

8.2 G & A SHEPPARD - RECONFIGURING A LOT - SUBDIVISION (1 INTO 3 LOTS) - LOT 2 ON RP726691 - 29 BOYLES ROAD, KURANDA - RAL/20/0003

Date Prepared: 4 January 2021
Author: Planning Officer
Attachments: 1. Proposal Plan
 2. Ecological Assessment
 3. Submission/s

APPLICATION DETAILS

APPLICATION		PREMISES	
APPLICANT	G & A Sheppard	ADDRESS	29 Boyles Road, Kuranda
DATE LODGED	5 June 2020	RPD	Lot 2 on RP726691
TYPE OF APPROVAL	Development Permit		
PROPOSED DEVELOPMENT	Reconfiguring a Lot - Subdivision (1 into 3 Lots)		
FILE NO	RAL/20/0003	AREA	13.676 hectares
LODGED BY	U&i Town Plan	OWNER	G & A Sheppard
PLANNING SCHEME	Mareeba Shire Council Planning Scheme 2016		
ZONE	Rural Residential Zone		
LEVEL OF ASSESSMENT	Impact Assessment		
SUBMISSIONS	One (1) Submission in Support		

EXECUTIVE SUMMARY

Council is in receipt of an impact assessable development application described in the above application details. During the mandatory public notification period, only one (1) submission was received that was in support of the proposed development.

The application and supporting material has been assessed against the Mareeba Shire Council Planning Scheme 2016 and no significant conflicts with the Planning Scheme have been identified.

Draft conditions were provided to the Applicant care of their consultant and have been agreed to.

It is recommended that the application be approved, subject to conditions.

OFFICER'S RECOMMENDATION

1. That in relation to the following development application:

APPLICATION		PREMISES	
APPLICANT	G & A Sheppard	ADDRESS	29 Boyles Road, Kuranda
DATE LODGED	5 June 2020	RPD	Lot 2 on RP726691
TYPE OF APPROVAL	Development Permit		
PROPOSED DEVELOPMENT	Reconfiguring a Lot - Subdivision (1 into 3 Lots)		

and in accordance with the Planning Act 2016, the applicant be notified that the application for a development permit for the development specified in (A) is:

Approved by Council in accordance with the approved plans/documents listed in (B), subject to assessment manager conditions in (C), assessment manager’s advice in (D), relevant period in (E), further permits in (F), and further approvals from Council listed in (G);

And

The assessment manager does not consider that the assessment manager’s decision conflicts with a relevant instrument.

(A) APPROVED DEVELOPMENT: Development Permit for Reconfiguring a Lot - Subdivision (1 into 3 Lots)

(B) APPROVED PLANS:

Plan/Document Number	Plan/Document Title	Prepared by	Dated
R4-20(2)	Development Plan - 1 into 3 Lot Reconfiguration	U&i Town Plan	12/11/2020

(C) ASSESSMENT MANAGER’S CONDITIONS (COUNCIL)

(a) Development assessable against the Planning Scheme

1. Development must be carried out substantially in accordance with the approved plans and the facts and circumstances of the use as submitted with the application, and subject to any alterations:

- found necessary by the Council’s delegated officer at the time of examination of the engineering plans or during construction of the development because of particular engineering requirements; and
- to ensure compliance with the following conditions of approval.

2. Timing of Effect

2.1 The conditions of the development permit must be complied with to the satisfaction of Council’s delegated officer prior to the endorsement of the plan of survey for the development, except where specified otherwise in these conditions of approval.

3. General

- 3.1 The development approval would not have been issued if not for the conditions requiring the construction of infrastructure or the payment of infrastructure charges/contributions within the conditions of approval.
- 3.2 The applicant/developer is responsible for the cost of necessary alterations to existing public utility mains, services or installations required by works in relation to the proposed development or any works required by condition(s) of this approval.
- 3.3 All payments or bonds required to be made to the Council pursuant to any condition of this approval must be made prior to the endorsement of the plan of survey and at the rate applicable at the time of payment.
- 3.4 The developer must relocate (in accordance with FNQROC standards) any services such as water, sewer, drainage, telecommunications and electricity that are not wholly located within the lots that are being created/serviced where required by the relevant authority, unless approved by Council's delegated officer.
- 3.5 Where utilities (such as sewers on non-standard alignments) traverse lots to service another lot, easements must be created in favour of Council for access and maintenance purposes. The developer is to pay all costs (including Council's legal expenses) to prepare and register the easement documents.
- 3.6 Where approved existing buildings and structures are to be retained, setbacks to any new property boundaries are to be in accordance with Planning Scheme requirements for the relevant structure and/or Queensland Development Code.
- 3.7 All works must be designed, constructed and carried out in accordance with FNQROC Development Manual requirements (as amended) and to the satisfaction of Council's delegated officer.
- 3.8 Charges

All outstanding rates, charges, and expenses pertaining to the land are to be paid in full.
- 3.9 Bushfire Management
 - 3.9.1 At the time of dwelling construction on Lots 1 and 2, a minimum of 5,000 litres of water storage for firefighting purposes must be provided and preserved for no other purpose. The supply can be satisfied by either a separate tank, a reserve section of a larger domestic water supply tank, a dam or swimming pool. Where a tank water supply is provided it must be fitted with standard rural fire brigade fittings and be situated adjacent a hard stand area of heavy vehicles.

3.9.2 A bushfire management plan must be prepared for Lots 1 - 3 to the satisfaction of Council's delegated officer. The future use of each lot must comply with the requirements of the bushfire management plan at all times.

3.10 Slope Stability

For any new building work proposed on a slope of 15% or greater, the applicant/developer must provide Council with a site specific geotechnical report prepared by a suitably qualified Registered Professional Engineer of Queensland (RPEQ) that certifies:

- the long-term stability of the development site; and
- that the development site will not be adversely affected by land slide/slip activity originating on sloping land above the development site.

3.11 Building Envelopes

- (a) The approved building envelopes for proposed lots 1 and 2 are the building envelopes shown on plan No. R4-20 (2) dated 12/11/2020. The building envelopes must not exceed 2,500m² each (excluding access driveways).
- (b) Prior to the endorsement of the survey plan the approved building envelope areas must be defined by survey markers set at each corner, to the satisfaction of Council's delegated officer.
- (c) All future buildings including associated on-site effluent disposal systems must be located within the approved building envelopes.
- (d) No vegetation shall be cleared outside the approved building envelopes.

3.12 Environmental Covenants

The applicant/developer shall be responsible for the preparation and registration of a statutory covenant with Council pursuant to S97A of the Land Title Act for the purposes of native vegetation and habitat preservation including the preservation, protection and maintenance of native vegetation and a mapped ecological corridor.

The covenant will be of a form that is acceptable to the Registrar of Titles and will apply to the entirety of Lots 1 and 2 excluding the building envelopes mentioned in Condition 3.11 and driveways. The covenant location and the covenant document provisions will be to the satisfaction of Council's delegated officer.

The covenant agreement shall be signed by the registered owner prior to endorsement of the survey plan by Council and the signed covenant shall be jointly lodged for registration with the survey plan with the Department of Resources.

The covenant must stipulate that the covenant area must be protected, preserved and conserved, including by strictly adhering to the following non-exhaustive conditions (which may be varied by written agreement between the parties):

- (a) no existing living vegetation or hereafter existing in the covenant area, may be cut down, damaged or destroyed;
- (b) no fences permitted within the covenant area;
- (c) no construction to take place within the covenant areas;
- (d) to prohibit the construction of any dams or other structures or undertaking of any activities which may interrupt the natural hydrology, on any part of the site at any time.
- (e) no native animals within the covenant area shall be killed or interfered with;
- (f) no domestic dogs or domestic cats are to be kept within the covenant area at any time;
- (g) no other acts may be carried out on or in respect of the covenant area which, in the opinion of the Council, acting reasonably may have a detrimental environmental impact on the covenant area;

Notwithstanding clause (a) to (g), if any native or indigenous animal on the covenant area poses a risk to human safety the native or indigenous animal may be removed with the prior written consent of the Council and any other approvals which might be required by law.

The covenant document shall be to the satisfaction of Council's delegated officer, and the applicant shall be responsible for the cost of preparation and registration of the covenant.

4. Infrastructure Services and Standards

4.1 Access

4.1.1 A single asphalt or concrete sealed driveway (no bitumen), with a minimum width of six (6) metres must be constructed to provide shared access to Lots 1 and 2. The crossover must be constructed (from the edge of Boyles Road to the property boundary of the lots) in accordance with the FNQROC Development Manual, to the satisfaction of Council's delegated officer.

4.1.2 The existing access crossover servicing Lot 3 must also be upgraded to a bitumen, asphalt or concrete standard (from the edge of Boyles Road to

the property boundary) in accordance with the FNQROC Development Manual, to the satisfaction of Council's delegated officer.

4.2 Stormwater Drainage

- (a) The applicant/developer must take all necessary steps to ensure a non-worsening effect on surrounding land as a consequence of the development.
- (b) All stormwater drainage collected from the site must be discharged to an approved legal point of discharge.

4.3 Water Supply

Lots 1 and 2 must be provided with a water supply either via:

- (a) a bore or bores 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;
 - (iii) to be installed and connected prior to the occupation of any dwelling on the Lot.

If on site water storage tank/s is the chosen method of domestic water supply, a notation will be placed on the rates notice for each lot notifying prospective purchasers that no water supply has been provided to each lot and that future domestic water supply will be satisfied via tank supply and be their responsibility and provided solely at their expense.

4.4 Wastewater Disposal

At the time of construction of a future dwelling or outbuilding on each lot, any associated on-site effluent disposal system must be constructed in compliance with the latest version On-Site Domestic Wastewater Management Standard (ASNZ1547) to the satisfaction of the Council's delegated officer.

4.5 Electricity provision/supply

The applicant/developer must ensure that an appropriate level of electricity supply is provided to each allotment in accordance with FNQROC Development Manual standards (as amended) to the satisfaction of Council's delegated officer.

Written advice from an Electricity Service Provider is to be provided to Council indicating that an agreement has been made for the provision of power reticulation.

4.6 Telecommunications

The applicant/developer must demonstrate that a connection to the national broadband network is available for each allotment, or alternatively, enter into an agreement with a telecommunication carrier to provide telecommunication services to each lot and arrange provision of necessary conduits and enveloping pipes (to be included for the full length of the shared driveways required by 4.1 (b) above).

5. Additional Payment Condition/s (section 130 of the Planning Act 2016)

5.1 The additional payment condition has been imposed as the development will create additional demand on trunk infrastructure which will create additional trunk infrastructure costs for council.

5.2 The developer must pay \$9,640.00 per additional lot as a contribution toward trunk infrastructure with the amount of the contribution increased on 1 July each year in accordance with the increase for the PPI index for the period starting on the day the development approval takes effect, adjusted by reference to the 3-yearly PPI index average to the date of payment.

5.3 The trunk infrastructure for which the payment is required is:

- The trunk transport network servicing the land (\$4,820.00 per additional allotment)
- The trunk open space infrastructure servicing the land (\$4,820.00 per additional allotment)

5.4 The developer may elect to provide part of the trunk infrastructure instead of making the payment.

5.5 If the developer elects to provide part of the trunk infrastructure the developer must:

- Discuss with Council's delegated officer the part of the works to be undertaken;
- Obtain the necessary approvals for the part of the works;
- Indemnify the Council in relation to any actions, suits or demands relating to or arising from the works;
- Take out joint insurance in the name of the Council and the developer in the sum of \$20,000,000 in relation to the undertaking of the works;
- Comply with the reasonable direction of Council officers in relation to the completion of the works;
- Complete the works to the standards required by the Council; and
- Complete the works prior to endorsement of the plan of subdivision.

(D) ASSESSMENT MANAGER'S ADVICE

- (a) A number of other charges or payments may be payable as conditions of approval. The applicable fee is set out in Council's Fees & Charges Schedule for each respective financial year.

(b) Endorsement Fees

Council charges a fee for the endorsement of a Survey Plan, Community Management Statements, easement documents, and covenants. The fee is set out in Council's Fees & Charges Schedule applicable for each respective financial year.

(c) Compliance with applicable codes/policies

The development must be carried out to ensure compliance with the provisions of Council's Local Laws, Planning Scheme Policies, Planning Scheme and Planning Scheme Codes to the extent they have not been varied by a condition of this approval.

(d) Notation on Rates Record

A notation will be placed on Council's Rate record with respect to each lot regarding the following conditions:

- a registered covenant (Lot 1 and 2 only)
- an approved building envelope plan (Lot 1 and 2 only)
- conditions regarding bushfire management
- an approved bushfire management plan
- a registered easement over the subject site (Lot 3 only)
- conditions regarding water supply (Lot 1 and 2 only)

(e) Environmental Protection and Biodiversity Conservation Act 1999

The applicant is advised that referral may be required under the *Environmental Protection and Biodiversity Conservation Act 1999* if the proposed activities are likely to have a significant impact on a matter of national environmental significance. Further information on these matters can be obtained from www.environment.gov.au

(f) Cultural Heritage

In carrying out the activity the applicant must take all reasonable and practicable measures to ensure that no harm is done to Aboriginal cultural heritage (the "cultural heritage duty of care"). The applicant will comply with the cultural heritage duty of care if the applicant acts in accordance with gazetted cultural heritage duty of care guidelines. An assessment of the proposed activity against the duty of care guidelines will determine whether or to what extent Aboriginal cultural heritage may be harmed by the activity. Further information on cultural heritage, together with a copy of the duty of care guidelines and cultural heritage search forms, may be obtained from www.datsip.qld.gov.au

(E) RELEVANT PERIOD

When approval lapses if development not started (s.85)

- Reconfiguring a Lot– four (4) years (starting the day the approval takes effect);

(F) OTHER NECESSARY DEVELOPMENT PERMITS AND/OR COMPLIANCE PERMITS

- Nil

(G) OTHER APPROVALS REQUIRED FROM COUNCIL

- Access approval arising from condition number 4.1 (Please contact Planning Section to obtain application form and applicable fee).

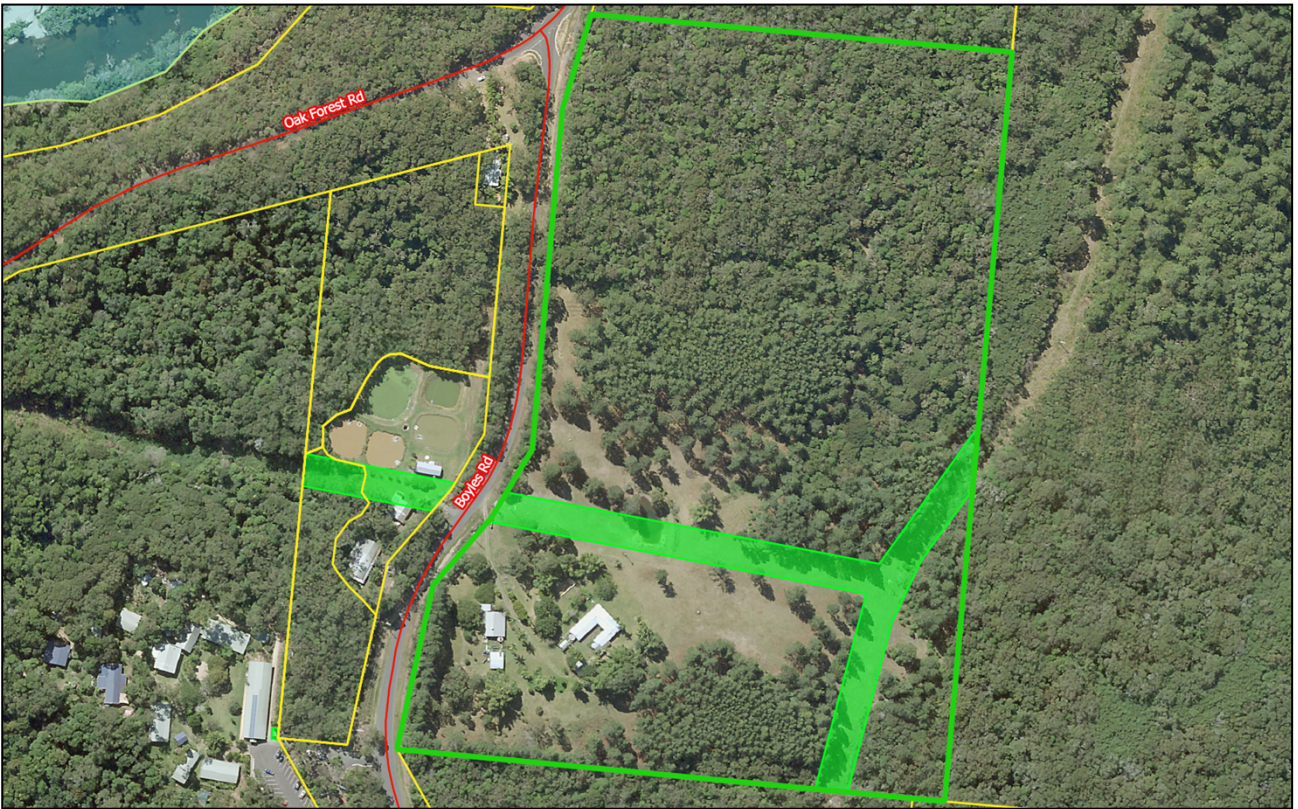
THE SITE

The subject site is situated on the corner of Boyles Road and Oak Forest Road at 29 Boyles Road, Kuranda and is more particularly described as Lot 2 on RP726691. The site is generally regular in shape with a total area of 13.676 hectares and is zoned Rural Residential under the Mareeba Shire Council Planning Scheme 2016.

The site contains 484 metres of frontage to Boyles Road which is constructed to a bitumen sealed standard with an approximate width of 6 - 6.5 metres. The site also contains 20 metres of frontage to a section of undeveloped road reserve in the south-east corner of lot which remains vegetated and unused. The site is improved by a dwelling and outbuildings (sheds) situated in the south-west corner of the allotment. Access is provided from Boyles Road via a single unsealed crossover. The southern half of the property surrounding the improvements is predominately cleared with some thickets of vegetation and gardens remaining. The northern half of the property remains vegetated. An Ergon Energy electricity supply easement is established over the southern half of the site.

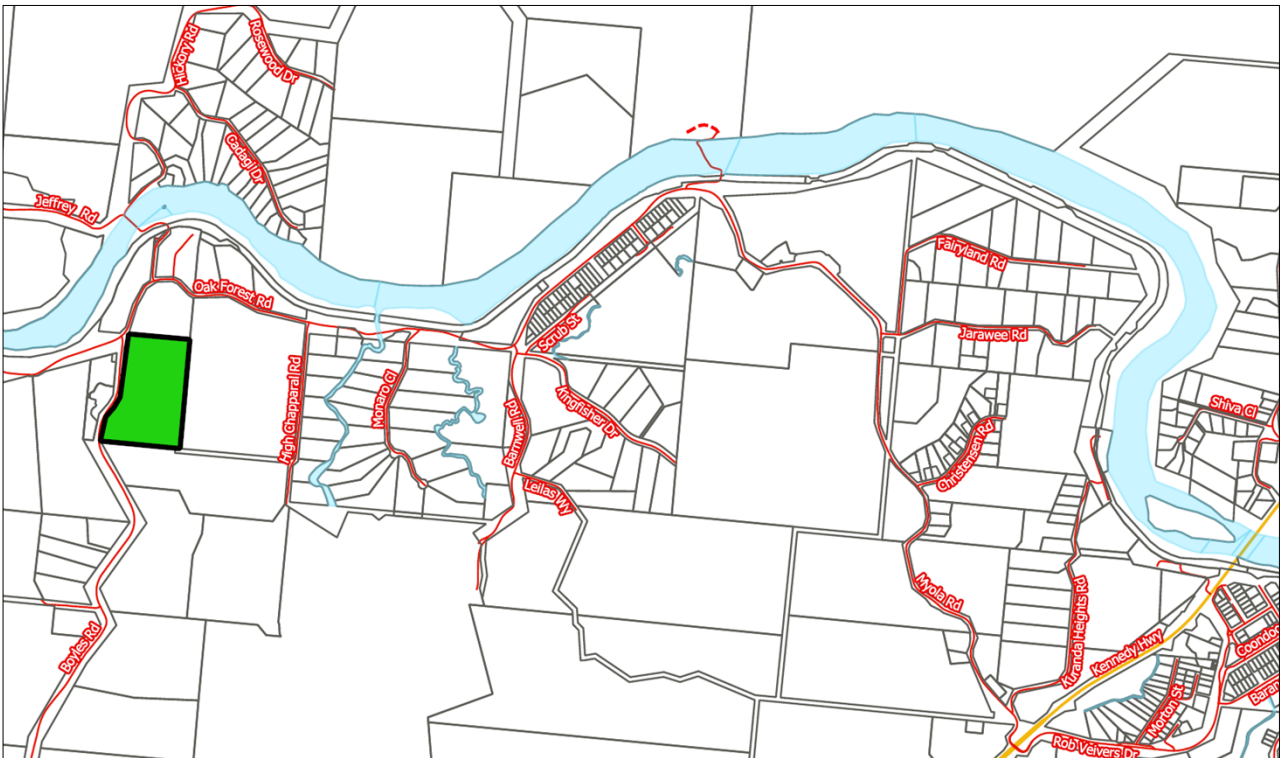
The majority of allotments immediately surrounding the site are zoned Rural residential and are used accordingly. Lot 2 on RP748313 situated to the east of the site is zoned Emerging Community.

The Cairns Hinterland Steiner School is established to the south-west of the site on the opposite side of Boyles Road.



Map Disclaimer:

Based on or contains data provided by the State of Queensland (Department of Environment and Resource Management) (2009). In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws.



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BACKGROUND AND CONTEXT

Nil

PREVIOUS APPLICATIONS & APPROVALS

Nil

DESCRIPTION OF PROPOSED DEVELOPMENT

The development application seeks a Development Permit for Reconfiguring a Lot - Subdivision (1 into 3 Lots) in accordance with the plans shown in **Attachment 1**. The proposed development will see the creation of two additional lots, proposed Lots 1 and 2 on the northern end of the site with areas of approximately 2.2 ha and 2.3 ha. The balance Lot, proposed Lot 3, will have an area of approximately 9.17 ha and will include the sites existing improvements. Building envelopes of 2,500m² are proposed on both Lots 1 and 2 to limit the amount of future clearing on either lot. The proposed lot layout is shown below:



REGIONAL PLAN DESIGNATION

The subject site is included within the Regional Landscape and Rural Production Area land use category in the Far North Queensland Regional Plan 2009-2031. The Regional Plan Map 3- 'Areas of Ecological Significance' also identifies the site as containing:

- *Strategic Rehabilitation Area*
- *State & Regional Conservation Corridors*
- *Terrestrial Area of General Ecological Significance*

PLANNING SCHEME DESIGNATIONS

Strategic Framework:	<p>Land Use Categories</p> <ul style="list-style-type: none"> • Rural Residential Area <p>Natural Environment Elements</p> <ul style="list-style-type: none"> • Biodiversity Area
Zone:	Rural Residential zone
Precinct:	No Precinct
Overlays:	<ul style="list-style-type: none"> • Bushfire Hazard Overlay • Environmental Significance Overlay • Hill and Slope Overlay • Residential Dwelling House and Outbuilding Overlay • Transport Infrastructure Overlay

RELEVANT PLANNING INSTRUMENTS

Assessment of the proposed development against the relevant planning instruments is summarised as follows:

(A) Far North Queensland Regional Plan 2009-2031

Separate assessment against the Regional Plan is not required because the Mareeba Shire Council Planning Scheme appropriately advances the Far North Queensland Regional Plan 2009-2031, as it applies to the planning scheme area.

(B) State Planning Policy

Separate assessment against the State Planning Policy (SPP) is not required because the Mareeba Shire Council Planning Scheme appropriately integrates all relevant aspects of the SPP.

(C) Mareeba Shire Council Planning Scheme 2016

Strategic Framework

3.3 Settlement pattern and built environment

3.3.10 Element—Rural residential areas

3.3.10.1 Specific outcomes

- (1) *Rural residential development is consolidated within rural residential areas where it will not result in the fragmentation or loss of agricultural areas or biodiversity areas.*

- (2) *Infill development within rural residential areas occurs only where appropriate levels of infrastructure are available and provided, the existing rural living character can be maintained and an activity centre is proximate.*
- (3) *No further subdivision of greater than anticipated density occurs within rural residential areas that are not proximate to an activity centre and its attending physical and social infrastructure.*
- (4) *Rural residential areas across Mareeba Shire are characterised by a range of lot sizes, consistent with the form of historical subdivision in the vicinity of proposed development.*

Comment

The subject site is in a rural residential area and is not agricultural land. The site does not contain any mapped Wildlife Habitat or Regulated Vegetation; however, the site is situated within a mapped Ecological Corridor. A 2,500m² building envelope is proposed for both Lots 1 and 2 and it is anticipated that these building envelopes will be cleared for the future construction of a single dwelling and outbuilding/s on each allotment. It should be noted that the original application included building envelopes of 4,200m² and 4,700m² on Lots 1 and 2 respectively, however these were later reduced to 2,500m² per allotment.

A comprehensive ecological assessment (included as **Attachment 2**) was carried out over the site to determine the impact the proposed development would have on native flora and fauna as well as wildlife connectivity. The ecological assessment concluded that the clearing proposed, which makes up approximately 12% of each of proposed Lots 1 and 2 and approximately 3% of the entire site will not likely impact on wildlife connectivity over the subject land or surrounding locality. This is mainly due to size of each building envelope and the location of the building envelopes on the western side of the lots adjacent to Boyles Road which will leave the remainder and majority of vegetation on either lot undisturbed. The ecological assessment also determined that no endangered or threatened flora or fauna species would be impacted by the proposed building envelope clearing. In order to ensure the remaining vegetation on either lot remains undisturbed moving forward, it is proposed to include a condition requiring the establishment of environmental covenants over the remaining vegetated sections of the subject land. This approach is consistent with the recommendations contained within the Ecological Assessment.

Proposed Lots 1 and 2 will be consistent in size with other rural residential lots in the surrounding locality and will be conditioned to be appropriately serviced in line with other 2 ha rural residential lots in the Shire. The additional lots will be situated within 500 metres of the long established Cairns Hinterland Steiner School and will help ensure its ongoing operation as an essential service for the region.

The proposed development does not conflict with these specific outcomes.

3.3.14 Element—Natural hazard mitigation

3.3.14.1 Specific outcomes

- (1) *The risk of loss of life and property associated with bushfires, cyclones, flooding, landslides and other weather related events are minimised through the appropriate use of land having regard to its level of susceptibility to the hazard or potential hazard.*
- (2) *Development in an area subject to a natural hazard incorporates appropriate siting and design measures that mitigate risks to infrastructure, buildings and the community.*

- (3) *Development considers the potential for increased occurrence of natural hazards as a result of climate change, including greater frequency of extreme weather events and increased rainfall intensities.*
- (4) *Development incorporates emergency response measures to ensure the impacts of natural hazards can be minimised.*

Comment

Proposed Lot 3 contains an existing dwelling so there is no increased risk to life of property on this proposed allotment. The 2,500m² building envelopes contained within proposed Lots 1 and 2 will be situated within a bushfire hazard area. It is anticipated that these building envelopes will be cleared for the future siting of a dwelling which should provide sufficient separation from any hazardous vegetation. The building envelope areas are also situated in close proximity to Boyles Road providing ease of access for firefighting appliances as well as quick and efficient evacuation for occupants. Conditions will be attached to any approval requiring the provision of on-site water storage for firefighting purposes as well as the preparation of a Bushfire Management Plan to be adhered to by future land owners.

Some parts of the subject site are also mapped as "hill and slope areas" however the gradient of the land within the identified building envelope areas is less than 15% and does not pose a land slip risk. No flood risk has been identified over the subject land.

The proposed development complies or can be conditioned to comply with these specific outcomes.

3.4 Natural resources and environment

3.4.4 Element—Biodiversity areas

3.4.4.1 Specific outcomes

- (1) *Development avoids adverse impacts on the ecological values of biodiversity areas and where avoidance is not possible the adverse impacts are minimised and, for an area of high ecological significance, no net loss in biodiversity values is achieved.*
- (2) *Development on lots containing biodiversity areas ensures their ongoing protection and retention through application of conservation covenants or dedication for public use.*
- (3) *Biodiversity areas that are considered to be of regional, state or higher levels of significance are awarded levels of protection commensurate with these values.*
- (4) *The ecological values of biodiversity areas which have been degraded are rehabilitated as part of the development, and commensurate with the scale of development.*
- (6) *Endangered and of-concern ecosystems and threatened species habitat including upland refugia ecosystems, wet sclerophyll, and the habitat of endemic species are protected across all land tenures.*

Comment

The subject site is in a rural residential area and is not agricultural land. The site does not contain any mapped Wildlife Habitat or Regulated Vegetation; however, the site is situated within a mapped Ecological Corridor. A 2,500m² building envelope is proposed for both Lots 1 and 2 and it is anticipated that these building envelopes will be cleared for the future construction of a single dwelling and outbuilding/s on each allotment. It should be noted that the original application included building envelopes of 4,200m² and 4,700m² on Lots 1 and 2 respectively, however these were later reduced to 2,500m² per allotment.

A comprehensive ecological assessment (included as **Attachment 2**) was carried out over the site to determine the impact the proposed development would have on native flora and fauna as well as wildlife connectivity. The ecological assessment concluded that the clearing proposed, which makes up approximately 12% of each of proposed Lots 1 and 2 and approximately 3% of the entire site will not likely impact on wildlife connectivity over the subject land or surrounding locality. This is mainly due to size of each building envelope and the location of the building envelopes on the western side of the lots adjacent to Boyles Road which will leave the remainder and majority of vegetation on either lot undisturbed. The ecological assessment also determined that no endangered or threatened flora or fauna species would be impacted by the proposed building envelope clearing. In order to ensure the remaining vegetation on either lot remains undisturbed moving forward, it is proposed to include a condition requiring the establishment of environmental covenants over the remaining vegetated sections of the subject land. This approach is consistent with the recommendations contained within the Ecological Assessment.

The proposed development will achieve compliance with these specific outcomes, particularly with the inclusion of the environmental covenants.

Relevant Developments Codes

The following Development Codes are considered to be applicable to the assessment of the application:

- 6.2.10 Rural residential zone code
- 8.2.3 Bushfire hazard overlay code
- 8.2.4 Environmental significance overlay code
- 8.2.8 Hill and slope overlay code
- 9.4.2 Landscaping code
- 9.4.3 Parking and access code
- 9.4.4 Reconfiguring a lot code
- 9.4.5 Works, services and infrastructure code

The application included a planning report and assessment against the planning scheme. An officer assessment has found that the application satisfies the relevant acceptable solutions (or probable solutions/performance criteria where no acceptable solution applies) of the relevant codes set out below, provided reasonable and relevant conditions are attached to any approval.

Relevant Codes	Comments
Rural Residential Zone Code	<p>The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code.</p> <p>The proposed development is not consistent with Overall Outcomes (g) and (h) contained within the code which seek to discourage the creation of additional lots in Rural residential zoned areas that lie outside a subdivision precinct. Despite this non-compliance, the application is considered to comply with the higher order Strategic Framework provisions contained within</p>

	the Planning Scheme. Further commentary is provided in the Planning Discussion section of the report.
Bushfire Hazard Overlay Code	The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code.
Environmental Significance Overlay Code	The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code.
Hill and Slope Overlay Code	The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code.
Landscaping Code	The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code.
Parking and Access Code	The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code.
Reconfiguring a Lot Code	<p>The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code apart from the following:</p> <ul style="list-style-type: none"> • Acceptable Outcome AO1.1 • Performance Outcome PO13 (no acceptable outcome) <p>In the case of AO1.1, it is considered the development can comply with the higher order Performance Outcome PO1. In the case of PO13 and AO13 compliance with the higher order Overall Outcomes of the Reconfiguring a Lot code can be achieved.</p> <p>Further commentary is provided in the planning discussion section of report.</p>
Works, Services and Infrastructure Code	The application can be conditioned to comply with the relevant acceptable outcomes (or performance outcomes where no acceptable outcome is provided) contained within the code.

(D) Planning Scheme Policies/Infrastructure Charges Plan

The following planning scheme policies are relevant to the application:

- Planning Scheme Policy 4 - FNQROC Regional Development Manual

A condition will be attached to any approval requiring all development works be designed and constructed in accordance with FNQROC Development Manual standards.

(E) Additional Trunk Infrastructure Condition – Road Infrastructure (Section 650 of SPA)

The subject land is located outside the identified Priority Infrastructure Area (PIA).

Section 130 of the Planning Act 2016 allows Council to condition additional trunk infrastructure outside the PIA.

The development, which will create two (2) additional rural residential lots, is predicted to place additional demand on Council’s trunk transport infrastructure and trunk open space infrastructure.

The developer must pay a one-off payment of **\$9,640.00** (per additional lot) as a contribution toward trunk infrastructure with the amount of the contribution increased on 1 July each year in accordance with the increase for the PPI index for the period starting on the day the development approval takes effect, adjusted by reference to the 3-yearly PPI index average to the date of payment

The trunk infrastructure for which the payment is required is:

- The trunk transport network servicing the land (\$4,820.00 per additional lot)
- The trunk open space infrastructure servicing the land (\$4,820.00 per additional lot)

REFERRAL AGENCY

The application triggered referral to Ergon Energy as an Advice Agency. In a letter dated 16 June 2020 Ergon Energy advised Council they had no requirements in relation to the application.

Internal Consultation

Not applicable.

PUBLIC NOTIFICATION

The development proposal was placed on public notification from 18 November 2020 to 9 December 2020. The applicant submitted the notice of compliance on 9 December 2020 advising that the public notification requirements were carried out in accordance with the requirements of the Act.

One submission was received that supported the proposed development and is included as **Attachment 3**.

The grounds for objection/support are summarised and commented on below:

Grounds for objection /support	Comment
The submission included the following statement: <i>"I have properties adjoining the above property (Lot 2 on RP726691). The applicants have sent me the plans of the intended reconfiguration and as it is not for profit and is for family use I have no issue with the change going ahead."</i>	Noted. The application is recommended for approval.

Submitters

Name of Principal submitter	Address
1. Wayne Tonkin	64 High Chapparal Road, Kuranda

PLANNING DISCUSSION

Compliance with the Performance Outcomes and Purpose of the Rural Residential Zone Code and the Reconfiguring a Lot Code is summarised as follows:

Rural Residential Zone Code

The development generally complies with the Overall Outcomes contained within the Rural Residential zone code apart from the following:

- (g) Reconfiguring a lot will maintain the predominant lot size of the precinct or intended for the precinct; and*
- (h) Reconfiguring a lot involving the creation of new lots is not undertaken external to a precinct in the Rural residential zone in consideration of the inherent environmental, and/or physical infrastructure and/or social infrastructure constraints of Rural residential zoned land outside of identified precincts.*

Comment

Despite not complying with overall outcomes (g) and (h), the application is impact assessable and can therefore be assessed against the Planning Scheme's Strategic Framework which is the highest order assessment provisions contained within the Planning Scheme. It is considered that the proposed development achieves compliance with the Strategic Framework provisions relating to settlement pattern and built environment, specifically for rural residential areas. See the Strategic Framework section of this report for further commentary.

Reconfiguring a Lot Code

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; and**
- (f) allows for the protection of environmental features; and*
- (g) accommodates site constraints.*

AO1.1

*Lots provide a minimum area and frontage in accordance with **Table 9.4.4.3B**.*

Comment

Table 9.4.4.3B does not nominate a minimum area and frontage for rural residential allotments that are located outside a precinct.

Assessment is therefore necessary against PO1 and the criteria it nominates:

- (a) The proposed lots will be consistent with the design/size of lots in the surrounding area.
- (b) The proposed lots allow the desired amenity of the zone to be achieved.
- (c) Each of the proposed lots is of sufficient size and shape to be able to accommodate all buildings, structures and works associated with the intended future residential land use;
- (d) Boyles Road is constructed to a reasonable standard. Proposed lots 1 and 2 will be accessed via a shared driveway while Lot 3 will utilise the existing site access. All three accessed will be required to be upgraded/constructed to FNQROC Development Manual standards.
- (e) The subject land is surrounded by existing rural residential development and is within 500 metres of the long established Cairns Hinterland Steiner School.
- (f) Building envelopes will ensure future development on site results in minimal vegetation clearing only. Environmental covenants will be required to be established on the vegetated balance areas. See Ecological Assessment included as **Attachment 2**.
- (g) The proposed lot layout reasonably responds to the site's constraints.

The development complies with PO1.

PO13

New lots are only created in the Rural residential zone where land is located within the 4,000m² precinct, the 1 hectare precinct or the 2 hectare precinct.

A013

No acceptable outcome is provided.

Comment

The proposed development conflicts with PO13 as the subject land is not located within a rural residential zone precinct.

An assessment of the development's consistency with the higher order purpose and overall outcomes contained within the Reconfiguring a Lot Code is therefore required and is discussed below:

The purpose of the Reconfiguring a Lot code will be achieved through the following overall outcomes:

- (a) *Subdivision of land achieves the efficient use of land and the efficient provision of infrastructure and transport services;*

The site is already serviced by all infrastructure typically conditioned for rural residential lots above 2 ha in size. Each new lot will be adequately serviced which will include electricity supply, access and telecommunications via the NBN fixed wireless network. Water supply and wastewater disposal will be achieved on-site which is typical of 2 ha rural residential allotments.

- (b) *Lots are of a suitable size and shape for the intended or potential use having regard to the purpose and overall outcomes of the relevant zone or precinct;*

All three proposed lots are of a suitable size and shape to accommodate the anticipated future residential land uses.

- (c) *Subdivision of land creates lots with sufficient area and dimensions to accommodate the ultimate use, meet user requirements, protect environmental features and account for site constraints;*

The ultimate use of each lot is a single dwelling house with the potential for some ancillary domestic outbuildings. All lots proposed have sufficient area and dimensions to accommodate a future dwelling house and avoid/protect environmental features. A building envelope is nominated for each lot to ensure future development is appropriately separated from any remaining environmental features.

- (d) *A range and mix of lot sizes is provided to facilitate a variety of industry and housing types;*

The proposed development would add to the range of lot sizes available in the locality.

- (e) *Subdivision design incorporates a road network that provides connectivity and circulation for vehicles and provide safe and efficient access for pedestrians, cyclists and public transport;*

Not applicable. The proposed development does not require an extension to the road network.

- (f) *Subdivision design provides opportunities for walking and cycling for recreation and as alternative methods of travel;*

The subject site is situated in proximity to parkland on the corner of Hickory Road and Oak Forest Road and is connected to Kuranda's urban centre by a reasonable constructed road network.

- (g) *Subdivision of land provides and integrates a range of functional parkland, including local and district parks and open space links for the use and enjoyment of the residents of the locality and the shire;*

Due to the proposed developments relatively small scale and the adequate supply of existing parkland and facilities in the locality, a monetary infrastructure contribution is considered to be appropriate.

- (h) *Subdivision of land contributes to an open space network that achieves connectivity along riparian corridors and between areas with conservation values;*

The proposed development will not impact on wildlife connecting locally or regionally (see Ecological Assessment in **Attachment 2**).

- (i) *Subdivision within the Rural zone maintains rural landholdings in viable parcels;*

Not applicable. The subject land is within the Rural Residential zone, not the Rural zone.

- (j) *Land in historical townships is not reconfigured to be used for urban purposes; and*

Not applicable. The subject land is not within a historical township for the purpose of the planning scheme.

- (k) *Residential subdivision and greenfield development is designed to consider and respect:*
- i. topography;*
 - ii. climate responsive design and solar orientation;*
 - iii. efficient and sustainable infrastructure provision;*
 - iv. environmental values;*
 - v. water sensitive urban design;*
 - vi. good quality agricultural land; and*
 - vii. the character and scale of surrounding development.*

The proposed lot layout appropriately and efficiently responds to the relevant identified criteria.

Development Plan - 1 into 3 Lot Reconfiguration





Ecological Assessment- Lot 2 RP726691

Boyles Road, Myola

Lot 2 RP 726691



Document Set ID: 3891222
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Ecological Assessment- Lot 2 RP726691

Boyles Road, Myola Lot 2 RP 726691

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Appendix A Potential Occurrence
Appendix B Wildlife Online (NC Act 1992)
Appendix C Protected Matters Search Tool (EPBC Act 1999)
Appendix D Regulated Vegetation Report (VM Act 1999)

1.0 Introduction

A residential subdivision has been proposed for Lot 2 RP726691 in Myola (**Figure 1**). Currently, the property is configured as a single 13.70 ha lot, however reconfiguration into three lots for the implementation of two additional ~4000 m² building envelopes are proposed. 4 Elements Consulting was commissioned by Allyson Sheppard to conduct an ecological constraints assessment of the proposed subdivision on the property. The proposed subdivision is located within the Mareeba Shire Councils' Environmental Significance Overlay Code (P08) and requires assessment under this instrument to determine what acceptable outcomes are achieved as a result of the proposed subdivision. The proposed lot reconfiguration proposes to clear category C high value regrowth vegetation as listed under the *Vegetation Management Act 1999*. The ecological constraints assessment below will address any potential impacts to EPBC act 1999 flora and fauna.

1.1 Site Background

The study site is approximately ~350-370 m above sea level and located to the east of Boyles Road, Myola (Lot 2 RP 726691). The majority of the study site is mapped as category C regrowth vegetation under the *Vegetation Management Act 1999*. The study site has primarily been used for a low-density residential dwelling currently with a number of dwellings and cleared areas located in the far south of the property. The property is bordered by similar low-density residential properties to the east and the Cairns Hinterland Steiner School roughly opposite on the western boundary.

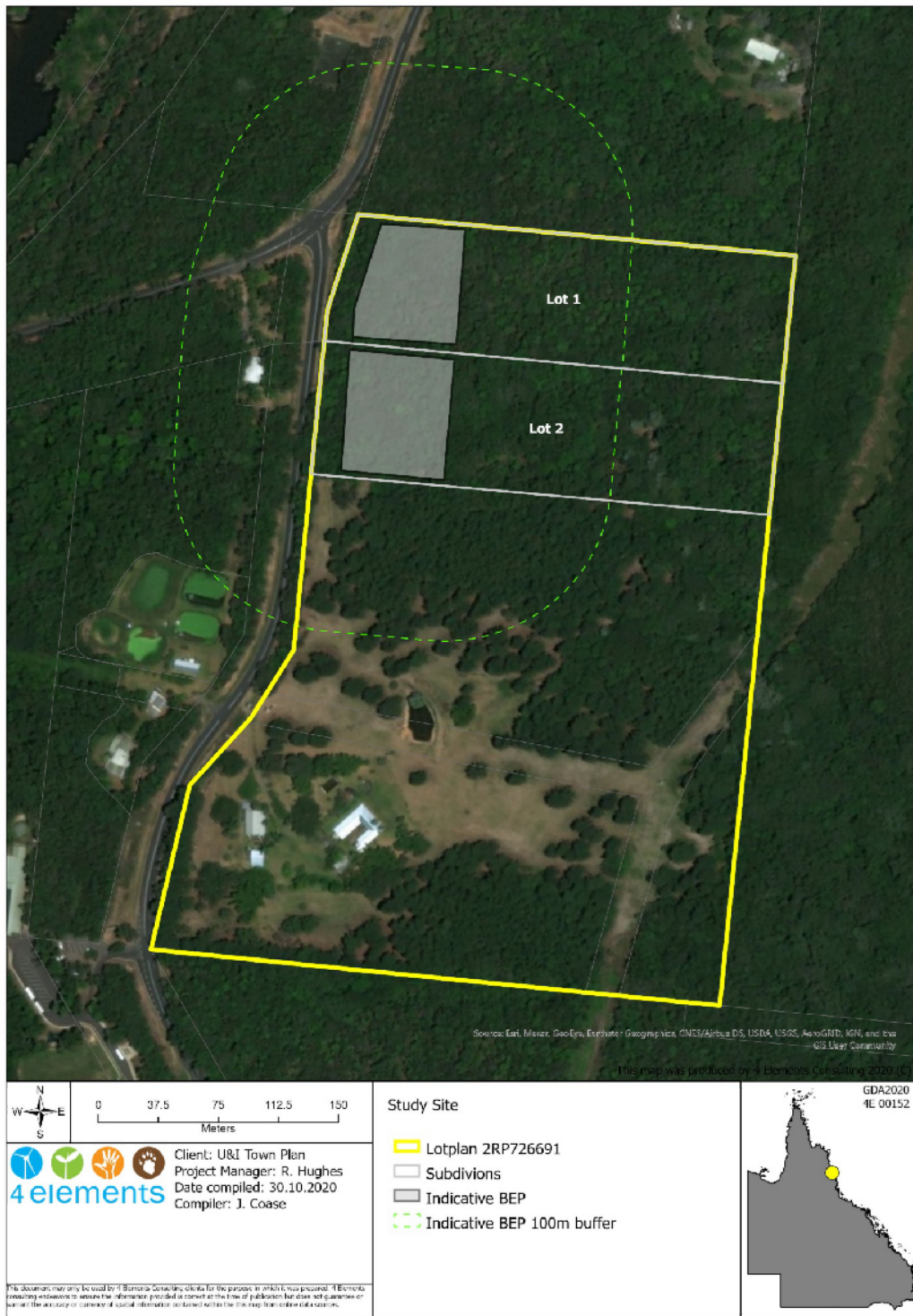


Figure 1 Study Site and Proposed Building Envelopes

1.2 Legislative Context

The following legislation, provided in **Table 1**, are relevant to identifying ecological values and to provide guidance for the assessment of potential project impacts and identify environmental constraints to project activities. These legislation and guidance documents have been considered in this report and the reports provided in the Appendices to this report.

Table 1 Statutory Legislation Applied to the Project and Corridors

Legislative Act	Brief Description
Commonwealth Legislation	
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	<p>The <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) provides a mechanism for assessing the environmental impact of activities and development where "Matters of National Environmental Significance" (NES) may be significantly affected.</p> <p>The Act identifies nine matters of NES, which require consideration and analysis, namely:</p> <ul style="list-style-type: none"> ▶ Ramsar wetland of international importance; ▶ World Heritage properties; ▶ National Heritage places; ▶ Commonwealth Marine areas; ▶ Great Barrier Reef Marine Park; ▶ Nationally listed threatened species and ecological communities; ▶ Nationally listed migratory species; ▶ Nuclear actions (including uranium mining); and ▶ Water resources in relation to coal seam gas and large coal mining development. <p>Where a project or action is believed to potentially cause a significant impact on a matter of NES, it is to be referred to the Australian Government Department of Environment and Science (DES) for assessment as to whether the action is a 'controlled action' requiring Commonwealth approval for the proposed action. The EPBC Act processes also allow voluntary referral of a project to seek confirmation that a Project will not have significant impacts on matters of NES. Where an action requires Commonwealth approval, a formal assessment process is undertaken in accordance with provisions of relevant legislation.</p>
State Legislation	
<i>Vegetation Management Act 1999</i>	<p>The <i>Vegetation Management Act 1999</i> (VMA) is the planning initiative underlying regional management of vegetation in Queensland, including clearing of vegetation types, termed Regional Ecosystems (REs).</p> <p>The RE classification is a hierarchical system formed by a three-part code with the primary subdivision being bioregion, followed by land zone, and then vegetation. The biogeographic region or bioregion is the primary level of classification for biodiversity values in Queensland</p>

Legislative Act	Brief Description
	<p>describing where the RE is found on a state-wide basis. Land Zones are geological and geomorphic categories that describe the major geologies and landforms of Queensland.</p> <p>The system is based primarily on geology, with geologic age considered an important determinant. The status of REs is based on their pre-clearing and remnant extent and is gazetted under the act and listed in the RE Description Database (REDD) maintained by the Queensland Department of Environment and Science (DES).</p> <p>The VMA aims to conserve remnant endangered and of concern REs, prevent land degradation and further loss of biodiversity, manage the environmental impacts of clearing vegetation and reduce of greenhouse emissions. The VMA status of a RE is described in line with the following:</p> <ul style="list-style-type: none"> ▶ Endangered. A RE that is prescribed under the regulation and has either of the following attributes: <ul style="list-style-type: none"> ❖ Less than 10% of its pre-clearing extent remaining; or ❖ From 10% to 30% of its pre-clearing extent remaining and the remnant vegetation remaining is less than 10,000 ha. ▶ Of concern. A RE that is prescribed under the regulation and has either of the following attributes: <ul style="list-style-type: none"> ❖ From 10% to 30% of its pre-clearing extent remaining; or ❖ More than 30% of its pre-clearing extent remaining and the remnant vegetation remaining is less than 10,000 ha; or ▶ Least concern. A RE that is prescribed under the regulation and has more than 30% of its pre-clearing extent remaining and the remnant vegetation remaining is more than 10,000 ha; or ▶ The biodiversity status of a RE is classified by DES based on the condition of remnant vegetation. A RE will have a vegetation management status and/or a biodiversity status of endangered, of concern or least concern; or ▶ Essential Habitat. The VMA also has provision for the regulation of essential habitat for species of state significance. Essential habitat (mapped by DES) is vegetation in which a listed species has been known to occur. Clearing or disturbance to areas of essential habitat will require compensatory habitat measures to be developed. For the project development area, core habitat has been used to describe the combination of critical or essential habitat for both national or state listed significant species.
<i>Planning Act 2016</i>	<p>The Planning Act (2016) (Qld) establishes the framework for Queensland planning system. The purpose of the legislation is to establish an efficient and accountable system of land-use planning and development assessment that will lead to ecological sustainability. The Planning Act defines ecological sustainability as a balance between:</p> <ul style="list-style-type: none"> ▶ The protection of ecological processes and natural systems at local, regional, state and national levels; ▶ Economic development; and

Legislative Act	Brief Description
	<p>▶ The cultural, economic, physical and social wellbeing of Queenslanders.</p> <p>The Planning Regulation (2017) and the State Planning Policy (2017) are to guide local and state government in land use planning and development by defining the Queensland Government policies relating to matters of State interest.</p>
<p><i>Nature Conservation Act 1999</i></p>	<p>The <i>Nature Conservation Act 1992</i> (NCA) aims to conserve nature through strategies such as dedicating and declaring protected areas for those parts of Queensland with outstanding biological diversity, natural features and wilderness values. The NCA provides for the protection of near threatened, vulnerable and endangered animals and plants.</p> <p><i>Nature Conservation (Wildlife) Regulation 2006</i></p> <p>In support of the purpose and the provisions of the NCA, the <i>Nature Conservation (Wildlife) Regulation 2006</i> lists all flora and fauna species which are considered to be 'extinct in the wild', 'endangered', 'Vulnerable', 'Near Threatened' and 'Least Concern' wildlife.</p> <p>With respect to clearing activities:</p> <p>▶ The primary purpose of the NC Act is to conserve biodiversity by creating and managing protected areas, managing and protecting native wildlife, and managing the spread of non-native wildlife. Unless authorised, it is an offence under the NC Act to take, keep, use, or move protected flora and fauna for commercial, recreational or other purposes. Where a proposed development will result in such impacts to flora and/or fauna protected under the NC Act, authorisation from DEH will be required.</p> <p>Under <i>section 332 of the Nature Conservation (Wildlife Management) Regulation 2006</i>, mining operations requires an approved Species Management Program (SMP) to undertake any works that will, or potentially will, disturb or interfere with a protected animal breeding place.</p> <p>s332 - Tampering with animal breeding place</p> <p>A person must not, without a reasonable excuse, tamper with an animal breeding place that is being used by a protected animal to incubate or rear the animal's offspring.</p> <p>For subsection (1), an animal breeding place is being used by a protected animal to incubate or rear the animal's offspring if -</p> <ul style="list-style-type: none"> ▶ The animal is preparing, or has prepared, the place for incubating or rearing the animal's offspring; or ▶ The animal is breeding, or is about to breed, and is physically occupying the place; or ▶ The animal and the animal's offspring are physically occupying the place, even if the occupation is only periodical; or ▶ The animal has used the place to incubate or rear the animal's offspring and is of a species generally known to return to the same place to incubate or rear offspring in each breeding season for the animal. <p>Also, subsection (1) does not apply to a person removing or otherwise tampering with the breeding place if -</p>

Legislative Act	Brief Description
	<ul style="list-style-type: none"> ▶ The removal or tampering is part of an approved species management program for animals of the same species; or ▶ The person holds a damage mitigation permit for the animal and the permit authorises the removal or tampering.
<p><i>Queensland Fisheries Act 1994</i></p>	<p>The <i>Fisheries Act 1994</i> (Fisheries Act) provides for the use, conservation and enhancement of the community's fisheries resources and fish habitat by providing for, amongst other things, the protection of fish habitats.</p> <p>The <i>Fisheries Act</i> has been integrated into the <i>Sustainable Planning Act 2009</i> (SP Act) so that development permits under the SP Act are required for certain operational works that are assessable development under the SP Act.</p> <p>Operation works that are assessable development under the SP Act include waterway barrier works and works in a declared fish habitat.</p>
<p><i>Biosecurity Act (2014)</i></p>	<p>The Queensland Government's <i>Biosecurity Act 2014</i> is administered by the Department of Agriculture and Fisheries (DAF). The Act provides management measures to protect agricultural and tourism industries and the environment from pests, diseases and contaminants. Under the Act, invasive plants and animals are categorised as either a 'Prohibited Matter' or a 'Restricted Matter' and replace the 'Declared' status under the Land Protection (Pest and Stock Route Management) Act 2002 which has been superseded.</p>
<p><i>Environmental Protection Act 1994</i></p>	<p>The <i>Environmental Protection Act 1994</i> (EP Act) provides the key legislative framework for environmental management and protection in Queensland.</p> <p>The EP Act utilises a number of mechanisms to achieve its objectives. Relevant to this project is the requirement for the establishment of a general environmental duty, under Section 319 of the EP Act.</p> <p>Section 319 of the EP Act places a general environmental duty on the client to ensure that 'it does not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm'.</p> <p>By undertaking the preparation of this detailed ecological investigation, the client demonstrates that it is cognisant of the responsibilities for environmental protection and management in Queensland.</p>

Legislative Act	Brief Description
<i>Water Act 2000</i>	<p>The purpose of the <i>Water Act 2000</i> is to provide for the sustainable management of water and other resources. Under Section 266 of the <i>Water Act 2000</i>, a riverine protection permit is generally required from the DNRME to:</p> <ul style="list-style-type: none"> ▶ Destroy vegetation in a watercourse; ▶ Excavate in a watercourse; and ▶ Place fill in a watercourse. <p>Additionally, water supply for construction purposes (e.g. access track construction/compaction, dust suppression etc) may be required. Where this water supply is proposed to be sourced from nearby watercourses, a permit in accordance with Section 237 of the <i>Water Act 2000</i> will be required from DNRME prior to any water being extracted from the watercourse.</p>

1.3 Weed Management Legislation

Invasive plant species have the ability to interrupt natural landscape function and may lead to significant economic impacts. Weeds are managed by being declared under on or all of the three relevant legislation and or local law outlined below.

1.3.1 Weeds of National Significance

The Australian state and territory governments have compiled a list of invasive plant species based on an assessment process that prioritised these weeds based on their invasiveness, potential for spread and environmental, social, and economic impacts. Consideration was also given to their ability to be successfully managed. A list of 20 WoNS was endorsed in 1999 and a further 12 were added in 2012.

1.3.2 Biosecurity Act 2014 (Queensland)

1.3.2.1 Prohibited Invasive Plant

Prohibited matter includes a range of invasive plants and invasive animals and other types of pests and diseases listed in the Act. These plants have the potential to have significant impacts and are currently not present or known to be present in Queensland. It is an offence to deal with prohibited matter or fail to report its presence.

1.3.2.2 Restricted Invasive Plants

These species are established in Queensland and seriously threaten Queensland's primary industries, natural environment, livestock, human health and people's livelihoods.

Under the *Biosecurity Act 2014*, there are 7 categories of restricted matter (i.e. restricted matter may include matter such as plants, animal diseases, noxious fish, insects, pest animals and weeds).

Restricted invasive plants may fall into 1, a combination or all of categories 2 to 5 (listed below). Under each category the restricted invasive plant has listed restrictions. The specific restriction requirements also apply to a person when dealing with restricted invasive plants unless they have a restricted matter permit.

Restricted invasive plant categories and restrictions:

- ▶ Category 2: the invasive plant must be reported within 24 hours Biosecurity Queensland on 13 25 23.
- ▶ Category 3: the invasive plant must not be distributed either by sale or gift or released into the environment.
- ▶ Category 4: the invasive plant must not be moved.
- ▶ Category 5: the invasive plant must not be kept.
- ▶ Category 5: the invasive plant must not be kept.

All landowners have a general biosecurity obligation (GBO) under the *Biosecurity Act 2014* to take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control *regardless of its declared status*. Weeds that are not declared under the *Biosecurity Act 2014* may still be declared at the local government level.

1.3.3 Mareeba Shire Council Local Area Pest Management Plan (2015-2020)

This management plan outlines the objectives and strategies for ongoing, coordinated and effective pest management within the Mareeba Shire local government area.

Weed species are allocated a ranking, where weeds with the highest score are given the highest priority for control. Pest plants are given a ranking, where weeds with higher scores are given higher priority for control. The highest score an individual pest plant can receive is 45. This score is based on the listing under national and state legislation, the current distributional extent and potential economic, social and environmental impacts as well as the likelihood of a beneficial control outcome.

The Mareeba Shire priority weeds, WoNS and declared weeds *Biosecurity Act 2014* occurring within or near the site are listed in Section 3.3.

2.0 Methodology

2.1 Desktop review

4 Elements Consulting completed a review of relevant mapping, databases, legislation and associated plans and policies to identify potential matters of ecological significance including species and communities, and other ecological features that may occur on or within proximity planned housing development. This review included an assessment of the following:

- ▶ Wildlife Online database of flora and fauna (DEHP 2014). This database holds records of plants and animals that have either been sighted or collected within a given radius of the site (a search parameter was prescribed limiting the search area to a 10 km radius around the site. The records held in this database are maintained by DEHP;
- ▶ Protected Matters database of MNES (DAWE 2020). This database applies a range of bio-models to predict the presence of species of flora and fauna and other MNES within a given radius of the site (a search parameter was prescribed limiting the search area to a 5 km radius) as cited under the Commonwealth's EPBC Act;
- ▶ Protected Matters database of MSES (DEH, 2019). This database applies a range of bio-models to predict the presence of species of vegetation and other MSES within a given radius of the site (a search parameter was prescribed limiting the search area to 10 km);
- ▶ Review of relevant legislation and associated plans and policies, including but not limited to the QLD NC Act, VM Act, EPBC Act, and the Water Act;
- ▶ Mareeba Shire Planning Scheme Environmental Significance Overlay Code P08. Identify and protect matters of environmental significance, which include matters of state environmental significance (MSES) as defined under the State Planning Policy 2017 (SPP).
- ▶ Literature review. A range of scientific papers, recovery and conservation plans and other literature were reviewed for a number of related matters (such as targeted threatened species);
- ▶ Digital geological mapping on GeoResGlobe which details surface geology; and
- ▶ Australian Virtual Herbarium (for voucher notes and distribution records of threatened flora species.

3.0 Field Investigation

A field investigation was undertaken by an ecologist on 28 October 2020. The entire vegetated areas of the property were traversed on foot by an ecologist. The purpose was to assess the ecological condition of the study site and provide information on the following:

- ▶ Presence of threatened flora and fauna;
- ▶ Presence of invasive weed species and relevant Biosecurity listing;
- ▶ Determine the presence of any regulated vegetation (VMA 1999) and/or threatened ecological communities (EPBC Act 1999);
- ▶ Determine the presence of any mapped waterways and or wetlands;
- ▶ Assess locations of any locally and regionally significant ecological corridors.

3.1 Potential Habitat Assessment

The study site traverse included evaluating the area for potential occurrence of threatened flora and fauna species to occur within the target areas. All species are assessed under the *Nature Conservation Act 1992* and the *Environment Protection and Biodiversity Conservation Act 1999*. Recorded features included:

- ▶ Presence/absence of suitable habitat for EVNT species;
- ▶ Condition and disturbance history of habitat;
- ▶ Location of site within known distribution of the species;
- ▶ Connectivity with habitat where species is known to occur;
- ▶ Structural and floristic characteristics of the vegetation;
- ▶ Soil type and structure (visual only);
- ▶ Presence of water in any form e.g. rivers, dams, creeks, drainage lines, soaks;
- ▶ Size and abundance of hollows and coarse woody debris (CWD);
- ▶ Presence of sandbanks, shallow wading areas, rock walls, saltmarsh, roost areas, etc; and
- ▶ Presence of mistletoe, nectar, gum, seed, sap sources, browse trees.

3.2 Field Survey

3.2.1 Vegetation Communities

The vegetation throughout much of the property was in a regrowth condition (category C and R see **Figure 2**). The communities aligned with the pre-clearance regional ecosystems as mapped on the study site (RE 7.11.5),

the exception being the distinct lack of *Eucalyptus tereticornis* that dominates RE 7.11.44. Occasionally, medium sized *Eucalyptus pellita* and *Corymbia intermedia* were encountered up to ~60 cm diameter at breast height (DBH). Although much of the mature aged canopy trees have been removed through historical clearing of the study site and broader property. No hollow bearing trees were encountered in the PPS meander contributing further evidence of an immature regrowth community being the representative vegetation condition across the property.

Vegetation within the study site consisted broadly of open wet sclerophyll forest. The canopy (10-15 m) was generally dominated by *Eucalyptus pellita*, *Corymbia intermedia* and occasionally *Corymbia torelliana*. Fire exclusion was evident over the entire property and has permitted a dominant rainforest understorey including *Polyscias australianum*, *Guioa lasioneura*, *Alstonia muelleriana* and *Glochidion hylandii*. These species have formed a dense shrub and understorey layer that is suppressing recruitment of the Eucalypt canopy. The typical grassy understorey with a sparse shrub layer was largely absent from all parts of the study site. Fire intervals of a low intensity at 2-5-year intervals are required for maintaining a typical grassy understorey. No evidence of any fire scars on Eucalypt trees and advanced growth of a number of fire sensitive rainforest indicate lack of fire exceeding five (5) years.

Within ephemeral drainage lines the rainforest incursion was further pronounced with higher proportions of epiphytes and lianas and a dense shrub layer was occasionally present containing a shrub layer rainforest element (Plate 1). Highly modified non-remnant vegetation was present in the south of the study site.



Plate 1 Riparian Vegetation Present in the East of the Property

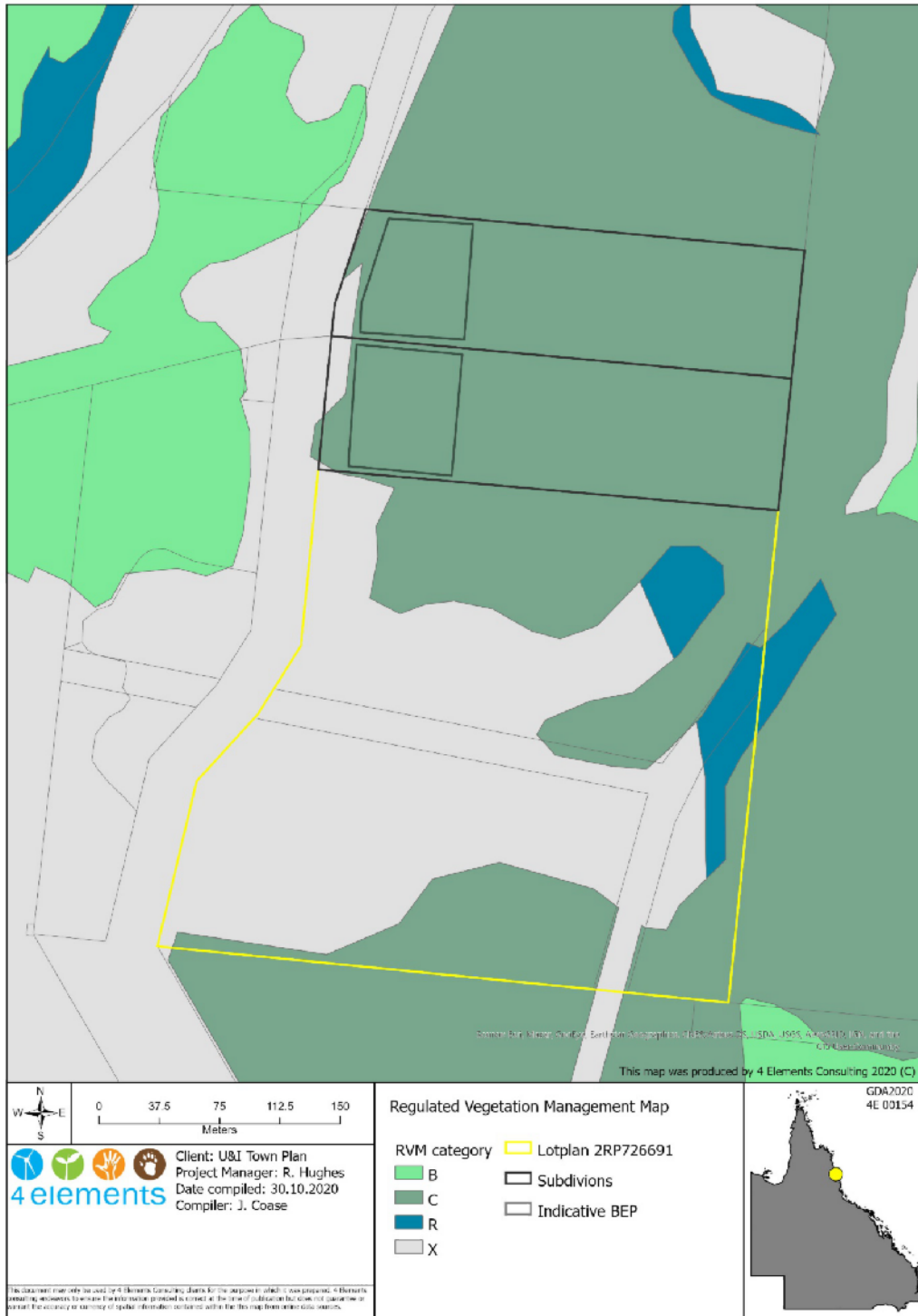


Figure 2 Vegetation Categories on Site

3.2.2 Habitat Attributes

Table 2 Habitat Attributes Present on the Site

Habitat Type	Study Area	Potential Value for Threatened Species
Connectivity	The study site maintains high connectivity with the surrounding vegetation communities, with forested corridors connecting Formartine State forest to the south and Kuranda National Park to the North. Minor roads, powerline easements and residential properties are present within the region.	Property represents a minor portion of larger foraging ranges for most species occurring in the property. Property represents generic habitat for a number of least concern species.
Ground Cover	Ground cover was present throughout the site, particularly in drier sections where a grassy understory was still present	Generic ground layer habitat was present across the property. May provide generic habitat for a range of common ground dwelling small mammals, amphibians and reptiles.
Leaf Litter	Due to an emerging rainforest canopy, thick leaf litter is present on the site.	Dense leaf litter provides structural refuge and foraging habitat for a range of common birds, mammals, amphibians and reptiles.
Coarse Woody Debris	Present on site throughout, however most debris are small and not hollow bearing. Two stag <i>Acacia celsa</i> trees were found near the southern housing alignment S16.80813° E145.59027° and S16.80809° E145.59016°. there is potential roosting habitat within these trees.	Moderate value. Generic habitat feature. May provide denning and foraging cover for a range of species, particularly small mammals (rodents and microbats) and reptiles.
Tree Hollows	Limited presence of tree hollows with the exception of a hollow termite mound in a tree (S16.80899° E145.58953°) (see 0)	Minimal value of site, given the lack of tree hollows in the Eucalyptus species on site. Arboreal hollows were only observed within arboreal termitaria occasionally on site (Plate 2). Providing refuge for obligate hollow denning species.
Shrub layer containing Melaleuca, Acacia, Banksia, Xanthorrhoea species	Largely suppressed by the advancing rainforest succession across the property.	Minimal value to any species.

Habitat Type	Study Area	Potential Value for Threatened Species
Primary Nectar Sources	Limited to <i>Eucalyptus pellita</i> , <i>Coyrmbia intermedia</i> and <i>Melaleuca dealbata</i> trees on site. Mistletoe spp. were present on site particularly within the <i>Acacia Celsa</i> within the cleared area nearest the housing pads.	High. These trees may provide a seasonal supply of nectar sources for a wide range of nectivorous species including the Spectaded Flying Fox.
Sap and Gum Sources	Limited to <i>Eucalyptus pellita</i> and other <i>Coyrmbia</i> trees on site	Moderate. Limited numbers of Eucalypt trees present on site. Rainforest incursion limiting the regrowth of open forest species for sap and gum sources.
Koala browse trees	<i>Eucalyptus pellita</i> feed trees are present within the study site. Connectivity to the surrounding vegetation communities of adjacent properties is high.	Minimal. Site is in a stage of regrowth with a developing rainforest incursion and as a result is not optimal habitat for koala. No proximate records exist.
Fleshy fruiting Species including <i>Ficus spp.</i>	Recorded occasionally in the understorey i.e. <i>Ficus rubignosa</i> .	Minimal. <i>Ficus spp.</i> Represent a minor component of the vegetation present within the property.
Passerine bird habitat	Dense stands of emerging rainforest trees, vine thickets and tall Eucalyptus emergent trees present.	Moderate. Generic passerine bird habitat is found throughout the study site. Evidence of Red-tailed Black Cockatoo feeding trees observed on site see Plate 3
Rock Outcrops	None	None
Water bodies	None	None. Ephemeral creeks and minor lagoons were recorded outside of the proposed clearing areas.



Plate 2 Arboreal termite mound found on a *Eucalyptus pellita*



Plate 3 Red-tailed Black Cockatoo feeding scar on *Acacia flavescens*

3.3 Invasive Weeds

Weeds were generally a very minor occurrence throughout the study site where regrowth vegetation was present. Within ephemeral drainage lines a higher number of herbaceous weeds were encountered. Of the 28 species encountered during the meander surveys, most were located along Boyles Road and the cleared paddock to the south.

Weeds of national significance (WoNS) restricted invasive category three species were found only within the road reserve along Boyles Road and were not present within the property (Lot 2 RP 726691).

4.0 Desktop Analysis Results

4.1 Mapped Vegetation Communities

RE & Biodiversity Status	Description (REDD v 11.1)	Location	Site Value
Wet Tropics, Land Zone 12 – Granite and Rhyolite Derived Landforms			
7.11.5a LC/NOC Category C	<i>Eucalyptus pellita</i> , <i>Corymbia intermedia</i> , <i>C. tessellaris</i> open forest with <i>Acacia celsa</i> , <i>A. cincinnata</i> , <i>A. mangium</i> and <i>A. flavescens</i> . Lowlands and foothills on metamorphics, of the very wet and wet rainfall zones.	Present as a majority portion of the study site.	Potential habitat for NCA listed species: <i>Aphyllorchis queenslandica</i> , <i>Buckinghamia ferruginiflora</i> , <i>Freycinetia marginata</i> , <i>Randia audasii</i> , <i>Sphaerantia chartacea</i> , <i>Vrydagzynea grayi</i> , <i>Whyanbeelia terrae-reginae</i> . Pre-clear extent = 30,000 ha; 2017 extent = 27,000 ha
7.11.5c LC/NOC Category C	<i>Corymbia intermedia</i> , <i>Eucalyptus pellita</i> , <i>E. tereticornis</i> , <i>C. tessellaris</i> , <i>C. torelliana</i> , open forest to woodland with <i>Acacia celsa</i> , <i>A. mangium</i> , <i>Lophostemon suaveolens</i> and <i>Syncarpia glomulifera</i> . Lowlands and foothills on metamorphics, of the wet and moist rainfall zones.	Present as a minor portion of the study site restricted to the central east of the property.	Potential habitat for NCA listed species: <i>Aphyllorchis queenslandica</i> , <i>Buckinghamia ferruginiflora</i> , <i>Freycinetia marginata</i> , <i>Randia audasii</i> , <i>Sphaerantia chartacea</i> , <i>Vrydagzynea grayi</i> , <i>Whyanbeelia terrae-reginae</i> . Pre-clear extent = 30,000 ha; 2017 extent = 27,000 ha
7.11.44 OC/OC Category C	<i>Eucalyptus tereticornis</i> (forest red gum) open forest to woodland. Coastal metamorphic foothills.	Present as a minor portion of the study site in the south of the property.	Potential habitat for NCA listed species: <i>Randia audasii</i> Pre-clear extent = 10,000 ha; 2017 extent = 9,000 ha

4.2 Matters of National and State Environmental Significance

Desktop searches for potentially occurring threatened species and habitats were conducted under both the *Environment Protection and Biodiversity Act 1999* (EPBC Act) and the *Nature Conservation Act 1992* (NC Act). Results from both databases (Protected Matters Search Tool and Wildlife Online Database) are detailed in **Appendix B** and **Appendix C**.

4.3 NC Act Wildlife Online

The Wildlife Online database search tool returned records for 33 NCA listed species. These species comprised 7 amphibian, 8 bird, 1 insect, 6 mammal, 1 reptile and 10 plants. See **Appendix B** for the complete search results.

4.4 EPBC Act Protected Matters Search Tool (Species)

Database searches under the Protected Matters Search Tool (PMST) returned a result of 49 listed threatened species, 23 migratory and 29 marine species. One species, *Pristis pristis*, was excluded given it is a pelagic/marine aquatic habitat species. Listed threatened species included 12 Bird, 5 frog, 11 mammal, 1 reptile and 19 plants. Thirty (30) bird species listed as also migratory and marine were recorded in the search tool. **Appendix C** provides the complete search results for the PMST search tool.

An assessment for the potential occurrence of these species on the study site, for both the EPBC and NC threatened species, is provided in **Appendix A**. **Table 3** below provides a summary list for these species and their relevant legislative listing.

Table 3 PMST (EPBC Act 1999)

Common Name	Scientific Name	Status NC Act	Status EPBC Act
Threatened Fauna			
Frogs			
Australian Lace-lid	<i>Litoria dayi</i>	V	V
Kuranda Tree Frog	<i>Litoria myola</i>	CR	E
Waterfall frog	<i>Litoria nannotis</i>	E	E
Mountain mist frog	<i>Litoria nyakalensis</i>	CR	E
Common Mistfrog	<i>Litoria rheocola</i>	E	E
Tapping green eyed frog	<i>Litoria serrata</i>	-	V
Sharp-snouted Day Frog	<i>Taudactylus acutirostris</i>	Ex	Ex
Reptiles			
Estuarine Crocodile	<i>Crocodylus porosus</i>	V	-
Red Knot	<i>Calidris canutus</i>	E	E
Curlew Sandpiper	<i>Calidris ferruginea</i>	CE	E
Great Knot	<i>Calidris tenuirostris</i>	CE	E
Southern Cassowary	<i>Casuarius casuarius johnsonii</i>	E	E
Macleay's fig-parrot	<i>Cyclopsitta diophthalma macleayana</i>	-	V
Beach stone-curlew	<i>Esacus magnirostris</i>	-	V
Red Goshawk	<i>Erythrotriorchis radiatus</i>	V	E
Gouldian Finch	<i>Erythrura gouldiae</i>	E	E
Grey Falcon	<i>Falco hypoleucos</i>	-	V

Common Name	Scientific Name	Status NC Act	Status EPBC Act
White-throated Needletail	<i>Hirundapus caudacutus</i>	V, Ma, Mi	LC
West Alaskan Bar-tailed Godwit	<i>Limosa lapponica baueri</i>	V	V
Northern Siberian Bar-tailed Godwit	<i>Limosa lapponica menzbieri</i>	CE	E
Eastern Curlew	<i>Numenius madagascariensis</i>	CE	E
Australian Painted Snipe	<i>Rostratula australis</i>	E	V
Buff-Breasted Button Quail	<i>Turnix olivii</i>	E	E
Masked Owl (northern)	<i>Tyto novaehollandiae kimberli</i>	V	V
Fish			
Lake Eacham Rainbow Fish	<i>Melanotaenia eachamensis</i>	E	-
Opal Cling Goby	<i>Stiphodon semoni</i>	-	CR
Mammals			
Northern Bettong	<i>Bettongia tropica</i>	E	E
Northern quoll	<i>Dasyurus hallucatus</i>	-	E
Spotted-tail quoll	<i>Dasyurus maculatus gracilis</i>	E	E
Lumholtz's Tree Kangaroo	<i>Dendrolagus lumholtzi</i>	-	NT
Diadem leaf-nosed bat	<i>Hipposideros diadema reginae</i>	-	NT
Semon's leaf-nosed bat	<i>Hipposideros semoni</i>	E	V
Ghost bat	<i>Macroderma gigas</i>	E	V
Black-footed tree rat	<i>Mesembriomys gouldii rattoides</i>	-	V
Tube-nosed Insectivorous Bat	<i>Murina florium</i>	-	V
Koala	<i>Phascolarctos cinereus</i>	V	V
Spectacled flying-fox	<i>Pteropus conspicillatus</i>	V	V
Large-eared horseshoe bat	<i>Rhinolophus robertsi</i>	V	V
Bare-rumped sheath-tail bat	<i>Saccolaimus saccolaimus nudiclunatus</i>	E	V
Water Mouse	<i>Xeromys myoides</i>	V	V
Threatened Flora			
-	<i>Acalypha lyonsii</i>	-	V
-	<i>Archontophoenix myolensis</i>	E	E
-	<i>Alloxylon flammeum</i>	V	V
-	<i>Alpinia hylandii</i>	-	NT
-	<i>Canarium acutifolium</i>	V	V
-	<i>Carronia pedicellata</i>	E	E
-	<i>Calochlaena villosa</i>	-	NT
-	<i>Crepidomanes majoriae</i>	-	V
-	<i>Ctenopterus walleri</i>	-	NT
-	<i>Diplazium cordifolium</i>	V	V
Dark-stemmed antler orchid	<i>Dendrobium mirbelianum</i>	E	E

Common Name	Scientific Name	Status NC Act	Status EPBC Act
	<i>Syn: Durabaculum mirbelianum</i>		
Queensland bluegrass	<i>Dicanthium setosum</i>	V	LC
-	<i>Diplazium pallidum</i>	E	E
Ant Plant	<i>Myrmecodia beccarii</i>	V	V
Lesser Swamp-orchid	<i>Phaius australis</i>	E	E
-	<i>Phaius pictus</i>	V	V
Native Moth Orchid	<i>Phalaenopsis amabilis subsp. rosenstromii</i>	E	E
Blue Tassel-fern	<i>Phlegmariurus dalhousieanus</i>	E	CR
Rat's tail tassel-fern	<i>Phlegmariurus filiformis</i>	E	E
Square tassel-fern	<i>Phlegmariurus tetrastichoides</i>	V	V
Middle Filmy Fern	<i>Polyphlebium endlicherianum</i>	E	V
-	<i>Polyscias bellendenkerrensensis</i>	V	V
-	<i>Randia audasii</i>	-	NT
	<i>Rhomboda polygonoides</i>	V	V
	<i>Syzygium hodgkinsoniae</i>	V	V
-	<i>Senegalia albizioides</i>	-	NT
Dwarf Butterfly Orchid	<i>Vappodes lithocola</i>	E	E
-	<i>Wetria australiensis</i>	-	V

Key: Ex: extinct, CE: Critically Endangered; E: Endangered; V: Vulnerable; NT: Near Threatened

4.5 EPBC Act and MNES Search Tool (Places of Environmental Significance)

Matters of National Environmental Significance (MNES) are matters pursuant to the EPBC act. The results of the MNES search which provides details on environmentally significant areas and habitat types is provided in **Table 4** below. To conduct this search tool, a 10 Kilometre radius buffer was added around a central point on the property. This provides results for all possible MNES matters that may occur on the property.

Table 4 PMST results (Significant Places)

Category	Result
Matters of National Environmental Significance	
World Heritage Properties	1
National Heritage Places	2
Wetlands of International Importance	None
Great Barrier Reef Marine Park	None
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	1
Listed Threatened Species	49
Listed Migratory Species	23

Category	Result
Other Matters Protected by the EPBC Act	
Commonwealth Land	None
Commonwealth Heritage Places	None
Listed Marine Species	29
Whales and other cetaceans	None
Critical Habitats	None
Commonwealth Reserves Terrestrial	None
Commonwealth Reserves Marine	None
Nationally Important Wetlands	2

4.6 Migratory and Marine Species

A total of 23 migratory and 29 marine species (adjusted for the exclusion of species solely dependent on aquatic marine habitats) were identified in the PMST search report. A summarised list of these species is provided in **Table 5** below.

Table 5 Migratory Species

Common name	Scientific name	EPBC Act Status	NCA Act status
Magpie Goose	<i>Anseranas semipalmata</i>	Ma	LC
Common Sandpiper	<i>Actitis hypoleucos</i>	Mi, Ma	SLC
Great Egret	<i>Ardea alba</i>	Ma	LC
Cattle Egret	<i>Ardea ibis</i>	Ma	LC
Fork-tailed Swift	<i>Apus pacificus</i>	Mi, Ma	SLC
Sharp-tailed Sandpiper	<i>Calidris aculeata</i>	Mi, Ma	SLC
Red Knot	<i>Calidris canutus</i>	Mi, E	E
Curlew Sandpiper	<i>Calidris ferruginea</i>	Mi, CE	E
Pectoral Sandpiper	<i>Calidris melanotos</i>	Mi, Ma	SL
Great Knot	<i>Calidris tenuirostris</i>	CE, Mi	E
Lesser Frigatebird	<i>Fregata ariel</i>	Mi, Ma	SL
Great Frigatebird	<i>Fregata minor</i>	Mi, Ma	SL
White-throated Needletail	<i>Hirundapus caudacutus</i>	V, Ma, Mi	LC
Bar-tailed Godwit	<i>Limosa lapponica</i>	Mi, V	V
Barn Swallow	<i>Hirundo rustica</i>	Mi	SL
Black-faced Monarch	<i>Monarcha melanopsis</i>	Mi	SL
Spectacled Monarch	<i>Monarcha trivirgatus</i>	Mi	SLC
Black-winged Monarch	<i>Monarcha frater</i>	Mi	SLC
Yellow Wagtail	<i>Motacilla flava</i>	Mi	SLC
Eastern Curlew	<i>Numenius madagascariensis</i>	Mi, CE	E
Rufous Fantail	<i>Rhipidura rufifrons</i>	Mi, Ma	SLC
Osprey	<i>Pandion haliaetus</i>	Mi, Ma	SLC

Common name	Scientific name	EPBC Act Status	NCA Act status
Common Greenshank	<i>Tringa nebularia</i>	Mi, Ma	SLC
Black-eared Cuckoo	<i>Chrysococcyx osculans</i>	Ma	LC
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	Ma	LC
Rainbow Bee-eater	<i>Merops ornatus</i>	Ma	LC
Flycatcher Satin	<i>Myiagra cyanoleuca</i>	Mi	SLC
Painted Snipe	<i>Rostratula benghalensis (sensu lato)</i>	E, Ma	V
Oriental Cuckoo	<i>Cuculus optatus</i>	SLC	Mi
Latham's Snipe	<i>Gallinago hardwickii</i>	SLC	Mi

Key: Mi: Migratory, Ma: Marine, SLC: Special Least Concern

4.7 Matters of National Environmental Significance (MNES) continued

The following table details the guidelines to which a certain application may have a significant impact on a sensitive environmental matter pursuant under the EPBC Act. **Table 6** below details the impact the current project may have for places of national environmental significance. The PMST search tool identified one Threatened Ecological Community (TEC) that may potentially occur on the study. This TEC is not present in any part of the study site, especially given that much of the property is classed as regrowth vegetation. Furthermore, vegetation on the property consists of Regional Ecosystems 7.11.5a (*Eudayptis pellita* open forest) and 7.11.44, (Blue gum forest) with rainforest an invasive rainforest understorey incursion, thus limiting the ability for broad leaf tea-tree (*Melaleuca viridiflora*) woodlands to establish.

Table 6 Matters of National Environmental Significance (MNES)

Matters of National Environmental Significance	Triggers
Listed Threatened Ecological Communities	
<p>An action is likely to have a significant impact on a critically endangered or endangered ecological community if there is a real chance or possibility that it will:</p> <ul style="list-style-type: none"> ▶ reduce the extent of an ecological community ▶ fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines ▶ adversely affect habitat critical to the survival of an ecological community ▶ modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns ▶ cause a substantial change in the species composition of an occurrence of an ecological community, including causing a 	<p>One threatened Ecological Community is considered a potential occurrence under the EPBC:</p> <p>Broad leaf tea-tree (<i>Melaleuca viridiflora</i>) woodlands in high rainfall coast north Queensland.</p> <p>The project site does not intersect this listed threatened ecological community</p> <p>No significant impact.</p>

Matters of National Environmental Significance	Triggers
<p>decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting</p> <ul style="list-style-type: none"> ▶ cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: <ul style="list-style-type: none"> ❖ assisting invasive species, that are harmful to the listed ecological community, to become established, or ❖ causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or ❖ interfere with the recovery of an ecological community. 	
World Heritage Property/National Heritage Places	
<p>An action is likely to have a significant impact on natural heritage values of a World Heritage property if there is a real chance or possibility that the action will:</p> <p>Values associated with geology or landscape</p> <ul style="list-style-type: none"> ▶ damage, modify, alter or obscure important geological formations in a World Heritage property ▶ damage, modify, alter or obscure landforms or landscape features, for example, by excavation or infilling of the land surface in a World Heritage property ▶ modify, alter or inhibit landscape processes, for example, by accelerating or increasing susceptibility to erosion, or stabilising mobile landforms, such as sand dunes, in a World Heritage property ▶ divert, impound or channelise a river, wetland or other water body in a World Heritage property, and ▶ substantially increase concentrations of suspended sediment, nutrients, heavy metals, hydrocarbons, or other pollutants or substances in a river, wetland or water body in a World Heritage property. <p>Biological and ecological values</p> <ul style="list-style-type: none"> ▶ reduce the diversity or modify the composition of plant and animal species in all or part of a World Heritage property ▶ fragment, isolate or substantially damage habitat important for the conservation of biological diversity in a World Heritage property 	<p>Wet Tropics of Queensland</p> <p>This project site does not intersect or contain an environmental area within the Wet Tropics World heritage area.</p> <p>No significant impact</p>

Matters of National Environmental Significance	Triggers
<ul style="list-style-type: none"> ▶ cause a long-term reduction in rare, endemic or unique plant or animal populations or species in a World Heritage property, and ▶ fragment, isolate or substantially damage habitat for rare, endemic or unique animal populations or species in a World Heritage property. 	
National Heritage Places	Wet Tropics of Queensland
<p>An action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:</p> <ul style="list-style-type: none"> ▶ one or more of the National Heritage values to be lost ▶ one or more of the National Heritage values to be degraded or damaged, or ▶ one or more of the National Heritage values to be notably altered, modified, obscured or diminished. 	<p>Wet Tropics World Heritage Area (Indigenous Values) are not present on the property.</p> <p>National heritage places are not present on the property.</p> <p>No significant impact</p>

4.8 Significant Impact Assessment for MNES

Individual significant impacts assessments (SIA) have been conducted on those species identified as potentially at risk of impact from the development. The SIA's differ between federally listed and state listed species and are explained in the following sections

4.8.1 Threatened Species

The Department of Agriculture, Water and Environment (DAWE) notes an action is likely to have a significant impact on an endangered species if there is a real chance or possibility that it will:

- ▶ Lead to a long-term decrease in the size of a population;
- ▶ Reduce the area of occupancy of the species;
- ▶ Fragment an existing population into two or more populations;
- ▶ Adversely affect habitat critical to the survival of a species;
- ▶ Disrupt the breeding cycle of a population; and/or
- ▶ Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

Individual impact assessments were conducted on EPBC listed species considered to have a moderate likelihood or confirmed presence on site. These potentially occurring species are:

- ▶ Bare-rumped Sheath-tailed bat
- ▶ Large-eared Horseshoe Bat
- ▶ Spectacled Flying Fox
- ▶ Koala

Marginal generic suitable habitat is present on the study site for these species. The fauna species listed here may use the site as infrequent visitors for foraging, however the development footprint of the site represents a very minor portion of a larger foraging range for these species.

4.8.2 Migratory Species

The Department of Environment and Science (DES) notes an action is likely to have a significant impact on a migratory species if there is a possibility it will:

- ▶ Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species;
- ▶ Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species; or
- ▶ Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

The species considered moderate and highly likely to occur on site are:

- ▶ Oriental Cuckoo
- ▶ Satin Flycatcher
- ▶ Rainbow bee-eater
- ▶ Osprey
- ▶ Rufous fantail
- ▶ Black-winged Monarch
- ▶ Spectacled Monarch
- ▶ Black-faced Monarch
- ▶ Barn Swallow
- ▶ White throated needletail
- ▶ Fork-tailed swift

It is considered highly unlikely that a total vegetation clearance for the proposed subdivision will impact on ecologically significant habitat to these species such that it interferes with the breeding, foraging or roosting of migratory species. External to the site, there are large tracts of available vegetation for these species to utilise.

The results of this assessment determined there will be no significant impact on threatened or migratory species and this project will not be referred to the Department of Environment and Energy under the EPBC Act.

4.9 Matters of State Environmental Significance (MSES)

The following table (Table 7) details the guidelines to which a certain application may have a significant impact on a sensitive environmental matter pursuant under the *Nature Conservation Act 1992*.

Table 7 Matters of State Environmental Significance

Matters of State Environmental Significance	Triggers
Regulated Vegetation (VMA)	
<p>The prescribed regional ecosystems that are endangered regional ecosystems comprise a matter of State Environmental Significance.</p> <p>The prescribed regional ecosystems that are of concern regional ecosystems comprise a matter of State environmental significance.</p> <p>A prescribed regional ecosystem is a matter of State environmental significance if it is—</p> <p>(a) a regional ecosystem that intersects with an area shown as a wetland on the vegetation management wetlands map (to the extent of the intersection); or</p> <p>(b) an area of essential habitat on the essential habitat map for an animal that is endangered wildlife or vulnerable wildlife or a plant that is endangered wildlife or vulnerable wildlife.</p> <p>A prescribed regional ecosystem is a matter of State environmental significance to the extent the ecosystem is located within a defined distance from the defining banks of a relevant watercourse.</p>	<ul style="list-style-type: none"> ▶ Category C vegetation is present of the property ▶ Essential Habitat is present on the property for <i>Litoria serrata</i> (green eyed tree frog), <i>Litoria myola</i> (Kuranda tree frog) and <i>Alpinia hylandi</i> (a native ginger). Field investigation determined that in the current condition of the property it is unlikely that either of these species would be a likely occurrence.
Connectivity Areas	
<p>(1) This section applies to a prescribed regional ecosystem—</p> <p>(a) to the extent the ecosystem contains remnant vegetation; and</p>	<ul style="list-style-type: none"> ▶ The vegetation on site is continuous with large tracks of protected vegetation in the locality. The vegetation proposed for clearance on the property is not required to maintain connectivity to ecosystems within the region. ~0.9ha clearance of category C high value regrowth is required for the

Matters of State Environmental Significance	Triggers
<p>(b) if the ecosystem contains an area of land that is required for ecosystem functioning (a connectivity area).</p> <p>The prescribed regional ecosystem is a matter of State environmental significance if the administering agency is satisfied, having had regard to criteria in the environmental offsets policy about connectivity areas, that—</p> <p>(c) the connectivity area is of sufficient size or configured in a way that maintains ecosystem functioning; and</p> <p>(d) the prescribed regional ecosystem will remain despite a threatening process within the meaning of the <i>Nature Conservation Act 1992</i>.</p>	<p>development. No loss in connectivity to other sites will occur as a result of this clearing.</p>
Wetlands and Watercourses	
<p>(2) Each of the following matters is a matter of State environmental significance—</p> <p>(a) a wetland;</p> <p> i. in a wetland protection area; or</p> <p> ii. of high ecological significance shown on the Map of referable wetlands;</p> <p>(b) a wetland or watercourse in high ecological value waters.</p>	<ul style="list-style-type: none"> ▶ Category R (Reef regrowth watercourse vegetation is located approximately 120 metres from the proposed clearance area to the south east. No impact is expected given that clearing is not expected to take place within these mapped regrowth areas. Furthermore, erosion and sediment control measures must be put in place to mitigate sedimentation and runoff issues.
Designated Precinct in a Strategic Environmental Area	
<p>(1) A designated precinct in a strategic environmental area is a matter of State environmental significance.</p>	<p>The project area does not intersect or contain a strategic environmental area.</p>
Protected Wildlife Habitat	
<p>(1) An area that is shown as a high-risk area on the flora survey trigger map and that contains plants that are endangered wildlife or vulnerable wildlife is a matter of State environmental significance.</p> <p>An area that is not shown as a high-risk area on the flora survey trigger map, to the extent the area contains plants that are endangered wildlife or vulnerable wildlife, is a matter of State environmental significance.</p> <p>A non-juvenile koala habitat tree located in an area shown as bushland habitat, high value rehabilitation habitat or medium value rehabilitation habitat on the</p>	<ul style="list-style-type: none"> ▶ A Protected Plant Search (PPS) was conducted for the study site. No threatened plants were found on the site. ▶ No Koala Habitat Values were mapped on the site. Marginal suitable feeding trees are present. ▶ No habitat for threatened wildlife was found on site. Suitable generic habitat for a range of species was identified.

Matters of State Environmental Significance	Triggers
<p>map called 'Map of Assessable Development Area Koala Habitat Values' that applies under the South East Queensland Koala Conservation State Planning Regulatory Provisions is a matter of State environmental significance.</p> <p>A habitat for an animal that is endangered wildlife or vulnerable wildlife, or a special least concern animal is a matter of State environmental significance.</p>	
Protected Areas	
<p>A protected area is a matter of State environmental significance.</p>	<p>There are no protected areas under the <i>Nature Conservation Act</i> present on the site.</p>
Highly Protected Zones of State Marine Parks	
<p>A highly protected area of a relevant Queensland marine park is a matter of State environmental significance.</p>	<p>There are no marine parks or land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone present on the site.</p>
Fish Habitat Areas	
<p>An area declared under the <i>Fisheries Act 1994</i> to be a fish habitat area is a matter of State environmental significance.</p>	<p>There are no fish habitat areas under the <i>Fisheries Act 1994</i> present on the study site.</p>
Waterway Providing for Fish Passage	
<p>1) Any part of a waterway providing for passage of fish is a matter of State environmental significance only if the construction, installation or modification of waterway barrier works carried out under an authority will limit the passage of fish along the waterway.</p>	<p>▶ No part of the study site spans an area deemed to be a water way for water barrier works (stream).</p>
Marine Plants	
<p>A marine plant within the meaning of the <i>Fisheries Act 1994</i> is a matter of State environmental significance.</p>	<p>There are no marine plants under the <i>Fisheries Act 1994</i> recorded on the site.</p>
Legally Secured Offset Areas	
<p>A legally secured offset area is a matter of State environmental significance.</p>	<p>There are no legally secured offset areas intersecting the site.</p>

4.9.1 Mareeba Shire Council Environmental Significance Overlay

Table 8 below details the outcomes against the Mareeba Shire Council Environmental Significance Overlay. There are no significant residual impacts from the proposed development.

Table 8 Site Outcomes against Environmental Significance Overlay

Performance outcomes	Acceptable outcomes	Comment
REGULATED VEGETATION		
<p>PO1 Vegetation clearing in areas mapped as 'Regulated vegetation' identified on the Environmental Significance Overlay Maps (OM-004a-o) is avoided unless:</p> <ul style="list-style-type: none"> (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 minimized and any residual impacts are offset. 	<p>A01.1 No clearing of native vegetation is undertaken within areas of 'Regulated vegetation' identified on the Environmental Significance Overlay Maps (OM-004a-o).</p>	<p>(C) Wildlife connectivity will be maintained as after the development is finalised. ~0.9ha of Category C regrowth vegetation will be cleared from the proposed development. The remaining Category C vegetation on the eastern half of the property will be permitted to return to remnant vegetation and maintain wildlife connectivity should this vegetation be protected.</p> <p>(D) Residual impacts from vegetation clearing could be maintained with the implementation of an (EMP) Environmental Management Plan</p>
<p>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:</p> <ul style="list-style-type: none"> (a) does not interrupt, interfere, alter or otherwise impact on underlying natural ecosystem processes such as water quality, hydrology, geomorphology and biophysical processes; 	<p>A02 Development (excluding roads, earthworks, drainage infrastructure and underground infrastructure) is not located within 20 meters of 'Regulated vegetation' areas identified on the Environmental Significance Overlay Maps (OM-004a-o).</p>	<p>The proposed subdivision is located on Regulated Vegetation Category C high value regrowth.</p> <ul style="list-style-type: none"> a) The implementation of an erosion and sediment control plan will be required to mitigate potential impacts to described natural ecosystem processes. b) Wildlife movement will be unaffected from the proposed development. Intact vegetation exists to the east of the property block.

Performance outcomes	Acceptable outcomes	Comment
(b) does not negatively impact the movement of wildlife at a local or regional scale; and avoids noise, light, vibration or other edge affects, including weed and pest incursion		
REGULATED VEGETATION INTERSECTING WATERCOURSES		
<p>PO3</p> <p>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 the extent that migration or normal movement of significant species between habitats or normal gene flow between populations is not inhibited.</p>	<p>Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)</p> <p>A03.1</p> <p>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).</p>	<p>Category R Reef regrowth vegetation is located outside of the proposed clearing area approximately 100m east from the proposed building envelope clearing areas on the property. No vegetation clearing will occur within mapped category R waterway areas or waterways as defined under the <i>Vegetation Management Act 1999</i>.</p>
	<p>Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)</p> <p>A03.2</p> <p>No clearing of native vegetation is undertaken within the minimum setback identified at A03.1.</p>	
WATERWAYS AND WETLANDS		
<p>PO4</p> <p>'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:</p>	<p>Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)</p> <p>A04.1</p> <p>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'</p>	<p>A04.1 The waterway at the east of the study site runs north into the Barron River. Additional riparian habitats are mapped as Category R Great Barrier Reef Riverine regrowth vegetation. The distance from these areas from the proposed clearing areas is greater than 100m away (see Section 3 Figure 2). Regrowth vegetation will be</p>

Performance outcomes	Acceptable outcomes	Comment
(a) maintaining adequate separation distances between waterways/wetlands and development;	identified on the Environmental Significance - Waterway Overlay Maps (OM-004p-z) .	maintained acting as a vegetation buffer for potential sedimentation impacts associated with the proposed clearing and development of the site.
(b) maintaining and enhancing aquatic and terrestrial habitat including vegetated corridors to allow for native fauna (terrestrial and aquatic) movement;	Where within a 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o) A04.2	Wastewater and stormwater management plan may be required provided unless indication of where stormwater and wastewater will flow to can be provided prior.
(c) maintaining waterway bank stability by minimising bank erosion and slumping;	A minimum buffer of 200 meters is provided between development and the edge of a 'High ecological significance wetland' identified on the	a) All riparian vegetation on the property is expected to be retained during and after the proposed development has been conducted.
(d) maintaining water quality by providing buffers to allow filtering of sediments, nutrients and other pollutants; and	Environmental Significance Overlay Maps (OM-004a-o) Where within a 'Waterway buffer' on Environmental Significance -	b) No high ecological significance wetlands are located within the property.
(e) retaining and improving existing riparian vegetation and existing vegetation associated with a wetland.	Waterway Overlay Maps (OM-004p-z) or 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o) A04.3	
	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) .	
	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) A04.4	

Performance outcomes	Acceptable outcomes	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) .	
WILDLIFE HABITAT		
<p>POS Development within a 'Wildlife habitat' area identified on the Environmental Significance Overlay Maps (OM-004a-o):</p> <ul style="list-style-type: none"> (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 critical life stage ecological processes (such as feeding, breeding or roosting). 	<p>A05 No acceptable outcome is provided</p>	<ul style="list-style-type: none"> A) Building envelopes found on the western end of the property bordering a Boyles Rd. Remaining habitat on the eastern part of the property is expected to be maintained (~3.6ha) B) Assessment of ecological values (Ecological Assessment of habitat and threatened species potential) were assessed on site. Design measures will be incorporated to adhere to these findings. No significant ecological values are expected to be impacted from the proposed development. C) Wildlife interconnectivity will be maintained as the eastern section of this property will not be disturbed. All clearing will occur in close proximity to Boyles Road i.e. reducing fragmentation impacts associated with clearing vegetation. D) Development sites are located on the western section of the property on a road edge. Forms of potential disturbance are to

Performance outcomes	Acceptable outcomes	Comment
<p>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.</p> <p>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy</p>		<p>be limited to the cleared area of approximately ~0.9 ha, thus mitigating impacts to the remaining ecosystems on the property. Remaining intact habitat to protect life-stage ecological processes will be maintained on the property.</p>
LEGALLY SECURED OFFSET AREAS		
<p>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.</p>	<p>A06 No acceptable outcome is provided.</p>	<p>Development is not within a Legally secured offset area</p>
PROTECTED AREAS		
<p>PO7 Development within a ‘Protected area’ identified on the Environmental Significance Overlay Maps (OM-004a-o) is consistent</p>	<p>A07 No acceptable outcome is provided</p>	<p>Development is not within a protected area</p>

Performance outcomes	Acceptable outcomes	Comment
<p>with the values of the Protected Area and:</p> <ul style="list-style-type: none"> (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. <p>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports.</p>		
<p>ECOLOGICAL CORRIDORS AND HABITAT LINKAGES</p>		
<p>PO8 Development located:</p> <ul style="list-style-type: none"> (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) <p>does not compromise the provision of habitat connectivity of the corridor/linkage, having regard to:</p> <ul style="list-style-type: none"> (a) the environmental values of the area of the site identified 	<p>A08 No acceptable outcome is provided</p>	<p>Development is located on Category C (High Value Regrowth) vegetation and is mapped within the ecological corridor under the Mareeba Shire Environmental significance overlay.</p> <ul style="list-style-type: none"> A) As a result of the proposed ~0.9ha vegetation removal, the development is not expected to compromise the mapped ecological corridor. Vegetation clearance is proposed to occur at the edge of Boyles Road to reduce impacts of fragmentation impacts for wildlife.

Performance outcomes	Acceptable outcomes	Comment
<p>in the 'Ecological corridor' or 'Habitat linkage';</p> <p>(b) the environmental values of adjoining and nearby land within the 'Ecological corridor' or 'Habitat linkage';</p> <p>(c) the extent of any modification proposed to the natural environment including (but not limited to) vegetation and topography;</p> <p>(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</p> <p>(e) the ability for the 'Ecological corridor' or 'Habitat linkage' to be enhanced to improve ecological connectivity.</p> <p>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.</p>		<p>No part of the proposed clearance area is within a mapped habitat linkage area.</p> <p>A) Existing developed properties occur to nearby the study site. No loss of remaining Category C vegetation outside of the proposed clearing area is expected to be cleared from proposed works. This remaining area of ~3.6ha of Category C vegetation should be permitted to mature which will provide a higher quality wildlife habitat than currently exists on the property currently.</p> <p>B) Land clearing within the proposed building envelope is expected to be the predominant modification of the natural environment on the property. The retention of ~3.6ha of Category C remnant vegetation will improve habitat connectivity for a greater number of species once it is permitted to reach a more mature structure.</p> <p>C) Building structures (two dwellings) and associated infrastructure is to be built within the building envelope, no impacts to the vegetation is expected to occur outside of this area from the proposed development.</p>

Performance outcomes	Acceptable outcomes	Comment
		D) Potential minor ecological corridors provided by the property area maintained with the remaining property outside of the building enveloped being maintained for native vegetation growth.

4.9.2 Rural Residential Zone Code (6.2.10)

This code applies to assessing the development of Lot 2 RP 726691 which is located within the Rural Residential Zone.

Rural residential areas such as this site is intended to support rural residential development of varying densities, to prevent further fragmentation and alienation of rural areas, conservation areas and biodiversity areas within the regional landscape. The new allotments provided in this development are suitably located near the Boyles Road end of the property where impacts to the biodiversity areas are avoided, by maintaining the significant environmental corridor located across the east of the property, which allows and ensures the regrowth vegetation of importance is left to mature as noted in **Table 8** above. Accordingly, the development achieves compliance with purpose outcome (H) of the rural residential zone code, with regards to the inherent environmental characteristics, which will be maintained on the site as part of this development.

4.9.3 Hill and Slope Overlay Code

This code applies to the assessment of the development, where we provide the following assessment based on the results of our field survey conducted. It was confirmed on the study site during the field survey that the slope within the building envelope areas did not exceed a slope of 15% (**see Plate 2 section 3.2**). Nevertheless, subsequent buildings to be constructed on each site will be required to be designed in accordance with the results of subsequent soil tests which will inform the foundations design and structural engineering certification outcomes.

5.0 Discussion

The proposed subdivision will require the clearance of ~0.9 ha of category C high value regrowth vegetation removed to establish two individual building envelopes. The proposal will see the retention of ~3.6 ha of category C vegetation retained and permitted to mature in structure to provide improved habitat over time. No category R Riverine regrowth is proposed to be cleared as a result of this proposal. A vegetation buffer will remain at approximately 100 m to any riparian vegetation or mapped waterways on the property. Essential Habitat is mapped as being present on the property for *Litoria serrata* (green eyed tree frog), *Litoria myola* (Kuranda tree frog) and *Alpinia hylandi* (a native ginger). Field investigation, including a detailed protected plant survey, determined that the current condition of the property is unlikely to support either of these species.

The Mareeba Shire Strategic Ecological corridor is mapped over the property (Lot 2 RP726691); however, it is considered that the location of vegetation removal adjacent to Boyles Road and the retention of ~3.6ha of category C vegetation will mitigate impacts of damaging this linkage and provide an associated beneficial ecological outcome that will improve as the retained vegetation structure matures.

A protected plant survey was undertaken in addition to this ecological assessment which determined that it was highly unlikely (33) threatened flora species identified in the initial desktop assessment considered to have a potential to occur on site were present. This is largely due to a lack of suitable habitat for each of these species given that much of the site has been cleared at least 15 years ago. The regenerating vegetation has established a representative canopy of *Eucalyptus pellita* and *Corymbia intermedia*, however, rainforest incursion is advancing to canopy height which will likely reduce the health of the Eucalypt canopy on the property with continued fire exclusion.

A number of potential threatened fauna species were considered as moderately likely to occur on the study site after the initial desktop assessment was conducted (see **Appendix C**). Results from the field survey component of this study however, identified the site contained only marginal generic foraging habitat for each of these species.

When considering the potential for the Koala, the feed tree species *Eucalyptus pellita* was present on the site. Limited information on preferred Koala browse trees is known, however *E. pellita* is likely to be palatable. Like elsewhere in North Queensland, records within the locality are very low for this species. Considering the dense rainforest understorey incursion also present throughout the property there is a very low likelihood this species would be present for more than transient individuals moving through the property to more suitable habitats. The lack of high nutrient alluvial or basalt soils likely reduces the palatability of any potential forage trees further reducing the likelihood of usage by this species.

The Spectacled flying-fox (*Pteropus conspiculatus*) may utilise the site for generic foraging habitat when the *Eucalyptus pellita* and *Corymbia intermedia* trees are in flower in early to late summer. However, this site represents a small portion of possible foraging habitat and higher quality habitat remains throughout the region.

Two threatened microbat species were determined as moderately likely to occur on the site. These species are the Bare-rumped sheath-tailed bat (*Saccolaimus saccolaimus*) and the Large eared horseshoe bat (*Rhinolophus robertsi*). It is certainly possible for these bats to utilise the site as a minor foraging ground, however, with a lack of tree hollows on site and a small amount of dead roosting trees, it is unlikely these bat species will rely on the site indefinitely for foraging and roosting.

Eleven (11) migratory bird species were considered as having a moderate likelihood of occurrence on the study site. One of these species, the Spectacled Monarch (*Symposiachrus trivirgatus*), was confirmed on the study site during the field survey. Typical generic foraging and nesting habitat is present for this species throughout the study site. Overall, the remaining migratory bird species are only expected to occur on site either as flyovers or for generic foraging habitat i.e. gleaning insects from foliage while passing through on a migrant route. It is unlikely, however, that these species will utilize the site for breeding in large enough numbers that would result in a population decline, given the sites marginal habitat and small size.

6.0 Recommendations

To provide a beneficial environmental outcome, all areas of the property mapped as regrowth vegetation (Category C & R) should be rehabilitated to form a mature Eucalypt canopy of a remnant condition (Category B). This will likely require the implementation of a hazard reduction regime that will reduce the incursion of rainforest species that are likely to outcompete canopy of RE 7.11.5a/c and RE 7.11.44 transitional these systems to alternative rainforest vegetation community. If any vegetation is to be retained within the proposed clearing areas, it should be of larger diameter individual's representative of RE 7.11.5 and RE 7.11.44 i.e. *Eucalyptus pellita*, *Eucalyptus tereticornis* and *Corymbia intermedia*. These species are the most likely to form hollows as they mature providing important denning habitat for a wide range of least concern and threatened fauna species.

Formulation of a construction management plan and erosion and sediment control planned should be implemented to manage any potential residual environmental impacts associated with sedimentation of waterways. A section of Category R (Reef regrowth watercourse vegetation) is located approximately 120 metres from the nearest housing pad alignment. Whilst this vegetation is not within the housing pad alignment, mitigation measures relating to erosion and sediment control must be adhered to during any earth works that occur on site to prevent any siltation to waterways.

During vegetation clearing works it is a requirement under the *Nature Conservation Act 1992* that a fauna spotter catcher working under a rehabilitation permit be present on site to capture and relocate any fauna that may occur within the clearing alignments.

7.0 References

- Churchill, S. (2008). *Australian Bats*. Crows Nest, NSW, Allen and Unwin.
- DAWE (2020). "EPBC Protected Matters Search Tool." from <http://www.environment.gov.au/epbc/pmst/index.html>.
- Department of the Environment, Water, Heritage and the Arts (2008a) '14159 - Approved Conservation Advice for *Dichanthium setosum*'. Available at: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=14159 (Accessed: 20 October 2020).
- Department of the Environment, Water, Heritage and the Arts (2008b) 'Approved conservation advice for *Carronia pedicellata*'. Available at: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=24178 (Accessed: 20 October 2020).
- Department of the Environment, Water, Heritage and the Arts (2008c) 'Approved Conservation Advice for *Dendrobium mirbelianum*'. Available at: http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=14310 (Accessed: 20 October 2020).
- Department of the Environment, Water, Heritage and the Arts (2008d) 'Approved conservation advice for *Zeuxine polygonoides*'. Available at: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/46794-conservation-advice.pdf>.
- Higgins, P. J. (1999). *Handbook of Australian, New Zealand and Antarctic Birds*, Oxford University Press.
- Starr, C., et al. (2017). Terrestrial Vertebrate Biodiversity Surveys on Kings Plains and Alkoomie Nature Refuges, Cape York. Mareeba, Northern Gulf Resource Management Group: 54.
- Hyland, B. P. M., et al. (2010). "Australian Tropical Rainforest Plants." *Online key 7*. Retrieved 2 July, 2020, from <http://keys.trin.org.au/key-server/data/0e0f0504-0103-430d-8004-060d07080d04/media/Html/index.html>.
- Starr, C. and N. Waller (2014). Biodiversity Survey Report, Steve Irwin Wildlife Reserve/ Bertiehaugh Station. Mareeba, Australia, Northern Gulf Resource Management Group: 30.
- Starr, C., et al. (2016). South Endeavour Nature Refuge Biodiversity Survey Report. Mareeba, Northern Gulf Resource Management Group: 52.

From: Wayne Tonkin
Sent: Wed, 25 Nov 2020 21:41:00 +1000
To: Info (Shared)
Cc: Allyoops1970@gmail.com
Subject: Reconfiguration of 29 Boyle's Rd Kuranda

To whom this may concern,

I have properties adjoining the above property (Lot 2 on RP726691). The applicants have sent me the plans of the intended reconfiguration and as it is not for profit and is for family use I have no issue with this change going ahead.

Regards
Wayne Tonkin

Sent from my iPad

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