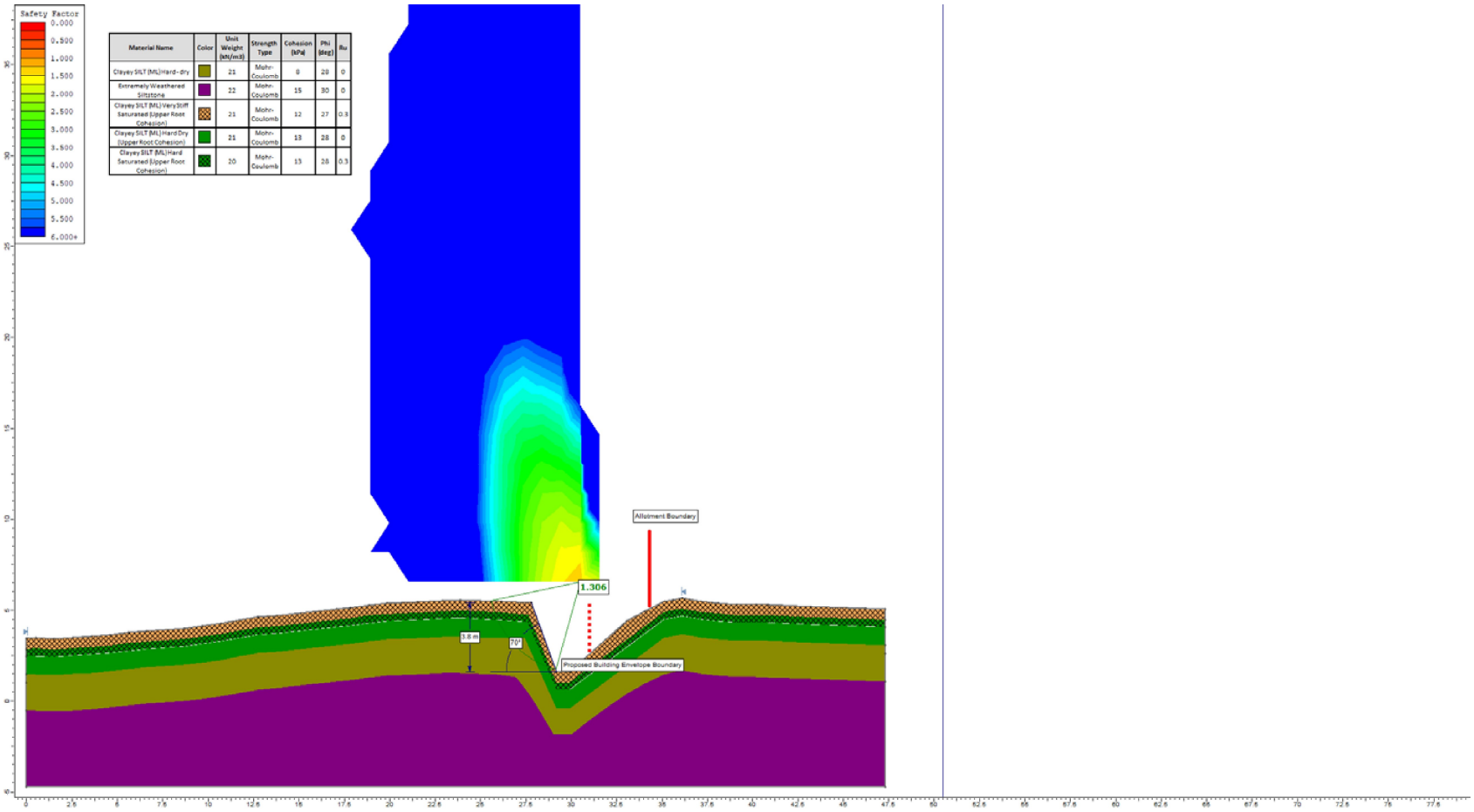
Section A-A' – Lot 20, Developed Profile - Dry



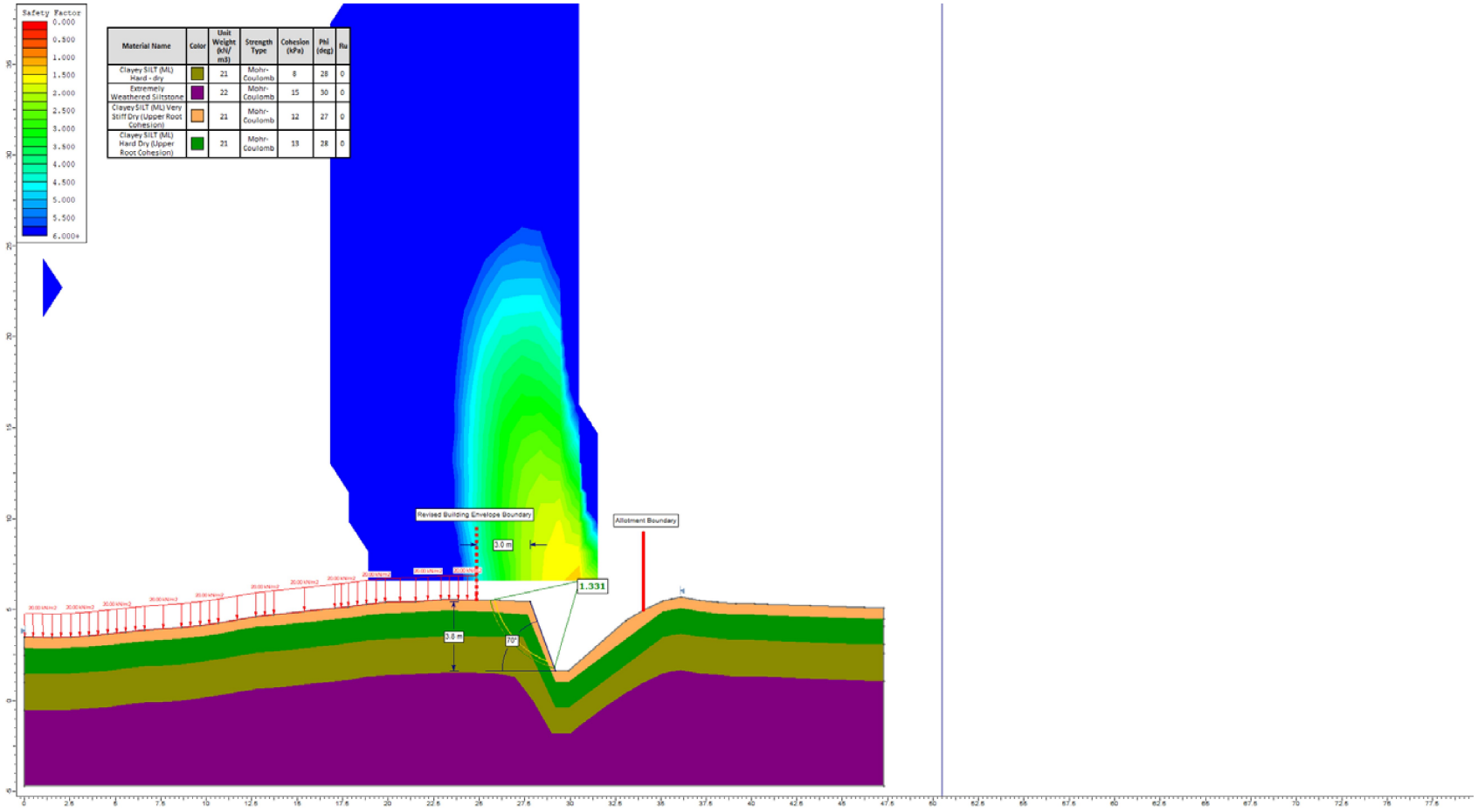
Section A-A' – Lot 20, Developed Profile - Saturated



Section B-B' – Lot 21, Current - Dry



Section B-B' – Lot 21, Current - Saturated



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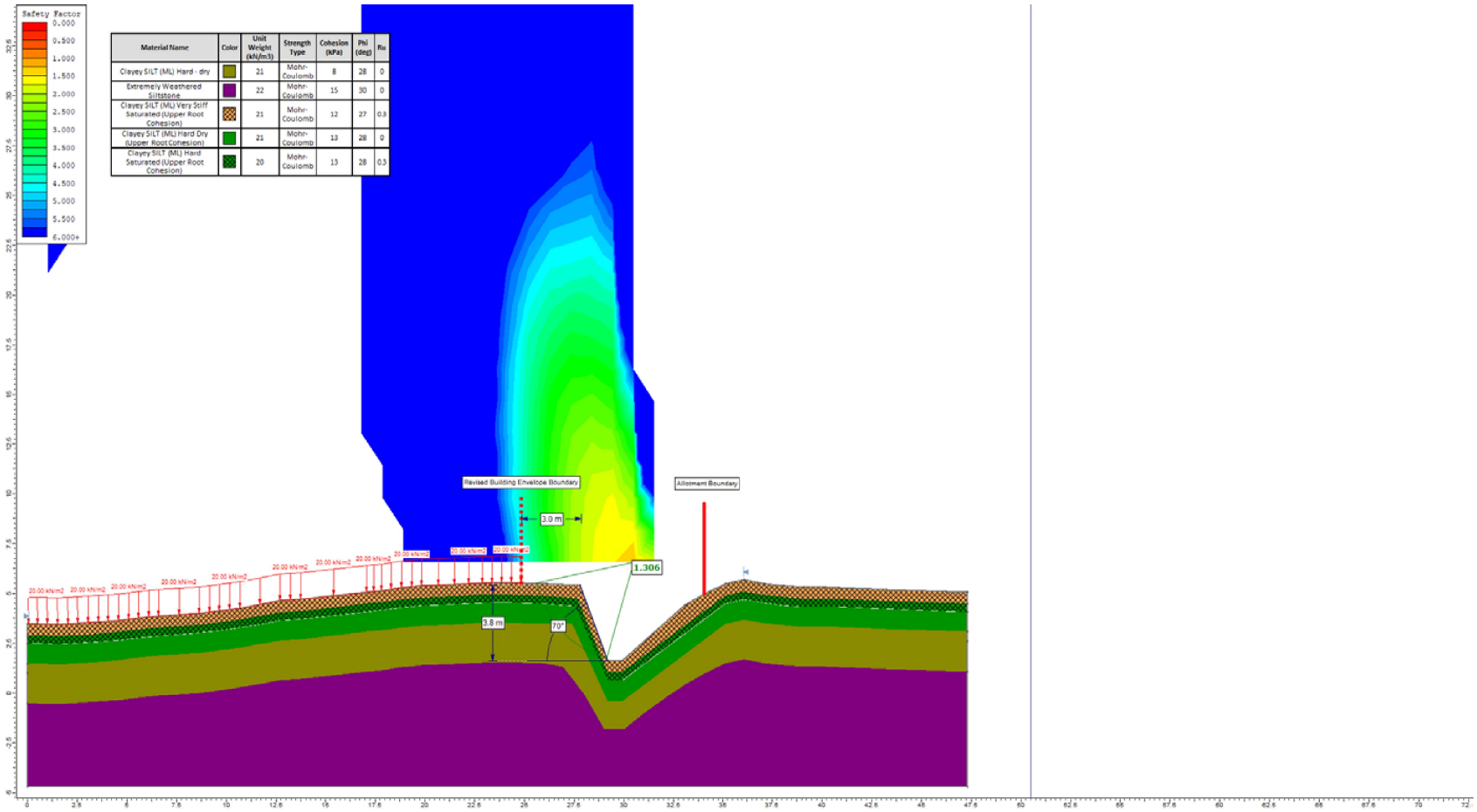
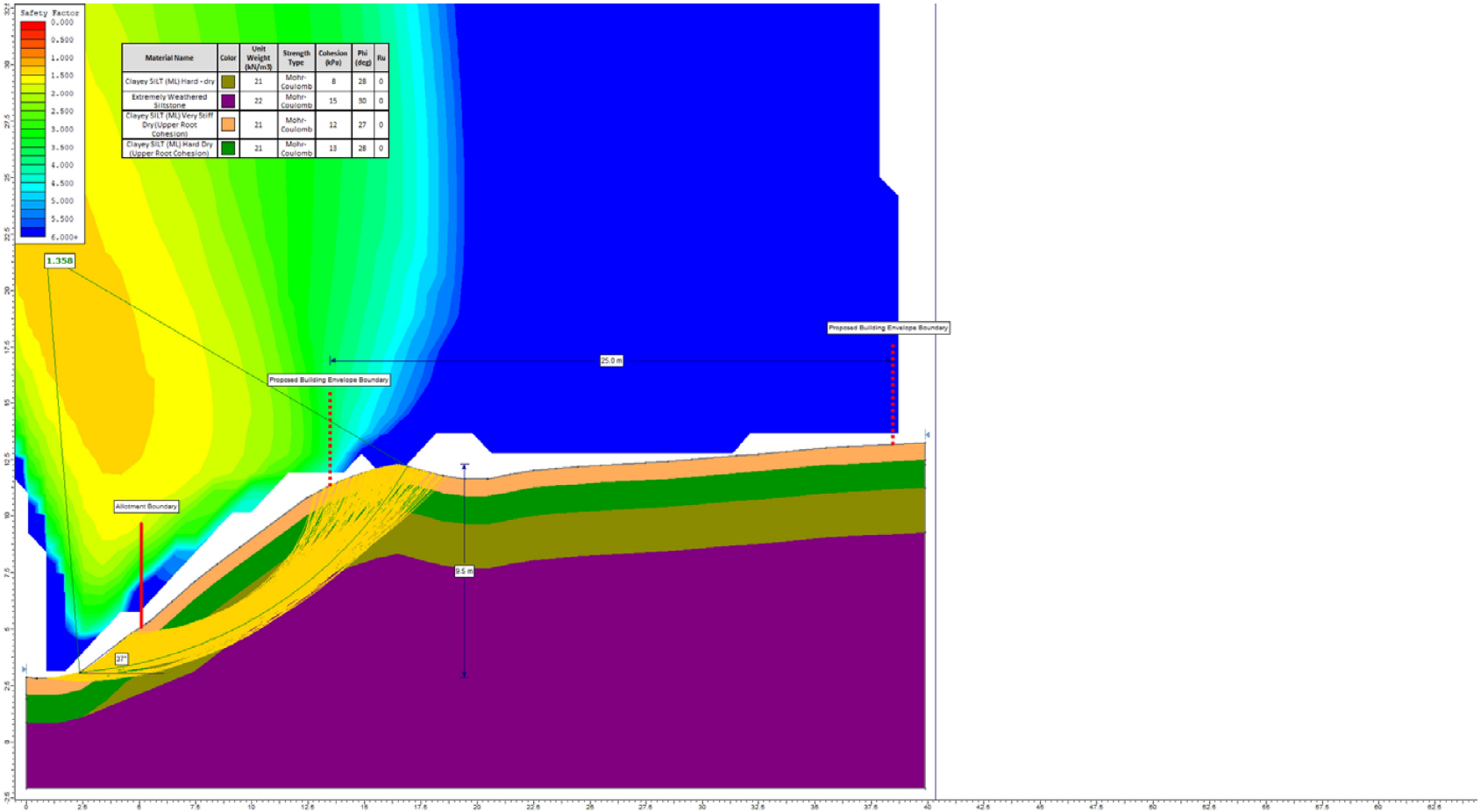
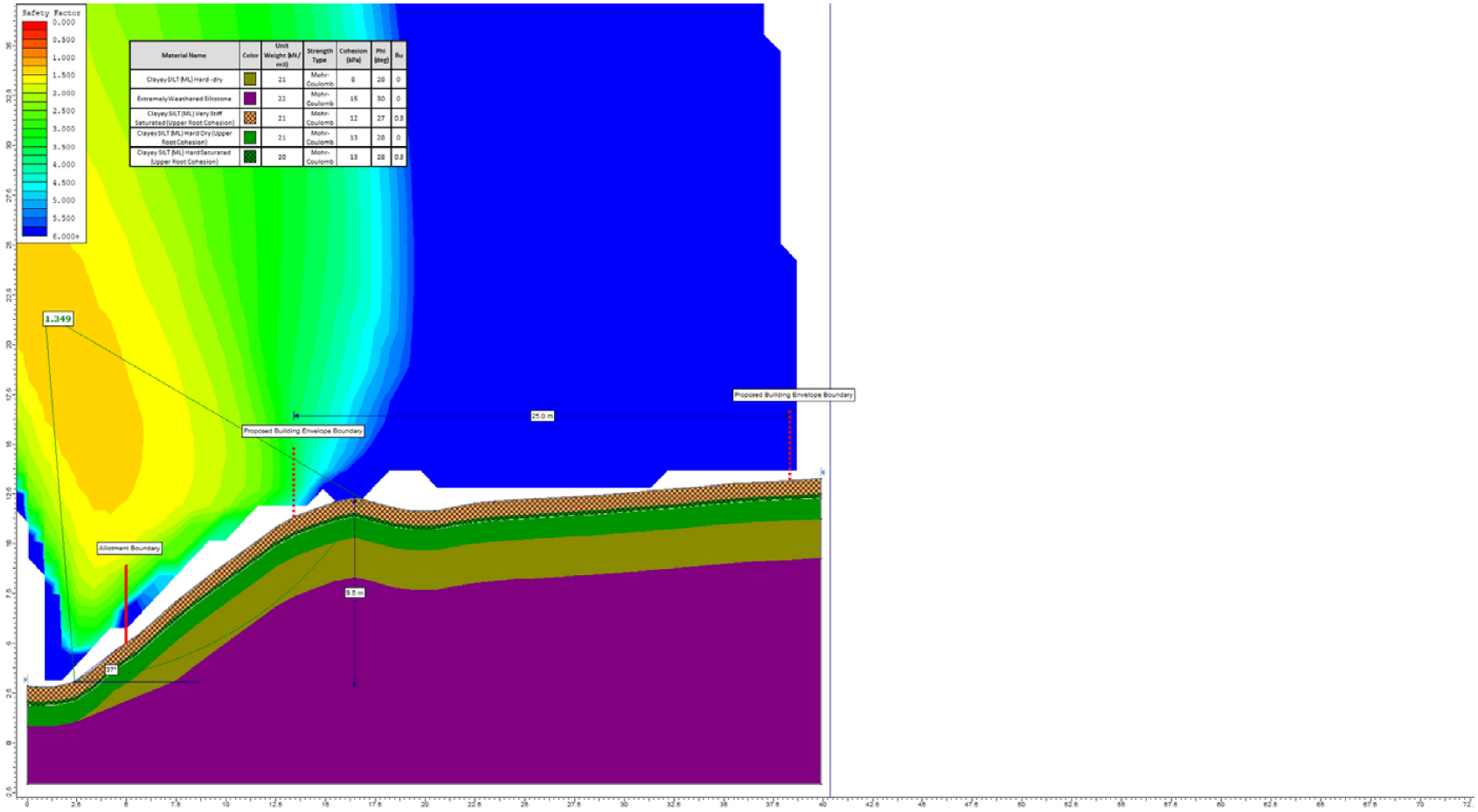


Section B-B' – Lot 21, Developed Profile – Saturated



Section C-C' – Lot 23, Current - Dry



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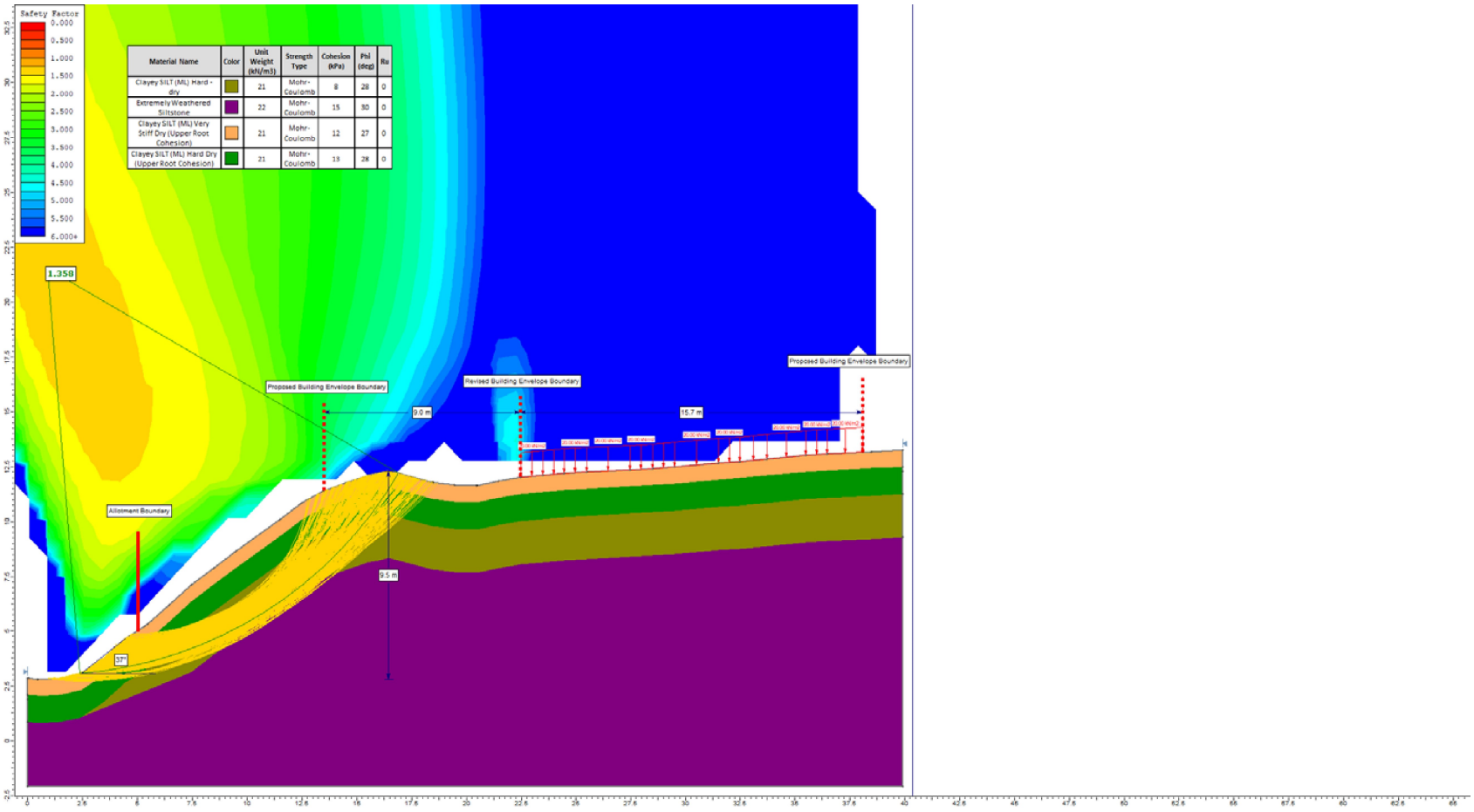
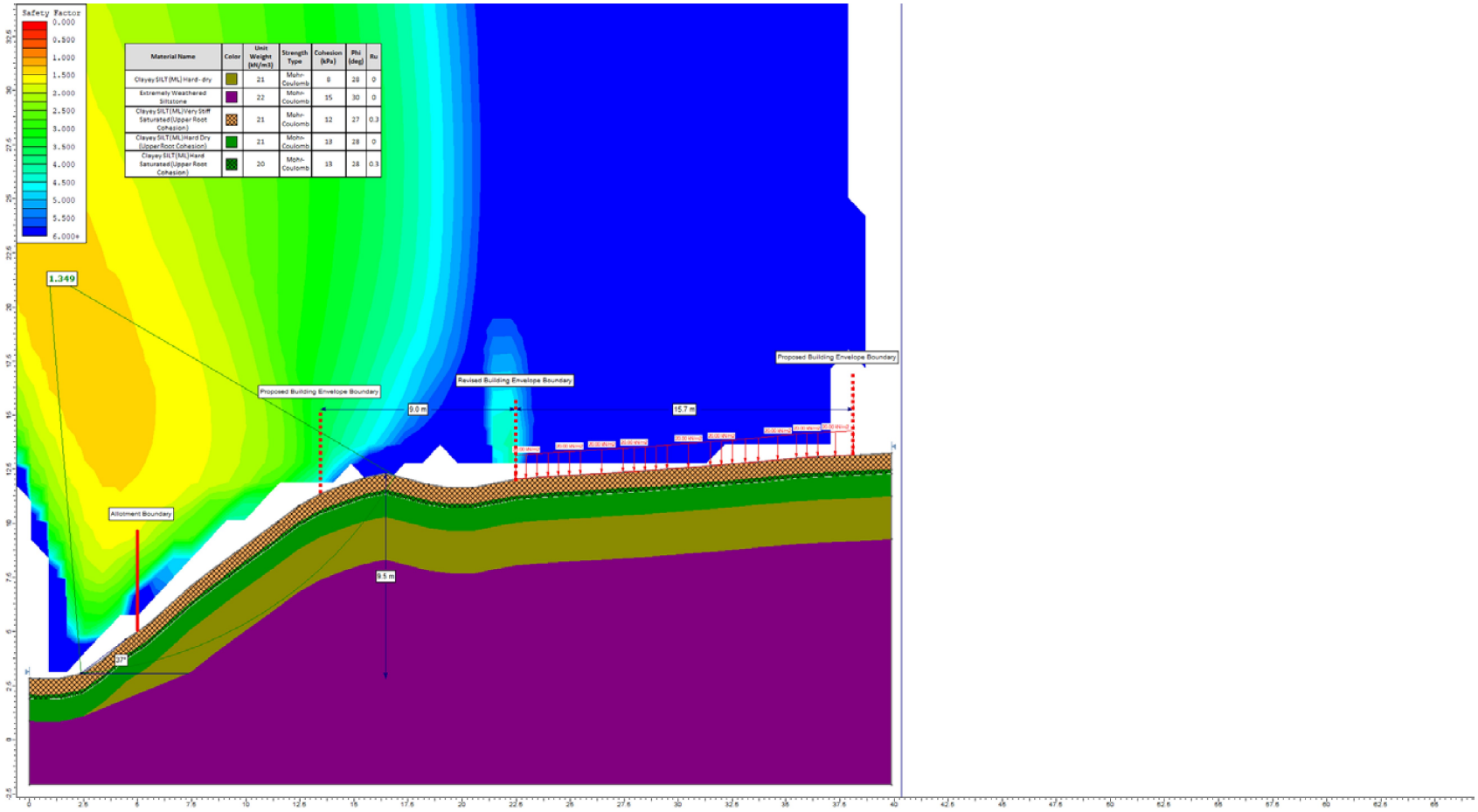


Section C-C' – Lot 23, Developed Profile - Dry



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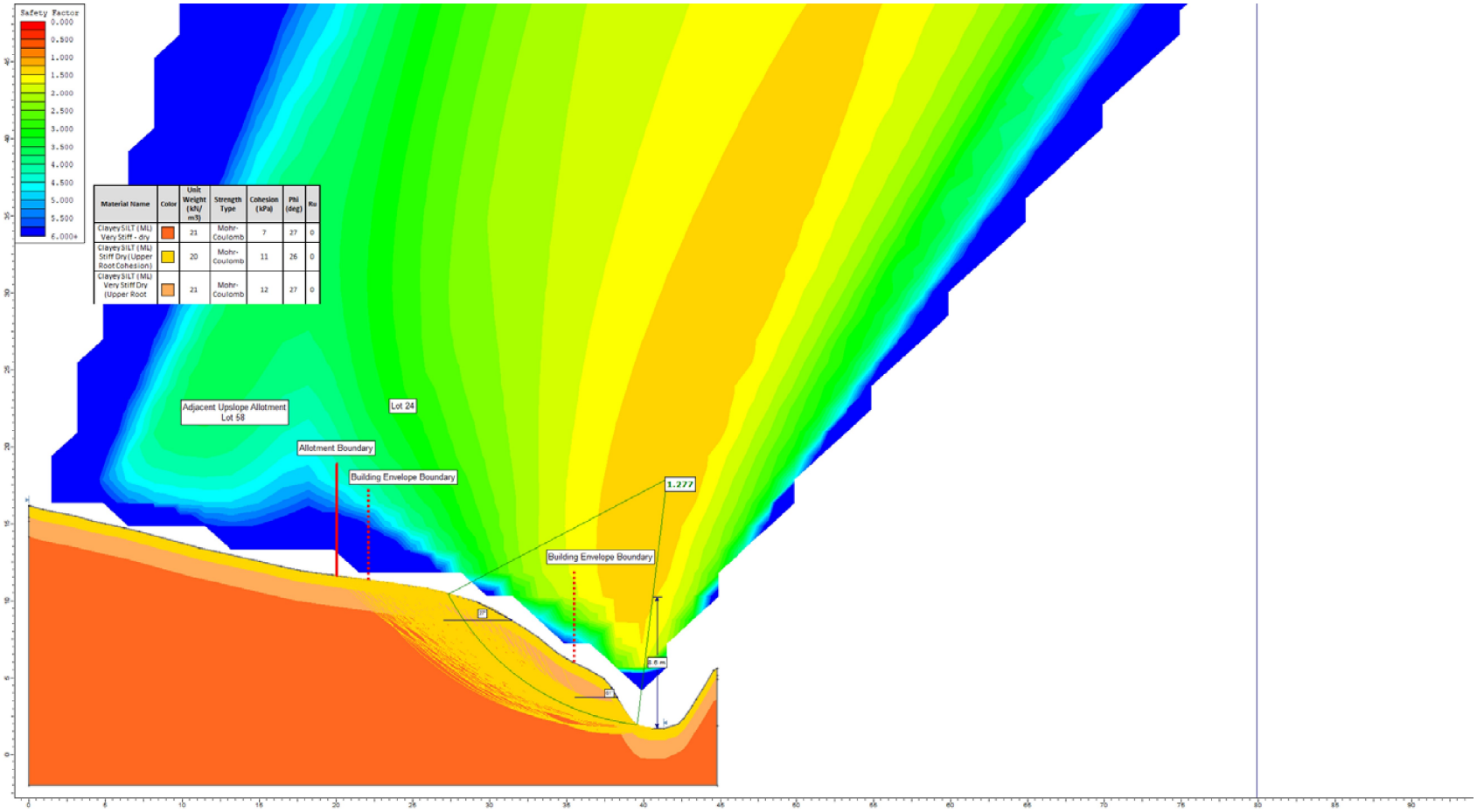
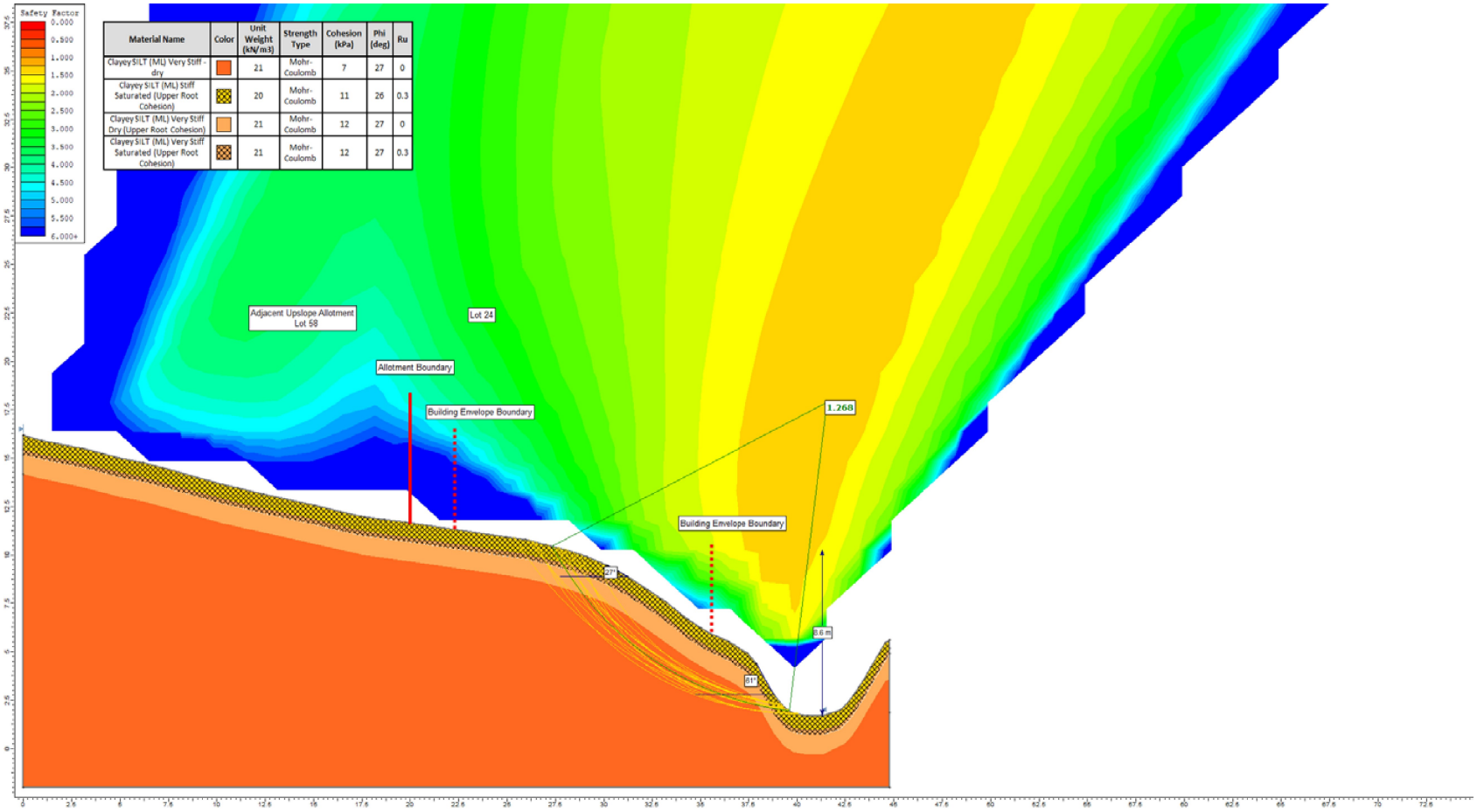
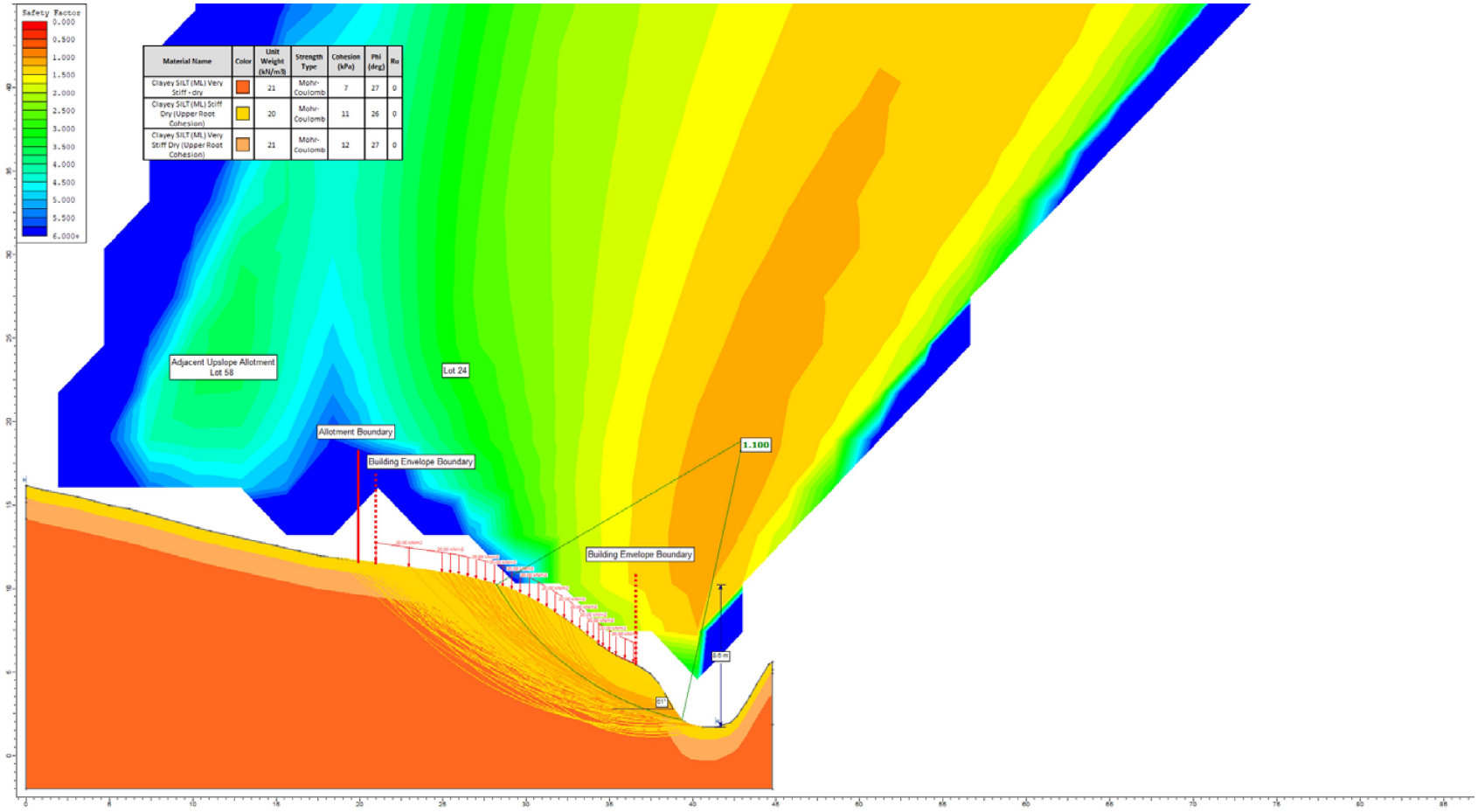


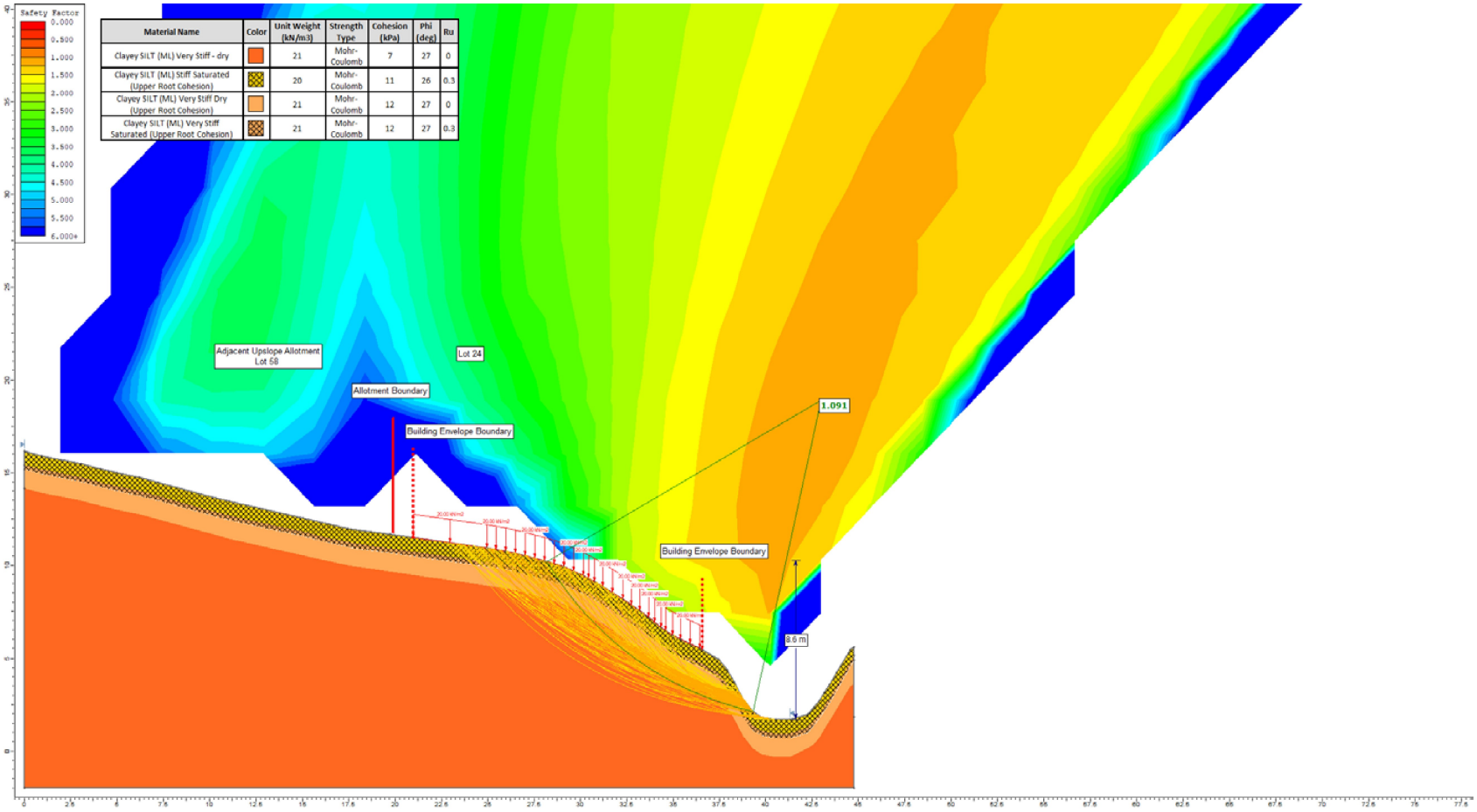
Section D-D' – Lot 24 East, Current - Dry



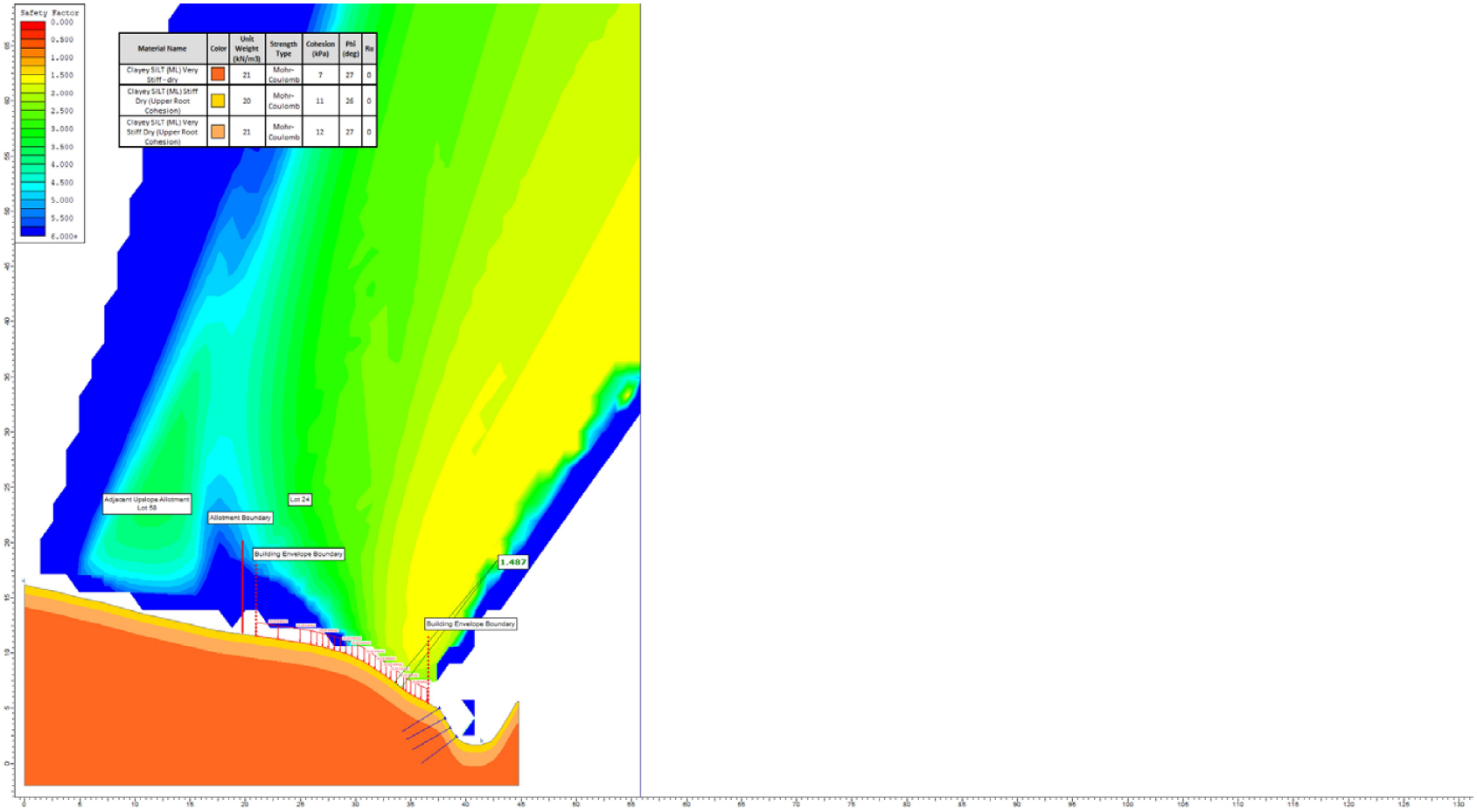
Section D-D' – Lot 24 East, Current - Saturated



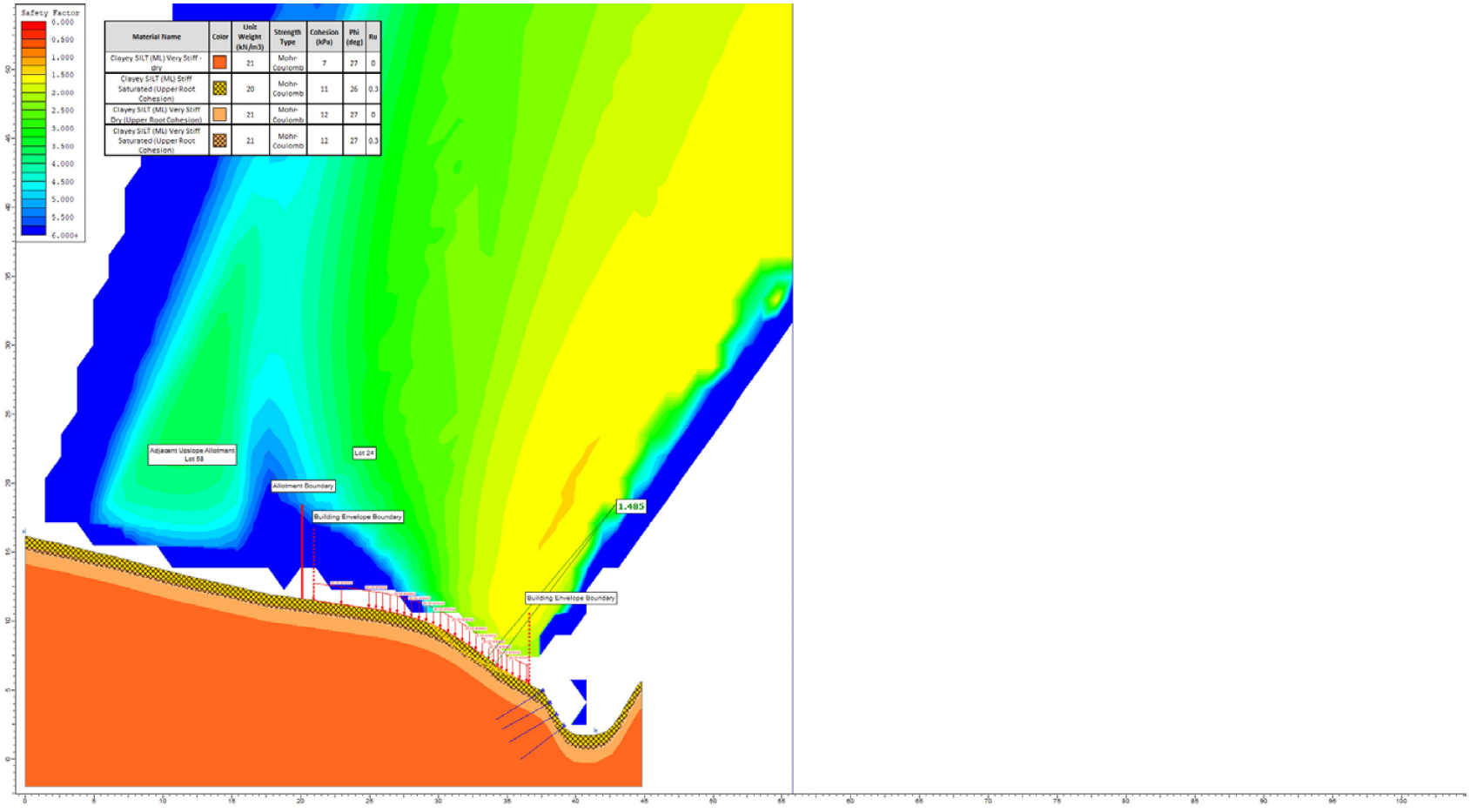
Section D-D' – Lot 24 East, Developed Profile - Dry



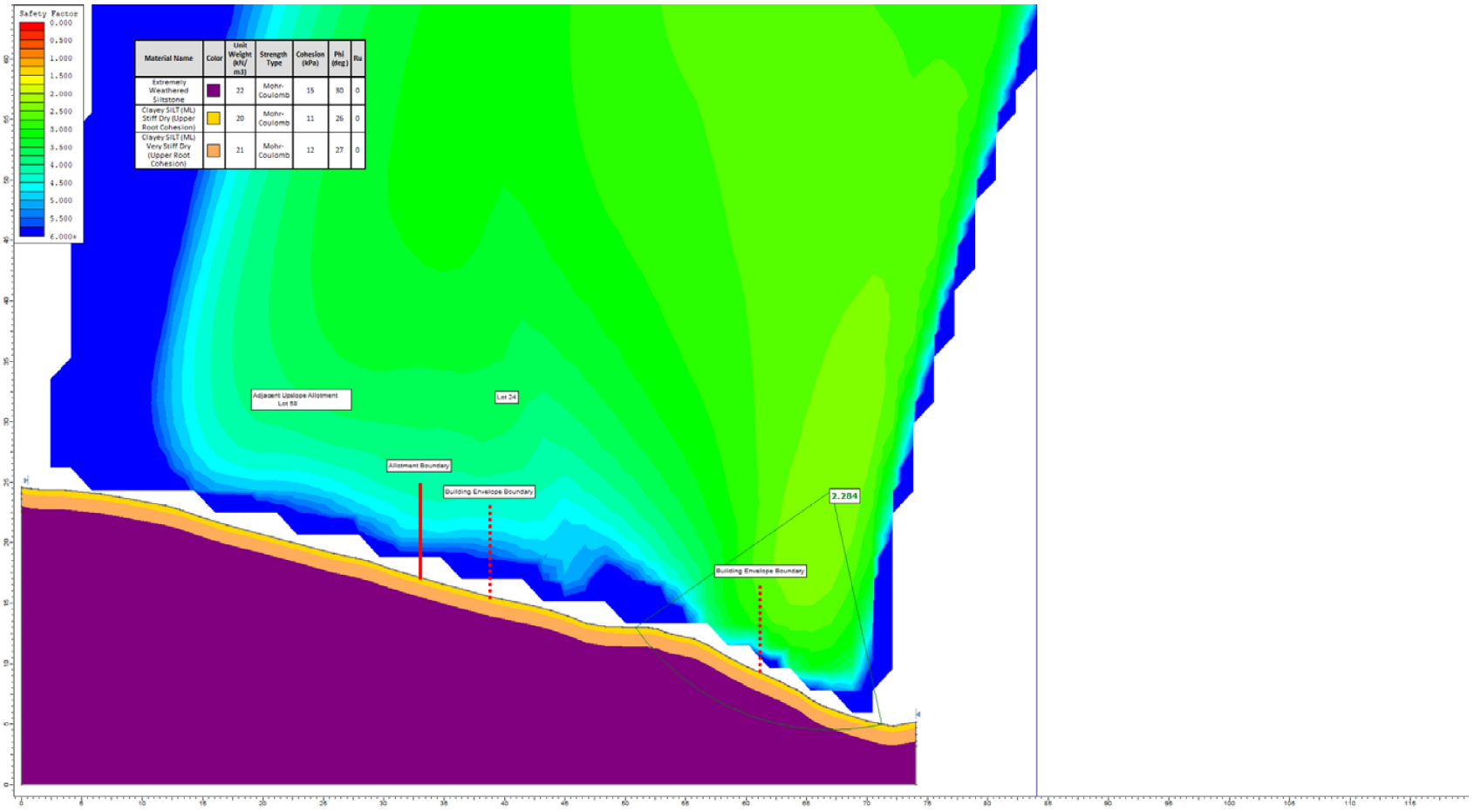
Section D-D' – Lot 24 East, Developed Profile – Saturated



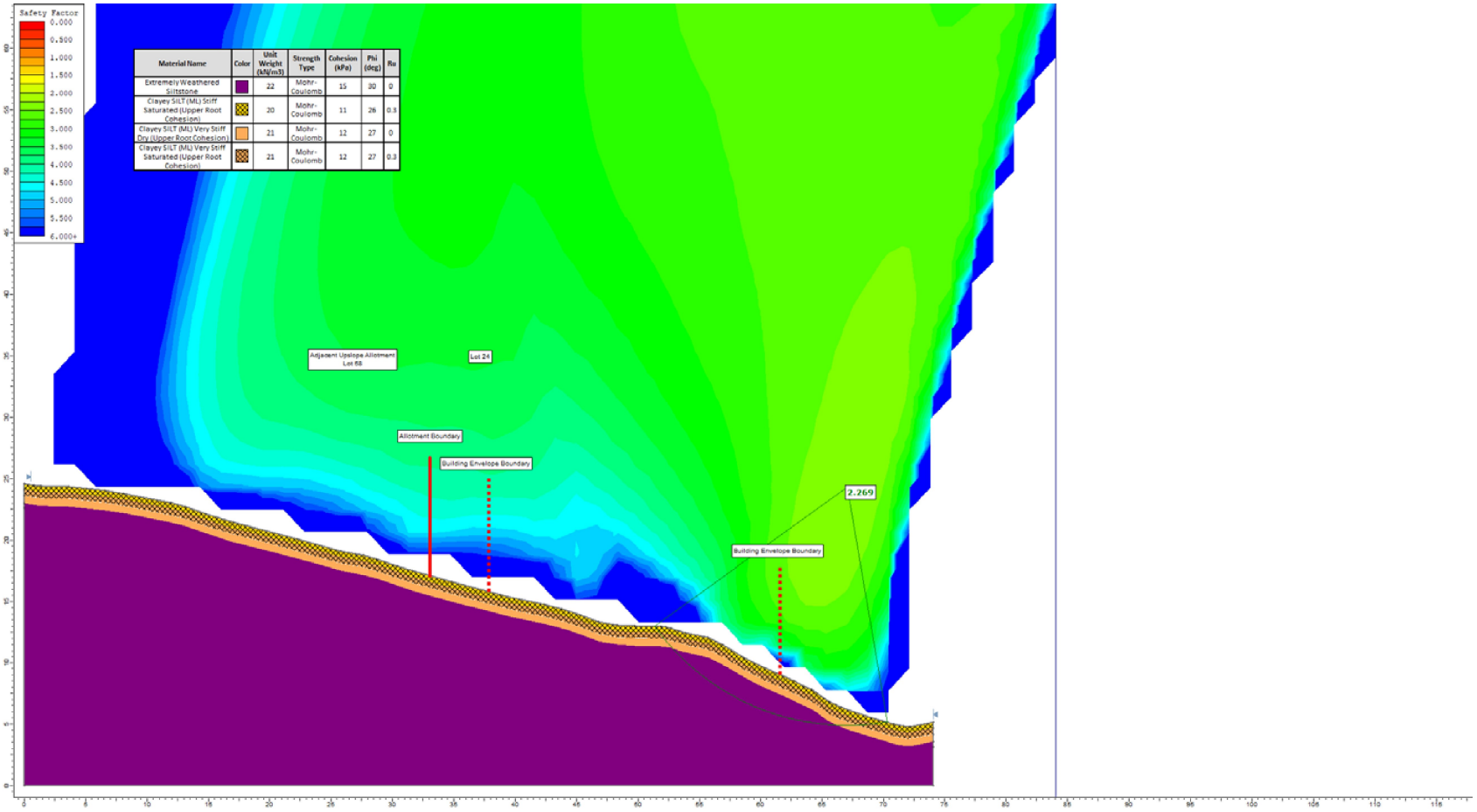
Section D-D' – Lot 24 East, Developed Profile (Embankment Stabilised with Soil Nails) - Dry



Section D-D' – Lot 24 East, Developed Profile (Embankment Stabilised with Soil Nails) - Saturated



Section E-E' – Lot 24 West, Current - Dry



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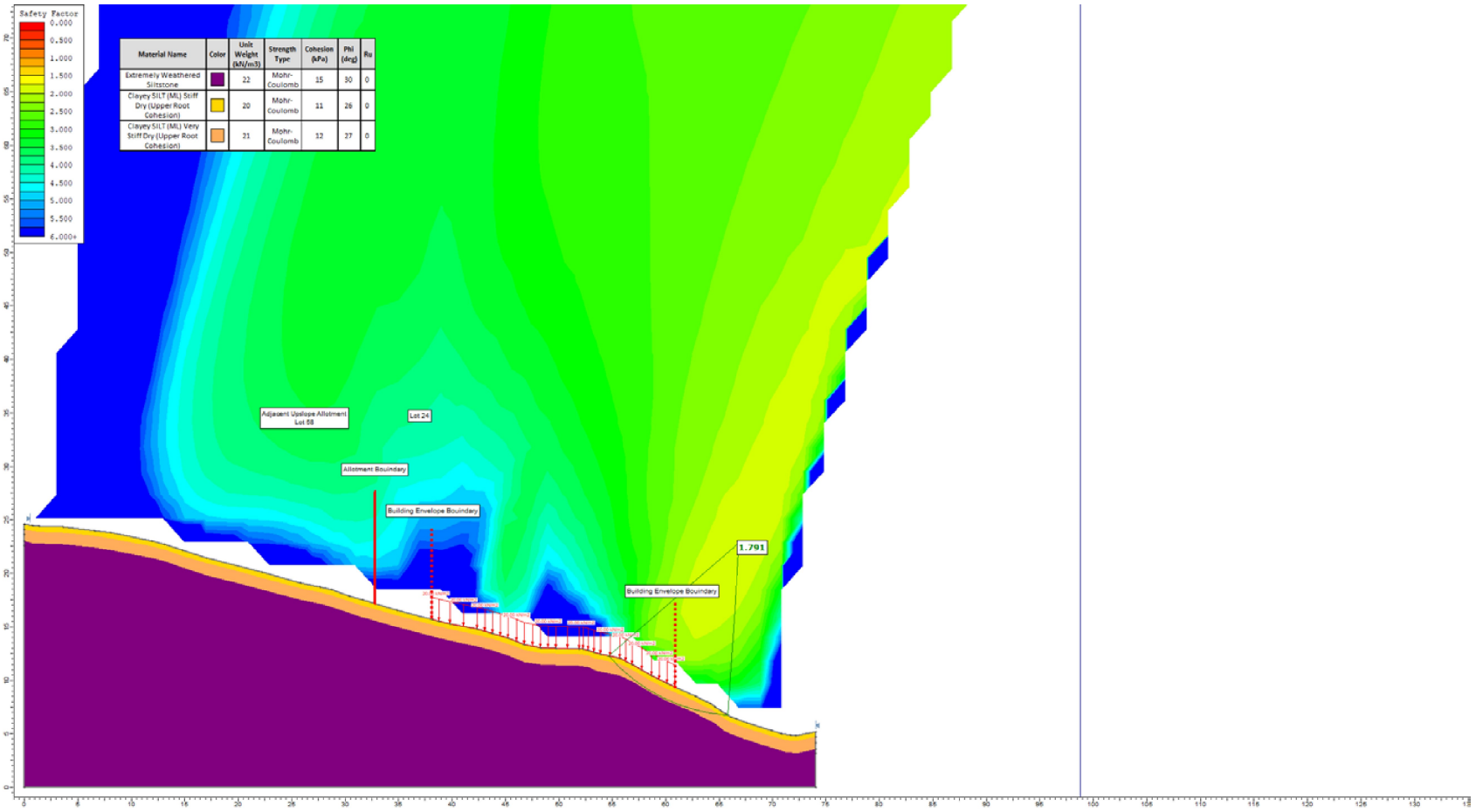
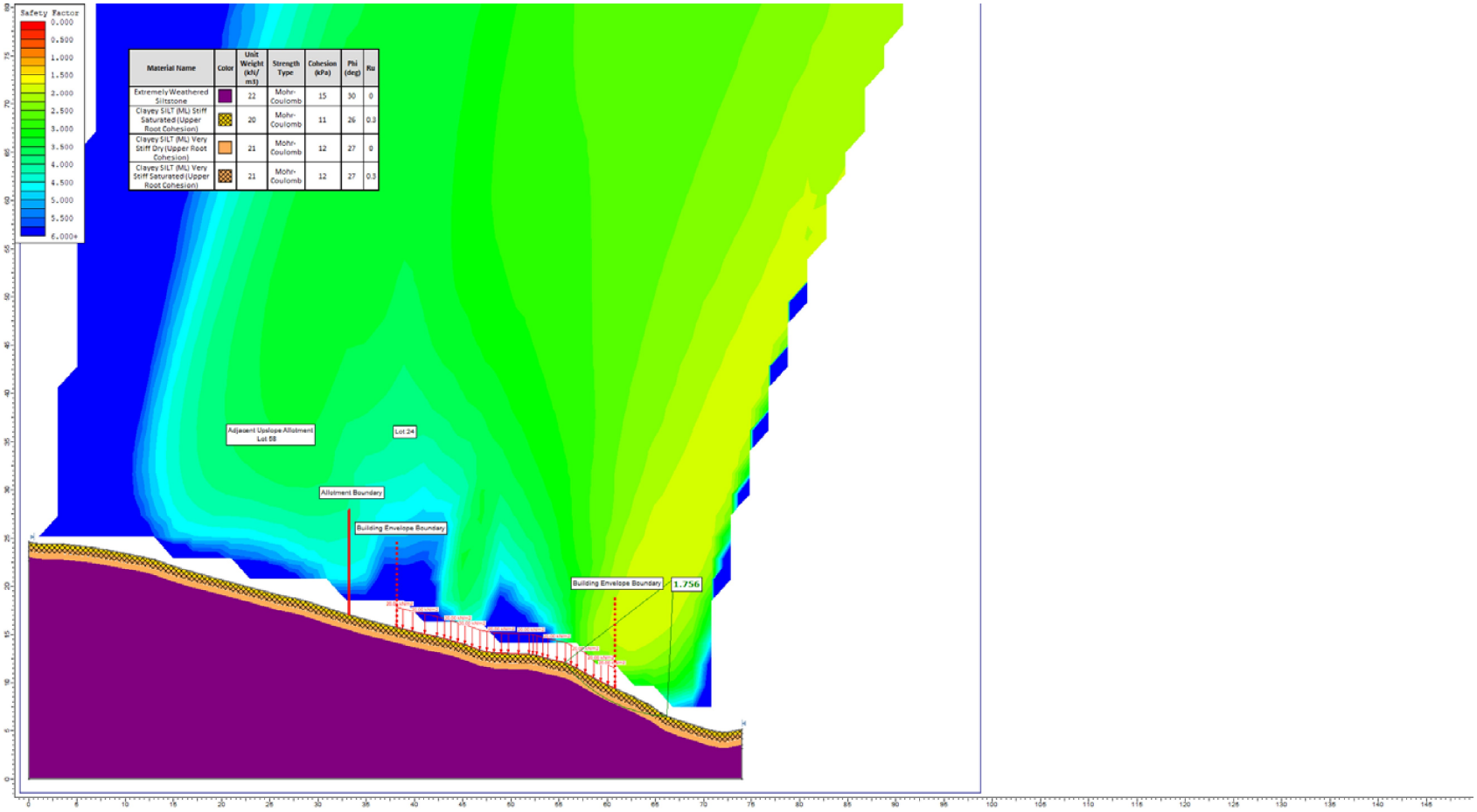
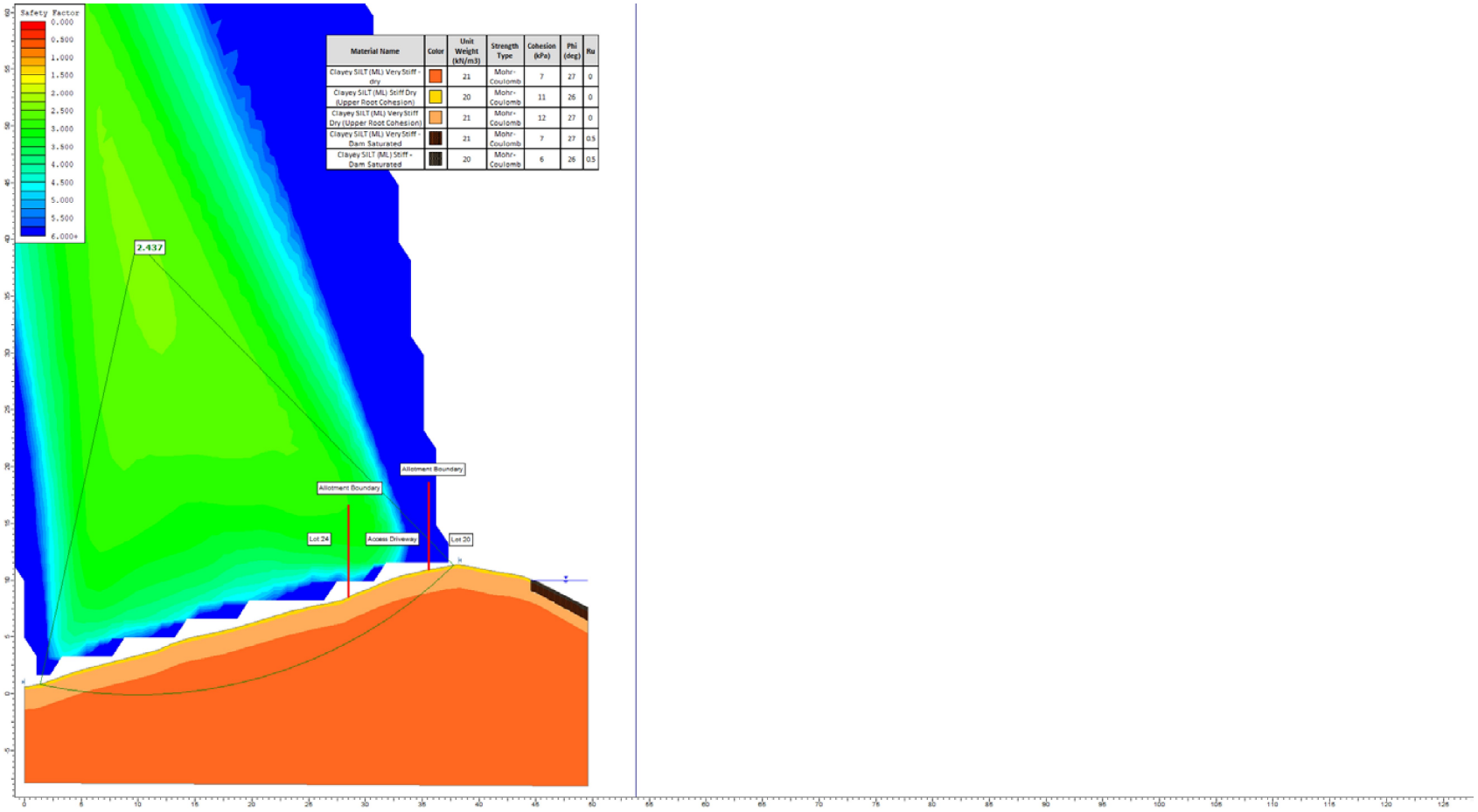


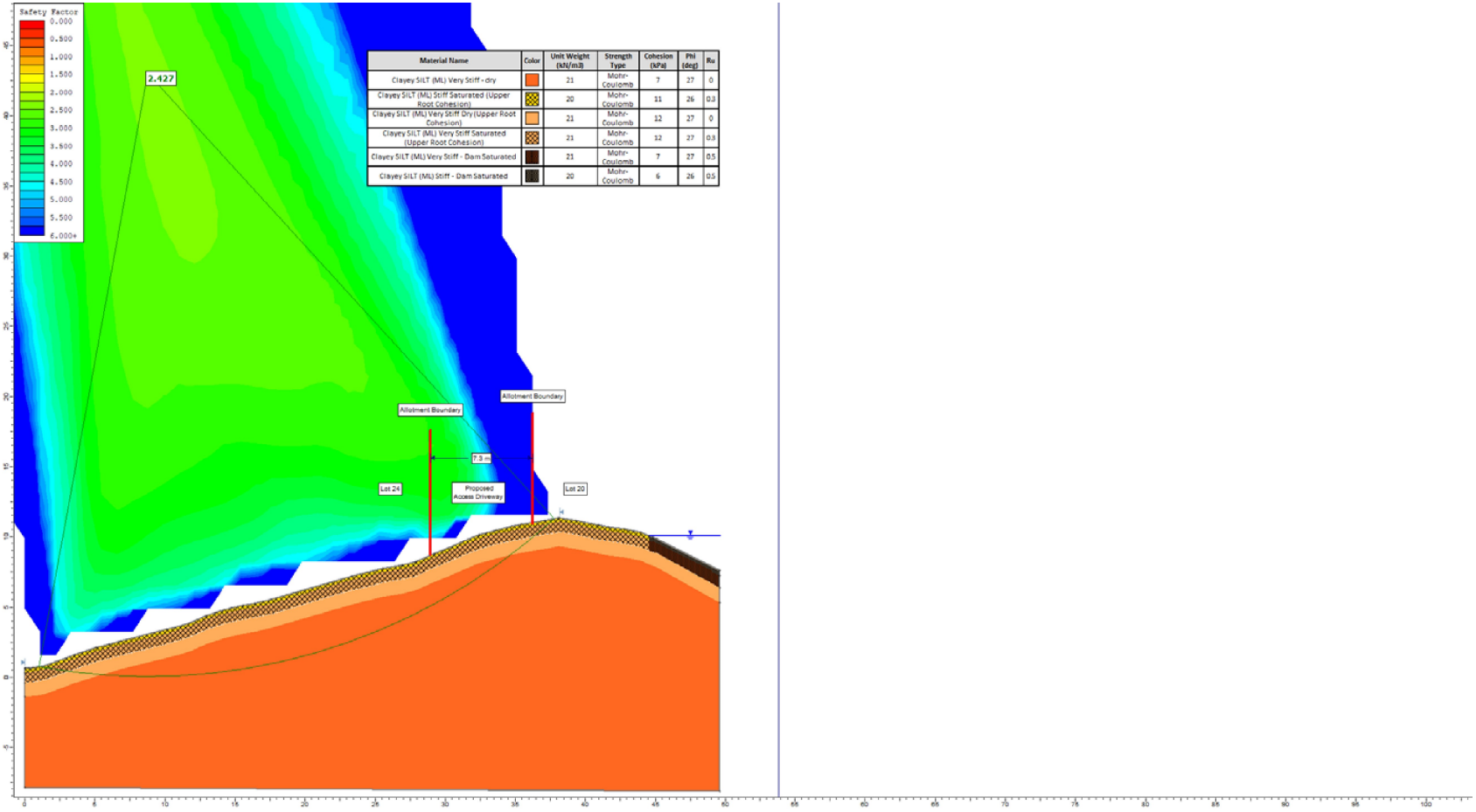
Section E-E' – Lot 24 West, Developed Profile - Dry



Section E-E' – Lot 24 West, Developed Profile – Saturated



Section F-F' – Dam Embankment, Current - Dry



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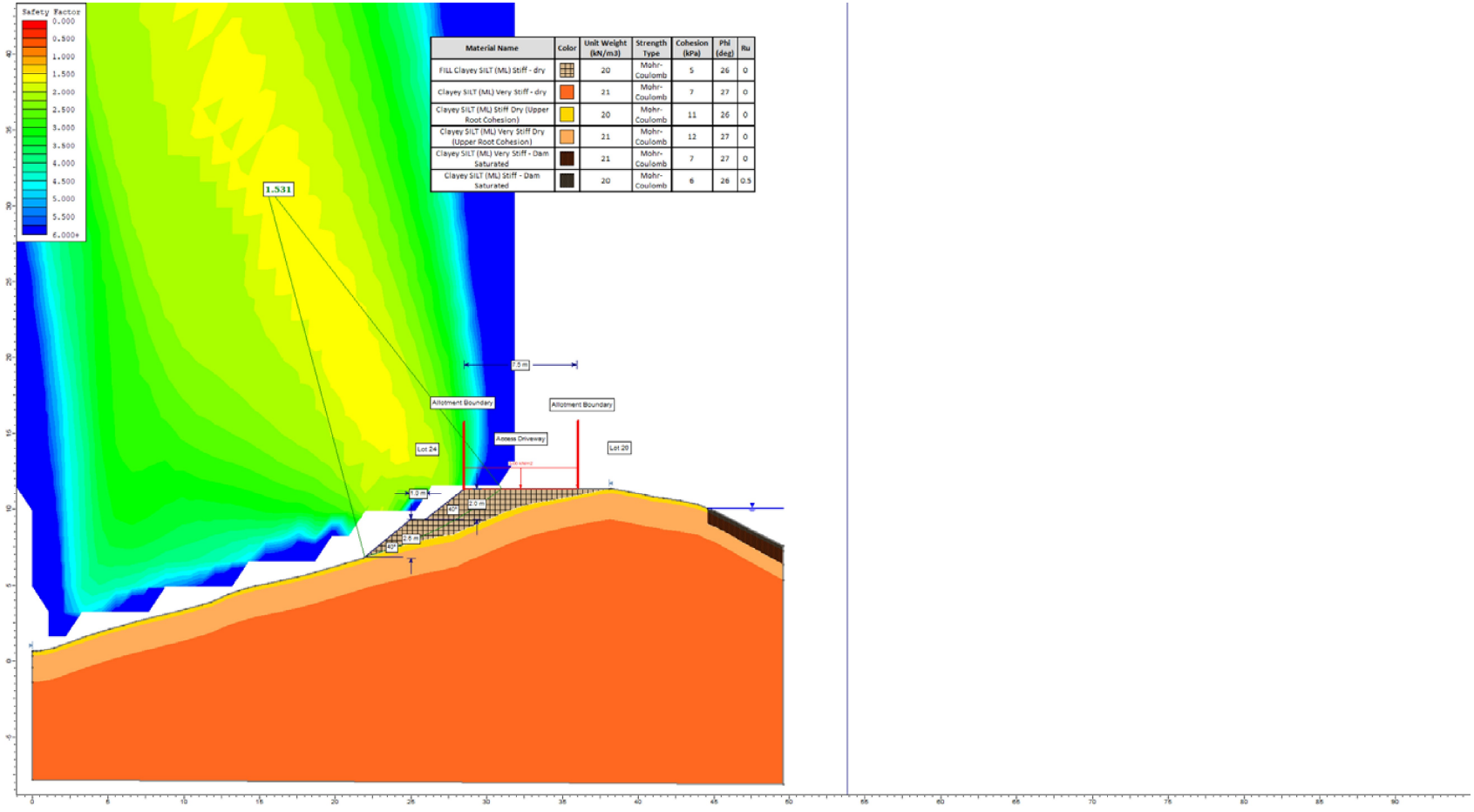

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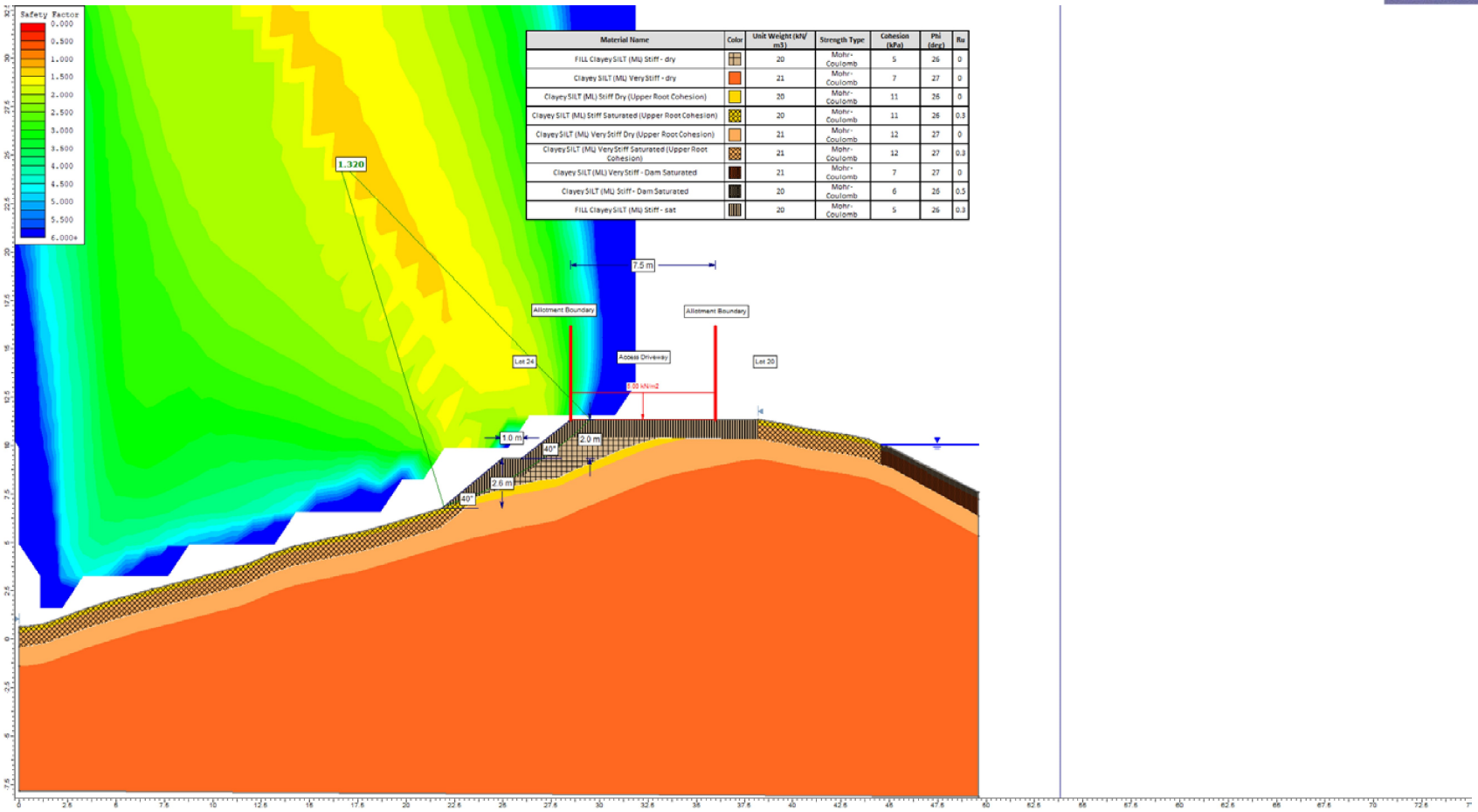

Section F-F' – Dam Embankment, Developed Profile – Saturated

APPENDIX E – UNDERSTAND THE LIMITATIONS OF YOUR GEOTECHNICAL REPORT

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23 Knight Street
Portsmith QLD 4870

UNDERSTAND THE LIMITATIONS OF YOUR GEOTECHNICAL REPORT

This report is based on project details as provided to ETS Geo Pty Ltd at the time of commission. It therefore applies only to the site investigated, and to the specific set of project requirements as understood by ETS Geo Pty Ltd.

If there are changes to the project, you need to advise us in order that the effect of the changes on the report recommendations can be adequately assessed. ETS Geo Pty Ltd cannot take responsibility for problems that may occur due to project changes if we are not consulted.

It is important to remember that the subsurface conditions described in the report represent the state of the site at the time of investigation. Natural processes and the activities of man can result in changes to site conditions. For example, ground water levels can change, or fill can be placed on a site after the investigation is completed. If there is a possibility that conditions may have changed with time, ETS Geo Pty Ltd should be consulted to assess the impact on the recommendations of the report.

The site investigation only identifies the actual subsurface conditions at the location and time when the samples were taken. Geologists and engineers then extrapolate between the investigation points to provide an assumed three-dimensional picture of the site conditions. The report assumes that the site conditions as identified at the investigation locations are representative of the actual conditions throughout an area. This may not be the case and actual conditions may differ from those inferred to exist. This will not be known until construction has commenced. Your geotechnical report and the recommendations contained within it can therefore only be regarded as preliminary.

In the event that conditions encountered during construction differ from those described in the report, ETS Geo Pty Ltd should be consulted immediately. Although little can be done to change the actual site conditions which exist, steps can be taken to ameliorate the impact of unexpected conditions. For this reason, the services of ETS Geo Pty Ltd should be retained throughout the development stage of the project.

Problems can occur when other design professionals misinterpret a report. To help avoid this, ETS Geo Pty Ltd should be retained for liaison with other design professionals to explain the implications of the report.

This report should be retained as a complete document and should not be copied in part, divided, or altered in any way.

It is recommended that the services or ETS Geo Pty Ltd are retained during the construction phase to confirm that conditions encountered are consistent with design assumptions. For example, this may involve assessment of bearing capacity for footings, stability of natural slopes or excavations or advice on temporary construction conditions.

This document has been produced to help all parties involved recognise their individual responsibilities.

ATTACHMENT 7

ECOLOGICAL ASSESSMENT REPORT (PREPARED BY NATURA)

Ecological Assessment

Lot 2 on Plan SP126546

20 Warril Drive, Kuranda

Prepared for: Urban Sync
Prepared by: J. Pittard, A. Morris and R. Hughes
Date: 8 April 2022
Job #: NCO22-0006_Urban Sync_20 Warril Drive Kuranda
Version: 1.0

Natura Pacific – Document Control Sheet

Project	
Title:	**Ecological Assessment (Lot 2 SP126546)**
Authors:	**Joanna Pittard, Adam Morris & R. Hughes**
Mapping:	**Dr Mark Nadir Runkovski**
File reference:	**NCO22-0006_Urban Sync_Lot 2 on SP126546 20 Warril Drive Kuranda**
Project leader	**Joanna Pittard**
Phone:	**+(61) 7 5576 5568, +(61) 4 9111 3890**
Email:	**joanna.pittard@natura-pacific.com**
Client:	**Urban Sync**
Client contact:	**Matt Ingram**
Contact:	**matt@urbansync.com.au**
DCR #:	**NCO_PRJ_220408_Q00142**

Revision History

Version:	**Purpose:**	**Issued by:**	**Date**	**Reviewer:**	**Date:**
0.1	Draft	Joanna Pittard	07/04/2022	Angela Flaws	08/04/2022
1.0	Final	Joanna Pittard	08/04/2022	Kieran Richardt	08/04/2022

DISCLAIMER

This report and any files associated with it contain information which is confidential and may also be legally privileged. It is for the exclusive use of the client and its use is entirely limited to the specific purpose of the proposed development as was agreed to under the signing of the contract between the provider (us) and the recipient (you).

All the information contained within this report is provided in good faith in the belief that no information or recommendations made are misleading.

All comments and opinions provided in this report have been based upon a limited survey of the study site and/or on information supplied by the client, their agents and/or third parties.

All the assessments of site biology, ecology and the extent and nature of impacts of and to this study site is limited to the terms of reference stated within this report; and by the limited timeframe of study. Therefore the results presented herein cannot be considered absolute or conclusive without additional long-term follow-up studies.

Natura Pacific, its agents and employees, expressly disclaim any and all liability for representations, expressed or implied, contained in, or omissions from, this report or any of the written or oral communications transmitted to the client or any third party.

Acceptance of this document denotes acceptance of the above terms.

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List of Figures

List of Tables

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1 Introduction

1.1 Background

Natura Pacific was commissioned by Urban Sync to carry out an Ecological Assessment (EA) for 20 Warril Drive, Kuranda, Lot 2 on Plan SP126546, Queensland (the site). This Ecological Assessment is provided for the purpose of identifying ecological (flora and fauna) values within and adjacent to the areas of proposed works. Works proposed at the site are for a 1 lot into 5 lot subdivision with defined building envelopes and access.

1.2 Objectives

The objectives of the Ecological Assessment include:

- Desktop mapping of vegetation community types, topographical characteristics and any existing infrastructure.

- Desktop review of legislative requirements that are relevant to the development including assessment of the following key legislative documents:
    - *Environmental Protection and Biodiversity Conservation Act 1999*
    - *Vegetation Management Act 1999*
    - *Nature Conservation Act 1992*
    - *Water Act 2000*
    - *Fisheries Act 1994*

- Assessment of ecological features, primarily: location of known or expected significant flora, fauna and habitat, weed infestations, water bodies and/or drainage paths and conservation reserves.

- Assessment of the proposed development impacts on ecologically significant areas, buffers, ecological corridors and any potential onsite fauna.

- Assessment of ecological functions, including core habitat areas, ecological corridors and buffer areas.

- Provide recommendations to reduce the impact of the proposed development on ecological features and functions.

- Propose any additional management plans required to conserve ecologically significant areas within the proposed development footprint.

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2 Desktop analysis

2.1 Location

The subject site is located on Lot 2 SP126546 (20 Warril Drive, Kuranda). The lot is approximately 2.2 hectares in size and is approximately 1 kilometre west from the main highway that facilitates access to the township of Kuranda and to surrounding towns and Cairns City. The site neighbours several residential houses in the area and encompasses a large dam in the south-west of the land parcel. Vegetation is present over the remaining area of the site and continues north, south and west of Lot 2. Figure 1 presents the site location.

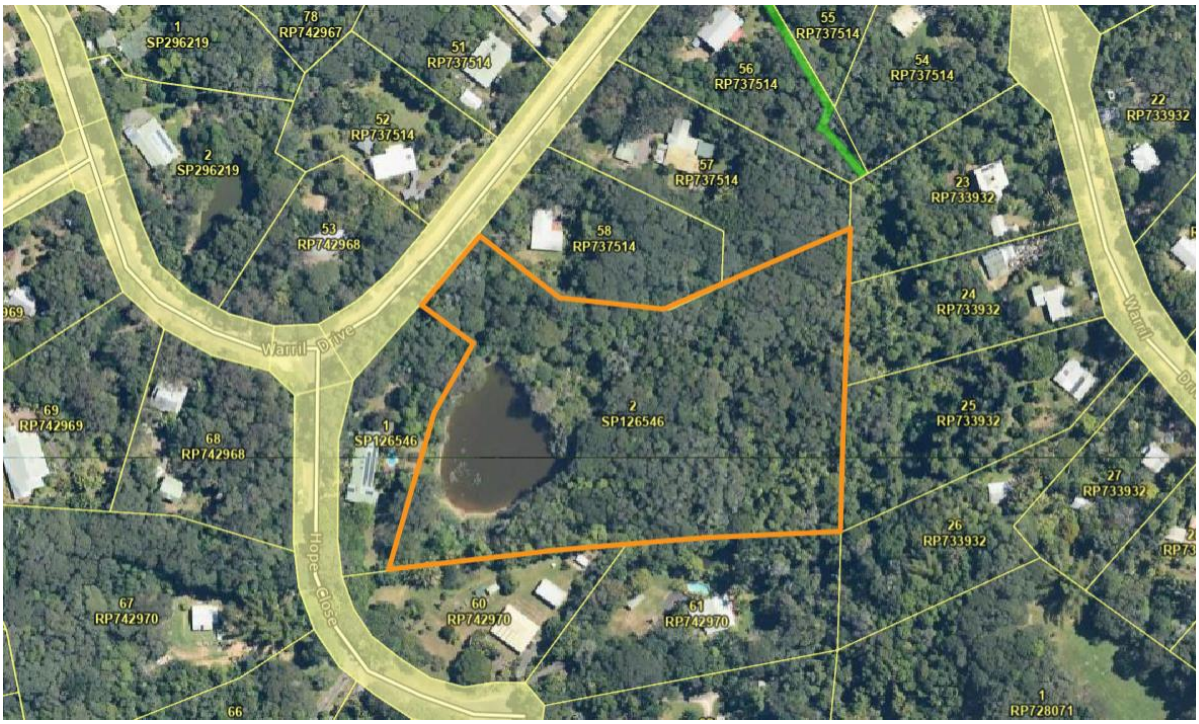

Figure 1 Property location (shown in orange) and surrounding area aerial imagery (Source: Queensland Globe 2022)

2.2 Current and historical land use

The site is currently vegetated over the majority of the site area. Areas fronting Warril Drive have been previously planted with a mixture of native species, exotic fruit trees and garden ornamentals. Native pre-clearing vegetation is also regrowing through these areas. A large dam is present in the south-western boundary of the site. Evidence of use of this dam by both fauna and humans is present. Seating has been constructed on the bank of the dam and a track has been maintained around the northern and eastern edges of the dam. Table 1 provides general information on relevant constraints as identified by the Mareeba Shire Council and associated Planning Scheme overlay maps.

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Table 1 Zoning and land use constraints of subject site

Property	Constraints
Lot / Plan: Lot 2 SP126546 Locality: Mareeba Shire Council	• Zone: Rural Residential (A) • Total Property Area: 22,810 m^2 • Environmental Significance - MSES Waterway Buffer and MSES Protected Vegetation • Areas of Local Ecological Significance – Strategic Rehabilitation Areas and Local Conservation Corridors • Hill and Slope Overlay – Hill and Slopes

2.3 Surrounding development

The proposed development is for a 1 lot into 5 lot subdivision. Each lot would have a defined building envelope ranging in size from approximately 800 m² to 1,200 m². Properties surrounding the site are also zoned rural residential and appear to have residential dwellings constructed on larger sized lots. Neighbouring houses were visible from the site, particularly near the dam, with one of the neighbouring houses overlooking the dam.

2.4 Soils

The subject is part of Landzone 11, according to regional ecosystem mapping.

> Landzone 11: *"Metamorphosed rocks, forming ranges, hills and lowlands. Primarily lower Permian and older sedimentary formations which are generally moderately to strongly deformed. Includes low- to high-grade and contact metamorphics such as phyllites, slates, gneisses of indeterminate origin and serpentinite, and interbedded volcanics. Soils are mainly shallow, gravelly Rudosols and Tenosols, with Sodosols and Chromosols on lower slopes and gently undulating areas. Soils are typically of low to moderate fertility."*

2.5 Vegetation

The Queensland *Vegetation Management Act 1999* provides regulation of clearing of Remnant Vegetation, High Value Regrowth, and Reef Regrowth in Queensland through the Regional Ecosystem vegetation classification system. Clearing is regulated in accordance with the level of significance of the vegetation communities identified under the system.

Remnant vegetation is defined by the State of Queensland within the 'Methodology for surveying and mapping regional ecosystems and vegetation communities in Queensland: Version 5.0' as:

> *"Vegetation that has at least 70% of the height and 50% of the cover of the dominant stratum, relative to the undisturbed height and cover of that stratum, and which is dominated by species characteristic of the vegetation's undisturbed canopy. The definition includes vegetation that has not been cleared, or has been lightly thinned, or vegetation that has been cleared or heavily thinned but substantially regrown (Neldner et al 2020). In vegetation with woody or shrubby canopies, the definition does not consider the composition or condition of the ground layer, i.e. the layer usually dominated by grasses and herbs, but is based primarily on the vegetation's canopy."*

The site is mapped by the Department of Natural Resources and Mines (DNRM) as containing 'Non-r*emnant*' Category X vegetation, and '*Reef Regrowth*' Category R vegetation. The Reef Regrowth is

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categorized as regrowth vegetation that is within 50 m of a waterway, watercourse or drainage area that is within a Great Barrier Reef catchment. A first order watercourse / drainage feature intersects the site in the south-eastern corner. Figure 2 provides a Regional Ecosystem extract and shows the property boundary (in orange), and a description of Regional Ecosystems is provided in Table 2. Appendix 1 has the full vegetation management report for the site.

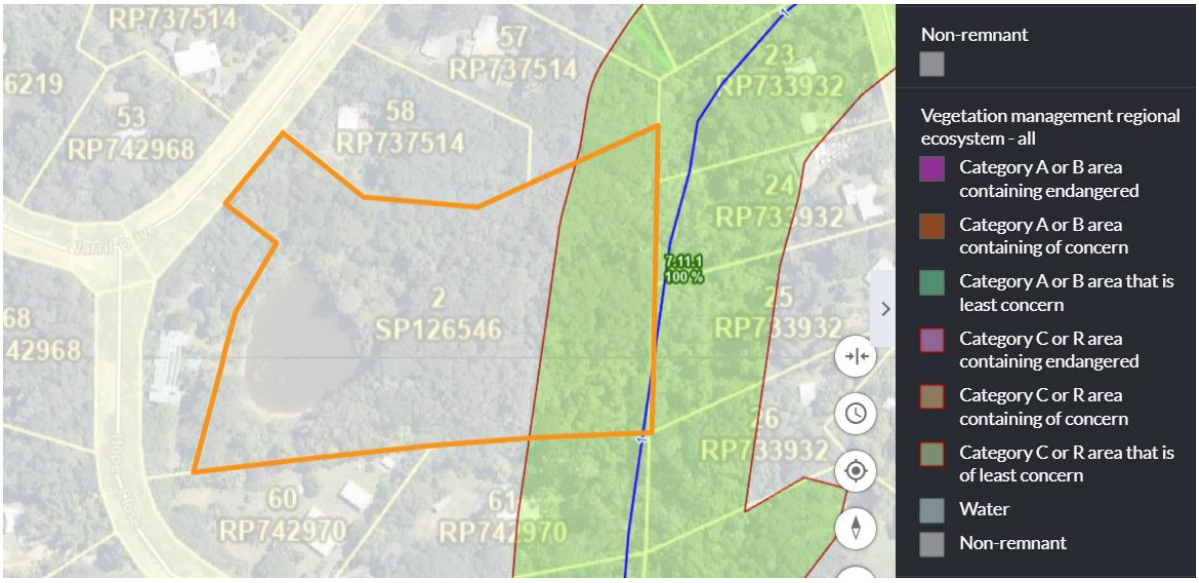

Figure 2 Regional Ecosystem extract (Source: Queensland Globe 2022)

Table 2 Regional Ecosystems mapped in the wider locality of the site (Source: Queensland Government 2022)

RE Code	Description	Status
7.11.1	Simple to complex mesophyll to notophyll vine forest on moderately to poorly drained metamorphics (excluding amphibolites) of moderate fertility of the moist and wet lowlands, foothills and uplands.	Least Concern

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2.6 Flora Trigger Survey Map

Flora Trigger Survey Maps are used to provide information on the presence of high-risk areas for protected plants and are used to determine flora survey and clearing permit requirements for a property. Review of the Flora Trigger Survey Map for the site under the *Nature Conservation Act 1992* reveals that the site is not situated within a high-risk area and is therefore exempt from requiring a protected plant survey (Figure 3). Note that should a threatened plant be identified on the property at any time, a clearing permit would then be required for any vegetation clearing within 100 m of the identified specimen.

Figure 3 Flora Trigger Survey Map (Source: Queensland Globe, 2022)

2.7 Fauna

2.7.1 Essential habitat

The subject site does not include any areas identified as *essential habitat* under the Queensland Government Essential Habitat Mapping Scheme. Areas to the south, southwest, and west of the site are indicated as containing essential habitat for the Southern Cassowary (*Casuarius casuarius johnsonii*).

Figure 4 Essential Habitat Map (Source: Queensland Globe, 2022)

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2.7.2 WildNet search

A WildNet database survey was undertaken to provide information on the likely occurrence of listed fauna on the subject site. Species lists returned from the WildNet tool are to be regarded as *potentially* occurring at the site only. These searches span over a wide range of habitats that may not occur at the site. Furthermore, results from the Wildnet search may be historical and unvetted, and therefore are not always accurate. Due to the above, and to ensure that results provided relevant information, the Wildnet search was confined to a 2 km radius.

The full results of the WildNet search are contained within Appendix 2, and Table 3 presents the species identified that are *endangered, vulnerable, near threatened* or *special least concern.*

Table 3 *Endangered, vulnerable, near threatened* and *special least concern* species identified in the Wildnet Search

Class	Family	Species	Common Name	Status*
Amphibians	Hylidae	*Litoria myola*	Kuranda treefrog	Critically Endangered
Amphibians	Hylidae	*Litoria rheocola*	Common Mistfrog	Endangered
Amphibians	Hylidae	*Litoria serrata*	Tapping green-eyed frog	Vulnerable
Birds	Casuariidae	*Casuarius casuarius johnsonii*	Southern Cassowary	Endangered
Birds	Estrildidae	*Chloebia gouldiae*	Gouldian Finch	Endangered
Birds	Monarchidae	*Symposiachrus trivirgatus*	Spectacled monarch	Special Least Concern
Birds	Psittacidae	*Cyclopsitta diophthalma macleayana*	Macleay's fig-parrot	Vulnerable
Mammals	Ornithorhynchidae	*Ornithorhynchus anatinus*	Platypus	Special Least Concern
Mammals	Tachyglossidae	*Tachyglossus aculeatus*	Short-beaked Echidna	Special Least Concern
Mammals	Vespertilionidae	*Murina florium*	Tube-nosed Insectivorous Bat	Vulnerable
Plants	Arecaceae	*Archontophoenix myolensis*	-	Endangered
Plants	Arecaceae	*Linospadix palmerianus*	-	Near Threatened
Plants	Zingiberaceae	*Alpinia hylandii*	-	Near Threatened

* Status indicates the Queensland conservation status under the *Environment Protection and Biodiversity Conservation Act 1999* and / or the *Nature Conservation Act 1992*

2.8 Matters of State Environmental Significance

The Queensland Government State Planning Policy defines Matters of State Environmental Significance (MSES). The Queensland Government State Planning Policy is a component of Queensland's land use planning system and defines the Queensland Government's policies about matters of state interest in land use planning and development. The Queensland Government State

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Planning Policy interactive mapping system indicates areas of MSES over the property that relate to the regulated vegetation mapping discussed in Section 2.5 of this report. Figure 5 shows the site on the State Planning Policy Interactive Mapping System.

Figure 5 Queensland Government State Planning Policy – Biodiversity (Source: Queensland Government 2022).

2.9 Matters of National Environmental Significance

The federal government protected matters search tool identifies Matters of National Environmental Significance (MNES) as potentially occurring within the surrounding area (Appendix 3).

Desktop search results for MNES return a wide range of records based upon possible habitat for species that are listed as threatened pursuant to the *Environmental Protection and Biodiversity Conservation Act 1999*. A review of these search results has identified 30 different threatened species and 2 different migratory species have potential to occur within the wider site locality.

2.10 Planning designation

2.10.1 Far North Queensland Regional Plan

The Far North Queensland (FNQ) Regional Plan divides land in the region into three regional land use categories: regional landscape and rural production area; urban footprint; and rural living area. These categories provide a spatial context for the preferred pattern of development in the regional plan. The site falls within the *'Regional Landscape and Rural Production Area'* category, including lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

2.11 Mareeba Shire Council Planning Scheme Overlays

2.11.1 Zone and Zone Precincts

The Mareeba Shire Council applies zoning to areas as an assessment tool. The site is situated within the rural residential zone, and is bordered by properties that are also rural residential zone.

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Figure 6 Mareeba Shire Council Zone Map (Source: Mareeba Shire Council Planning Scheme 2016)

2.11.2 Environmental Significance Overlay

The Mareeba Shire Council Environmental Significance Overlay aims to identify and protect matters of environmental significance, which include matters of state environmental significance (MSES) as defined under the state planning policy. The Environmental significance overlay code ensures that:

(a) waterways and high ecological significance wetlands are protected and enhanced to maintain ecosystem services and hydrological processes and provide aquatic habitat for flora and fauna; and
(b) the environmental values of regulated vegetation, wildlife habitat, protected areas and legally secured offset areas are protected and managed.

A portion of the site is affected by the 'Environmental Significance Overlay'. This Ecological Assessment Report has been produced to assess compliance with the performance outcomes associated with this overlay. Figure 7 below shows location of the Environmental Significance Overlay over the site. Figure 8 shows where the site is situated within areas of 'Local Ecological Significance' including '*Strategic Rehabilitation Planning'* and *'Local Conservation Corridors'* under the Mareeba Shire Council Planning Scheme 2016.

Figure 7 Environmental Significance Overlay (Source: Mareeba Shire Council Planning Scheme 2016)

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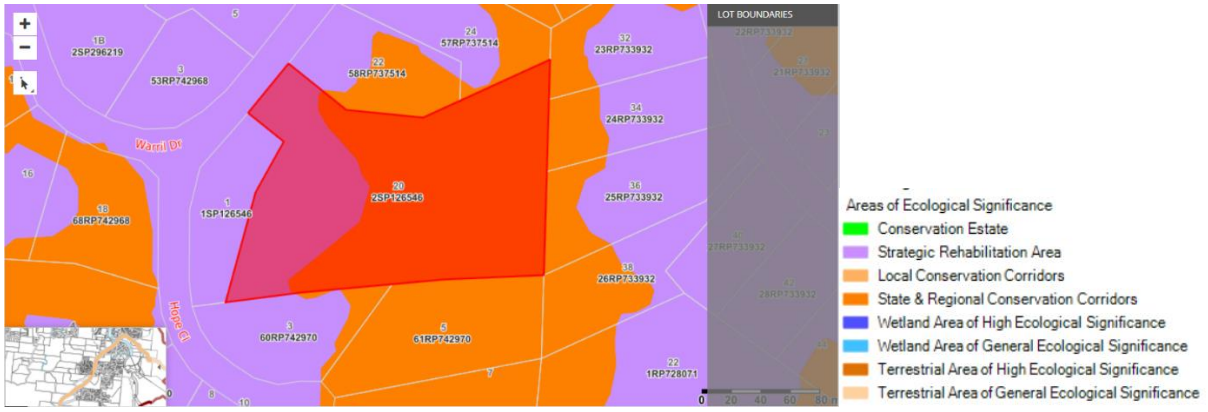

Figure 8 Areas of Ecological Significance Overlay (Source: Mareeba Shire Council Planning Scheme 2016)

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3 Site Assessment

3.1 Survey methods

A summary of survey methodology is as follows:

- Diurnal field survey conducted by two ecologists over a full day on 30 March 2022.
- Identification of individual flora and fauna species, or evidence of fauna species (e.g. scats, scratches, nests) and compilation of species lists.
- Assessment of biosecurity including any significant weed infestations.
- Observations and active searches for Endangered, Vulnerable, Near Threatened or locally significant species (EVNT) that may fall within the area of the proposed construction site.
- Baited camera traps set in 2 locations of the site for a period of 2 nights and 2 days each (total of 4 days and 4 nights of camera trap effort).

A site visit was conducted by two Senior Ecologists on Wednesday 30 March 2022. Camera traps were set on the afternoon of 30 March 2022 and collected on the afternoon of 1 April 2022. These site surveys were conducted to assess the key environmental values present within the proposed development footprint and the wider site area to allow for informed recommendations.

3.2 Vegetation

3.2.1 Ground-truthed vegetation

Vegetation at the site varies over the changing landform of the site, which includes a large dam, as well as a drainage line and a natural creek which both run through steep gullies. Other areas of the site are also steeply sloped in some locations and historically cleared or disturbed in some areas. Most of the site has mature vegetation present.

The site has been separated into three distinct vegetation community types (VTs) and these have been identified in Table 4, described in the following sections and mapped on Figure 9.

Table 4 Vegetation Types (VTs) identified during site assessment

Vegetation Type	Description
VT1	Dam and associated riparian vegetation community within a 10 m buffer of the water's edge
VT2	Waterway and drainage line contained within steep gullies and associated complex mesophyll vine forest vegetation consistent with RE 7.11.1a
VT3	Mesophyll vine forest recovering from disturbance, with Acacia spp. canopy or emergents consistent with RE 7.11.1b

The following headings provide brief summaries of the structure and condition of the identified vegetation communities, followed by representative photographs of each vegetation community type. Figure 9 shows the location of vegetation communities.

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VT1

This vegetation type encompasses the large dam and surrounding riparian vegetation within an approximate buffer of 10 m from the water's edge. The dam has established aquatic and riparian vegetation within and surrounding the waters edge. The vegetation has been cleared at one section of the waters edge where the driveway meets the dam. This cleared area is dominated by the exotic ground cover Singapore Daisy (*Sphagneticola trilobata*) and numerous exotic 'garden escapees' and 'agricultural weeds'. Native species present within this area are typical of riparian margins and disturbed areas that are regenerating, and include species such as *Melaleuca leucadendra, Acacia celsa, Alphitonia sp.* and *Glochidion sumatranum*. The average canopy height within this VT was estimated to be 14 - 16 m and the canopy cover estimated at 40%. Photo Plates 1 and 2 show this vegetation type.

VT2

VT2 describes the vegetation present within the waterway at the rear of the property, and the drainage line that runs along the boundary of proposed lots 23 and 24 and vegetation contained within an approximately 20 m buffer of the centreline of these flow paths. This vegetation is consistent with the Regional Ecosystem 7.11.1a (Mesophyll vine forest. Lowlands and foothills on metamorphics. Very wet and wet rainfall zones). The canopy is significantly higher in VT2 than observed in in VT1, at 22 to 25 m. The vegetation is primarily comprised of native, endemic, rainforest species and is dominated by *Eleaocarpus grandis, Alstonia muerelliana, Acacia Celsa* and *Cryptocarya hypospodia* in the canopy layer, *Cyathea cooperi, Myrystica insipida*, and *Meliocope elleryana* in the sub-canopy layer*, Polycias australis, Pandanus monticola* and *Angiopteris evecta* in the shrub layer and heavily vegetated with *Calamus australis* (Wait-a-while vine) through the ground layer. This VT contains good quality habitat for amphibians and an intact native vegetation community likely to be consistent with the status of remnant vegetation. Photo Plates 3 and 4 show this vegetation type.

VT3

VT3 has been mapped as non-remnant vegetation. However, vegetation present within VT3 was identified during the site assessment to be consistent with the vegetation described as mesophyll vine forest recovering from disturbance, with *Acacia* spp. canopy or emergents consistent with RE 7.11.1b. This community is characterised by steep ridges and gullies on metamorphics. The canopy layer is dominated by *Acacia celsa* which does indicate past disturbance; however, the size of the canopy trees present indicates that disturbance is likely to have been over 30 years ago, with some *Acacia celsa* trees having a measured DBH of 50 cm and 70 cm. The canopy layer ranged from approximately 15 to 18 m and was dominated by *Acacia celsa* with *Alstonia muelerana* also present. *Polycias australianum* and *Polycias elegans* were present in the sub-canopy layer and the shrub and ground layers represented the highest diversity in this vegetation type*. Mallotus acutefolius, Neolitsea dealbata, Cryptocarya murryi, Rhodamnia cessiflora* and *Syzigium wilsonii* were common in the shrub layer, while species such as *Tetracera daemeliana, Callamus australis, Ghania aspera, Dianella atractis, Psuedoranthum variabale, Oplismenus mollus* and *Axonopus compressus* were common in the ground layer or present as vines. Photo Plates 5 and 6 show this vegetation type.

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Photo Plate 1 VT1 showing vegetation that surrounds the dam

Photo Plate 2 VT1 showing the large dam located on the site

Photo Plate 3 VT2 taken from centreline of drainage gully that runs between Lots 23 and 24

Photo Plate 4 VT2 taken from centreline of waterway at the rear boundary of the property

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Photo Plate 5 VT3 showing cleared area looking towards driveway

Photo Plate 6 VT3 taken from NE corner peg of Lot 22 building envelope looking SW into the proposed building envelope area

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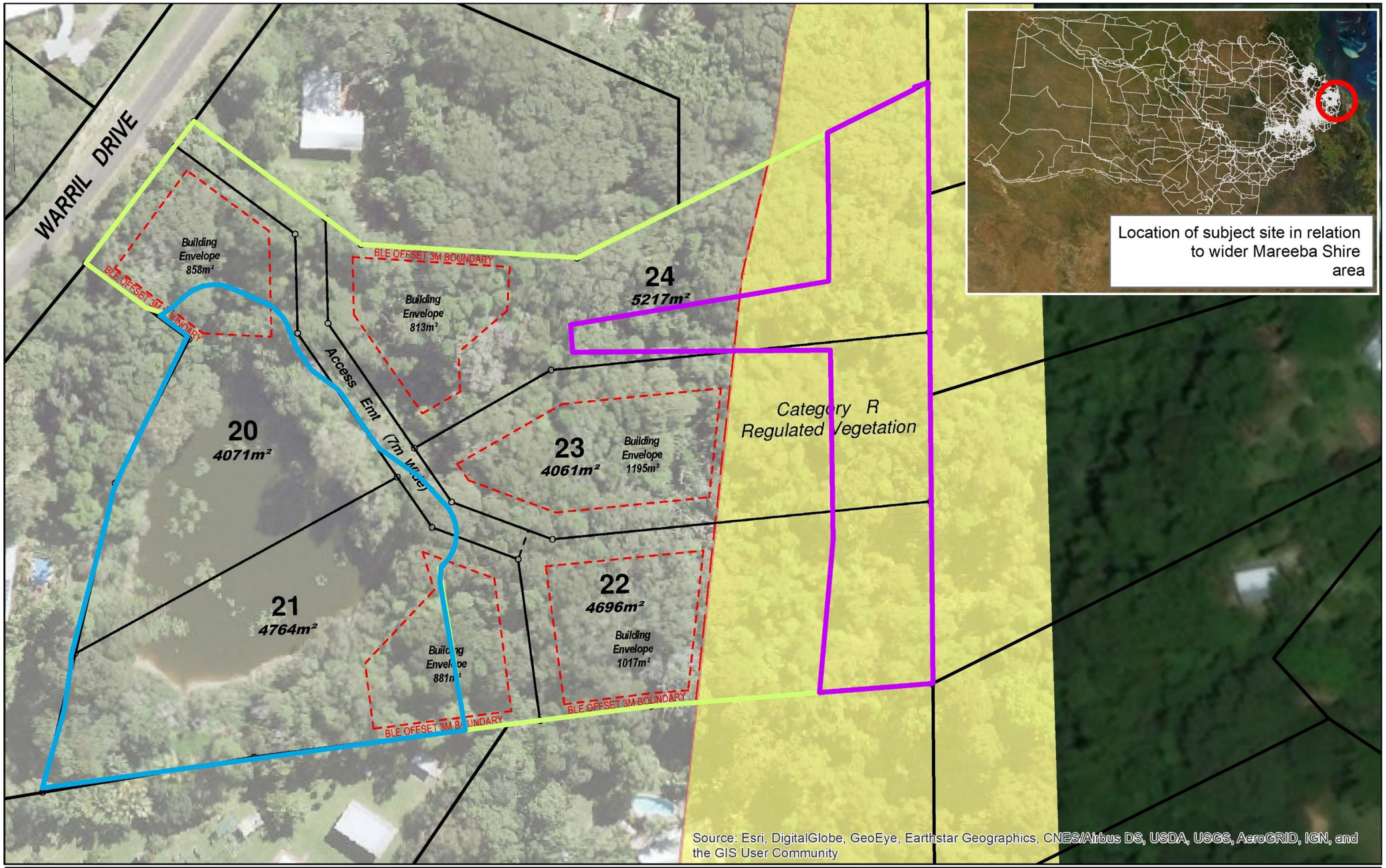

Figure 9 Vegetation Types (VTs) observed during the site assessment

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Table 5 presents the full native species list for the proposed development footprint and wider site area. All native species located are listed as 'Least Concern' or 'Special Least Concern' pursuant to the *Nature Conservation Act 1992* and *Environment Protection and Biodiversity Conservation Act 1999*.

Table 5 Native vegetation species list for the proposed clearing footprint and wider site area vegetation types

Details			Vegetation Types			Conservation Status	
Botanical Name	**Common Name**	**Family**	**VT1**	**VT2**	**VT3**	**NC Act 2002**	**EPBC Act 1999**
Acacia celsa	Hickory Wattle	Fabaceae	●	●	●	LC	C
Alphitonia oblata	Hairy Sarsaparilla Ash	Rhamnaceae	●		●	LC	C
Alstonia muelleriana	Yellowwood	Apocynaceae	●	●		LC	C
Archirhodomyrtus beckleri	Small-leaved Myrtle	Myrtaceae			●	LC	C
Calamus australis	Lawyer Cane	Arecaceae		●	●	LC	C
Calamus moti	Vicious Lawyer Cane	Arecaceae		●	●	LC	C
Cissus antarctica	Kangaroo Vine	Vitaceae		●	●	LC	C
Cryptocarya hypospodia	Rib-fruited Pepperberry	Lauraceae		●		LC	C
Cryptocarya murrayi	Murray's Laurel	Lauraceae			●	LC	C
Cupaniopsis foveolata	Toothed Tuckeroo	Sapindaceae			●	LC	C
Cyathea cooperi	Scaly Tree-fern	Cyatheaceae		●		LC	C
Cyathea rebeccae	Black Tree-fern	Cyatheaceae		●	●	LC	C
Cymbidium madidum	Giant Boat-lipped Orchid	Orchidaceae	●			SL	C
Dianella atraxis	Northern Flax Lily	Hemerocallidaceae			●	LC	C
Drynaria rigidula	Basket Fern	Polypodiaceae	●	●	●	SL	C
Dysoxylum pettigrewianum	Spur Mahogany	Meliaceae			●	LC	C
Elaeocarpus grandis	Blue Quandong	Elaeocarpaceae	●	●	●	LC	C
Eucalyptus tereticornis	Queensland Blue Gum	Myrtaceae	●			LC	C
Ficus congesta	Cluster Fig	Moraceae	●	●	●	LC	C
Gahnia aspera	Saw-sedge	Cyperaceae	●	●	●	LC	C

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Details			Vegetation Types			Conservation Status	
Botanical Name	**Common Name**	**Family**	**VT1**	**VT2**	**VT3**	**NC Act 2002**	**EPBC Act 1999**
Glochidion sumatranum	Umbrella Chees Tree	Phyllanthaceae	●		●	LC	C
Grevillea baileyana	Brown Silky Oak	Proteaceae			●	LC	C
Guioa acutifolia	Glossy Tamarind	Sapindaceae			●	LC	C
Guioa lasioneura	Silky Tamarind	Sapindaceae			●	LC	C
Hibbertia scandens	Climbing Guinea Flower	Dilleniaceae	●			LC	C
Hypserpa laurina	Laurel-leaf Hypserpa	Menispermaceae		●	●	LC	C
Linospadix minor	Minor Walking Stick Palm	Arecaceae	●	●	●	LC	C
Lomandra hystrix	Mat Rush	Asparagaceae	●			LC	C
Mackinlaya confusa	-	Apiaceae	●			LC	C
Mallotus ficifolius	Fig-leaved Mallotus	Euphorbiaceae			●	LC	C
Melaleuca bracteata	Black Tea-tree	Myrtaceae	●			LC	C
Melaleuca leucadendra	Weeping Paperbark	Myrtaceae	●			LC	C
Melaleuca quinquenervia	Broad-leaved Paperbark	Myrtaceae	●			LC	C
Melaleuca viminalis	Weeping Bottlebrush	Myrtaceae	●			LC	C
Melicope elleryana	Pink Doughwood	Rutaceae		●		LC	C
Melodinus australis	Southern melodinus	Apocynaceae	●			LC	C
Myristica insipida	Australian Nutmeg	Myristicaceae		●		LC	C
Neolitsea dealbata	White Bolly Gum	Lauraceae	●		●	LC	C
Nymphaea caerulea	Blue Lotus	Nymphaeaceae	●			LC	C
Nymphaea immutabilis	-	Nymphaeaceae	●			LC	C
Ophioglossum pendulum	Ribbon Fern	Ophioglossaceae			●	LC	C
Oplismenus mollis	-	Poaceae	●		●	LC	C

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Details			Vegetation Types			Conservation Status	
Botanical Name	**Common Name**	**Family**	**VT1**	**VT2**	**VT3**	**NC Act 2002**	**EPBC Act 1999**
Pandanus monticola	Screw Palm	Pandanaceae		●	●	LC	C
Passiflora kuranda	Kuranda Passionfruit	Passifloraceae		●	●	LC	C
Phyllanthus multiflorus	Waterfall plant	Phyllanthaceae	●			LC	C
Piper caninum		Piperaceae	●		●	LC	C
Platycerium bifurcatum	Elkhorn Fern	Polypodiaceae	●		●	SL	C
Polyscias australiana	Ivory Basswood	Araliaceae		●	●	LC	C
Polyscias elegans	Celerywood	Araliaceae			●	LC	C
Pseuderanthemum variabile	Pastel Flower	Acanthaceae			●	LC	C
Pyrrosia longifolia	-	Polypodiaceae	●		●	LC	C
Rhodamnia sessiliflora	Iron Malletwood	Myrtaceae			●	LC	C
Syzygium wilsonii	Powder-puff Lily Pilly	Myrtaceae			●	LC	C
Tetracera daemeliana	Large-leaved Fire Vine	Dilleniaceae			●	LC	C
Terminalia catappa	Tropical Almond	Combretaceae	●			LC	C
Tetracera nordtiana	Fire Vine	Dilleniaceae			●	LC	C
Timonius timon	Tim-tim	Rubiaceae	●			LC	C
Toechima daemelianum	Cape Tamarind	Sapindaceae			●	LC	C

LC – Least Concern, SL – Special Least Concern pursuant to the *Nature Conservation Act 1992*. C – Common pursuant to the *Environment Protection and Biodiversity Conservation Act 1999*

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Table 6 Weeds identified during site assessment and their status under the *Biosecurity Act 2015*

Species	Common Name	*Restricted Invasive Plant
Ageratum houstonianum	Blue Billygoat-weed	
Ardesia elliptica	Shoebutton Ardesia	
Axonopus compressus	Broad-leaved Carpet Grass	
Cocos nucifera	Coconut Tree	
Dypsis lutescens	Golden Cane Palm	
Eugina uniflora	Brazilian cherry	
Psidium guajava	Guava	
Setaria sp.	Pigeon Grass	
Sphagneticola trilobata	Singapore Daisy	RIP

*Invasive Plant Status under *Biosecurity Act 2014*

PIP = Prohibited invasive plants must not be kept, moved, given away or sold without a permit. The Biosecurity Act requires that all sightings to be reported to Biosecurity Queensland within 24 hours. By law, everyone has a general biosecurity obligation to take all reasonable and practical steps to minimise the risk of spreading prohibited invasive plants until they receive advice from an authorised officer.

RIP = Restricted invasive plants must not be given away, sold or released into the environment without a permit. The Biosecurity Act requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control. At a local level, each local government must have a biosecurity plan that covers invasive plants and animals in its area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws.

OIP = Other invasive plants are not prohibited or restricted, however, by law, everyone has a general biosecurity obligation to take reasonable and practical steps to minimise the risks associated with invasive plants under their control. Local governments must have a biosecurity plan that covers invasive plants and animals in their area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws.

No species of plant were detected within the site that are an Endangered, Vulnerable or Near Threatened species pursuant to the *Nature Conservation Act 1992* and / or the *Environment Protection and Biodiversity Conservation Act 1999*. Several plants were located that are Special Least Concern pursuant to the *Nature Conservation Act 1992* being several Boat-lipped Orchids and Elkhorn Ferns. These are protected from wild harvest for profit or gain by individuals. This protection is not applicable in relation to clearing for an approved development.

3.3 Fauna

3.3.1 Fauna surveys

A one-day duration diurnal fauna survey was conducted by Natura Pacific ecologists to assess the nature of faunal activity within the site footprint of the initial site survey brief. Direct targeted searches were undertaken for any fauna species including obvious signs of activity from scats, scratches and nests. This involved searching suitable habitat in and immediately adjacent to the proposed works areas and completing targeted searches for any threatened species.

In addition to the diurnal surveys, two baited camera traps were set in different habitat areas of the site. One camera trap was set within VT2 and the other was set in VT3. Both traps were baited with a secured chicken neck and a mixture containing oats, peanut butter and honey. The traps were set for a period of 2 days and 2 nights.

Fauna surveys were limited by the small survey window. Seventeen bird, three reptile, four amphibian and six mammal species were recorded in the survey area. A complete fauna list is presented in Table 7. The survey track and camera trap locations are provided in Figure 10.

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Table 7 Fauna species identified on the site during field surveys

Genus and Species	Common Name	Method**	NCA1*	EPBC2*
AVES				
Ailuroedus melanotis	Spotted Catbird	O	LC	C
Alectura lathami	Brush Turkey	O	LC	C
Cacatua galerita	Sulphur-crested Cockatoo	O	LC	C
Ceyx pusilla	Little Kingfisher	O	LC	C
Chrysococcyx minutillus	Little Bronze-Cuckoo	O	LC	C
Cracticus quoyi	Black Butcherbird	O	LC	C
Cyclopsitta diophthalma macleayana	Macleay's Fig Parrot	O	V	C
Dicrurus bracteatus	Spangled Drongo	O	LC	C
Geopelia humeralis	Bar-shouldered Dove	V	LC	C
Gerygone magnirostris	Large-billed Gerygone	O	LC	C
Meliphaga notata	Yellow-spotted Honeyeater	O	LC	C
Nectarinia jugularis	Olive-backed Sunbird	O	LC	C
Psophodes olivaceus	Eastern Whipbird	O	LC	C
Symposiarchus trivirgatus	Spectacled Monarch	O	SL	C
Todiramphus macleayii	Forest Kingfisher	O	LC	C
Tregellasia capito	Pale-yellow Robin	V	LC	C
Trichoglossus haematodus	Rainbow Lorikeet	V	LC	C
REPTILES				
Carlia rubrigularis	Red-throated Rainbow Skink	O	LC	C
Intellagama lesueurii	Eastern Water Dragon	O	LC	C
Varanus varius	Lace Monitor	CT	LC	C
AMPHIBIANS				
Mixophyes coggeri	Mottled Barred Frog	O	LC	C
Papurana daemeli	Wood Frog	O	LC	C
Ranoidia jungguy	Northern Stoney Creek Frog	O	LC	C
Rhinella marina	Cane Toad	O	I	I
MAMMALS				
Hydromys chrysogaster	Water Rat	CT	LC	C
Perameles nasuta	Long-nosed Bandicoot	CT	LC	C
Rattus sp.	Unidentified Rat	CT	LC	C
Rattus rattus	Black Rat	CT	I	I
Thylogale stigmatica	Red-legged Pademelon	CT	LC	C
Uromys caudimaculatus	Giant White-tailed Rat	CT	LC	C

Note that: *Status refers to as listed in the *Queensland Nature Conservation, Wildlife Regulation 1994* (*Nature Conservation Act 1992*): E = Endangered, V = Vulnerable, RV = Regionally Vulnerable, R = Rare, C = Common, I = introduced species, and as listed in the *Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)*: CE*= Critically endangered, E*= Endangered, V*= Vulnerable, CD*= Conservation dependent, I = Introduced species, C = Common SL = Special Least Concern; **Method of identification: V = Vocalization, O = Observed, CT = Camera Trap, S = Other Signs of Presence (scats, tracks, scratches).

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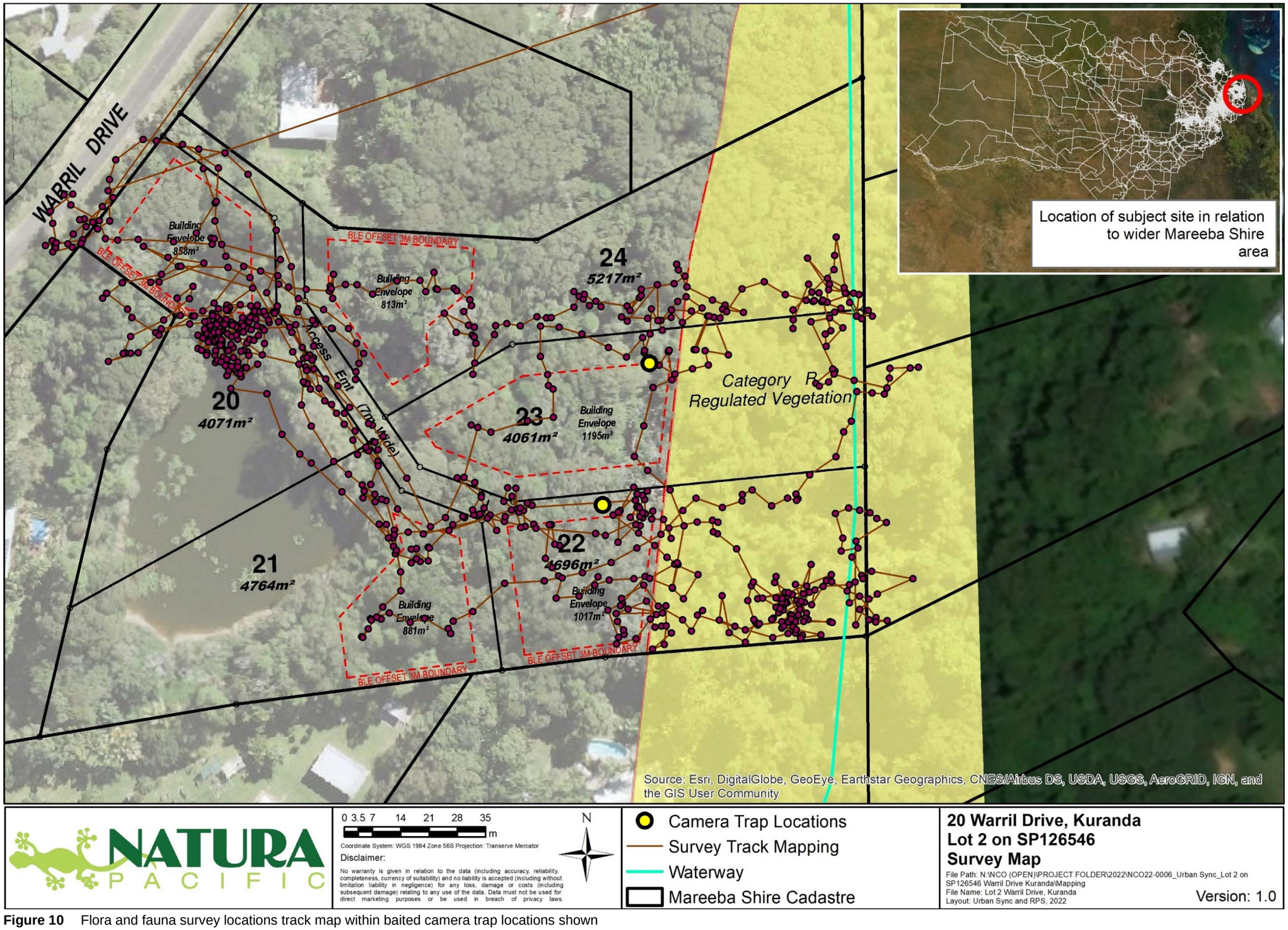

Figure 10 Flora and fauna survey locations track map within baited camera trap locations shown

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3.3.2 Habitat assessment

Sections of intact vegetation within the site were found to provide a wide range of habitats suitable for fauna including good quality riparian habitat that supports amphibian breeding activities, excavated arboreal and terrestrial termitaria, mound nests of Brush Turkeys, hollow ground logs, burrows, structured ground cover and feed trees for gliders and Striped Possums.

No active nests were directly confirmed within the site's footprint. However, amphibian breeding was confirmed in both the drainage gully and the dam. It should also be noted that excavated termitaria are likely to provide breeding habitat for possums, gliders, Lace Monitors, and hollow-dependant bird species and were not able to be checked for breeding activity in the brief site survey. An inactive nest of the Brush Turkey was present and further activity of this species was confirmed on the site, so active nest mounds are likely to be encountered.

The riparian habitat along the waterway at the rear boundary of the site was the best quality habitat available at the site and is likely to support breeding activities of threatened species such as the *Litoria myola* (Critically Endangered Kuranda Treefrog), and the *Litoria serrata* (Vulnerable Tapping Green-eyed Treefrog).

One migratory (Special Least Concern) species was confirmed to be using the site. This was the Spectacled Monarch. This species migrates south to breed but generally some individuals will also remain in the area to breed. The survey was conducted outside of the regular breeding time for this species (Sept-Feb) however suitable breeding habitat was present within VT2 as shown on Figure 9.

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4 Legislative requirements

4.1 Federal Government interests

The site was identified within desktop review as potentially impacted by matters of national environmental significance. Matters of National Environmental Significance (MNES) are governed by the *EPBC Act*. The MNES identified as potentially occurring on the site through the desktop review include listed threatened species and migratory species.

The site visit did not detect any signs of threatened species using the site. The waterway at the rear boundary of the property is however likely to support listed threatened amphibian species and works must be carefully managed to ensure any potential impacts to this waterway are avoided so as not to risk causing harm to any MNES.

Prior to any vegetation clearing, the clearing area should be assessed again for the presence of threatened species or breeding places of special least concern (migratory / marine) species, by a licenced fauna spotter catcher operating under a Rehabilitation Permit approved by the DEHP.

4.2 State Government interests

The site has Matters of State Environmental Significance (MSES) as identified within the desktop review including reef regrowth vegetation, and threatened and Special Least Concern wildlife. MSES are governed by the *Nature Conservation Act 1992* and the *Vegetation Management Act 1999* and their supporting regulations.

The site is not within the trigger area for threatened plants and is therefore exempt from requiring a formal protected plant survey. If at any time a threatened plant is identified on the property and works a proposed within 100 m of this plant, a clearing permit application would be required. Several Special Least Concern plants *were* identified on the site, and these are protected from the wild plant harvest trade and cannot be taken for this purpose without a valid permit. Clearing in relation to an approved development is not subject to these legislative restrictions.

The Special Least Concern animal identified within the desktop search (Spectacled Monarch) was also identified on the site and suitable breeding habitat for this species was present in waterway and drainage line gullies. Areas of the site do contain suitable habitat for this species and are largely being preserved in the mapped regrowth vegetation at the rear of the site, as part of the proposed development application. Recommendations in this report have been developed to further preserve the habitat present at the site for this and other species confirmed.

4.3 Local Government interests

The site falls within the Mareeba Shire Council area. Local government interests are governed under the Mareeba Shire Council Planning Scheme 2016 (major amendment 2020). Various local government interests have been identified through the desktop review. Further details of the local government interests and requirements for the proposed development under the planning scheme 2016 are as follows.

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4.3.1 Environmental Significance Overlay

The site is impacted by the '*Environmental Significance Overlay'* under the Mareeba Shire Council Planning Scheme. The mapped environmental significance areas over the site align with the mapped MSES vegetation which is shown as reef regrowth (Category R) vegetation.

The Mareeba Shire Council Planning scheme also defines areas of the region that are '*Strategic Rehabilitation and Ecological Corridors'* which are mapped over the entire site as shown in Figure 8 of this report. The Mareeba Shire Council aims to protect these areas via the specific outcomes outlined within Element 3.4.5 of the Mareeba Shire Council Planning Scheme.

The Specific Outcomes of the strategic rehabilitation and ecological corridors element states that:

(a) Ecological corridors are major existing habitat corridors that link key biodiversity areas within Mareeba Shire and greater Far North Queensland region. Development does not compromise the habitat connectivity of ecological corridors.

(b) Habitat linkages are strategically located future habitat corridors linking biodiversity areas within the shire. Development does not compromise the ability to realise these opportunities for ecological connectivity through progressive revegetation of habitat linkages with native vegetation.

To achieve these specific outcomes, we recommend that the buffer zone between the development and the best quality habitat for threatened species contained within VT2, is carefully managed through enacting the recommendations of this Ecological Assessment report.

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5 Environmental Management – Recommendations

5.1 Strategic rehabilitation and ecological corridors

The site's natural vegetation provides numerous opportunities for fauna movement between surrounding areas of vegetation, particularly along the waterway that is present along the eastern boundary of the site and continues to the north and south. Vegetation contained within VT2 represents the waterway, drainage gully, and surrounding riparian zone where complex mesophyll vine forest vegetation consistent with RE 7.11.1a. VT2 is considered to be of particular ecological importance for the key reasons outlined as follows:

- High structural complexity of the vegetation, particularly in the ground and shrub layers – this provides shelter and foraging opportunities for diverse range of fauna species, both to traverse through the area and also utilize the area.

- The steep sided gullies and flowing / pools of water present within the gullies of VT2 indicate the passage of high volumes water through these areas during and following rainfall events – the existing small volume of water is currently providing breeding habitat for at least one species of amphibian. As water flows increase during rainfall events it is likely to support breeding of further amphibian species such as the threatened treefrog species known in the region *Litoria serrata* and *Litoria myola*.

- Vegetation contained within VT2 is *not* currently being impacted by weed incursion, erosion or sedimentation. The base of this gully is clay in most parts, which can be susceptible to erosion and sedimentation. Any opening of the canopy via vegetation removal is likely to result in bank destabilization and infestation of VT2 with the Restricted Invasive Plant: Singapore Daisy (*Sphagneticola trilobata*) which is already present on the site and has heavily infested the existing cleared area adjacent to the dam.

The vegetation within VT2 on the site is proposed to be retained largely in its current state within the current proposed layout. The current proposed layout retains all vegetation along the waterway at the rear boundary of the site. The drainage line is situated between the proposed building envelopes of Lots 23 and 24 and is therefore not being directly impacted. We recommend that the building envelope of Lot 23 is reduced in the north-east corner to provide a minimum buffer of approximately 20 m to the drainage gully. We have indicated this (approximately) within the following Figure 11.

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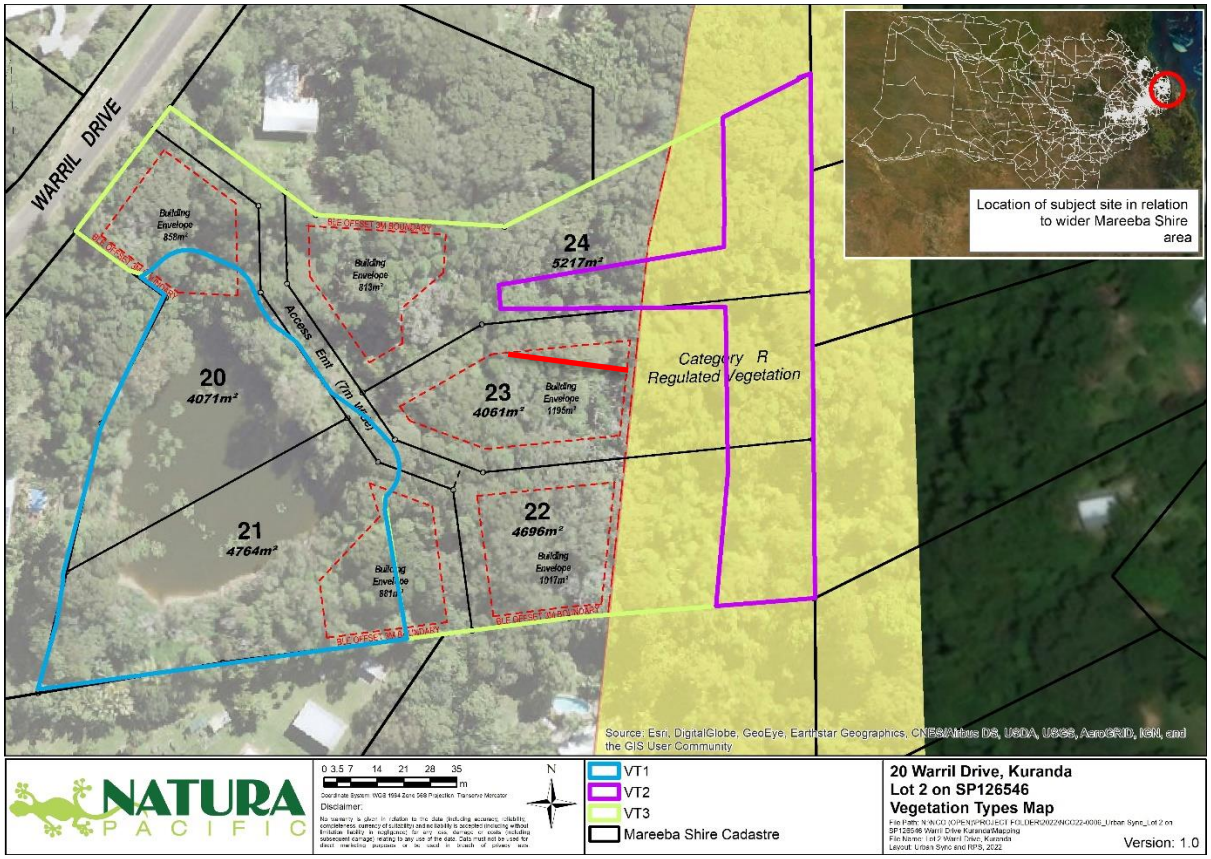

Figure 11 VT Map indicating the recommended approximate reduction of building envelope of Lot 23 to achieve a 20 m set-back from the drainage line

Further management measures should be implemented through design, construction and finalisation, such as erosion and sedimentation control measures, weed control, replacement of native trees through appropriate landscaping, appropriate fauna management measures and exclusion of construction and other access to sensitive ecological areas.

5.2 Buffers

Native species that are endemic to the site and surrounding area should be selected in landscape plantings and for rehabilitation of disturbed areas surrounding the construction footprint.

The location of the works should be assessed by a consulting arborist to mitigate the impact of the construction footprint on vegetation adjacent to the structures as well as to any vegetation being retained within the subject site that is in close proximity to structures. This needs to be undertaken to ensure the longevity of the vegetation ear-marked for retention surrounding the construction footprint.

5.3 Significant species

Active animal breeding places were identified within VT1 and VT2 which are not proposed to be impacted directly. A further inspection of the site prior to any vegetation disturbance is required to ensure that fauna have not taken up occupancy within the proposed clearing footprints in the time that has elapsed. Should any native animal breeding places be present within trees or other structures to be removed, approval is to be sought for the destruction of animal breeding places from the Department of Environment and Science. A licensed fauna spotter is required to conduct a pre-clearance fauna

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inspection and oversee all vegetation clearing works to identify animal breeding places, obtain approval to destroy the animal breeding place, and manage any fauna interactions that may occur.

5.4 Spotter catcher

A qualified Spotter Catcher with a current license issued by DES must be present to inspect any trees to be felled prior to clearing. In particular, the Spotter Catcher is to inspect the trees for arboreal mammals, nesting birds, microbats and species that use hollows. Additionally, the Spotter Catcher will inspect ground habitat and relocate native terrestrial fauna.

5.5 Sediment fencing

To ensure that sediment runoff does not impact any retained vegetation or impact water quality in the waterway and drainage line within VT2, or the dam within VT1, strict erosion and sediment control measures are to be installed prior to any ground disturbance work and maintained throughout construction until all exposed surfaces are stabilized with revegetation. Erosion and Sediment Control should be managed through engagement of a suitably qualified due to the sensitivity of the surrounding environment.

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6 Appendices

APPENDIX 1 – Vegetation Management Report

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Vegetation management report

For Lot: 2 Plan: SP126546

28/03/2022

Queensland Government

This publication has been compiled by Operations Support, Department of Resources.

Recent changes

Updated mapping

Updated vegetation mapping was released on 8 September 2021 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

1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 2 Plan: SP126546, 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)
2	SP126546	Freehold	22,810

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.

1.2 Property location

Table 2 provides a summary of the locations for property Lot: 2 Plan: SP126546, in relation to natural and administrative boundaries.

Table 2: Property location details

Local Government(s)
Mareeba Shire

Bioregion(s)	Subregion(s)
Wet Tropics	Macalister

Catchment(s)
Barron

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: 2 Plan: SP126546

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: 2.28ha

Vegetation category	Area (ha)
Category R	0.6
Category X	1.7

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
7.11.1	Least concern	R	0.59	Simple to complex mesophyll to notophyll vine forest on moderately to poorly drained metamorphics (excluding amphibolites) of moderate fertility of the moist and wet lowlands, foothills and uplands	Dense
non-rem	None	X	1.69	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

There are no vegetation management wetlands present on this property.

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

No records

3.6 Area Management Plan(s)

Area Management Plan for the control of pest plants in the Dry Tropics region

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: 2 Plan: SP126546.

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.

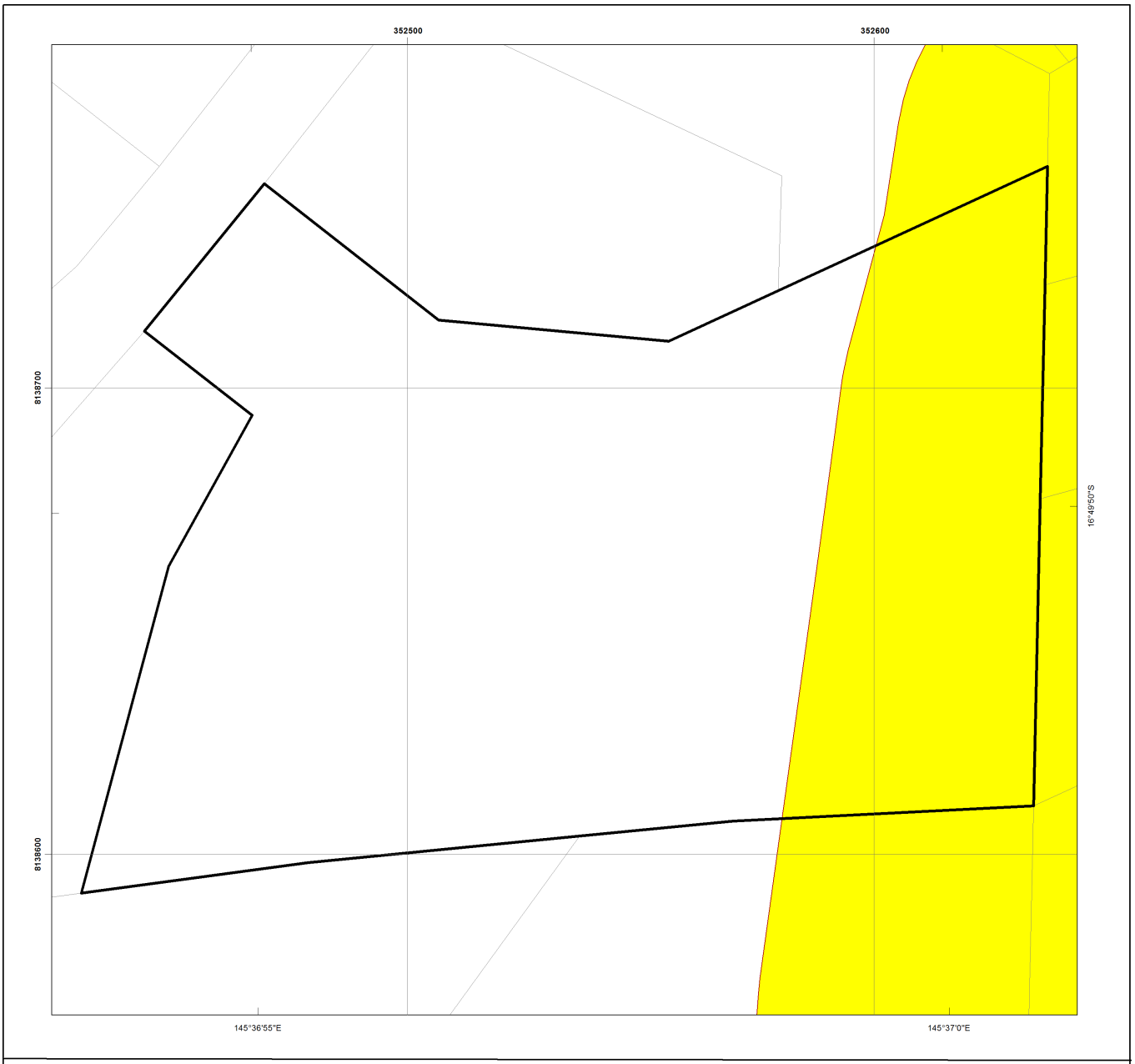
Coastal/non-coastal map

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

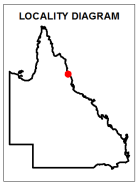


Regulated Vegetation Management Map

Legend

- Selected Lot and Plan
- Category A area (Vegetation offsets/compliance notices/VDecs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
- Water
- Area not categorised
- Other land parcel boundaries

LOCALITY DIAGRAM



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0 10 20 30 40 50 m

This product is projected into:
GDA 1994 MGA Zone 55

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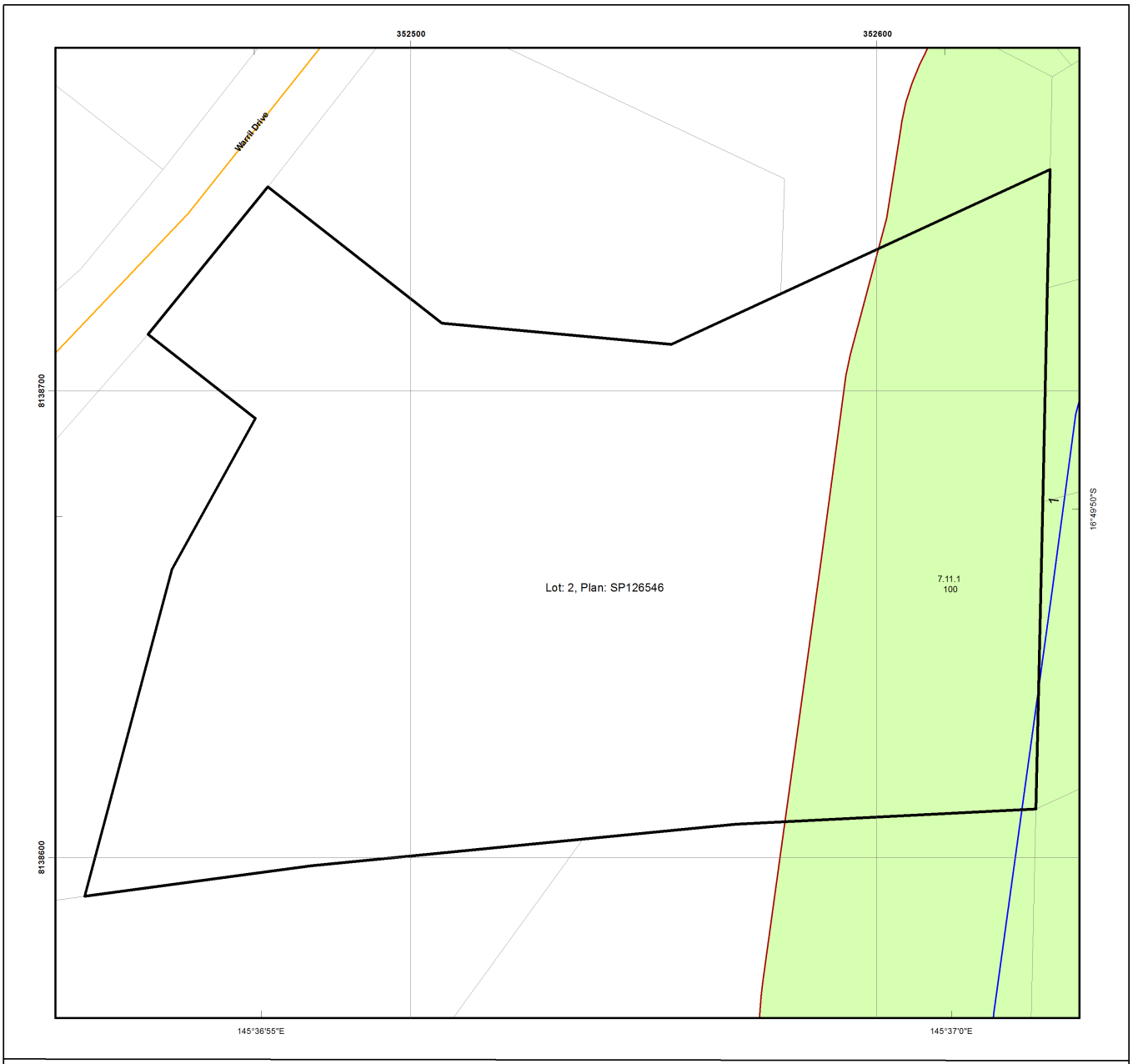
Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at http://www.information.qld.gov.au/

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.

4.2 Vegetation management supporting map

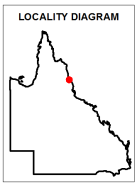


Vegetation Management Supporting Map

Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries

LOCALITY DIAGRAM



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This product is projected into:
GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

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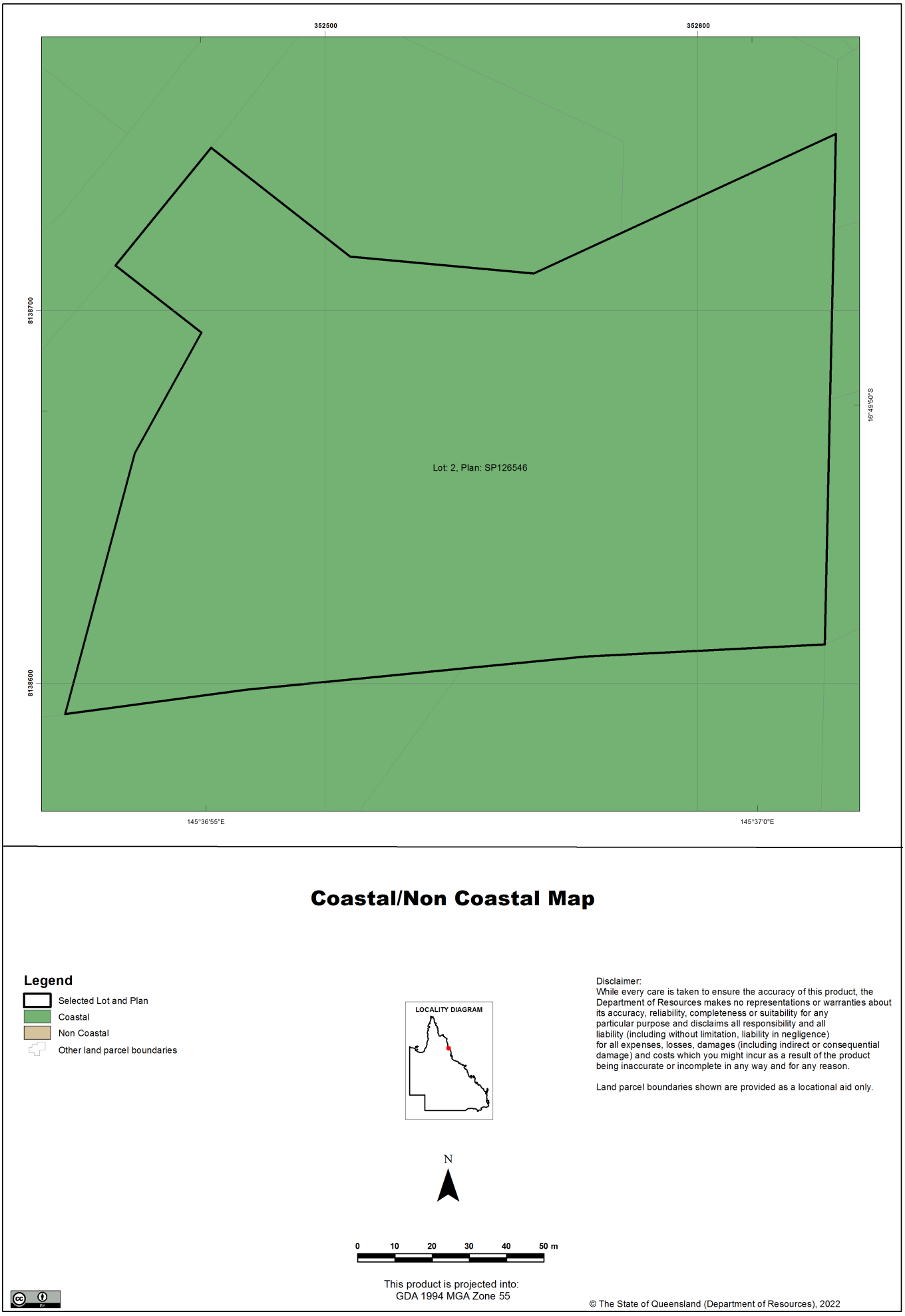
Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

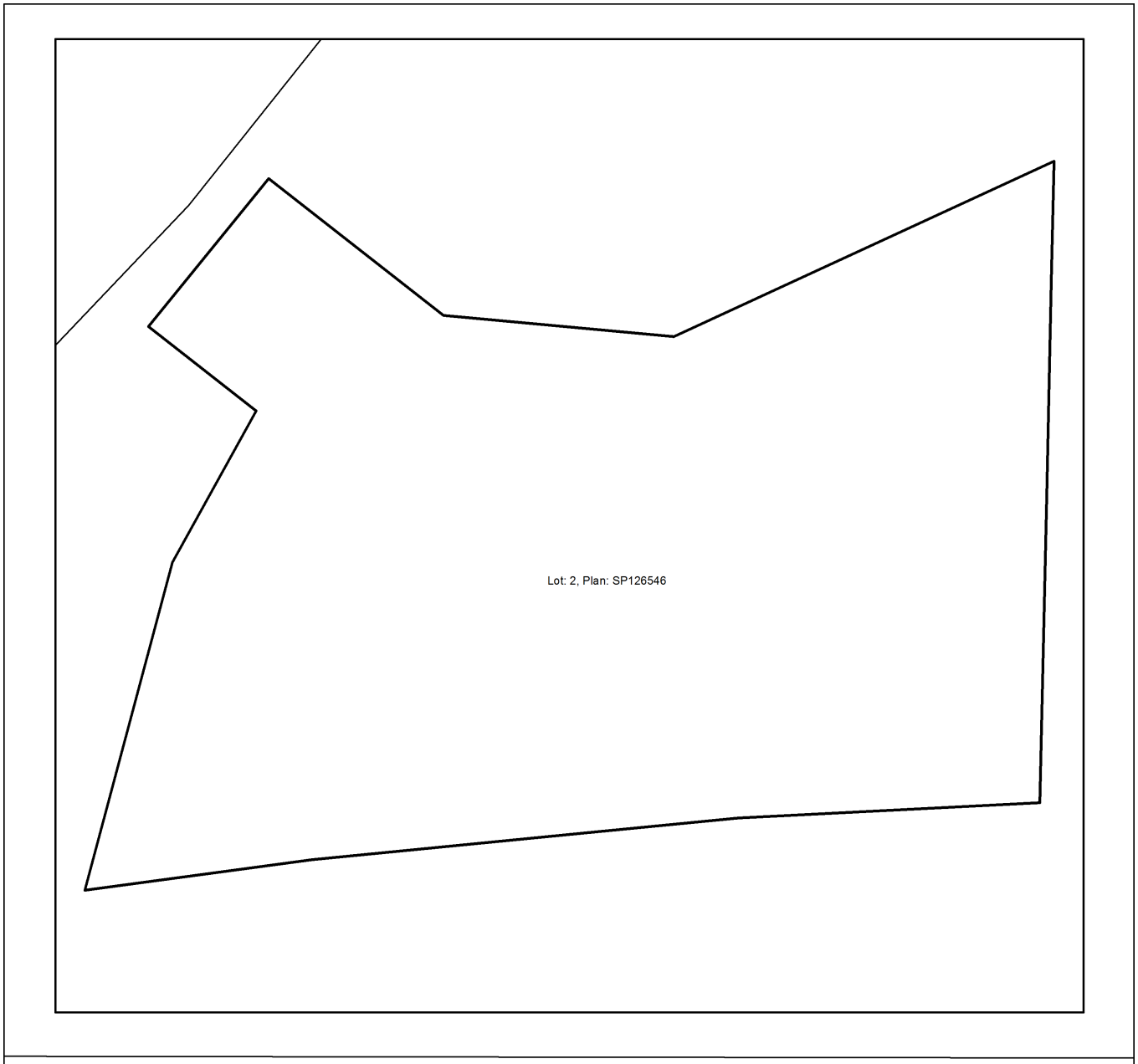
Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at http://www.information.qld.gov.au/

Land parcel boundaries are provided as locational aid only.

4.3 Coastal/non-coastal map



4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



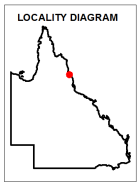
Agricultural Land Class A or B
as per State Planning Policy: State Interest for Agriculture

Legend

- Selected Lot and Plan
- Towns
- Rivers and creeks
- Freeways / motorways; Highways
- Secondary roads; Streets

Agricultural land class A or B

- A
- B
- Not class A or B



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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 endangered, vulnerable or near threatened (EVNT) plants. These are areas where EVNT 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 EVNT plants that may be present in the clearing impact area.

If the flora survey identifies that EVNT plants are not present within the clearing impact area or clearing within 100m of EVNT plants 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 EVNT 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 EVNT 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

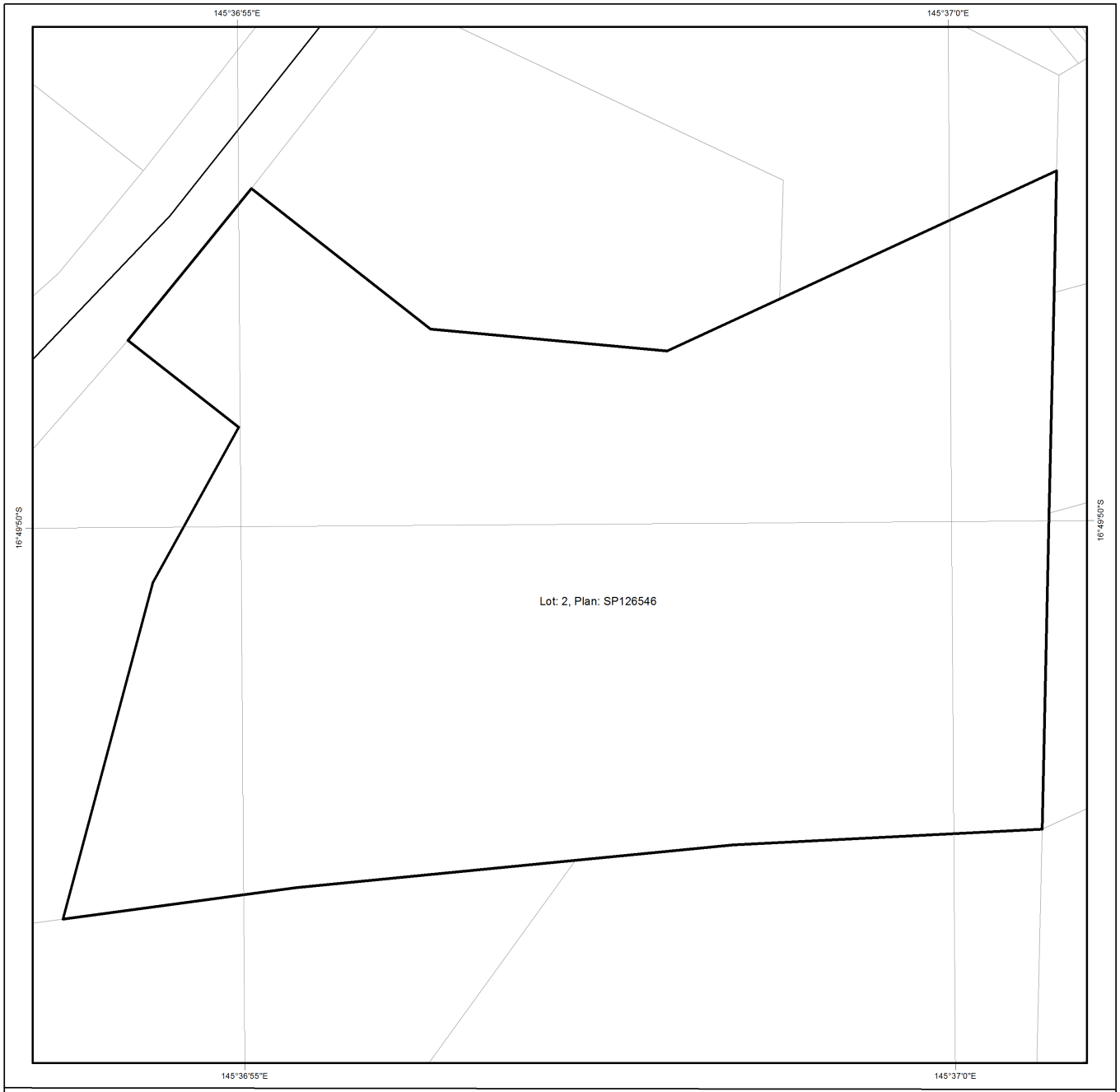
This map included may also be requested individually at: https://apps.des.qld.gov.au/map-request/flora-survey-trigger/.

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

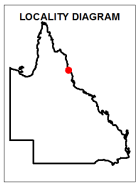
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the Queensland Spatial Catalogue, the Department of Environment and Science does not provide species information on request. 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



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This product is projected into:
GDA 1994 MGA Zone 55

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

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6. Koala protection framework (administered by the Department of Environment and Science (DES))

The koala (*Phascolarctos cinereus*) is listed in Queensland as vulnerable 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: 2 Plan: SP126546

7.1 Koala districts

Koala District C

7.2 Koala priority area, koala habitat area and identified koala broad-hectare area map

Koala priority area, koala habitat area and identified koala broad-hectare area map

Legend

- Selected Lot and Plan
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Koala priority area
- Identified koala broad-hectare area
- Cadastral Boundaries
- Towns
- Highway
- Connector
- Street/Local Road
- Major rivers/creeks
- Queensland

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

LOCALITY DIAGRAM

N

0 10 20 30 40 50 m

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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

In order to ensure that the most recent map for an area of interest can be accessed, prior to the annual update, a register of changes made to koala habitat areas as a result of the map amendment process will be available at: https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/. The register will include lot on plan for the change, the date the decision was made and the map issued to the landholder which shows areas determined to be koala habitat areas.

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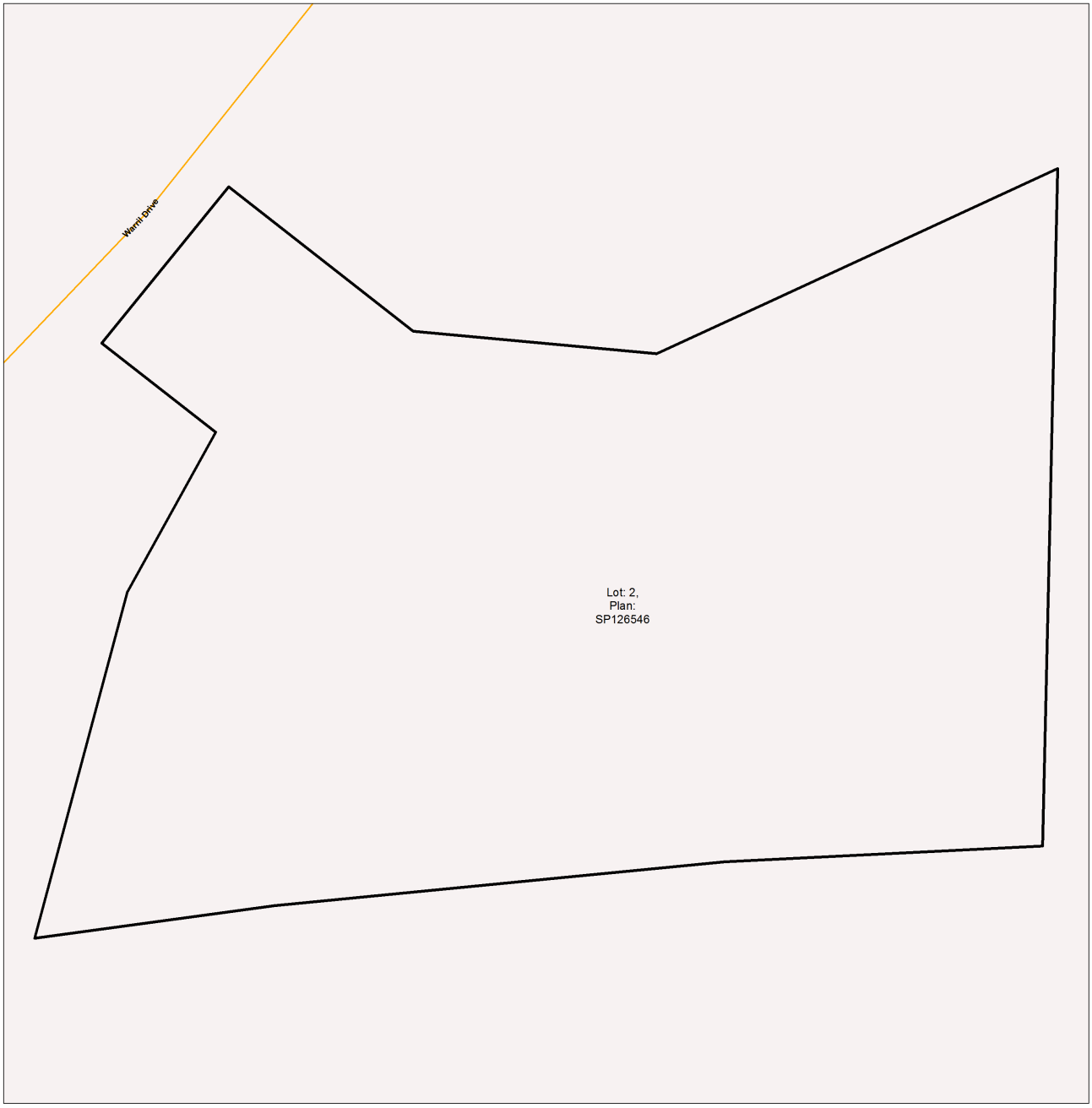
7.3 Koala habitat regional ecosystems for core koala habitat areas

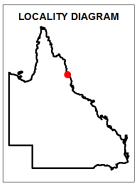


Koala habitat regional ecosystems for core koala habitat areas

Legend

- Selected Lot and Plan
- Koala habitat area (core)
- Towns
- Highway
- Connector
- Street/Local Road
- Major rivers/creeks
- Queensland

LOCALITY DIAGRAM



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This product is projected into GDA 1994 MGA Zone 55

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

APPENDIX 2 – Wildlife Online Search Results

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info@natura-pacific.com www.natura-pacific.com

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Queensland status: All
Records: Confirmed
Date: Since 1980
Latitude: -16.8307
Longitude: 145.6160
Distance: 2
Email: joanna.pittard@natura-pacific.com
Date submitted: Monday 28 Mar 2022 12:57:45
Date extracted: Monday 28 Mar 2022 13:00:03

The number of records retrieved = 563

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufonidae	*Rhinella marina*	cane toad	Y			4
animals	amphibians	Hylidae	*Litoria bicolor*	northern sedgefrog		C		1
animals	amphibians	Hylidae	*Litoria caerulea*	common green treefrog		C		14
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		12
animals	amphibians	Hylidae	*Litoria gracilenta*	graceful treefrog		C		14
animals	amphibians	Hylidae	*Litoria infrafrenata*	white lipped treefrog		C		14
animals	amphibians	Hylidae	*Litoria jungguy*	northern stony creek frog		C		3
animals	amphibians	Hylidae	*Litoria lesueuri sensu lato*	stony creek frog		C		3
animals	amphibians	Hylidae	*Litoria microbelos*	javelin frog		C		1
animals	amphibians	Hylidae	*Litoria myola*	Kuranda treefrog		CR	CE	6
animals	amphibians	Hylidae	*Litoria nasuta*	striped rocketfrog		C		1
animals	amphibians	Hylidae	*Litoria rheocola*	common mistfrog		E		2/2
animals	amphibians	Hylidae	*Litoria rothii*	northern laughing treefrog		C		4
animals	amphibians	Hylidae	*Litoria serrata*	tapping green eyed frog		V		15/1
animals	amphibians	Hylidae	*Litoria xanthomera*	orange thighed treefrog		C		3
animals	amphibians	Limnodynastidae	*Limnodynastes peronii*	striped marshfrog		C		9
animals	amphibians	Limnodynastidae	*Platyplectrum ornatum*	ornate burrowing frog		C		1
animals	amphibians	Microhylidae	*Austrochaperina pluvialis*	white browed whistlefrog		C		13/1
animals	amphibians	Microhylidae	*Cophixalus ornatus*	northern ornate nursery-frog		C		5
animals	amphibians	Myobatrachidae	*Mixophyes coggeri*	mottled barred frog		C		22/1
animals	amphibians	Myobatrachidae	*Mixophyes schevilli sensu lato*	northern barred frog		C		2
animals	amphibians	Ranidae	*Papurana daemeli*	Australian woodfrog		C		7
animals	birds	Acanthizidae	*Gerygone palpebrosa*	fairy gerygone		C		1
animals	birds	Acanthizidae	*Sericornis frontalis*	white-browed scrubwren		C		1
animals	birds	Accipitridae	*Accipiter novaehollandiae*	grey goshawk		C		1
animals	birds	Alcedinidae	*Ceyx azureus*	azure kingfisher		C		1
animals	birds	Alcedinidae	*Ceyx pusillus*	little kingfisher		C		1
animals	birds	Artamidae	*Melloria quoyi*	black butcherbird		C		1
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		1
animals	birds	Campephagidae	*Lalage leucomela*	varied triller		C		1
animals	birds	Casuariidae	*Casuarius casuarius johnsonii (southern population)*	southern cassowary (southern population)		E	E	8
animals	birds	Columbidae	*Chalcophaps longirostris*	Pacific emerald dove		C		4/4
animals	birds	Columbidae	*Geopelia placida*	peaceful dove		C		1
animals	birds	Columbidae	*Ptilinopus superbus*	superb fruit-dove		C		1/1
animals	birds	Cuculidae	*Chalcites minutillus*	little bronze-cuckoo		C		1
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		1
animals	birds	Estrildidae	*Chloebia gouldiae*	Gouldian finch		E	E	1
animals	birds	Halcyonidae	*Dacelo novaeguineae*	laughing kookaburra		C		1
animals	birds	Halcyonidae	*Tanysiptera sylvia*	buff-breasted paradise-kingfisher		C		1
animals	birds	Megapodiidae	*Alectura lathami*	Australian brush-turkey		C		1
animals	birds	Megapodiidae	*Megapodius reinwardt*	orange-footed scrubfowl		C		1
animals	birds	Meliphagidae	*Meliphaga notata*	yellow-spotted honeyeater		C		1
animals	birds	Meliphagidae	*Myzomela obscura*	dusky honeyeater		C		1/1
animals	birds	Meliphagidae	*Philemon argenticeps*	silver-crowned friarbird		C		1
animals	birds	Meliphagidae	*Xanthotis macleayanus*	Macleay's honeyeater		C		1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Monarchidae	*Machaerirhynchus flaviventer*	yellow-breasted boatbill		C		1
animals	birds	Monarchidae	*Symposiachrus trivirgatus*	spectacled monarch		SL		1
animals	birds	Nectariniidae	*Dicaeum hirundinaceum*	mistletoebird		C		1
animals	birds	Paradisaeidae	*Ptiloris victoriae*	Victoria's riflebird		C		1
animals	birds	Podargidae	*Podargus papuensis*	Papuan frogmouth		C		1
animals	birds	Psittacidae	*Cyclopsitta diophthalma macleayana*	Macleay's fig-parrot		V		1
animals	birds	Psittacidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		1
animals	birds	Psophodidae	*Psophodes olivaceus*	eastern whipbird		C		1
animals	birds	Ptilonorhynchidae	*Ailuroedus maculosus*	spotted catbird		C		1
animals	birds	Rallidae	*Fulica atra*	Eurasian coot		C		1
animals	birds	Rallidae	*Rallina tricolor*	red-necked crake		C		4/1
animals	birds	Rhipiduridae	*Rhipidura rufiventris*	northern fantail		C		1
animals	birds	Sturnidae	*Aplonis metallica*	metallic starling		C		1/1
animals	birds	Timaliidae	*Zosterops lateralis*	silvereye		C		2
animals	insects	Lycaenidae	*Philiris diana*	large moonbeam (Wet Tropics)				1
animals	insects	Lycaenidae	*Udara cardia tenella*	delicate blue				1
animals	mammals	Canidae	*Canis sp.*		Y			1
animals	mammals	Hypsiprymnodontidae	*Hypsiprymnodon moschatus*	musky rat-kangaroo		C		3/3
animals	mammals	Macropodidae	*Thylogale stigmatica*	red-legged pademelon		C		4/1
animals	mammals	Macropodidae	*Thylogale thetis*	red-necked pademelon		C		1
animals	mammals	Macropodidae	*Wallabia bicolor*	swamp wallaby		C		1
animals	mammals	Muridae	*Hydromys chrysogaster*	water rat		C		2
animals	mammals	Muridae	*Melomys burtoni*	grassland melomys		C		1
animals	mammals	Muridae	*Melomys cervinipes*	fawn-footed melomys		C		5/3
animals	mammals	Muridae	*Melomys sp.*			C		14/14
animals	mammals	Muridae	*Pogonomys sp.*	tree mouse		C		8/8
animals	mammals	Muridae	*Pseudomys gracilicaudatus*	eastern chestnut mouse		C		1
animals	mammals	Muridae	*Rattus fuscipes*	bush rat		C		1
animals	mammals	Muridae	*Rattus leucopus*	Cape York rat		C		1
animals	mammals	Muridae	*Uromys caudimaculatus*	giant white-tailed rat		C		6/2
animals	mammals	Ornithorhynchidae	*Ornithorhynchus anatinus*	platypus		SL		2
animals	mammals	Peramelidae	*Isoodon macrourus*	northern brown bandicoot		C		1
animals	mammals	Peramelidae	*Perameles pallescens*	northern long-nosed bandicoot		C		5/2
animals	mammals	Petauridae	*Dactylopsila trivirgata*	striped possum		C		5
animals	mammals	Petauridae	*Petaurus notatus*	Krefft's glider		C		1/1
animals	mammals	Potoroidae	*Aepyprymnus rufescens*	rufous bettong		C		1
animals	mammals	Pseudocheiridae	*Pseudochirops archeri*	green ringtail possum		C		5
animals	mammals	Rhinolophidae	*Rhinolophus megaphyllus*	eastern horseshoe-bat		C		1/1
animals	mammals	Tachyglossidae	*Tachyglossus aculeatus*	short-beaked echidna		SL		1
animals	mammals	Vespertilionidae	*Murina florium*	tube-nosed insectivorous bat		V		1
animals	mammals	Vespertilionidae	*Myotis macropus*	large-footed myotis		C		1
animals	mammals	Vespertilionidae	*Nyctophilus bifax*	northern long-eared bat		C		1
animals	reptiles	Agamidae	*Intellagama lesueurii*	eastern water dragon		C		3
animals	reptiles	Agamidae	*Lophosaurus boydii*	Boyd's forest dragon		C		1
animals	reptiles	Boidae	*Morelia spilota*	carpet python		C		4
animals	reptiles	Boidae	*Simalia kinghorni*	amethystine python (Australian form)		C		2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	reptiles	Carphodactylidae	*Saltuarius cornutus*	northern leaf-tailed gecko		C		1
animals	reptiles	Chelidae	*Emydura macquarii krefftii*	Krefft's river turtle		C		1
animals	reptiles	Chelidae	*Wollumbinia latisternum*	saw-shelled turtle		C		1
animals	reptiles	Colubridae	*Boiga irregularis*	brown tree snake		C		7
animals	reptiles	Colubridae	*Dendrelaphis calligastra*	northern tree snake		C		1
animals	reptiles	Colubridae	*Dendrelaphis punctulatus*	green tree snake		C		1
animals	reptiles	Colubridae	*Stegonotus australis*	slaty-grey snake		C		7/1
animals	reptiles	Colubridae	*Tropidonophis mairii*	freshwater snake		C		1
animals	reptiles	Crocodylidae	*Crocodylus johnstoni*	Australian freshwater crocodile		C		4
animals	reptiles	Elapidae	*Cryptophis nigrescens*	eastern small-eyed snake		C		2/1
animals	reptiles	Elapidae	*Pseudechis australis*	king brown snake		C		1/1
animals	reptiles	Scincidae	*Bellatorias frerei*	major skink		C		2/1
animals	reptiles	Scincidae	*Carlia crypta*			C		1
animals	reptiles	Scincidae	*Carlia jarnoldae*	lined rainbow-skink		C		1
animals	reptiles	Scincidae	*Concinnia brachysoma*	northern bar-sided skink		C		1
animals	reptiles	Scincidae	*Concinnia tenuis*	bar-sided skink		C		1
animals	reptiles	Scincidae	*Cryptoblepharus metallicus*	metallic snake-eyed skink		C		1
animals	reptiles	Scincidae	*Cyclodomorphus gerrardii*	pink-tongued lizard		C		1
animals	reptiles	Scincidae	*Eulamprus quoyii*	eastern water skink		C		1
animals	reptiles	Scincidae	*Glaphyromorphus fuscicaudis*	brown-tailed bar-lipped skink		C		2/1
animals	reptiles	Scincidae	*Gnypetoscincus queenslandiae*	prickly forest skink		C		1/1
animals	reptiles	Scincidae	*Lampropholis coggeri*	rainforest sunskink		C		2
animals	reptiles	Scincidae	*Lygisaurus laevis*	rainforest edge litter-skink		C		1/1
animals	reptiles	Scincidae	*Lygisaurus sp.*			C		1
animals	reptiles	Scincidae	*Saproscincus basiliscus*	basilisk shadeskink		C		2/1
animals	reptiles	Scincidae	*Saproscincus tetradactylus*	four-fingered shadeskink		C		1
animals	reptiles	Typhlopidae	*Anilios torresianus*	north-eastern blind snake		C		1
animals	reptiles	Varanidae	*Varanus scalaris*	spotted tree monitor		C		1
animals	reptiles	Varanidae	*Varanus varius*	lace monitor		C		1
fungi	Agaricomycetes	Clavulinaceae	*Clavulina*			C		1/1
fungi	Agaricomycetes	Inocybaceae	*Auritella*					1/1
fungi	sordariomycetes	Xylariaceae	*Xylaria cubensis*			C		1/1
plants	land plants	Acanthaceae	*Acanthus ilicifolius*			C		1
plants	land plants	Acanthaceae	*Brunoniella acaulis*			C		1
plants	land plants	Acanthaceae	*Brunoniella australis*	blue trumpet		C		1
plants	land plants	Acanthaceae	*Hypoestes*					1
plants	land plants	Acanthaceae	*Pseuderanthemum variabile*	pastel flower		C		1
plants	land plants	Acanthaceae	*Rostellularia adscendens*			C		1
plants	land plants	Acanthaceae	*Rostellularia adscendens subsp. glaucoviolacea*			C		1
plants	land plants	Alismataceae	*Echinodorus cordifolius*		Y			1/1
plants	land plants	Amaranthaceae	*Achyranthes aspera*			C		1
plants	land plants	Amaranthaceae	*Alternanthera denticulata*	lesser joyweed		C		1
plants	land plants	Amaranthaceae	*Alternanthera denticulata var. micrantha*			C		1
plants	land plants	Amaranthaceae	*Alternanthera ficoidea*		Y			1
plants	land plants	Amaranthaceae	*Alternanthera nana*	hairy joyweed		C		1
plants	land plants	Amaranthaceae	*Amaranthus viridis*	green amaranth	Y			1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Amaranthaceae	*Deeringia amaranthoides*	redberry		C		1
plants	land plants	Amaranthaceae	*Gomphrena celosioides*	gomphrena weed	Y			1
plants	land plants	Anacardiaceae	*Blepharocarya involucrigera*			C		1
plants	land plants	Anacardiaceae	*Euroschinus falcatus var. falcatus*			C		1
plants	land plants	Annonaceae	*Annona glabra*	pond apple	Y			1/1
plants	land plants	Annonaceae	*Huberantha nitidissima*			C		1
plants	land plants	Annonaceae	*Meiogyne cylindrocarpa subsp. trichocarpa*			C		1/1
plants	land plants	Annonaceae	*Melodorum leichhardtii*			C		1
plants	land plants	Apiaceae	*Centella asiatica*			C		1
plants	land plants	Apiaceae	*Mackinlaya macrosciadea*	mackinlaya		C		1
plants	land plants	Apiaceae	*Platysace valida*			C		1
plants	land plants	Apocynaceae	*Alstonia muelleriana*	hard milkwood		C		2/1
plants	land plants	Apocynaceae	*Alstonia scholaris*	white cheesewood		C		1
plants	land plants	Apocynaceae	*Catharanthus roseus*	pink periwinkle	Y			1
plants	land plants	Apocynaceae	*Gomphocarpus physocarpus*	balloon cottonbush	Y			1
plants	land plants	Apocynaceae	*Hoya pottsii*			C		2/1
plants	land plants	Apocynaceae	*Melodinus australis*	southern melodinus		C		1
plants	land plants	Apocynaceae	*Melodinus baccellianus*			C		1
plants	land plants	Apocynaceae	*Parsonsia densivestita*	silkpod		C		1
plants	land plants	Apocynaceae	*Parsonsia lanceolata*	northern silkpod		C		1
plants	land plants	Araceae	*Epipremnum pinnatum*			C		1
plants	land plants	Araceae	*Rhaphidophora australasica*			C		1
plants	land plants	Araceae	*Syngonium podophyllum*		Y			1
plants	land plants	Araliaceae	*Cephalaralia cephalobotrys*	climbing panax		C		1
plants	land plants	Araliaceae	*Heptapleurum actinophyllum*			C		1
plants	land plants	Araliaceae	*Hydrocotyle*					2
plants	land plants	Araliaceae	*Motherwellia haplosciadea*			C		1
plants	land plants	Araliaceae	*Polyscias australiana*	ivory basswood		C		1
plants	land plants	Araliaceae	*Polyscias elegans*	celery wood		C		1
plants	land plants	Araliaceae	*Polyscias mollis*			C		1
plants	land plants	Araliaceae	*Polyscias murrayi*			C		1
plants	land plants	Araliaceae	*Polyscias willmottii*			C		1
plants	land plants	Araucariaceae	*Agathis*					1
plants	land plants	Arecaceae	*Archontophoenix myolensis*			E	E	3/2
plants	land plants	Arecaceae	*Calamus australis*	hairy Mary		C		1
plants	land plants	Arecaceae	*Calamus moti*			C		1
plants	land plants	Arecaceae	*Calamus radicalis*	vicious hairy Mary		C		1
plants	land plants	Arecaceae	*Linospadix microcaryus*			C		1
plants	land plants	Arecaceae	*Linospadix minor*			C		1
plants	land plants	Arecaceae	*Linospadix palmerianus*			NT		1
plants	land plants	Arecaceae	*Ptychosperma elegans*	solitaire palm		C		1
plants	land plants	Aspleniaceae	*Asplenium australasicum*			C		1
plants	land plants	Aspleniaceae	*Asplenium polyodon*	mare's tail fern		C		1
plants	land plants	Aspleniaceae	*Asplenium simplicifrons var. laciniatum*			C		1
plants	land plants	Asteraceae	*Ageratum conyzoides*	billygoat weed	Y			1/1
plants	land plants	Asteraceae	*Ageratum conyzoides subsp. conyzoides*		Y			2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Asteraceae	*Bidens alba var. radiata*		Y			1
plants	land plants	Asteraceae	*Bidens bipinnata*	bipinnate beggar's ticks	Y			1
plants	land plants	Asteraceae	*Bidens pilosa*		Y			1
plants	land plants	Asteraceae	*Chrysocephalum apiculatum subsp. exile*			C		1
plants	land plants	Asteraceae	*Coronidium rupicola*			C		1/1
plants	land plants	Asteraceae	*Crassocephalum crepidioides*	thickhead	Y			1
plants	land plants	Asteraceae	*Eclipta prostrata*	white eclipta	Y			1
plants	land plants	Asteraceae	*Elephantopus mollis*	tobacco weed	Y			1
plants	land plants	Asteraceae	*Emilia sonchifolia var. javanica*		Y			1
plants	land plants	Asteraceae	*Erigeron sumatrensis*		Y			1
plants	land plants	Asteraceae	*Peripleura diffusa*			C		1
plants	land plants	Asteraceae	*Praxelis clematidea*		Y			1
plants	land plants	Asteraceae	*Pseudognaphalium luteoalbum*	Jersey cudweed		C		1
plants	land plants	Asteraceae	*Sigesbeckia orientalis*	Indian weed		C		1
plants	land plants	Asteraceae	*Sonchus*					1
plants	land plants	Asteraceae	*Sonchus oleraceus*	common sowthistle	Y			1
plants	land plants	Asteraceae	*Sphagneticola trilobata*		Y			1
plants	land plants	Asteraceae	*Synedrella nodiflora*		Y			1
plants	land plants	Asteraceae	*Tagetes minuta*	stinking roger	Y			1
plants	land plants	Asteraceae	*Tridax procumbens*	tridax daisy	Y			1
plants	land plants	Asteraceae	*Xerochrysum bracteatum subsp. (Port Keats C.Dunlop+ 6459)*			C		1
plants	land plants	Athyriaceae	*Diplazium*					1
plants	land plants	Bignoniaceae	*Pandorea nervosa*			C		2/1
plants	land plants	Bignoniaceae	*Pyrostegia venusta*		Y			1
plants	land plants	Bignoniaceae	*Saritaea magnifica*		Y			1/1
plants	land plants	Bignoniaceae	*Spathodea campanulata subsp. nilotica*		Y			1
plants	land plants	Blechnaceae	*Blechnum cartilagineum*	gristle fern		C		1
plants	land plants	Blechnaceae	*Blechnum orientale*			SL		1
plants	land plants	Blechnaceae	*Telmatoblechnum indicum*			SL		1
plants	land plants	Brassicaceae	*Lepidium*					1
plants	land plants	Burseraceae	*Canarium muelleri*	scrub turpentine		C		1
plants	land plants	Byttneriaceae	*Commersonia bartramia*	brown kurrajong		C		1
plants	land plants	Campanulaceae	*Lobelia concolor*			SL		1
plants	land plants	Campanulaceae	*Lobelia quadrangularis*			SL		2/1
plants	land plants	Campanulaceae	*Wahlenbergia gracilis*	sprawling bluebell		SL		1
plants	land plants	Cannaceae	*Canna indica*	Indian shot	Y			1
plants	land plants	Celastraceae	*Elaeodendron melanocarpum*			C		1
plants	land plants	Celastraceae	*Siphonodon membranaceus*			C		1
plants	land plants	Clusiaceae	*Garcinia zichii*			C		1
plants	land plants	Clusiaceae	*Hypericum gramineum*			C		1/1
plants	land plants	Combretaceae	*Combretum indicum*		Y			1/1
plants	land plants	Combretaceae	*Terminalia sericocarpa*	damson		C		1
plants	land plants	Commelinaceae	*Pollia macrophylla*			C		1
plants	land plants	Commelinaceae	*Tradescantia zebrina*		Y			1
plants	land plants	Convolvulaceae	*Cuscuta campestris*	dodder	Y			1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Convolvulaceae	*Distimake tuberosus*		Y			1/1
plants	land plants	Convolvulaceae	*Ipomoea hederifolia*		Y			1
plants	land plants	Convolvulaceae	*Ipomoea plebeia*	bellvine		C		1
plants	land plants	Convolvulaceae	*Jacquemontia paniculata var. tomentosa*			C		1
plants	land plants	Costaceae	*Costus dubius*		Y			1/1
plants	land plants	Cucurbitaceae	*Momordica charantia*	balsam pear	Y			1
plants	land plants	Cunoniaceae	*Davidsonia pruriens*			C		1
plants	land plants	Cunoniaceae	*Schizomeria whitei*	white birch		C		1
plants	land plants	Cyatheaceae	*Alsophila baileyana*			C		1
plants	land plants	Cyatheaceae	*Cyathea robertsiana*	lacy tree fern		C		1
plants	land plants	Cyatheaceae	*Sphaeropteris cooperi*			C		1
plants	land plants	Cyperaceae	*Bulbostylis barbata*			C		1
plants	land plants	Cyperaceae	*Carex*					1
plants	land plants	Cyperaceae	*Carex horsfieldii*			C		1
plants	land plants	Cyperaceae	*Cyperus brevifolius*	Mullumbimby couch	Y			1
plants	land plants	Cyperaceae	*Cyperus difformis*	rice sedge		C		1
plants	land plants	Cyperaceae	*Cyperus distans*			C		1
plants	land plants	Cyperaceae	*Cyperus gracilis*			C		1
plants	land plants	Cyperaceae	*Cyperus haspan*			C		1
plants	land plants	Cyperaceae	*Cyperus iria*			C		1
plants	land plants	Cyperaceae	*Cyperus sharpei*			C		1
plants	land plants	Cyperaceae	*Cyperus squarrosus*	bearded flatsedge		C		1
plants	land plants	Cyperaceae	*Scleria brownii*			C		1
plants	land plants	Davalliaceae	*Davallia denticulata var. denticulata*			C		1
plants	land plants	Davalliaceae	*Davallia repens*			C		1
plants	land plants	Dennstaedtiaceae	*Histiopteris incisa*	bats-wing fern		C		1
plants	land plants	Dennstaedtiaceae	*Pteridium esculentum*	common bracken		C		1
plants	land plants	Dichapetalaceae	*Dichapetalum papuanum*			C		1/1
plants	land plants	Dicranaceae	*Dicranella dietrichiae*			C		1/1
plants	land plants	Dilleniaceae	*Hibbertia*					1
plants	land plants	Dilleniaceae	*Hibbertia bicarpellata*			C		1
plants	land plants	Dilleniaceae	*Hibbertia longifolia*			C		1
plants	land plants	Dilleniaceae	*Hibbertia scandens*			C		1
plants	land plants	Dilleniaceae	*Hibbertia scandens var. oxyphylla*			C		1
plants	land plants	Dilleniaceae	*Tetracera nordtiana var. nordtiana*			C		1
plants	land plants	Dioscoreaceae	*Dioscorea transversa*	native yam		C		1
plants	land plants	Dryopteridaceae	*Arachniodes aristata*	prickly shield fern		SL		1
plants	land plants	Ebenaceae	*Diospyros pentamera*	myrtle ebony		C		1
plants	land plants	Elaeagnaceae	*Elaeagnus triflora*			C		1
plants	land plants	Elaeocarpaceae	*Elaeocarpus johnsonii*	Kuranda quandong		C		1
plants	land plants	Elaeocarpaceae	*Elaeocarpus largiflorens subsp. largiflorens*			C		1
plants	land plants	Elaeocarpaceae	*Elaeocarpus sericopetalus*			C		1
plants	land plants	Euphorbiaceae	*Aleurites moluccanus*	candlenut tree		C		1
plants	land plants	Euphorbiaceae	*Baloghia inophylla*	scrub bloodwood		C		1
plants	land plants	Euphorbiaceae	*Claoxylon tenerifolium subsp. boreale*			C		1
plants	land plants	Euphorbiaceae	*Euphorbia*					1

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plants	land plants	Euphorbiaceae	*Euphorbia hirta*		Y			1
plants	land plants	Euphorbiaceae	*Euphorbia macdonaldii var. macdonaldii*			C		1
plants	land plants	Euphorbiaceae	*Homalanthus novoguineensis*			C		1
plants	land plants	Euphorbiaceae	*Hylandia dockrillii*			C		1
plants	land plants	Euphorbiaceae	*Macaranga dallachyana*			C		1
plants	land plants	Euphorbiaceae	*Macaranga involucrata var. mallotoides*			C		1
plants	land plants	Euphorbiaceae	*Macaranga subdentata*			C		1
plants	land plants	Euphorbiaceae	*Macaranga tanarius*	macaranga		C		1
plants	land plants	Euphorbiaceae	*Mallotus mollissimus*			C		1
plants	land plants	Euphorbiaceae	*Mallotus paniculatus*			C		1
plants	land plants	Euphorbiaceae	*Mallotus philippensis*	red kamala		C		1
plants	land plants	Euphorbiaceae	*Mallotus polyadenos*			C		1
plants	land plants	Euphorbiaceae	*Mallotus repandus*			C		1
plants	land plants	Euphorbiaceae	*Ricinus communis*	castor oil bush	Y			1
plants	land plants	Flagellariaceae	*Flagellaria indica*	whip vine		C		1
plants	land plants	Gleicheniaceae	*Gleichenia dicarpa*	pouched coral fern		C		1
plants	land plants	Gleicheniaceae	*Sticherus flabellatus var. flabellatus*			C		1
plants	land plants	Hemerocallidaceae	*Dianella atraxis*			C		2
plants	land plants	Hemerocallidaceae	*Geitonoplesium cymosum forma album*			C		1
plants	land plants	Lamiaceae	*Coleus amicorum*			C		1
plants	land plants	Lamiaceae	*Hyptis capitata*		Y			1/1
plants	land plants	Lamiaceae	*Salvia*					1
plants	land plants	Lamiaceae	*Tectona grandis*		Y			1
plants	land plants	Lauraceae	*Beilschmiedia bancroftii*			C		1
plants	land plants	Lauraceae	*Beilschmiedia tooram*			C		1
plants	land plants	Lauraceae	*Cinnamomum laubatii*			C		1
plants	land plants	Lauraceae	*Cryptocarya angulata*	ivory laurel		C		1
plants	land plants	Lauraceae	*Cryptocarya cocosoides*			C		1
plants	land plants	Lauraceae	*Cryptocarya corrugata*			C		1
plants	land plants	Lauraceae	*Cryptocarya grandis*			C		1
plants	land plants	Lauraceae	*Cryptocarya laevigata*			C		1
plants	land plants	Lauraceae	*Cryptocarya leucophylla*			C		1
plants	land plants	Lauraceae	*Cryptocarya triplinervis var. triplinervis*			C		1
plants	land plants	Lauraceae	*Cryptocarya vulgaris*			C		1
plants	land plants	Lauraceae	*Endiandra cowleyana*	northern rose walnut		C		1
plants	land plants	Lauraceae	*Endiandra monothyra subsp. monothyra*			C		1
plants	land plants	Lauraceae	*Endiandra montana*			C		1
plants	land plants	Lauraceae	*Litsea fawcettiana*			C		1
plants	land plants	Lauraceae	*Litsea leefeana*			C		1/1
plants	land plants	Lauraceae	*Neolitsea dealbata*	white bolly gum		C		1
plants	land plants	Leguminosae	*Acacia*					1
plants	land plants	Leguminosae	*Acacia aulacocarpa*			C		1
plants	land plants	Leguminosae	*Acacia cincinnata*			C		1/1
plants	land plants	Leguminosae	*Acacia disparrima subsp. calidestris*			C		1
plants	land plants	Leguminosae	*Acacia melanoxylon*	blackwood		C		1
plants	land plants	Leguminosae	*Acacia simsii*			C		1/1

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plants	land plants	Leguminosae	*Alysicarpus muelleri*			C		1
plants	land plants	Leguminosae	*Archidendron lucyi*			C		1
plants	land plants	Leguminosae	*Archidendron ramiflorum*			C		1
plants	land plants	Leguminosae	*Archidendron vaillantii*	salmon bean		C		1
plants	land plants	Leguminosae	*Austrosteenisia blackii var. astipella*			C		1
plants	land plants	Leguminosae	*Austrosteenisia blackii var. blackii*			C		1
plants	land plants	Leguminosae	*Austrosteenisia stipularis*			C		1
plants	land plants	Leguminosae	*Centrosema molle*		Y			1
plants	land plants	Leguminosae	*Chamaecrista rotundifolia var. rotundifolia*		Y			1
plants	land plants	Leguminosae	*Clitoria ternatea*	butterfly pea	Y			1
plants	land plants	Leguminosae	*Crotalaria pallida var. obovata*		Y			1/1
plants	land plants	Leguminosae	*Desmodium*					1
plants	land plants	Leguminosae	*Desmodium uncinatum*		Y			1
plants	land plants	Leguminosae	*Flemingia parviflora*	flemingia		C		1
plants	land plants	Leguminosae	*Galactia tenuiflora forma sericea*			C		1
plants	land plants	Leguminosae	*Indigofera suffruticosa*		Y			1/1
plants	land plants	Leguminosae	*Leucaena leucocephala subsp. glabrata*		Y			1
plants	land plants	Leguminosae	*Mimosa diplotricha var. diplotricha*	giant sensitive plant	Y			2/2
plants	land plants	Leguminosae	*Mimosa pudica var. unijuga*		Y			1
plants	land plants	Leguminosae	*Pararchidendron pruinosum*			C		1
plants	land plants	Leguminosae	*Senna obtusifolia*		Y			1/1
plants	land plants	Leguminosae	*Stylosanthes guianensis var. guianensis*		Y			1
plants	land plants	Leguminosae	*Stylosanthes humilis*	Townsville stylo	Y			1
plants	land plants	Leguminosae	*Stylosanthes scabra*		Y			1/1
plants	land plants	Leguminosae	*Tephrosia barbatala*			C		1
plants	land plants	Leguminosae	*Tephrosia filipes forma vestita*			C		1
plants	land plants	Leguminosae	*Tephrosia varians*			C		1
plants	land plants	Loganiaceae	*Strychnos psilosperma*	strychnine tree		C		1
plants	land plants	Loranthaceae	*Amyema*					1
plants	land plants	Loranthaceae	*Amyema cambagei*			C		1
plants	land plants	Loranthaceae	*Amyema congener subsp. congener*			C		1
plants	land plants	Loranthaceae	*Amyema queenslandica*			C		1
plants	land plants	Loranthaceae	*Decaisnina congesta*			C		1/1
plants	land plants	Lycopodiaceae	*Palhinhaea cernua*			C		1/1
plants	land plants	Lycopodiaceae	*Phlegmariurus*					1
plants	land plants	Lygodiaceae	*Lygodium microphyllum*	snake fern		C		1
plants	land plants	Lythraceae	*Cuphea carthagenensis*		Y			1
plants	land plants	Malvaceae	*Malvastrum americanum var. americanum*		Y			1
plants	land plants	Malvaceae	*Sida cordifolia*		Y			1
plants	land plants	Malvaceae	*Sida rhombifolia*		Y			1
plants	land plants	Malvaceae	*Urena lobata*	urena weed	Y			1
plants	land plants	Marattiaceae	*Ptisana oreades*			C		1
plants	land plants	Melastomataceae	*Melastoma malabathricum subsp. malabathricum*			C		2/1
plants	land plants	Meliaceae	*Aglaia*					1
plants	land plants	Meliaceae	*Aglaia meridionalis*			C		1
plants	land plants	Meliaceae	*Dysoxylum klanderi*			C		1

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plants	land plants	Meliaceae	*Dysoxylum rufum*			C		1
plants	land plants	Meliaceae	*Synoum glandulosum subsp. paniculosum*			C		1
plants	land plants	Monimiaceae	*Palmeria scandens*	anchor vine		C		1
plants	land plants	Monimiaceae	*Wilkiea angustifolia*			C		1
plants	land plants	Moraceae	*Ficus adenosperma*			C		1
plants	land plants	Moraceae	*Ficus copiosa*			C		1
plants	land plants	Moraceae	*Ficus fraseri*	white sandpaper fig		C		1
plants	land plants	Moraceae	*Ficus septica var. septica*			C		1
plants	land plants	Moraceae	*Ficus watkinsiana*	green-leaved Moreton Bay fig		C		1
plants	land plants	Moraceae	*Maclura cochinchinensis*	cockspur thorn		C		1
plants	land plants	Moraceae	*Streblus glaber subsp. australianus*			C		1
plants	land plants	Moraceae	*Trophis scandens subsp. scandens*			C		1
plants	land plants	Myrsinaceae	*Ardisia crenata*		Y			1/1
plants	land plants	Myrsinaceae	*Ardisia pachyrrhachis*			C		1
plants	land plants	Myrsinaceae	*Myrsine*					1
plants	land plants	Myrsinaceae	*Myrsine porosa*			C		1/1
plants	land plants	Myrsinaceae	*Myrsine variabilis*			C		1
plants	land plants	Myrtaceae	*Corymbia torelliana*	cadaghi		C		2/1
plants	land plants	Myrtaceae	*Gossia bidwillii*			C		1
plants	land plants	Myrtaceae	*Leptospermum*					1
plants	land plants	Myrtaceae	*Leptospermum polygalifolium*	tantoon		C		1
plants	land plants	Myrtaceae	*Melaleuca*					1
plants	land plants	Myrtaceae	*Psidium guajava*	guava	Y			1
plants	land plants	Myrtaceae	*Rhodamnia spongiosa*			C		1
plants	land plants	Myrtaceae	*Rhodomyrtus canescens*			C		1
plants	land plants	Myrtaceae	*Rhodomyrtus pervagata*			C		1
plants	land plants	Myrtaceae	*Rhodomyrtus trineura subsp. trineura*			C		1
plants	land plants	Myrtaceae	*Syzygium canicortex*	yellow satinash		C		1
plants	land plants	Myrtaceae	*Syzygium cryptophlebium*			C		1
plants	land plants	Myrtaceae	*Syzygium endophloium*			C		1
plants	land plants	Myrtaceae	*Syzygium erythrocalyx*	scarlet satinash		C		1
plants	land plants	Myrtaceae	*Syzygium kuranda*	Kuranda satinash		C		1
plants	land plants	Myrtaceae	*Syzygium luehmannii*			C		1
plants	land plants	Myrtaceae	*Syzygium tierneyanum*	river cherry		C		1
plants	land plants	Nephrolepidaceae	*Nephrolepis biserrata*			C		1
plants	land plants	Nephrolepidaceae	*Nephrolepis cordifolia*	fishbone fern		C		1
plants	land plants	Nephrolepidaceae	*Nephrolepis hirsutula*			C		1
plants	land plants	Nyctaginaceae	*Boerhavia dominii*			C		1
plants	land plants	Ochnaceae	*Ochna serrulata*	ochna	Y			1
plants	land plants	Oleaceae	*Jasminum kajewskii*			C		1
plants	land plants	Onagraceae	*Ludwigia octovalvis*	willow primrose		C		1
plants	land plants	Ophioglossaceae	*Ophioglossum gramineum*			C		1
plants	land plants	Orchidaceae	*Geodorum densiflorum*	pink nodding orchid		SL		1
plants	land plants	Oxalidaceae	*Oxalis corniculata*		Y			1
plants	land plants	Oxalidaceae	*Oxalis debilis var. corymbosa*	pink shamrock	Y			1
plants	land plants	Pandanaceae	*Benstonea monticola*			C		2

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plants	land plants	Pandanaceae	*Freycinetia excelsa*	climbing pandanus		C		1
plants	land plants	Pandanaceae	*Pandanus*					1
plants	land plants	Passifloraceae	*Passiflora foetida*		Y			1
plants	land plants	Passifloraceae	*Passiflora kuranda*			C		1/1
plants	land plants	Pennantiaceae	*Pennantia cunninghamii*	brown beech		C		1
plants	land plants	Petiveriaceae	*Rivina humilis*		Y			1
plants	land plants	Phyllanthaceae	*Actephila*					1
plants	land plants	Phyllanthaceae	*Breynia oblongifolia*			C		1
plants	land plants	Phyllanthaceae	*Glochidion harveyanum var. harveyanum*			C		2
plants	land plants	Pinaceae	*Pinus caribaea*	Caribbean pine	Y			1
plants	land plants	Piperaceae	*Piper*					1
plants	land plants	Piperaceae	*Piper interruptum*			C		1
plants	land plants	Poaceae	*Bothriochloa decipiens var. cloncurrensis*			C		1
plants	land plants	Poaceae	*Cenchrus echinatus*	Mossman River grass	Y			1
plants	land plants	Poaceae	*Chloris gayana*	rhodes grass	Y			1
plants	land plants	Poaceae	*Dichanthium aristatum*	angleton grass	Y			1
plants	land plants	Poaceae	*Digitaria didactyla*	Queensland blue couch	Y			1
plants	land plants	Poaceae	*Digitaria violascens*	bastard summergrass	Y			1
plants	land plants	Poaceae	*Echinochloa colona*	awnless barnyard grass	Y			1
plants	land plants	Poaceae	*Eleusine indica*	crowsfoot grass	Y			1
plants	land plants	Poaceae	*Eragrostis brownii var. pubescens*			C		1
plants	land plants	Poaceae	*Eragrostis tenuifolia*	elastic grass	Y			1
plants	land plants	Poaceae	*Eriochloa procera*	slender cupgrass		C		1
plants	land plants	Poaceae	*Imperata cylindrica*	blady grass		C		1
plants	land plants	Poaceae	*Melinis repens*	red natal grass	Y			1
plants	land plants	Poaceae	*Oplismenus aemulus var. lasiorhachis*			C		1
plants	land plants	Poaceae	*Oplismenus compositus*			C		1
plants	land plants	Poaceae	*Oplismenus mollis*			C		1
plants	land plants	Poaceae	*Panicum laevinode*	pepper grass		C		1
plants	land plants	Poaceae	*Panicum paludosum*	swamp panic		C		1
plants	land plants	Poaceae	*Panicum simile*			C		1
plants	land plants	Poaceae	*Paspalidium distans*	shotgrass		C		1
plants	land plants	Poaceae	*Paspalum conjugatum*	sourgrass	Y			1
plants	land plants	Poaceae	*Paspalum distichum*	water couch	Y			1
plants	land plants	Poaceae	*Paspalum mandiocanum*		Y			1
plants	land plants	Poaceae	*Phalaris canariensis*	canary grass	Y			1/1
plants	land plants	Poaceae	*Phalaris paradoxa*	paradoxa grass	Y			1/1
plants	land plants	Poaceae	*Setaria sphacelata*		Y			1
plants	land plants	Podocarpaceae	*Podocarpus grayae*			C		1
plants	land plants	Polygalaceae	*Polygala paniculata*		Y			2/2
plants	land plants	Polypodiaceae	*Drynaria rigidula*			SL		1
plants	land plants	Polypodiaceae	*Lepisorus mucronatus*			SL		1
plants	land plants	Polypodiaceae	*Platycerium bifurcatum*			SL		1
plants	land plants	Polypodiaceae	*Prosaptia fuscopilosa*			SL		1
plants	land plants	Polypodiaceae	*Pyrrosia confluens var. dielsii*			SL		1
plants	land plants	Polypodiaceae	*Pyrrosia longifolia*			SL		1

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plants	land plants	Polypodiaceae	*Pyrrosia rupestris*	rock felt fern		SL		1
plants	land plants	Proteaceae	*Alloxylon wickhamii*			C		1
plants	land plants	Proteaceae	*Athertonia diversifolia*			C		1
plants	land plants	Proteaceae	*Bleasdalea bleasdalei*			C		1
plants	land plants	Proteaceae	*Cardwellia sublimis*			C		1
plants	land plants	Proteaceae	*Darlingia*			C		1
plants	land plants	Proteaceae	*Grevillea baileyana*			C		1
plants	land plants	Proteaceae	*Grevillea hilliana*			C		1
plants	land plants	Proteaceae	*Helicia nortoniana*			C		2/1
plants	land plants	Proteaceae	*Stenocarpus*					1
plants	land plants	Proteaceae	*Triunia erythrocarpa*			C		1
plants	land plants	Psilotaceae	*Psilotum nudum*	skeleton fork fern		SL		1
plants	land plants	Pteridaceae	*Adiantum atroviride*			SL		1
plants	land plants	Pteridaceae	*Adiantum diaphanum*			SL		1
plants	land plants	Pteridaceae	*Adiantum hispidulum var. hispidulum*			SL		1
plants	land plants	Pteridaceae	*Adiantum silvaticum*			SL		1
plants	land plants	Pteridaceae	*Cheilanthes distans*	bristly cloak fern		C		1
plants	land plants	Pteridaceae	*Cheilanthes nudiuscula*			C		1
plants	land plants	Pteridaceae	*Doryopteris concolor*			SL		1
plants	land plants	Pteridaceae	*Pellaea muelleri*			SL		1
plants	land plants	Pteridaceae	*Pellaea paradoxa*	heart fern		SL		1
plants	land plants	Pteridaceae	*Pteris platyzomopsis*			SL		1
plants	land plants	Pteridaceae	*Pteris umbrosa*	jungle bracken		SL		1
plants	land plants	Putranjivaceae	*Drypetes deplanchei*	grey boxwood		C		1
plants	land plants	Ranunculaceae	*Clematis glycinoides*			C		1
plants	land plants	Rhamnaceae	*Alphitonia excelsa*	soap tree		C		1
plants	land plants	Rhamnaceae	*Alphitonia petriei*	pink ash		C		1
plants	land plants	Rhamnaceae	*Alphitonia whitei*	red ash		C		1
plants	land plants	Rhamnaceae	*Emmenosperma alphitonioides*	yellow ash		C		1
plants	land plants	Rosaceae	*Rubus alceifolius*	giant bramble	Y			4/3
plants	land plants	Rosaceae	*Rubus moluccanus var. moluccanus*			C		2/1
plants	land plants	Rosaceae	*Rubus moluccanus var. trilobus*			C		1
plants	land plants	Rubiaceae	*Atractocarpus merikin*			C		1
plants	land plants	Rubiaceae	*Coelospermum purpureum*			C		1
plants	land plants	Rubiaceae	*Coffea arabica*	Arabian coffee	Y			1
plants	land plants	Rubiaceae	*Cyclophyllum multiflorum*			C		1/1
plants	land plants	Rubiaceae	*Pavetta australiensis var. pubigera*			C		1
plants	land plants	Rubiaceae	*Pomax umbellata*			C		1
plants	land plants	Rubiaceae	*Psychotria daphnoides var. angustifolia*			C		1
plants	land plants	Rubiaceae	*Psychotria loniceroides*	hairy psychotria		C		1
plants	land plants	Rubiaceae	*Psychotria submontana*			C		1
plants	land plants	Rubiaceae	*Randia tuberculosa*			C		1
plants	land plants	Rubiaceae	*Scleromitrion galioides*			C		1
plants	land plants	Rubiaceae	*Tarenna dallachiana subsp. dallachiana*			C		1
plants	land plants	Rutaceae	*Acronychia acidula*	lemon aspen		C		1
plants	land plants	Rutaceae	*Acronychia acronychioides*			C		1

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plants	land plants	Rutaceae	*Acronychia vestita*			C		1
plants	land plants	Rutaceae	*Citrus x limon*		Y			1
plants	land plants	Rutaceae	*Flindersia bourjotiana*			C		1
plants	land plants	Rutaceae	*Flindersia brayleyana*	Queensland maple		C		1
plants	land plants	Rutaceae	*Flindersia pimenteliana*	maple silkwood		C		1
plants	land plants	Rutaceae	*Flindersia schottiana var. pubescens*			C		1
plants	land plants	Rutaceae	*Halfordia kendack*	saffron heart		C		1
plants	land plants	Rutaceae	*Melicope bonwickii*			C		1
plants	land plants	Rutaceae	*Melicope xanthoxyloides*			C		2/1
plants	land plants	Salicaceae	*Casearia sp. (Mission Beach B.P.Hyland 773)*			C		1/1
plants	land plants	Sapindaceae	*Arytera divaricata*	coogera		C		1
plants	land plants	Sapindaceae	*Cupaniopsis flagelliformis var. flagelliformis*			C		1
plants	land plants	Sapindaceae	*Guioa acutifolia*	northern guioa		C		1
plants	land plants	Sapindaceae	*Guioa montana*			C		1
plants	land plants	Sapindaceae	*Harpullia rhyticarpa*			C		1
plants	land plants	Sapindaceae	*Jagera pseudorhus var. integerrima*			C		1
plants	land plants	Sapindaceae	*Mischarytera lautereriana*	corduroy tamarind		C		1
plants	land plants	Sapindaceae	*Mischocarpus pyriformis subsp. pyriformis*			C		1
plants	land plants	Sapindaceae	*Sarcopteryx martyana*			C		1
plants	land plants	Sapindaceae	*Sarcopteryx reticulata*			C		1/1
plants	land plants	Sapotaceae	*Niemeyera prunifera*			C		1
plants	land plants	Schizaeaceae	*Schizaea dichotoma*	branched comb fern		SL		1
plants	land plants	Smilacaceae	*Smilax aculeatissima*			C		1
plants	land plants	Smilacaceae	*Smilax australis*	barbed-wire vine		C		1
plants	land plants	Smilacaceae	*Smilax glyciphylla*	sweet sarsaparilla		C		1
plants	land plants	Solanaceae	*Capsicum frutescens*		Y			1
plants	land plants	Solanaceae	*Solanum capsicoides*	devil's apple	Y			1
plants	land plants	Solanaceae	*Solanum nigrum*		Y			2
plants	land plants	Solanaceae	*Solanum seaforthianum*	Brazilian nightshade	Y			1
plants	land plants	Solanaceae	*Solanum torvum*	devil's fig	Y			2/1
plants	land plants	Sparrmanniaceae	*Triumfetta rhomboidea*	chinese burr	Y			1
plants	land plants	Sterculiaceae	*Argyrodendron peralatum*	red tulip oak		C		1
plants	land plants	Sterculiaceae	*Brachychiton acerifolius*	flame tree		SL		1
plants	land plants	Sterculiaceae	*Franciscodendron laurifolium*			C		1
plants	land plants	Tectariaceae	*Tectaria confluens*			C		1
plants	land plants	Thymelaeaceae	*Pimelea linifolia subsp. linifolia*			C		1
plants	land plants	Thymelaeaceae	*Wikstroemia indica*	tie bush		C		1
plants	land plants	Ulmaceae	*Trema tomentosa var. aspera*			C		1
plants	land plants	Urticaceae	*Dendrocnide moroides*	Gympie stinger		C		1
plants	land plants	Urticaceae	*Dendrocnide photiniphylla*	shiny-leaved stinging tree		C		1
plants	land plants	Verbenaceae	*Duranta erecta*	duranta	Y			1
plants	land plants	Verbenaceae	*Lantana camara*	lantana	Y			1
plants	land plants	Verbenaceae	*Stachytarpheta cayennensis*		Y			1/1
plants	land plants	Verbenaceae	*Stachytarpheta jamaicensis*	Jamaica snakeweed	Y			1
plants	land plants	Verbenaceae	*Stachytarpheta mutabilis*	pink snakeweed	Y			1/1
plants	land plants	Verbenaceae	*Verbena litoralis var. litoralis*		Y			1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Violaceae	*Viola perreniformis*			C		1
plants	land plants	Viscaceae	*Notothixos subaureus var. cinereus*			C		1/1
plants	land plants	Vitaceae	*Cayratia saponaria*			C		1
plants	land plants	Vitaceae	*Cayratia trifolia*			C		1
plants	land plants	Vitaceae	*Cissus antarctica*			C		1
plants	land plants	Vitaceae	*Cissus hastata*			C		1
plants	land plants	Vitaceae	*Cissus oblonga*			C		1
plants	land plants	Vitaceae	*Cissus repens*			C		1
plants	land plants	Vitaceae	*Clematicissus opaca*			C		1
plants	land plants	Vitaceae	*Tetrastigma nitens*	shining grape		C		1
plants	land plants	Xyridaceae	*Xyris complanata*	yellow-eye		C		1
plants	land plants	Zingiberaceae	*Alpinia caerulea var. arundelliana*			C		1
plants	land plants	Zingiberaceae	*Alpinia hylandii*			NT		1/1

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 3 – Protected Matters Search Result

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Australian Government
Department of Agriculture, Water and the Environment

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: 28-Mar-2022

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	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	30
Listed Migratory Species:	20

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

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 http://www.environment.gov.au/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:	24
Whales and Other Cetaceans:	None
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:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	3
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

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
BIRD		
Calidris canutus		
Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Casuarius casuarius johnsonii		
Southern Cassowary, Australian Cassowary, Double-wattled Cassowary [25986]	Endangered	Species or species habitat known to occur within area
Erythrotriorchis radiatus		
Red Goshawk [942]	Vulnerable	Species or species habitat known to occur within area
Falco hypoleucos		
Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Turnix olivii		
Buff-breasted Button-quail [59293]	Endangered	Species or species habitat known to occur within area
Tyto novaehollandiae kimberli		
Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
FROG		
Litoria dayi		
Australian Lace-lid, Lace-eyed Tree Frog, Day's Big-eyed Treefrog [86707]	Vulnerable	Species or species habitat likely to occur within area
Litoria myola		
Kuranda Tree Frog [82063]	Critically Endangered	Species or species habitat known to occur within area
Litoria nyakalensis		
Mountain Mistfrog, Nyakala Frog [1820]	Critically Endangered	Species or species habitat likely to occur within area
MAMMAL		
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Hipposideros semoni		
Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii rattoides		
Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat may occur within area
Petauroides volans		
Greater Glider [254]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
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 likely to occur within area
Pteropus conspicillatus		
Spectacled Flying-fox [185]	Endangered	Species or species habitat likely to occur within area
Rhinolophus robertsi		
Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus		
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Archontophoenix myolensis		
Myola Palm, Myola Archontophoenix [64500]	Endangered	Species or species habitat known to occur within area
Diplazium cordifolium		
[15585]	Vulnerable	Species or species habitat likely to occur within area
Diplazium pallidum		
[12764]	Endangered	Species or species habitat likely to occur within area
Myrmecodia beccarii		
Ant Plant [11852]	Vulnerable	Species or species habitat likely to occur within area
Phaius pictus		
[22564]	Vulnerable	Species or species habitat likely to occur within area
Vappodes lithocola		
Dwarf Butterfly Orchid, Cooktown Orchid [78893]	Endangered	Species or species habitat likely to occur within area
Zeuxine polygonoides		
Velvet Jewel Orchid [46794]	Vulnerable	Species or species habitat likely to occur within area
SHARK		

Scientific Name	Threatened Category	Presence Text
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus		
Osprey [952]		Species or species habitat known to occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Symposiachrus trivirgatus as Monarcha trivirgatus		
Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area
Reptile		
Crocodylus porosus		
Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Jumrum Rainforest Estate	2011/5939	Controlled Action	Post-Approval
KUR-World Integrated Eco-resort, Kuranda, Qld	2016/7710	Controlled Action	Assessment Approach
Russett Park Alternative Access Road	2003/1043	Controlled Action	Completed

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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