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**Our Ref:** 18-13/001435
**Your Ref:** MCU/23/0009
**Date:** 25 June 2026

Chief Executive Officer
Mareeba Shire Council
65 Rankine Street
MAREEBA QLD 4880

**Via: Email - info@msc.qld.gov.au**

Dear Sir,

**RE: APPLICATION FOR 'OTHER CHANGE' TO EXISTING DEVELOPMENT PERMIT FOR MATERIAL CHANGE OF USE FOR 'EXTRACTIVE INDUSTRY' ON LAND AT KENNEDY HIGHWAY, KURANDA, DESCRIBED AS LOT 46 ON SP328230 & LOT 175 ON FTY1871**

Planning Plus has been engaged by Jacqshar Pty Ltd (the 'applicant') to prepare and lodge the abovementioned Development Application.

In support of the application, please find the following mandatory information included as **Annexure 1**:

- Completed DA Form 1 (Parts 5 & 7 only) & Form 5;
- Landowner consent; and
- Resource entitlement.

The relevant application fee, understood to be $7,525 in accordance with Council's 2025/26 Schedule of Fees and Charges, will be paid upon issue of a receipt by Council.

In addition to the above, the following submission has been prepared to assist Council and other relevant authorities with their assessment of the application.

# 1.0 Site Information

## 1.1. Site Details

The land the subject of this application is situated at the Kennedy Highway, Kuranda, and is formally described as Lot 46 on SP328230 and Lot 175 on FTY1871. The following information is provided in relation to the site:

- QLD Globe Aerial Overlay included as **Annexure 2**;
- SmartMap included as **Annexure 3**; and
- Title Certificate included as **Annexure 4**.

Lot 46 on SP328230 comprises an area of 62.34ha and contains an existing hard rock quarry operation known as 'Top Rock Quarry' comprising extraction pits, stockpiling and storage areas, caretaker's residence, access tracks, weighbridge and an office.

Lot 175 on FTY1871 is a State Forest and is vacant of any structures or improvements.

A summary of key site characteristics and planning designations is provided below.

## 1.2. Site Characteristics

Key site characteristics include:

| | |
|---|---|
| **Topography:** | Undulating |
| **Vegetation:** | Regulated vegetation<br>*Refer to **Annexure 5** for mapping* |
| **Wetlands:** | None |
| **Conservation Areas:** | Includes and adjoins State Forest |
| **Watercourses:** | Several minor watercourses and drainage features<br>*Refer to **Annexure 5** for mapping* |
| **Road frontages:** | Kennedy Highway |
| **Existing use of site:** | Hard rock quarry |

## 1.3. Planning Context

The planning context of the site includes:

| | |
|---|---|
| **Regional Plan designation:** | Regional Landscape and Rural Production Area |
| **Local Plan Area:** | None |
| **Zone:** | • Lot 46 – Rural<br>• Lot 175 - Conservation |
| **Planning Scheme Overlays:** | • Bushfire Hazard Overlay (Medium/High/Very High Potential Bushfire Intensity)<br>• Environmental Significance Overlay (MSES, MSES Waterway & MSES Waterway Buffer)<br>• Hill and Slope Overlay |

| | |
|---|---|
| | • Transport Infrastructure Overlay (State-Controlled Road) |
| **SDAP Mapping:** | • Water resource planning area<br>• Queensland waterways for waterway barrier works<br>• State-controlled road<br>• Area within 25m of a State-controlled road<br>• Regulated vegetation management map<br>*Refer to SDAP Mapping included as **Annexure 5*** |

# 2.0 Background

The subject site was originally approved for an 'Extractive Industry' in 2004, and an expansion of the original extraction area was approved by Council in 2023. A copy of this latest Decision Notice is included as **Annexure 6**.

Following continued demand in the construction industry and noting several large upcoming public projects such as the Barron River bridge replacement and duplication of the Cairns Western Arterial Road, the applicant has determined the need to further expand the extraction area to shore up the necessary resources. To this end, this application seeks to expand the proposed extraction area on to adjoining Lot 175 on FTY1871.

This additional land is an existing State Forest, the purpose of which may include economic activities such as timber production and resource extraction. The applicant has been working with the Department of Primary Industries and has obtained a Sales Permit which permits the extraction of quarry material subject to the relevant approvals. A copy of the permit is included as **Annexure 7**.

The proposed expansion will allow for the continued servicing of the local construction industry with a vital resource and allow for the continued utilisation of the significant onsite infrastructure which exists to support the operation.

# 3.0 Proposal

This application seeks an 'Other Change' under Section 82 of the Planning Act 2016 in relation to a Development Permit for Material Change of Use for 'Extractive Industry' (expansion of existing quarry). The proposal is illustrated by the following plans included as **Annexure 8**:

- Top Rock Quarry Sales Permit Site Plan - RPS Drawing No. 439201-1B
- Top Rock Quarry Proposed Staged Expansion Area – RPS Drawing No. 439201-2B

The only change proposed to existing operations is the expansion of the extraction area. Existing access, extraction rates and all other ancillary facilities and operations are to remain unchanged.

The Proposal Plan illustrates the extent of the proposed expanded extraction area to the south of the existing approved extraction area. The existing approval provides for an extraction area of 14ha while the proposed expansion area comprises a further 5.42ha.

An Ecological Assessment Report and Flora Survey Report have been prepared and are included as **Annexures 9 & 10**, respectively.

The applicant intends to stage operations as indicated on the Proposal Plan. Progressive rehabilitation will occur based on the underlying remnant vegetation communities as work is completed in areas.

Current operations are subject to various management documents as follows:

- Plan of Operations
- Integrated Site Management Plan
- Environmental Instructions:
    - Air Quality
    - Cultural Heritage
    - Soil Erosion and Stability
    - Flora and Fauna
    - Hazardous Substances
    - Noise and Vibration
    - Waste Generation
    - Water Quality

Copies of the above documents are provided as **Annexure 11**.

The current operation is subject to an existing Environmental Authority (reference ENRE00847608) which will require updating to reflect any new approval and this process will run concurrently with this Change Application.

# 4.0 Legislative Requirements

## 4.1 Planning Act 2016

This section provides an overview of the legislative context of the application under the provisions of the *Planning Act 2016*.

### *4.1.1 Assessable Development*

The proposed development is identified as 'assessable' under the *Planning Act 2016* due to the effect of the Mareeba Shire Planning Scheme.

### *4.1.2 Landowner's Consent & Relevant Purpose Determination*

Landowner's consent has been provided by the State of Queensland (represented by the Department of Primary Industries) as the legal owner of Lot 175 on FTY1871.

A relevant purpose determination, which is typically required from the Department of Resources for development applications involving clearing of native vegetation under the Vegetation Management Act 1999, is not required over Lot 175 on FTY1871 due to the land being a State Forest. A determination is however required, and has been obtained, for a small portion of assessable vegetation clearing on Lot 46 on SP328230 which was not captured by the original determination for the existing approval.

### *4.1.3 Assessment Manager*

The Assessment Manager for this development application is Mareeba Shire Council as determined by Schedule 8 of the *Planning Regulation 2017*.

### *4.1.4 Level of Assessment*

The Level of Assessment of the proposal is 'impact' given that it includes land zoned as 'Conservation'.

### *4.1.5 Referral Agencies*

A review of Schedule 10 of the *Planning Regulation 2009* indicates that the application will trigger referral to State agencies as follows:

- Schedule 10, Part 3, Division 4, Table 3 – Clearing native vegetation
- Schedule 10, Part 5, Division 4, Subdivision 2, Table 1 – Environmentally relevant activity not devolved to local government
- Schedule 10, Part 9, Division 4, Subdivision 2, Table 1 - State transport infrastructure thresholds
- Schedule 10, Part 9, Division 4, Subdivision 2, Table 4 – State transport corridors

### *4.1.6 Public Notification*

This application is subject to 'impact assessment' and therefore does require Public Notification.

# 5.0 Assessment Benchmarks

This section assesses the application against all relevant assessment benchmarks.

## 5.1 State Planning Regulatory Provisions

No State Planning Regulatory Provisions are relevant to this application.

## 5.2 State Planning Policy

It is understood that all applicable state interests have been appropriately integrated into the Planning Scheme relevant to the site.

## 5.3 State Development Assessment Provisions (SDAP)

The following State Development Assessment Provisions are identified as being applicable to the proposal:

- State code 1: Development in a state-controlled road environment
- State code 6: Protection of state transport networks
- State code 16: Native vegetation clearing
- State code 22: Environmentally relevant activities

An assessment of the above codes is included as **Annexure 12**.

## 5.4 Mareeba Shire Planning Scheme

Within the Mareeba Shire Planning Scheme, the subject site is included within the 'Rural' Zone and 'Conservation' Zone. Within the Conservation Zone the proposed Material Change of Use is identified as being 'impact-assessable' development, therefore the application is subject to impact assessment.

### *5.4.1 Strategic Framework*

Given the impact-assessable nature of the development application, an assessment of the proposal against the Planning Scheme's Strategic Framework is provided in the following:

*3.3 Settlement pattern and built environment*

*3.3.1 Strategic outcomes*

*(1) Mareeba Shire is intended to support a widely dispersed population in a variety of settings, including rural towns, small rural settlements, villages, rural residential areas, cropping lands, grazing lands and broad-hectare grazing properties. Future development maintains this settlement pattern and the distinct character that it provides*

*to the shire. The settlement pattern also ensures the continuing viability of the shire's rural economy, particularly through the provision of high quality services.*

Proposal does not compromise this outcome.

*(2) Mareeba Shire is supported by a network of compact, activity centres of varying scales. These activity centres form the primary focus for population growth. Each activity centre will maintain its individual character while growing to support and service the local economies of its catchments. The level of service provision within each activity centre is consistent with its role and function within the defined activity centre hierarchy. Growth is managed to ensure a high level of centre amenity and streetscape character is maintained, thus fostering vibrant, lively hubs of social interaction, trade and exchange.*

Proposal does not compromise this outcome.

*(3) Residential areas and urban expansion areas support strategically located and logically sequenced residential development, maximising the efficient utilisation of new and existing infrastructure, particularly active and public transport. Residential development, including infill housing in designated areas, is focussed in Mareeba and the Kuranda district. A diversity of housing choices is developed within proximity to services and activity centres while protecting the character of the shire.*

*Housing for aged persons, both for independent and assisted living, is provided to support the aging population of the shire. Aged care development is provided in suitable locations in the residential areas and urban expansion areas of the shire.*

Proposal does not compromise this outcome.

*(4) Rural residential areas are 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. Rural residential areas predominantly maintain the current density of development, with infill subdivision of rural residential areas generally limited to identified areas where consistent with the desired character and where adequate services and infrastructure are available or can be adequately and cost-effectively provided.*

Proposal does not compromise this outcome.

*(5) Primary industries in Rural areas are not compromised or fragmented by incompatible and/or unsustainable development, including but not limited to subdivision that results in a detrimental impact on rural productivity or fragments rural land. The valued, relaxed rural lifestyle, character and scenic qualities of the rural area are preserved and enhanced. The rural area is largely maintained to its current extent, while*

*accommodating development directly associated with or reliant on natural resources including rural activities and tourism. Rural areas protect the shire's agricultural area and ensure food security. Other rural areas predominantly remain agricultural grazing properties.*

Proposal is associated with a necessary natural resource and will occur in a way which does not impact existing land uses or amenity.

*(6) Industry areas support the industrial development in the shire and are protected from encroachment by incompatible or sensitive uses. The Mareeba major industry area is the predominant supply of industrial land which will cater for high impact industry and major industrial developments into the future. Smaller industry areas are strategically located across the shire to service local needs.*

Proposal does not compromise this outcome.

*(7) The built environment is ecologically sustainable, achieving energy and resource efficiency and favouring architecture that is sensitive to local character. Development reflects sustainable tropical design principles, is climate responsive and preserves natural features.*

Proposal does not compromise this outcome.

*(8) Risks to infrastructure, buildings and the community posed by bushfires, cyclones, flooding, landslides and other extreme events are minimised. Development is considerate of the potential increased incidence of these hazards induced by climate change.*

Proposal includes management procedures to appropriately mitigate risks from natural hazards.

*(9) New subdivisions which propose lots less than the minimum lot size of 60ha are not supported within the Rural zone, except for where:*
*(a) The subdivision results in no additional lots (boundary realignment) and does not create an additional rural lifestyle lot or rural residential purposes lot; or*
*(b) The subdivision is limited to one additional lot created to accommodate a public reconfiguration purpose.*

Proposal does not compromise this outcome.

*3.3.2 Element—Activity centres network*

*3.3.2.1 Specific outcomes*

*(1) The scale of development in activity centres is consistent with their role and function*

*within the defined hierarchy of activity centres, which consists of a major regional activity centre, a village activity centre, rural activity centres and rural villages.*

Proposal does not compromise this outcome.

*(2) Centre activities are focussed in major regional activity centres, particularly development which draws on a wide catchment. Other activity centres promote local self-containment by facilitating a diverse range of services in support of local catchments and communities.*

Proposal does not compromise this outcome.

*(3) Other than small scale industry areas, commercial activities will not occur outside centre areas unless there is an overriding need in the public interest, there are no alternative sites in centre areas, there is no adverse impact on centre areas or the area surrounding the development and the site is readily accessible by a range of transport modes.*

Proposal does not compromise this outcome.

*(4) Ribbon or strip commercial activities along state controlled roads and local collector roads is generally avoided outside of the centre areas where possible.*

Proposal does not compromise this outcome.

*(5) Centre areas provide vibrant settings for community activity, social interaction and trade. Each centre retains its individual character.*

Proposal does not compromise this outcome.

*(6) Centre areas provide high quality and attractive streetscapes, active shopfronts, comfortable pedestrian environments and spaces for social interaction.*

Proposal does not compromise this outcome.

*3.3.3 Element—Major regional activity centre*

*3.3.3.1 Specific outcomes*

*(1) The role and function of Mareeba as the major regional activity centre for services in Mareeba Shire is strengthened. Mareeba is to accommodate the most significant concentrations of regional-scale business, retail, entertainment, government administration, secondary and tertiary educational facilities and health and social services within the shire.*

Proposal does not compromise this outcome.

*(2) Development within Mareeba over time enhances the Shire's self-sufficiency in terms of services offered, business and employment opportunities.*

Proposal does not compromise this outcome.

*(3) Mareeba is characterised by a relative lack of development constraints, and is supported by an expanding major industry area and Mareeba Airport. Mareeba has significant residential, industrial and commercial growth potential.*

Proposal does not compromise this outcome.

*(4) The centre area of Mareeba continues to be focussed on the core area around Byrnes Street (between Rankin and Lloyd Streets), with significant expansion of centre activities within underutilised sites within the Byrnes Street core, in Walsh Street and south along Byrnes Street. New development will improve the streetscape of the town centre including streetscape improvement.*

Proposal does not compromise this outcome.

*(5) Regional scale services and employment are provided in Mareeba, including:*
*(a) primary, secondary and tertiary educational establishments;*
*(b) major supermarkets and large format retailers;*
*(c) factory outlets and warehouses;*
*(d) government administration;*
*(e) hospitals and social services;*
*(f) major recreation and health and fitness facilities.*

Proposal does not compromise this outcome.

*3.3.4 Element—Village activity centre*

*3.3.4.1 Specific outcomes*

*(1) Kuranda, as the village activity centre for Mareeba Shire, accommodates services, arts and cultural facilities, sports and recreation facilities, business and employment uses to support the village and its constituent surrounding rural and rural residential communities.*

Proposal does not compromise this outcome.

*(2) The Kuranda Village continues as a premier tourist destination of Far North*

*Queensland as the 'Village in the Rainforest', supported by a growing arts economy. Its positioning and access to the Cairns tourism base (including international and domestic airports) will continue to support a significant local tourist economy, as well as making it a lifestyle destination for new residents.*

Proposal does not compromise this outcome.

*(3) Kuranda's centre area retains and enhances its village character and rainforested entrance and surrounds which make it an attractive place to live and visit.*

Proposal does not compromise this outcome.

*(4) Growth is focused within the Kuranda village and rural residential areas. Further greenfield or rural residential development in the Myola corridor is not supported within the life of the planning scheme.*

Proposal does not compromise this outcome.

*3.3.5 Element—Rural activity centres*

*3.3.5.1 Specific outcomes*

*(1) Chillagoe and Dimbulah are the Rural activity centres within Mareeba Shire and continue to provide a level of commercial and community services to their rural catchments. Further development of emerging lower intensity activities is commensurate with the scale and amenity of the relevant local catchment, and includes support to primary industries, mining activities and tourism uses.*

Proposal does not compromise this outcome.

*(2) Rural industries, workers accommodation and mining infrastructure are accommodated in suitable locations. Any expansion of mining activity in the shire is anticipated to result in positive increases to population. Social, economic and environmental change within affected settlements is to be managed to ensure the long term sustainability of these settlements is protected.*

Proposal does not compromise this outcome.

*(3) The rural activity centres of Mareeba Shire maintain their relaxed, low density, small town character and lifestyle. Infill development will maintain larger lot sizes than other activity centres in the shire in order to retain the rural character and expected levels of amenity. Lower residential densities are also enforced due to a lack of sewerage infrastructure.*

Proposal does not compromise this outcome.

*(4) Chillagoe supports significant tourist activity and visitor numbers in addition to servicing its local community.*

Proposal does not compromise this outcome.

*3.3.6 Element—Rural villages*

*3.3.6.1 Specific outcomes*

*(1) Biboohra, Irvinebank, Julatten, Koah, Mutchilba, Mt Molloy, Myola and Speewah are rural villages, that have limited centre activities and other non-residential activities. Some rural villages include small clusters of activity in which limited, small-scale development may occur. Any growth within rural villages is limited and is proportionate to their current scale and zoning intent. Further expansion of these villages is to only occur on land designated as urban footprint or rural living area under the Regional Plan.*

Proposal does not compromise this outcome.

*3.3.7 Element—Residential areas and development*

*3.3.7.1 Specific outcomes*

*(1) Residential development, including Multiple dwellings and Dual occupancy, are sensitively integrated into the existing character of residential streets, predominantly in residential areas adjoining the centre areas of Mareeba and Kuranda. Infill development accounts for 20 percent of new dwellings constructed in Mareeba by 2031.*

Proposal does not compromise this outcome.

*(2) Population growth is focused on infill sites within existing residential areas and greenfield developments in residential areas and urban expansion areas to the east and south of Mareeba. An investigation area to the north of Mareeba will be considered for potential urban growth outside the life of the planning scheme.*

Proposal does not compromise this outcome.

*(3) Residential expansion occurs in residential areas immediately adjacent to established activity centres and is logically sequenced to ensure efficient servicing by existing physical infrastructure networks.*

Proposal does not compromise this outcome.

*(4) Residential areas contain predominantly low density residential development and are characterised by traditional detached housing and Dual occupancy development.*
Proposal does not compromise this outcome.

*(5) A range of mixed housing, affordable housing and social housing is provided in response to the diverse and changing demography of Mareeba Shire. This development is located in residential areas in a manner consistent with the character and amenity of the shire's activity centres.*

Proposal does not compromise this outcome.

*(6) Residential subdivision design and greenfield development considers and respects:*
*(a) topography;*
*(b) climate responsive design and solar orientation;*
*(c) efficient traffic flows and connectivity;*
*(d) pedestrian and cycle movement;*
*(e) efficient and sustainable infrastructure provision;*
*(f) environmental values;*
*(g) parkland and open space links;*
*(h) mixed lot sizes and dwelling types;*
*(i) water sensitive urban design;*
*(j) good quality agricultural land;*
*(k) the character and scale of surrounding development.*

Proposal does not compromise this outcome.

*3.3.8 Element—Urban expansion and investigation areas*

*3.3.8.1 Specific outcomes*

*(1) Urban expansion areas and investigation areas are anticipated to provide for development beyond the life of the planning scheme and are preserved for this purpose, with interim development not compromising future residential development.*

Proposal does not compromise this outcome.

*(2) Well-serviced and designed greenfield residential development occurs in urban expansion areas of Mareeba and Kuranda only where it is planned, logically sequenced and can be efficiently serviced.*

Proposal does not compromise this outcome.

*(3) Urban expansion areas in Mareeba provide a range of housing options and aim for density targets of twelve dwellings per hectare by 2031.*

*Proposal does not compromise this outcome.*

*(4) Local centre development may occur within urban expansion areas in Mareeba to provide for everyday community needs within a walkable catchment.*

Proposal does not compromise this outcome.

*3.3.8.2 Land use strategies*

*(1) Investigation areas are to be investigated to accommodate future development beyond the life of the planning scheme. Investigation areas are not to be developed unless there is an insufficient supply of land for the purpose intended to be developed. The purpose of development in an investigation area should promote a logical land use pattern, having regard to nearby land use and the established hierarchy of activity centres. In the instance that new or expanded areas are investigated, these are to be supported by detailed land use investigations that must demonstrate:*
*(a) need for land for the proposed land use;*
*(b) mitigation or avoidance of impacts on sensitive receiving environments;*
*(c) where involving good quality agricultural land:*
*(i) there is no alternative land available that is not good quality agricultural land; and*
*(ii) the need for future development represents a public benefit.*
*(d) suitable mitigation or offset arrangements in respect to impacts on areas of high ecological significance*
*(e) consistency with the Strategic Framework.*
*(f) consistency with State and Regional Planning requirements.*

Proposal does not compromise this outcome.

*3.3.9 Element—Aged care and retirement areas*

*3.3.9.1 Specific outcomes*

*(1) Appropriately designed and serviced aged accommodation, including residential care and retirement facilities, which take into account the support services required as people become less independent, are developed throughout Mareeba Shire's residential areas and urban expansion areas.*

Proposal does not compromise this outcome.

*(2) Small scale, low cost aged accommodation close to the CBD and health services*

*catering for independent living are encouraged to cater to Mareeba's ageing population.*

Proposal does not compromise this outcome.

*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.*

Proposal does not compromise this outcome.

*(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.*

Proposal does not compromise this outcome.

*(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.*

Proposal does not compromise this outcome.

*(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.*

Proposal does not compromise this outcome.

*(5) Limited agricultural and animal husbandry activities may occur in rural residential areas where the offsite impacts of the activity are mitigated in protection of the amenity expectation of the rural residential areas.*

Proposal does not compromise this outcome.

*(6) Small scale non-residential and tourism uses which do not impact on character and amenity are facilitated in rural residential areas.*

Proposal does not compromise this outcome.

*3.3.11 Element—Rural areas*

*3.3.11.1 Specific outcomes*

*(1) Rural areas include rural activities and land uses of varying scale, consistent with surrounding rural land use, character and site conditions.*

Proposal is an expansion of an existing land use and is therefore consistent with existing surrounding land use and character.

*(2) Land in rural areas is maintained in large lot sizes, to ensure that regional landscape and rural production values are not compromised by fragmentation, alienation or incompatible land uses. Subdivision of land is not supported on lots less than 60ha in the Rural zone except for where:*
*(a) The subdivision results in no additional lots (boundary realignment) and does not create an additional rural lifestyle lot or rural residential purposes lot; or*
*(b) The subdivision is limited to one additional lot created to accommodate a public reconfiguration purpose.*

Proposal does not compromise this outcome.

*(3) Tourism, rural industry, intensive animal industries and outdoor recreation facilities are developed in the rural area in a way which:*
*(a) does not impede or conflict with agricultural activities and production; and*
*(b) does not compromise rural character and scenic qualities; and*
*(c) does not adversely impact on ecological and biodiversity values.*

Proposal is an expansion of an existing land use and is therefore consistent with existing surrounding land use and character. Proposal also does not impact agricultural land and appropriately manages and mitigates ecological impacts.

*(4) Other rural areas will be largely maintained in their current configuration, only being subdivided where viable holdings are achieved and the infrastructure base of rural operations including workers accommodation, airstrips and farm infrastructure is provided.*

Proposal does not compromise this outcome.

*(5) Tourism, outdoor recreation, horticultural activities and natural bushland uses may be considered in other rural areas where appropriately located, serviced and otherwise consistent with the Strategic Framework.*

Proposal does not compromise this outcome.

*(6) Agricultural areas will be retained in large holdings (60ha or greater) and not*

*fragmented or compromised by unsuitable development. Uses and development within this precinct will not cause land use conflicts with primary production or will ensure these conflicts are mitigated.*

Proposal does not compromise this outcome.

*(7) Rural areas preserve lands for future uses beyond the life of the planning scheme.*

Proposal does not compromise this outcome.

*(8) Historical townships located in rural areas are generally cadastral anomalies. Historical townships are generally below current infrastructure standards in respect to roads, stormwater drainage, water and sewerage infrastructure and are not intended to be developed or further subdivided. Historical townships are not always named, and include:*
*(a) Almaden*
*(b) Calcifer*
*(c) Kingsborough*
*(d) Koorboora*
*(e) Montalbion*
*(f) Mt Mulligan*
*(g) Northcote*
*(h) Petford*
*(i) Stannary Hills*
*(j) Thornborough*
*(k) Watsonville*

Proposal does not compromise this outcome.

*3.3.12 Element—Industry areas*

*3.3.12.1 Specific outcomes*

*(1) The Mareeba major industry area will develop as a regional industrial hub, servicing Mareeba Shire and beyond. The role of Mareeba as an industrial and service node is strengthened by the allocation of suitable and adequately serviced land for all types of industry, from low impact to high impact and special industries including industries that generate trade waste e.g. fruit and vegetable processing, small scale meat processing, saw mills and chemical manufacturers.*

Proposal does not compromise this outcome.

*(2) Mareeba provides a strategic alternative and secure location to limited supplies of industrial land in Cairns, and potentially expands as a base for increased agricultural,*

*cattle and mining activities, and for servicing Gulf Savannah and Cape York communities.*

Proposal does not compromise this outcome.

*(3) Regional scale, large industrial facilities and high impact industries are primarily located within the Mareeba major industry area. Chillagoe industry area may accommodate high impact industry associated with mining where mitigation of impacts on the amenity of residential areas is undertaken in accordance with best practice.*

Proposal does not compromise this outcome.

*(4) The industry areas of Dimbulah and Mt Molloy accommodate light to medium impact industry and trades and services which service their local catchments.*

Proposal does not compromise this outcome.

*(5) Industry areas in select rural activity centres and rural villages support the local economy with light industry and trades. Where no industry area is supplied in rural activity centres and rural villages, some low impact industrial uses may be permitted in centre areas and residential areas where it is demonstrated that impacts on surrounding land uses can be appropriately managed.*

Proposal does not compromise this outcome.

*(6) The location of industry activities avoids or is appropriately separated from sensitive land uses to protect the health, wellbeing, amenity and safety of the community from the impacts of air, noise and odour emissions, and hazardous materials.*

Proposal does not compromise this outcome.

*(7) Sensitive urban land uses such as residential development or community facilities do not encroach upon or establish within industry areas.*

Proposal does not compromise this outcome.

*3.3.13 Element—Sustainable design*

*3.3.13.1 Specific outcomes*

*(1) Development integrates the principles and practices of sustainable urban design in streetscapes and public areas, providing attractive and comfortable environments for pedestrians.*

Proposal does not compromise this outcome.

*(2) Buildings are designed with appropriate orientation and siting, passive climate control and incorporate energy and water saving technologies.*
Proposal does not compromise this outcome.

*(3) Development reflects the tropical character of the shire to promote outdoor living.*

Proposal does not compromise this outcome.

*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.*

Proposal includes appropriate management procedures to address natural hazard risks.

*(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.*

Proposal includes appropriate management procedures to address natural hazard risks.

*(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.*

Proposal includes appropriate management procedures to address natural hazard risks.

*(4) Development incorporates emergency response measures to ensure the impacts of natural hazards can be minimised.*

Proposal includes appropriate management procedures to address natural hazard risks.

*3.3.15 Element—Indigenous communities*

*3.3.15.1 Specific outcomes*

*(1) Quality housing and infrastructure is provided in the Aboriginal Communities of Oak Forest, Kowrowa, Mantaka, Koah and Mona Mona and their expansion is anticipated and catered for.*

Proposal does not compromise this outcome.

*(2) The aspirations of Indigenous communities to return to their traditional country, facilitated through the development of interpretive tourism and rural based economic development, are realised in appropriate locations.*

Proposal does not compromise this outcome.

*3.4 Natural resources and environment*

*3.4.1 Strategic outcomes*

*(1) Mareeba Shire's outstanding natural environment, ecological processes and biodiversity values, including those within conservation areas and biodiversity areas, are conserved, enhanced and restored. Minimal loss of native vegetation is achieved in the shire through limited clearing of biodiversity areas, strategically located rehabilitation areas and the replanting of native vegetation. The impacts of pests and weeds on the natural environment is minimised and managed.*

Proposal includes management measures to minimise and mitigate operational environmental impacts, while vegetation clearing is to be offset in accordance with state offset policies.

*(2) Natural corridors through the landscape, including ecological corridors, and natural areas which provide linkages between areas of significant biodiversity and habitat value are protected and enhanced. Opportunities are realised to connect habitat fragments across the regional landscape through strategic rehabilitation and protection of potential habitat connection corridors, such as habitat linkages. The resilience of natural systems and wildlife to respond to climate change is strengthened by providing maximum connectivity across a range of habitats, allowing species to migrate and retreat.*

Proposal does not compromise significant habitat corridors.

*(3) The physical condition, ecological health, environmental values and water quality of surface water and groundwater systems, including but not limited to major waterbodies and major watercourses, is protected, monitored and improved. The impacts of Mareeba Shire's water quality, wetland and riparian health on the Great Barrier Reef and the Gulf of Carpentaria are recognised through integrating sustainable catchment management practices into land use planning. Riparian areas and areas surrounding ecologically significant wetlands will be enhanced as part of new development.*

Proposal does not impact significant waterway corridors.

*(4) The shire secures a safe, reliable and adequate water supply, which is efficiently used*

*and appropriately managed to ensure social, economic and environmental sustainability. Important strategic sources of water, including the Barron Basin, contingent water supplies and underground aquifers are recognised for their role in supporting the shire's community, primary industries and economic base. Their social, economic and environmental function is not compromised by land uses and development.*

Proposal does not compromise this outcome.

*(5) The air and acoustic environment of Mareeba Shire is managed to ensure its maintenance or improvement. Development maintains or enhances the health and wellbeing of the community and the natural environment.*

Proposal does not compromise this outcome.

*(6) Risks to health and safety caused by contaminated land are managed, including through the remediation of contaminated sites and the careful management of unexploded ordinances.*

Proposal does not compromise this outcome.

*3.4.2 Element—Conservation areas*

*3.4.2.1 Specific outcomes*

*(1) The ecological values and processes of conservation areas, including World Heritage Areas, are recognised and protected from development which is incompatible with these values.*

Proposal does not impact a designated conservation area. The site is a State Forest which is intended to facilitate economic outcomes.

*(2) Conservation areas include areas of high scenic amenity value and are protected from development which compromises these scenic values.*

Proposal includes vegetated buffers to the Kennedy Highway and does not impact visual amenity.

*(3) Development within conservation areas will be limited to:*
*(a) visitor facilities designed to facilitate nature appreciation and blend with the natural environment;*
*(b) facilities for ecological research;*
*(c) small-scale maintenance buildings and depots associated with the management of natural values;*
*(d) essential infrastructure corridors;*

*(e) uses in accordance with a relevant Indigenous Land Use Agreement (ILUA).*

Proposal is not located in a designated conservation area.

*(4) New development adjacent to conservation areas will:*
*(a) be compatible with natural values; and*
*(b) sensitively located and setback from conservation areas; and*
*(c) ensure no irreparable disturbances to the areas of ecological significance; and*
*(d) mitigate the cumulative impacts of development; and*
*(e) ensures contaminants do not impact conservation areas.*

Proposal does not compromise this outcome.

*3.4.3 Element—Pest and weed management*

*3.4.3.1 Specific outcomes*

*(1) Development within, adjoining or surrounding conservation areas, biodiversity areas, wetlands or watercourses avoids the incursion of weeds and pests through best practice management practices, sensitive design, landscaping and appropriate setback and buffer distances.*

Proposal includes measures to manage weed and pest impacts.

*(2) Wildlife predation from domestic animals in biodiversity areas is avoided by restricting cats and dogs, providing sufficient fencing or other appropriate mitigation measures.*

Proposal does not compromise this outcome.

*(3) Plants used for landscaping and street trees are ideally native species, appropriate for the purpose and the local environment, and do not introduce invasive or exotic plants into the shire.*

Rehabilitation works will emulate the existing vegetation community.

*(4) Operational works ensure appropriate management practices are adopted to minimise the spread of weed species.*

Proposal does not compromise this outcome.

*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.*
Proposal includes management measures to minimise and mitigate operational environmental impacts, while vegetation clearing is to be offset in accordance with state offset policies.

*(2) Development on lots containing biodiversity areas ensures their ongoing protection and retention through application of conservation covenants or dedication for public use.*

Proposal does not compromise this outcome.

*(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.*

Proposal does not compromise this outcome.

*(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.*

Proposal will include progressive rehabilitation of extraction areas.

*(5) Areas within the Einasleigh Uplands bioregion to the west of the shire are recognised for their high level of endemism and significant biodiversity values.*

Proposal does not compromise this outcome.

*(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.*

Proposal includes management measures to minimise and mitigate operational environmental impacts, while vegetation clearing is to be offset in accordance with state offset policies.

*3.4.5 Element—Strategic rehabilitation and ecological corridors*

*3.4.5.1 Specific outcomes*

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

Proposal does not compromise this outcome.

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

*3.4.6 Element—Watercourses and wetlands*

*3.4.6.1 Specific outcomes*

*(1) Hydrological flows, riparian ecology and ecosystem services of watercourses and wetlands are maintained, protected and enhanced.*

Proposal does not compromise this outcome.

*(2) Wetlands of ecological significance are protected from sediment and run off, vegetation clearing, weed invasion and pollution through designated setbacks and buffers. These include the following:*
*(a) Wetlands in the Great Barrier Reef Catchment; and*
*(b) Wetlands of High Ecological Significance as identified through the Aquatic Biodiversity Assessment and Mapping Method (AquaBAMM).*

Proposal does not compromise this outcome.

*(3) The water quality of rivers and creeks, which ultimately flow to the Great Barrier Reef and the Gulf of Carpentaria, is not compromised or polluted through sediment, gross pollutants or chemical run off from new or existing development.*

Proposal does not compromise this outcome.

*(4) The headwaters of the Staaten River, which are included in the far western extent of Mareeba Shire, are recognised for their status as a part of the Gulf Rivers Strategic Environmental Area.*

Proposal does not compromise this outcome.

*(5) Where development occurs on land including and adjoining watercourses and wetlands it provides appropriate setbacks and buffers and enhances these areas through revegetation.*

Proposal is appropriately setback from watercourses.

*3.4.7 Element—Water resources*

*3.4.7.1 Specific outcomes*

*(1) Development integrates the key principles of Total Water Cycle Management through:*
*(a) considering impacts on all water sources;*
*(b) using water sources sustainably;*
*(c) allocating and using water equitably;*
*(d) maintaining ecological flows and water quality.*

Proposal does not compromise this outcome.

*(2) Water resources and reserves, including the Barron Basin, are recognised, monitored and protected from development which may prejudice or compromise their important role in supplying the community and industries within the shire with water.*

Proposal does not compromise this outcome.

*(3) The extraction of groundwater for domestic or commercial purposes or as part of a petroleum or other mining activity from underground aquifers must not directly or indirectly cause environmental harm to any spring, wetland or other surface waters.*

Proposal does not compromise this outcome.

*(4) Development mitigates impacts on ground water contamination, particularly in areas where water tables are heavily drawn upon for irrigation or domestic purposes.*

Proposal does not compromise this outcome.

*(5) Demand management principles are integrated into the planning and design of water infrastructure.*

Proposal does not compromise this outcome.

*3.4.8 Element—Air and noise quality*

*3.4.8.1 Specific outcomes*

*(1) The health, well-being, amenity and safety of the community and the environment is protected from the impacts of air emissions, noise and odour through appropriate management and adequate separation distances.*

Proposal relates to the expansion of an existing operation which is well separated from sensitive land uses.

*(2) Mareeba's major industry area accommodates uses with the potential to impact on air*

*and acoustic qualities.*

Proposal does not compromise this outcome.

*(3) Land uses which emit high level of noise, including for example motor sports, gun clubs and the like will be appropriately located and managed to mitigate acoustic impacts.*

Proposal relates to the expansion of an existing operation which is well separated from sensitive land uses.

*(4) Sensitive land uses are appropriately separated from areas containing or designated for activities that generate noise and air emissions.*

Proposal relates to the expansion of an existing operation which is well separated from sensitive land uses.

*3.4.9 Element—Contaminated land*

*3.4.9.1 Specific outcomes*

*(1) Development avoids, or appropriately remediates, contaminated land.*

Proposal does not compromise this outcome.

*(2) Development does not increase the risk of human or environmental harm associated with contaminated land.*

Proposal does not compromise this outcome.

*(3) Development of land with substantial Unexploded Ordnance (UXO) potential only proceeds following the conduct of UXO investigations and any necessary remediation by a qualified UXO investigation and remedial search contractor.*

Proposal does not compromise this outcome.

*3.5 Community identity and diversity*

*3.5.1 Strategic outcomes*

*(1) Mareeba Shire is characterised by a diverse cultural, scenic and natural character and identity. Valued streetscapes, town centres, built and natural features and precincts of character housing will be preserved and enhanced through sympathetic new development and redevelopment of existing buildings.*

Proposal does not compromise this outcome.

*(2) Heritage places and areas of historical significance are conserved and enhanced through sensitive re-use. Indigenous cultural heritage within the landscape is protected, or developed in consultation with Traditional Owners.*

Proposal does not compromise this outcome.

*(3) The outstanding landscape qualities and scenic routes of Mareeba Shire are conserved and protected from development that diminishes their visual and aesthetic values. The rural character, evidence of geomorphologic history and natural features within the regional landscape are preserved through sensitive development which complements iconic views, rainforest, hill slopes, bushland and rural vistas.*

Proposal is well buffered visually from the Kennedy Highway by retained vegetation.

*(4) Development integrates a range of well linked and accessible open space and recreational areas within residential areas and centre areas and their surrounds. Open space and recreation areas are retained for community use, protected from incompatible development and incorporate important biodiversity areas and buffers to wetlands and watercourses. Open space supports a range of recreational activities which are consistent with community demand and encourage healthy and active lifestyles, including sporting and leisure facilities and trail networks.*

Proposal does not compromise this outcome.

*(5) A range of community facilities, that meet the needs of the Mareeba Shire community, is provided, maintained and enhanced. Facilities that cater for cultural events, community activities, sports and recreation are sensitively developed and integrated into the surrounding area. The range and location of community facilities caters for a wide cross section of interests and users in dispersed locations.*

Proposal does not compromise this outcome.

*(6) Easily accessible health care services and facilities are provided that meet community needs. Public health and safety is fostered in the design of the built environment in Mareeba Shire, including by promoting surveillance, activity and recreation.*

Proposal does not compromise this outcome.

*3.5.2 Element—Local character*

*3.5.2.1 Specific outcomes*

*(1) New development is designed to be complementary and sympathetic to:*
*(a) the character and identity of activity centres, particularly centre areas and main streets;*
*(b) prevalent architectural styles in the surrounding area;*
*(c) areas of early and highly valued character housing and commercial areas in Kuranda.*

Proposal does not compromise this outcome.

*(2) Built and natural features that contribute to the character and identity of the shire, particularly within activity centres, are protected and enhanced.*

Proposal does not compromise this outcome.

*(3) Development promotes opportunities to foster local arts and culture and celebrate local history and identity.*

Proposal does not compromise this outcome.

*3.5.3 Element—Cultural heritage*

*3.5.3.1 Specific outcomes*

*(1) Heritage places of local and State significance are identified and protected from development that detracts from their heritage values, including character, prevalent views, fabric and features.*

Proposal does not compromise this outcome.

*(2) Buildings and sites of cultural heritage significance are retained, sensitively developed and re-used in a way that enhances and retains their heritage values and historical significance.*

Proposal does not compromise this outcome.

*(3) Indigenous cultural heritage is protected, preserved and respected in accordance with traditional custom and practice and within the statutory framework of the Aboriginal Cultural Heritage Act 2003. 'Areas of Cultural Significance' have been broadly considered in the Strategic Framework.*

Proposal does not compromise this outcome.

*(4) Development of sites which include Indigenous cultural heritage significance*

*acknowledges the key role of traditional owners in cultural heritage matters and is carried out in accordance with a Cultural Heritage Management Plan and in observance of established duty of care practices and cultural sensitivity.*

Proposal does not compromise this outcome.

*(5) Evidence of past land use and the history of Mareeba Shire is preserved and sensitively integrated into new development. This includes the remnant infrastructure of mining, timber getting, tobacco and Second World War activities.*

Proposal does not compromise this outcome.

*3.5.4 Element—Scenic amenity*

*3.5.4.1 Specific outcomes*

*(1) Areas of high scenic amenity (such as scenic routes) are protected from development which is visually inappropriate, obtrusive, unattractive or insensitive. Scenic routes include:*
*(a) Great Tropical Drive;*
*(b) Savannah Way;*
*(c) Wheelbarrow Way;*
*(d) Black Mountain Road;*
*(e) Barron Falls Road;*
*(f) The Great Inland Way;*
*(g) Kuranda Range; and*
*(h) Rex Range*

Proposal is well buffered visually from the Kennedy Highway by retained vegetation.

*(2) Development ensures scenic amenity values are maintained through sensitive location, design, materials, colour schemes, scale, minimising earthworks and retention of native vegetation.*

Proposal is well buffered visually from the Kennedy Highway by retained vegetation.

*(3) Forested hill slopes which are visible from scenic routes and residential areas are maintained in their natural state in recognition of their contribution to the shire's scenic amenity.*

Proposal is well buffered visually from the Kennedy Highway by retained vegetation.

*(4) New development does not compromise or obstruct views or public access to iconic landscape features, including to the following:*

*(a) Chillagoe smelters;*
*(b) Ngarrabullgann / Mt Mulligan.*

Proposal does not compromise this outcome.

*(5) Roadside advertising devices in rural areas are unobtrusive and sparse, except in areas specifically identified as appropriate for large outdoor advertising.*

Proposal does not compromise this outcome.

*3.5.5 Element—Open space and recreation*

*3.5.5.1 Specific outcomes*

*(1) New and enhanced sports infrastructure and recreational and social interaction spaces are accessible and attractive to the majority of residents in convenient locations.*

Proposal does not compromise this outcome.

*(2) Public open space incorporates and protects environmentally significant features, including remnant native vegetation, wildlife habitat, major waterbodies and major watercourses.*

Proposal does not compromise this outcome.

*(3) New development enhances public access and connections to, and supports activation and appreciation of, features which are highly valued and utilised for outdoor recreational pursuits, including:*
*(a) parts of the Barron and Walsh Rivers;*
*(b) stock routes, particularly those of regional recreation and tourism significance such as the stock routes near Julatten and Mt Molloy;*
*(c) historic trails including Douglas track and Smiths track;*
*(d) decommissioned elements of the railway network, including rail trails of regional recreation and tourism significance, including former rail corridor between Almaden and Mungana;*
*(e) conservation areas;*
*(f) the existing network of parks and reserves in Mareeba Shire.*

Proposal does not compromise this outcome.

*(4) A network of public open space is integrated and well linked across urban and rural areas to provide continuous trails for walking, horse riding and cycling, including through the establishment of principal cycle routes.*

Proposal does not compromise this outcome.

*3.5.5.2 Land use strategies*

*(1) Mareeba Shire Council will prepare an Open Space Strategy which will identify priorities and direct investment into public open space to optimise community benefit.*

Proposal does not compromise this outcome.

*(2) The disused Atherton branch line which extends south from Mareeba to the Tablelands Regional Council border is maintained to allow for its future development as a rail trail for cycling and walking.*

Proposal does not compromise this outcome.

*3.5.6 Element—Community facilities*

*3.5.6.1 Specific outcomes*

*(1) The development and reuse of cultural facilities and precincts is:*
*(a) compatible with the surrounding area;*
*(b) provided with a high level of amenity and safety for users of the site;*
*(c) located to be easily accessible to the majority of residents.*

Proposal does not compromise this outcome.

*(2) Development complements and sensitively integrates with existing halls, clubs, libraries, art galleries, places of worship, theatres, function rooms, community and cultural centres and other key community infrastructure. Development on sites adjoining community facilities will not obstruct or detract from their use, accessibility and functionality.*

Proposal does not compromise this outcome.

*(3) Community facilities are redeveloped in a way that is functional, safe and sensitive to the community's needs. Development of these sites is cognisant of the existing character and adjoining land uses of the area and addresses the street frontage to create a high level of accessibility and legibility to the community.*

Proposal does not compromise this outcome.

*3.5.7 Element—Health*

*3.5.7.1 Specific outcomes*

*(1) The establishment of new medical services and facilities, particularly in small communities with limited access to healthcare, is facilitated.*

Proposal does not compromise this outcome.

*(2) Access to existing health facilities and regional hospitals is enhanced by consolidation and improvements within their immediate vicinity, such as:*
*(a) enhanced pedestrian orientation and infrastructure;*
*(b) universal housing to support ageing and impaired residents who may require regular medical treatment;*
*(c) the integration of universal design principles into the built environment, ensuring access to both the able bodied and the physically disabled.*

Proposal does not compromise this outcome.

*(3) Areas within walking distance of key regional hospitals and health care services provide infill development opportunity for people who depend on access to these facilities.*

Proposal does not compromise this outcome.

*3.5.8 Element—Safe and healthy communities*

*3.5.8.1 Specific outcomes*

*(1) An active and healthy community is supported through encouraging compact residential areas and centre areas, with a high degree of accessibility and permeability that promotes an increase in active transport.*

Proposal does not compromise this outcome.

*(2) New development integrates access to existing areas and facilities for sports and recreation. New sports and recreational facilities are accessible to a large number of users by mixed transit modes.*

Proposal does not compromise this outcome.

*(3) New development integrates the principles of Crime Prevention Through Environmental Design (CPTED) to limit opportunities for crime and vandalism.*

Proposal does not compromise this outcome.

*3.6 Transport and infrastructure*

*3.6.1 Strategic outcomes*

*(1) Local collector road and state controlled road networks support the identified hierarchy of activity centres and the rural economy of Mareeba Shire. The location, density and scale of development supports the efficient and convenient movement of goods, services and people. Roads are progressively upgraded (including construction of future state roads and future local connections) and maintained to a high standard to support higher urban densities, rural production, tourism, commerce, industry and major trip generators.*

Proposal does not compromise this outcome.

*(2) The rail network is recognised as important strategic infrastructure resulting from significant past investment. Use of the rail network for tourist, passenger and freight movements throughout the shire is protected and enhanced.*

Proposal does not compromise this outcome.

*(3) Designated freight routes are appropriately managed and upgraded. Designated freight routes, active elements of the rail network and planned and designated future state roads are not prejudiced by inappropriate land uses to ensure the efficient transportation of essential goods and services, now and in the future.*

Proposal retains existing access location and extraction rates so will not further impact the road network.

*(4) Street layout and design, including in new development, supports mixed transit modes, including buses, pedestrians, cyclists and mobility devices, particularly in activity centres. Centre areas and destinations are safely and conveniently accessible to cyclists and pedestrians through the provision of a permeable and highly connected active transport network, including principal cycle routes, and the provision of end of trip facilities.*

Proposal does not compromise this outcome.

*(5) The Mareeba Airport provides a strategic, regional hub for air traffic, aviation services and industries in the shire. The expansion of Mareeba Airport is facilitated as an airport enterprise area that encourages aviation compatible business, industry and commercial enterprises to co-locate to create an aviation dependant activity cluster where the activity centre hierarchy is maintained and where the operational efficiency and safety of the Mareeba Airport is ensured through the appropriate design and location of development.*

Proposal does not compromise this outcome.

*(6) New development is appropriately sequenced and coordinated with existing and future water, wastewater, stormwater and transport infrastructure, to ensure the operations of existing infrastructure are not compromised and community needs continue to be met. New infrastructure is provided to development in accordance with Council's desired standards of service and supports a consolidated urban form to maximise return on investment. The ongoing operation of key infrastructure elements is not prejudiced by inappropriate development.*

Proposal does not compromise this outcome.

*(7) The shire is provided with sustainable and adequate waste disposal facilities that have minimal adverse impact on the environment. Transfer stations and waste disposal facilities are separated and not compromised by incompatible development or sensitive land uses. Urban development provides appropriately located and adequate space for waste storage and collection.*

Proposal does not compromise this outcome.

*(8) The generation and consumption of energy is sustainable and efficient. Over reliance on distant coal-fired power stations for electricity supply is minimised through the establishment of renewable energy generation facilities and localised and domesticscale energy generation, where the integrity and function of local electricity networks is not compromised. Power stations, high-voltage transmission lines and sub stations, including electricity infrastructure and energy generation facilities, are protected from incompatible development.*

Proposal does not compromise this outcome.

*(9) Mareeba Shire is supported by affordable and reliable high-speed telecommunications that are delivered through facilities that minimise visual impact.*

Proposal does not compromise this outcome.

*(10) Out of sequence development and development in excess of planning assumptions provides contributions or upgrades to road, pedestrian and cycle, water and sewerage, and stormwater networks that are commensurate with the anticipated impacts generated by the development.*

Proposal does not compromise this outcome.

*(11) Regional water supply needs, including the Mareeba Shire's future agricultural water supply needs are secured through the identification of the Nullinga dam development*

*area and its protection from incompatible and inappropriate development.*

Proposal does not compromise this outcome.

*(12) Subdivision of land in the Rural zone to create lots less than 60ha is not consistent with facilitating appropriately sequenced and coordinated development, except for where:*
*(a) The subdivision results in no additional lots (boundary realignment) and does not create an additional rural lifestyle lot or rural residential purposes lot; or*
*(b) The subdivision is limited to one additional lot created to accommodate a public reconfiguration purpose.*

Proposal does not compromise this outcome.

*3.6.2 Element—Road network*

*3.6.2.1 Specific outcomes*

*(1) The shire's road network is upgraded and extended to provide for the safe, efficient movement of vehicles and to cater for new development.*

Proposal retains existing access location and extraction rates so will not further impact the road network.

*(2) The design and layout of new roads compliments the function and hierarchy of the existing road network and results in high levels of connectivity, accessibility and legibility to motorists and residents.*

Proposal does not compromise this outcome.

*(3) Planned future state roads and future local connections are integrated into new development and protected from development that would compromise their construction and future operation.*

Proposal retains existing access location and extraction rates so will not further impact the road network.

*(4) Development provides off-street parking, loading and manoeuvring areas where possible and practicable.*

Proposal does not compromise this outcome.

*(5) Development of new roads and upgrades to existing roads are designed and constructed in accordance with the FNQROC Regional Development Manual as amended.*

Proposal retains existing access location and extraction rates so will not further impact the road network.

*3.6.3 Element—Rail network*

*3.6.3.1 Specific outcomes*

*(1) The railway network may become more viable and active in response to rising oil prices and greenhouse gas abatement measures, and development should consider the potential for and impacts of ongoing use of the railway network for both freight and passenger transport.*

Proposal does not compromise this outcome.

*(2) The use of the railway network for tourist based passenger movements is protected and enhanced.*

Proposal does not compromise this outcome.

*(3) Activities that support the use of the railway network for passenger and freight purposes are encouraged in appropriate locations.*

Proposal does not compromise this outcome.

*3.6.4 Element—Freight*

*3.6.4.1 Specific outcomes*

*(1) The efficient and safe movement of freight is facilitated through an effective regional network of local collector roads, state controlled roads, B-Double routes and the railway network and a future network of future state roads and future local connections.*

Proposal does not compromise this outcome.

*(2) Mareeba Shire's freight network and supporting infrastructure, such as B-Double pads and freight depots, is protected from incompatible development that may impede existing and future traffic movements or future construction, upgrades and extensions.*

Proposal does not compromise this outcome.

*(3) Freight generating development and supporting industries are located close to freight network access points.*

Proposal does not compromise this outcome.

*3.6.5 Element—Public and active transport*

*3.6.5.1 Specific outcomes*

*(1) New urban development is designed to support increased public transport patronage and promote active transport.*

Proposal does not compromise this outcome.

*(2) Mareeba Shire's activity centres are well serviced with walking and cycling infrastructure, including:*
*(a) footpaths;*
*(b) shade trees;*
*(c) seating along key routes and in major trip generation areas;*
*(d) bike paths and lanes, including principal cycle routes;*
*(e) end of trip facilities.*

Proposal does not compromise this outcome.

*(3) Centre development provides for safe and convenient pedestrian mobility and access, and the provision for public transport and interchange facilities.*

Proposal does not compromise this outcome.

*(4) The operational requirements of bus routes are incorporated into new residential subdivisions where appropriate, creating efficient flow throughs for vehicular traffic and facilitating future expansion of public transport.*

Proposal does not compromise this outcome.

*3.6.6 Element—Air transport*

*3.6.6.1 Specific outcomes*

*(1) Air transport and aviation infrastructure in Mareeba expand to support the shire's economic base.*

Proposal does not compromise this outcome.

*(2) Development in the vicinity of public aviation infrastructure (including Mareeba, Chillagoe and Dimbulah) avoids:*
*(a) adversely affecting the safety and operational efficiency of those airports and*

*aviation infrastructure;*
*(b) large increases in the numbers of people adversely affected by aircraft noise;*
*(c) increasing the risk to public safety near the airport runways.*

Proposal does not compromise this outcome.

*(3) New private and public aviation infrastructure is developed within the other rural area to support rural production in locations where surrounding land uses and sensitive receptors are not adversely impacted.*

Proposal does not compromise this outcome.

*3.6.6.2 Land use strategies*

*(1) Development surrounding Mareeba Airport is undertaken consistent with a structure plan that encourages compatible business, industry and commercial enterprise to colocate in the creation of an aviation dependent or complementary aviation activity cluster that achieves synergies that contribute to economic growth and development where:*
*(a) consistent with Planning Scheme Policy 8 Structure Planning;*
*(b) the hierarchy of the activity centre network is maintained; and*
*(c) aircraft operations are not constrained or limited by land use and development, including consideration of future airport expansion(s).*

Proposal does not compromise this outcome.

*3.6.7 Element—Water supply and wastewater services*

*3.6.7.1 Specific outcomes*

*(1) Development is provided with adequate water and wastewater infrastructure in accordance with Council's Desired Standards of Service.*

Proposal does not compromise this outcome.

*(2) Water storage, sewerage disposal and reticulation infrastructure is utilised and extended economically and efficiently to new development.*

Proposal does not compromise this outcome.

*(3) Development in rural areas will demonstrate that it has access to adequate potable water and fire-fighting water supply on-site.*

Proposal does not compromise this outcome.

*(4) In areas not serviced by reticulated sewerage, on-site effluent disposal systems ensure the environment or amenity is not adversely impacted.*

Proposal does not compromise this outcome.

*(5) The ongoing operation of sewerage treatment plants and associated infrastructure is protected from incompatible and odour sensitive development.*

Proposal does not compromise this outcome.

*(6) Upgrades and extensions to water and wastewater infrastructure are designed and constructed in accordance with the FNQROC Regional Development Manual as amended.*

Proposal does not compromise this outcome.

*(7) Development within the Nullinga dam development area does not include:*
*(a) activities that physically impact the structure/geology of the land, in particular excavation activities in areas where the dam wall and any spillways are proposed to be sited;*
*(b) activities and development that increase the number of buildings, lots; and*
*(c) activities that may affect surface water and groundwater quality.*

Proposal does not compromise this outcome.

*3.6.8 Element—Stormwater management*

*3.6.8.1 Specific outcomes*

*(1) Water Sensitive Urban Design principles and adequate infrastructure are integrated into new development, ensuring:*
*(a) water quality objectives are met;*
*(b) a no worsening effect on surrounding land and the environment is achieved;*
*(c) flooding and ponding of water is avoided*

Proposal includes appropriate stormwater management.

*(2) Stormwater is managed and measures are implemented to ensure erosion is prevented or minimised and contaminants are not released into surrounding environs.*

Proposal includes appropriate stormwater management.

*3.6.9 Element—Waste management*

*3.6.9.1 Specific outcomes*

*(1) Waste facilities have adequate capacity to service the community and industry and provide a sustainable method of waste disposal.*

Proposal does not compromise this outcome.

*(2) Waste facilities are designed and operated to minimise adverse impacts on the community and the environment and are protected from encroachment of inappropriate and odour sensitive development.*

Proposal does not compromise this outcome.

*(3) Significant waste management facilities, including Mareeba landfill and Springmount waste facility, provide for the long term solid waste disposal needs of the eastern part of the shire. Their ongoing operations are protected from incompatible development.*

Proposal does not compromise this outcome.

*(4) On-site waste disposal and recycling areas are provided by development to meet operational requirements of storage, screening and collection.*

Proposal does not compromise this outcome.

*3.6.10 Element—Energy supply*

*3.6.10.1 Specific outcomes*

*(1) Adequate, sustainable, reliable and secure electricity supply infrastructure is provided to the shire, including new development.*

Proposal does not compromise this outcome.

*(2) High voltage major electrical infrastructure and energy generation facilities are protected from conflicting development.*

Proposal does not compromise this outcome.

*(3) The shire's net carbon emissions are reduced by establishment of renewable energy generation facilities, maintaining compact urban areas and encouraging development that embraces energy efficient design features.*

Proposal does not compromise this outcome.

*(4) Renewable energy facilities are connected to an existing, nearby, high voltage electricity network (with adequate capacity) without significant environment, social or amenity impact.*
Proposal does not compromise this outcome.

*3.6.11 Element—Information and communication technology*

*3.6.11.1 Specific outcomes*

*(1) Households, businesses and industry within urban and rural communities are serviced with high-speed fibre-optic, high-speed wireless or satellite broadband internet connections across the shire.*

Proposal does not compromise this outcome.

*(2) Telecommunications facilities, particularly mobile phone towers, are located to ensure visual amenity is not compromised, with these facilities co-located wherever possible.*

Proposal does not compromise this outcome.

*3.7 Economic development*

*3.7.1 Strategic outcomes*

*(1) The rural economy that underpins the settlement pattern of Mareeba Shire prospers and diversifies, with traditional and emerging primary industries continuing to provide the economic base of the shire. Increasing opportunities for value-adding and processing primary product are realised on-farm and within surrounding towns. Agricultural areas and rural industries are protected from development which may compromise its ongoing viability. Infrastructure which supports agriculture and primary industry is maintained and protected.*

Proposed development is an economic activity in itself and a significant enabler of other economic activity by providing a vital resource to the construction sector.

*(2) The rural area includes a range of uses which compliment dominant primary industry activities and enhance the shire's economy. Activities including rural industries, intensive agricultural uses, intensive animal industries and expanded forestry and permanent plantations are supported in appropriate locations where impacts on the environment and surrounding land uses are limited and manageable.*

Proposal seeks to expand an important existing primary industry operation.

*(3) Mareeba Shire is increasingly provided with retail and business opportunities and improved government services to enhance self-sufficiency. These opportunities and services are consolidated through the clustering and co-location of commercial uses in activity centres and are particularly focussed within Mareeba. Kuranda, as a village activity centre, maintains its level of self-reliance through servicing its local catchment with a range of services and employment opportunities.*

Proposal does not compromise this outcome.

*(4) The natural environment, rural and scenic landscapes of Mareeba Shire provide a basis for the development of sustainable tourism enterprises. Mareeba Shire's geographic proximity to Cairns International Airport provides opportunities for increasing visitation and exposure to the shire. Large scale tourist accommodation facilities are developed in key sites across the shire and meet the needs of a range of users. The character and appeal of key activity centres, landscape features and scenic routes which attract tourists to Mareeba Shire will be maintained and enhanced. The western dry land savannah of the shire accommodates further nature and rural based tourism development.*

Proposal does not compromise this outcome.

*(5) Industry areas provide for a range of industrial development, expansion, supporting infrastructure and employment opportunities consistent with their intended function in the shire. Industry areas are protected from incompatible development and sensitive land uses. The Mareeba Airport expands and caters for a hub of specialist aviation services.*

Proposal does not compromise this outcome.

*(6) Catalysts for economic diversification and cultural activity such as educational establishments, emerging technology, research and development activities and the arts are encouraged in the shire, preferably near or within Mareeba or the Kuranda district. Creative industries flourish in Mareeba Shire, providing strong cultural legacies and sustained employment opportunities. The shire's unique wet tropical ecosystems and dry tropical savannahs provide further opportunities to develop regional tropical expertise and attract more environmental education and scientific research activities to the shire.*

Proposal does not compromise this outcome.

*(7) The geological diversity and rare mineral occurrence of Mareeba Shire provide the basis for the establishment of mixed mining activities of varying scales, supporting increased employment and wealth within the shire, while ensuring ecological and amenity values are not negatively impacted. Support services and infrastructure to*

*existing and future mineral exploration, including workers accommodation, are encouraged in appropriate locations.*

Proposal does not compromise this outcome.

*(8) Key resource areas (of local, regional and state significance) and associated haul routes are buffered from incompatible development. New resource operations establish in rural areas where impacts on surrounding land are manageable and environmental values can be protected.*

Proposal is not located in an identified 'key resource area' however is nonetheless a key resource operation which should be supported and protected.

*(9) Flexibility and responsiveness allow for economic diversity and innovation, leading to a greater variety of employment opportunities that meet the changing needs of the community and economy. Small scale and emerging industries are supported in appropriate locations across the shire.*

Proposal does not compromise this outcome.

*(10) Mareeba Shire positions itself as a major sustainable energy region of Australia, providing a significant portion of the shire's electricity supply through various renewable sources. Sustainable energy generation also contributes to the economy of the shire and provides an increasing source of employment. Energy generation facilities, including the Barron Gorge Hydroelectric Power Station, and any newly established power generation facilities are protected from incompatible development.*

Proposal does not compromise this outcome.

*(11) Major employment generators within Mareeba Shire continue to support the economy and are protected from development which may prejudice their ongoing operation. New and expanded employment generators are promoted in appropriate locations across the shire, including within activity centres and rural areas.*

Proposal does not compromise this outcome.

*3.7.2 Element—Rural and Agricultural land*

*3.7.2.1 Specific outcomes*

*(1) Agricultural areas are preserved for the purpose of primary production and are protected from fragmentation, alienation and incompatible development.*

Proposal does not compromise this outcome.

*(2) Other rural areas are maintained in economically viable holdings and continue to develop and expand their rural infrastructure and operations.*

Proposal does not compromise this outcome.

*(3) Urban and rural residential development provides a buffer to adjacent rural areas in accordance with best practice.*

Proposal does not compromise this outcome.

*(4) Built infrastructure and non-agricultural uses within farms will be co-located and clustered with existing farm dwellings and infrastructure to prevent encroachment on productive land.*

Proposal does not compromise this outcome.

*(5) Development ensures rural activities in all rural areas are not compromised by incompatible development and fragmentation.*

Proposal does not compromise this outcome.

*(6) Important irrigation infrastructure, such as the Mareeba-Dimbulah Irrigation Area irrigation channels, pipelines and holding ponds, are maintained for the purpose of providing water to support agricultural production and are protected from incompatible development.*

Proposal does not compromise this outcome.

*3.7.3 Element—Rural enterprise*

*3.7.3.1 Specific outcomes*

*(1) Rural industries and intensive agricultural uses are appropriately scaled and located in the landscape of the shire, including the establishment of further:*
*(a) food and fibre processing facilities;*
*(b) value adding of primary product;*
*(c) cottage industries;*
*(d) hydroponics;*
*(e) aquaculture;*
*(f) wholesale nurseries;*
*(g) intensive horticulture;*
*(h) farmgate industries.*

Proposal does not compromise this outcome.

*(2) Rural industries of an appropriate scale are located within rural areas where an adequate level of infrastructure is available or can be provided and adverse impacts on surrounding land are limited and manageable.*

Proposal seeks to expand an existing important rural industry which is appropriately located with respect to major road infrastructure and a lack of surrounding sensitive land uses.

*(3) Large-scale and high impact rural industries will be encouraged to establish within industry areas.*

Proposal does not compromise this outcome.

*3.7.4 Element—Intensive animal industries*

*3.7.4.1 Specific outcomes*

*(1) Intensive animal industries are located and designed to avoid adverse impacts on surrounding land and residences, particularly in relation to noise and odour.*

Proposal does not compromise this outcome.

*(2) Intensive animal industries incorporate measures to protect environmental values and are located outside biodiversity areas.*

Proposal does not compromise this outcome.

*(3) Intensive animal industries are located in rural areas characterised by large lot sizes where residences and sensitive land uses are not adversely impacted.*

Proposal does not compromise this outcome.

*3.7.5 Element—Forestry and permanent plantations*

*3.7.5.1 Specific outcomes*

*(1) Rural areas provide opportunities for:*
*(a) sustainable forestry on private land;*
*(b) ongoing operation of established plantations;*
*(c) integrated agro-forestry and native forestry into land used primarily for cropping and pasture.*

Proposal does not compromise this outcome.

*(2) Permanent plantations are located within habitat linkages or areas which are not agricultural areas.*

Proposal does not compromise this outcome.

*3.7.6 Element—Retail and commercial development*

*3.7.6.1 Specific outcomes*

*(1) Commercial development will be facilitated by:*
*(a) consolidation and co-location of centre activities in existing centre areas;*
*(b) identification of space adjacent to centre areas to cater for the expansion of commercial activities;*
*(c) infrastructure provision in areas identified as able to cater for new commercial development;*
*(d) maintenance of a high standard of infrastructure, services and amenity in existing commercial areas to support further business investment and expansion.*

Proposal does not compromise this outcome.

*(2) Out-of-centre retail development is avoided and should only occur if there is a clearly demonstrated over-riding community need and evidence demonstrating that the development would not adversely impact existing centre areas.*

Proposal does not compromise this outcome.

*(3) Centre areas provide a vibrant, busy setting for community activity, social interaction and local trade and exchange. Each centre area retains its relaxed rural atmosphere and unique character, and provides for a high level of pedestrian activity.*

Proposal does not compromise this outcome.

*(4) The following features are integrated or provided by new commercial development:*
*(a) attractive streetscapes with shade trees and awnings;*
*(b) active shop fronts;*
*(c) pedestrian and cyclist comfort and convenience;*
*(d) universal design principles;*
*(e) spaces for community activity and social interaction;*
*(f) CPTED initiatives.*

Proposal does not compromise this outcome.

*(5) Rural activity centres and rural villages may accommodate commercial development*

*that supports their local community within residential areas in circumstances where no available land for centre purposes is designated. The use must demonstrate that any impacts on surrounding residences will not result in nuisance and will maintain rural amenity.*

Proposal does not compromise this outcome.

*3.7.7 Element—Tourism*

*3.7.7.1 Specific outcomes*

*(1) Kuranda maintains its status as a major, international tourist destination of Far North Queensland while the emerging tourist economy of Chillagoe continues to attract more interest and visitors. Irvinebank is recognised as a key site of historical significance and as a point of interest to tourists. Increasing levels of tourist accommodation and facilities are provided in all the shire's activity centres.*

Proposal does not compromise this outcome.

*(2) Major tourist accommodation facilities that can accommodate large numbers of overnight visitors in the shire are developed in strategic locations where amenity impacts are mitigated and physical infrastructure appropriately provided.*

Proposal does not compromise this outcome.

*(3) Tourist parks in key locations provide sites to accommodate caravans and recreational vehicles across the shire. Facilities to accommodate caravans and recreational vehicles are developed in a variety of urban and, at a limited scale, rural locations, to encourage extended visitations within the shire. Tourist facilities are designed to ensure they provide a high quality of infrastructure and services to visitors.*

Proposal does not compromise this outcome.

*(4) The outstanding scenic qualities of the regional landscape and the character and heritage values of the shire's activity centres are recognised and protected for their role in promoting and attracting visitors to the shire. Development in scenic and highly visible locations will minimise its impacts on scenic amenity through sensitive location, design, colour and scale.*

Proposal is well screened visually from the Kennedy Highway by retained vegetation.

*(5) A variety of small-scale, low impact tourist facilities are established across the rural landscape, including:*
*(a) tourist attractions and facilities within activity centres;*

*(b) cultural interpretive tours;*
*(c) nature based tourism;*
*(d) sports and recreational activities;*
*(e) tourist attractions;*
*(f) adventure tourism;*
*(g) farm based tourism;*
*(h) food based tourism;*
*(i) bed and breakfasts;*
*(j) camping and recreational vehicle facilities;*
*(k) cycle tourism.*

Proposal does not compromise this outcome.

*(6) Small scale tourism related development is sensitively designed, scaled and located so as to not compromise the natural landscape values and agricultural values of Mareeba Shire.*

Proposal does not compromise this outcome.

*3.7.8 Element—Industry*

*3.7.8.1 Specific outcomes*

*(1) The Mareeba major industry area is a key economic driver for the shire and provides a significant strategic supply of land for industrial uses, particularly difficult to locate high impact and special industries, in Far North Queensland.*

Proposal does not compromise this outcome.

*(2) Industry areas are located within activity centres to accommodate for trades and industrial development that provide employment and services to the catchments of these activity centres.*

Proposal does not compromise this outcome.

*(3) Industry areas are designated and protected from other land uses which could impair or prejudice their development for industrial purposes.*

Proposal does not compromise this outcome.

*(4) A high level of infrastructure, services and amenity in existing industry areas is provided to support business investment and expansion of industry areas.*

Proposal does not compromise this outcome.

*(5) The health, safety, wellbeing and amenity of the community is protected from unacceptable impacts associated with hazardous materials, noise, pollution and odour.*

Proposal is well separated from sensitive and uses.

*3.7.9 Element— Education, research, culture and the arts*

*3.7.9.1 Specific outcomes*

*(1) Development complements and provides for improved access to important education, research, cultural and arts facilities.*

Proposal does not compromise this outcome.

*(2) Education, research, cultural and arts facilities are protected from development that will adversely impact on their operations or constrain further development.*

Proposal does not compromise this outcome.

*(3) New education, research, cultural and arts facilities are established in appropriate, accessible, safe and well serviced locations within Mareeba Shire.*

Proposal does not compromise this outcome.

*(4) Education, research, cultural and arts facilities of limited scale are established in rural areas only where the facility is dependent on the natural resources of the locality.*

*3.7.10 Element—Mining*

*3.7.10.1 Specific outcomes*

*(1) The development and expansion of mining in the shire is encouraged in appropriate locations, where impacts on environmental values and local amenity are appropriately managed.*

Proposal does not compromise this outcome.

*(2) Mining activities in the shire are supported by ensuring associated industries and workers can be appropriately accommodated and sited within the shire, particularly within surrounding activity centres.*

Proposal does not compromise this outcome.

*(3) Mine sites, associated infrastructure and industries which support mining are protected from development that might prevent or constrain current or future operations.*

Proposal does not compromise this outcome.

*3.7.11 Element—Extractive resources*

*3.7.11.1 Specific outcomes*

*(1) Key resource areas of local, regional and state significance and their associated haul routes are protected from development that might prevent or constrain current or future extraction.*

Proposal is not located in an identified 'key resource area' however is nonetheless a key resource operation which should be supported and protected.

*(2) Extractive industries:*
*(a) mitigate impacts relating to air, noise, water and waste on local ecological and environmental values and the amenity of residential areas, and surrounding rural dwellings;*
*(b) avoid areas of ecological significance and values;*
*(c) progressively rehabilitate disturbed land on site and ensure ecological values are rehabilitated (where relevant).*

Proposal includes appropriate management actions to minimise environmental impacts and will be subject to rehabilitation and state government environmental offsets.

*(3) Sand extraction in watercourses maintains and restores the environmental and hydrological values of the site, and does not impede community recreational usage and public access points to waterways.*

Proposal does not compromise this outcome.

*3.7.12 Element—Small scale and emerging industries*

*3.7.12.1 Specific outcomes*

*(1) New and emerging industries and services are encouraged in appropriate locations.*

Proposal does not compromise this outcome.

*(2) The development of low-impact home-based business in residential areas is recognised as a form of localised economic diversification and self-generated employment, and supported where at an appropriate scale and where impacts can be*

*appropriately managed.*

Proposal does not compromise this outcome.

*3.7.13 Element—Energy generation*

*3.7.13.1 Specific outcomes*

*(1) Renewable energy facilities are established in locations where impacts on surrounding land and ecological values are mitigated.*

Proposal does not compromise this outcome.

*(2) The design, siting, construction, management, maintenance and operation of energy generation facilities and associated infrastructure takes comprehensive account of (and is sensitive to) environmental, heritage, landscape and scenic values, surrounding land, future preferred settlement patterns, and recognised impacts.*

Proposal does not compromise this outcome.

*(3) Energy generation facilities utilise and take comprehensive account of national and/or state government-recognised scientific knowledge and standards and are commensurate with the significance, magnitude and extent of both direct and nondirect impacts.*

Proposal does not compromise this outcome.

*(4) Energy generation facilities do not adversely impact on the amenity of the surrounding area.*

Proposal does not compromise this outcome.

*(5) Established energy generation facilities are protected from development which has the potential to constrain their operations or future expansion.*

Proposal does not compromise this outcome.

*(6) Energy generation facilities are connected to a nearby, high-voltage electricity network with adequate capacity.*

Proposal does not compromise this outcome.

*3.7.14 Element—Major employment generators*

*3.7.14.1 Specific outcomes*

*(1) Key enterprise and employment areas in Mareeba Shire, including Arriga Sugar Mill, Lotus Glen Correctional Facility and Springmount Waste Management Facility are protected from development which could compromise their expansion and ongoing operations.*

Proposal does not compromise this outcome.

*(2) New major urban employment generators are encouraged to be located near or within Mareeba or Kuranda.*

Proposal does not compromise this outcome.

### *5.4.2 Codes*

The following codes are identified as being applicable to this development application:

- Rural Zone Code
- Conservation Zone Code
- Industrial Activities Code
- Bushfire Overlay Code
- Ecological Overlay Code
- Landscaping Code
- Parking and Access Code
- Works, Services and Infrastructure Code

A detailed assessment against the Planning Scheme codes is included as **Annexure 13** to this report. The proposal is considered generally compliant with the relevant 'Acceptable Outcomes' and/or 'Performance Outcomes' of the relevant codes. Where strict compliance with the 'Acceptable Outcome' is not achieved, comments addressing the relevant 'Performance Outcome' have been provided in the code tables.

# 6.0 Conclusion

This submission supports an 'Other Change' Application under Section 82 of the Planning Act 2016 by Jacqshar Pty Ltd (the 'applicant') in relation to a Development Permit for Material Change of Use for 'Extractive Industry' (expansion of existing quarry) on land at Kennedy Highway, Kuranda, described as Lot 46 on SP328230 and Lot 175 on FTY1871.

The submission has included an assessment of the proposal against the relevant statutory planning controls at both the local and state level and included supporting information intended to address the likely concerns of Council and assessing authorities.

In summary, we submit that the proposed development is unlikely to have any significant impacts on the infrastructure, environment or community of the surrounding area that cannot be adequately controlled through the use of reasonable and relevant conditions.

We trust this information is sufficient for your purposes; however should you require any further details or clarification, please do not hesitate to contact the undersigned.

Yours Faithfully



**Evan Yelavich**
**Director / Planner**
**Planning Plus**

| | |
|---|---|
| **Annexure 1:** | **DA Forms, Landowner Consent & Resource Entitlement** |
| **Annexure 2:** | **QLD Globe Aerial Overlay** |
| **Annexure 3:** | **SmartMap** |
| **Annexure 4:** | **Title Searches** |
| **Annexure 5:** | **SDAP Mapping** |
| **Annexure 6:** | **Existing MCU Approval** |
| **Annexure 7:** | **Sales Permit** |
| **Annexure 8:** | **Proposal Plans** |
| **Annexure 9:** | **Environmental Assessment Report** |
| **Annexure 10:** | **Flora Survey Report** |
| **Annexure 11:** | **Current Operations Management Documents** |
| **Annexure 12:** | **SDAP Code Assessment** |
| **Annexure 13:** | **Planning Scheme Code Assessment** |

# Annexure 1: DA Forms, Landowner Consent & Resource Entitlement

# DA Form 1 – Development application details

***Approved form (version 1.6 effective 2 August 2024) made under section 282 of the Planning Act 2016.***

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

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

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

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

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

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

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

## PART 1 – APPLICANT DETAILS

| 1) Applicant details | |
|---|---|
| Applicant name(s) (*individual or company full name*) | |
| Contact name *(only applicable for companies)* | |
| Postal address *(P.O. Box or street address)* | |
| Suburb | |
| State | |
| Postcode | |
| Country | |
| Contact number | |
| Email address *(non-mandatory)* | |
| Mobile number *(non-mandatory)* | |
| Fax number *(non-mandatory)* | |
| Applicant's reference number(s) *(if applicable)* | |

**1.1) Home-based business**

☐ Personal details to remain private in accordance with section 264(6) of *Planning Act 2016*

**2) Owner's consent**

**2.1) Is written consent of the owner required for this development application?**

☐ Yes – the written consent of the owner(s) is attached to this development application

☐ No – proceed to 3)

# PART 2 – LOCATION DETAILS

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

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

### 3.1) Street address and lot on plan

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

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

| | | | | |
|---|---|---|---|---|
| a) | Unit No. | Street No. | Street Name and Type | Suburb |
| | | | | |
| | Postcode | Lot No. | Plan Type and Number *(e.g. RP, SP)* | Local Government Area(s) |
| | | | | |
| b) | Unit No. | Street No. | Street Name and Type | Suburb |
| | | | | |
| | Postcode | Lot No. | Plan Type and Number *(e.g. RP, SP)* | Local Government Area(s) |
| | | | | |

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

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

☐ Coordinates of premises by longitude and latitude

| Longitude(s) | Latitude(s) | Datum | Local Government Area(s) *(if applicable)* |
|---|---|---|---|
| | | ☐ WGS84<br>☐ GDA94<br>☐ Other: | |

☐ Coordinates of premises by easting and northing

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

### 3.3) Additional premises

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

☐ Not required

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

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

Name of water body, watercourse or aquifer:

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

Lot on plan description of strategic port land:

Name of port authority for the lot:

☐ In a tidal area

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

Name of port authority for tidal area *(if applicable)*

| | |
|---|---|
| ☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* | |
| Name of airport: | |
| ☐ Listed on the Environmental Management Register (EMR) under the *Environmental Protection Act 1994* | |
| EMR site identification: | |
| ☐ Listed on the Contaminated Land Register (CLR) under the *Environmental Protection Act 1994* | |
| CLR site identification: | |

**5) Are there any existing easements over the premises?**

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

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

☐ No

# PART 3 – DEVELOPMENT DETAILS

## Section 1 – Aspects of development

**6.1) Provide details about the first development aspect**

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

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

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

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

c) What is the level of assessment?

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

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

e) Relevant plans

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

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

**6.2) Provide details about the second development aspect**

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

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

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

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

c) What is the level of assessment?

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

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

e) Relevant plans

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

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

| 6.3) Additional aspects of development |
|---|
| ☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application |
| ☐ Not required |
| **6.4) Is the application for State facilitated development?** |
| ☐ Yes - Has a notice of declaration been given by the Minister? |
| ☐ No |

## Section 2 – Further development details

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

### Division 1 – Material change of use

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

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

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

| 8.3) Does the proposed development relate to temporary accepted development under the Planning Regulation? | |
|---|---|
| ☐ Yes – provide details below or include details in a schedule to this development application | |
| ☐ No | |
| Provide a general description of the temporary accepted development | Specify the stated period dates under the Planning Regulation |
| | |

### Division 2 – Reconfiguring a lot

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

| 9.1) What is the total number of existing lots making up the premises? |
|---|
| |

| 9.2) What is the nature of the lot reconfiguration? *(tick all applicable boxes)* | |
|---|---|
| ☐ Subdivision *(complete 10)* | ☐ Dividing land into parts by agreement *(complete 11)* |
| ☐ Boundary realignment *(complete 12)* | ☐ Creating or changing an easement giving access to a lot from a constructed road *(complete 13)* |

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

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

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

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

| 12.2) What is the reason for the boundary realignment? |
|---|
| |

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

## Division 3 – Operational work

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

| 14.1) What is the nature of the operational work? | | |
|---|---|---|
| ☐ Road work | ☐ Stormwater | ☐ Water infrastructure |
| ☐ Drainage work | ☐ Earthworks | ☐ Sewage infrastructure |
| ☐ Landscaping | ☐ Signage | ☐ Clearing vegetation |
| ☐ Other – please specify: | | |

| 14.2) Is the operational work necessary to facilitate the creation of new lots? *(e.g. subdivision)* | |
|---|---|
| ☐ Yes – specify number of new lots: | |
| ☐ No | |

14.3) What is the monetary value of the proposed operational work? *(include GST, materials and labour)*

$

# PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application

16) Has the local government agreed to apply a superseded planning scheme for this development application?

☐ Yes – a copy of the decision notice is attached to this development application
☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
☐ No

# PART 5 – REFERRAL DETAILS

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

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

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

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

☐ SEQ northern inter-urban break – community activity
☐ SEQ northern inter-urban break – indoor recreation
☐ SEQ northern inter-urban break – urban activity
☐ SEQ northern inter-urban break – combined use
☐ Tidal works or works in a coastal management district
☐ Reconfiguring a lot in a coastal management district or for a canal
☐ Erosion prone area in a coastal management district
☐ Urban design
☐ Water-related development – taking or interfering with water
☐ Water-related development – removing quarry material *(from a watercourse or lake)*
☐ Water-related development – referable dams
☐ Water-related development –levees *(category 3 levees only)*
☐ Wetland protection area

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

☐ Airport land
☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government)*
☐ Heritage places – Local heritage places

Matters requiring referral to the **Chief Executive of the distribution entity or transmission entity:**

☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:

- The **Chief Executive of the holder of the licence**, if not an individual
- The **holder of the licence**, if the holder of the licence is an individual

☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the **Brisbane City Council:**

☐ Ports – Brisbane core port land

Matters requiring referral to the **Minister responsible for administering the *Transport Infrastructure Act 1994*:**

☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
☐ Ports – Strategic port land

Matters requiring referral to the **relevant port operator**, if applicant is not port operator**:**

☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the **Chief Executive of the relevant port authority:**

☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the **Gold Coast Waterways Authority:**

☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the **Queensland Fire and Emergency Service:**

☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

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

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

| Referral requirement | Referral agency | Date of referral response |
|---|---|---|
| | | |
| | | |

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

# PART 6 – INFORMATION REQUEST

**19) Information request under the DA Rules**

☐ I agree to receive an information request if determined necessary for this development application

☐ I do not agree to accept an information request for this development application

***Note**: By not agreeing to accept an information request I, the applicant, acknowledge:*

- *that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties*
- *Part 3 under Chapter 1 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules or*
- *Part 2under Chapter 2 of the DA Rules will still apply if the application is for state facilitated development*

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

# PART 7 – FURTHER DETAILS

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

☒ Yes – provide details below or include details in a schedule to this development application

☐ No

| List of approval/development application references | Reference number | Date | Assessment manager |
|---|---|---|---|
| ☒ Approval<br>☐ Development application | MCU/23/0009 | 10/08/23 | MSC |
| ☐ Approval<br>☐ Development application | | | |

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

☐ Yes – a copy of the receipted QLeave form is attached to this development application

☐ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid

☒ Not applicable *(e.g. building and construction work is less than $150,000 excluding GST)*

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

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

☐ Yes – show cause or enforcement notice is attached

☒ No

23) Further legislative requirements

**Environmentally relevant activities**

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

☐ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below

☒ No

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

| | | | |
|---|---|---|---|
| Proposed ERA number: | | Proposed ERA threshold: | |
| Proposed ERA name: | | | |

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

**Hazardous chemical facilities**

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

☐ Yes – *Form 536: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application

☒ No

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

**Clearing native vegetation**

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

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

☐ No

***Note**: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.*
*2. See https://www.qld.gov.au/environment/land/vegetation/applying for further information on how to obtain a s22A determination.*

**Environmental offsets**

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

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

☐ No

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

**Koala habitat in SEQ Region**

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

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

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

☒ No

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

**Water resources**

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

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

☒ No

***Note**: Contact the Department of Resources at www.resources.qld.gov.au for further information.*

*DA templates are available from planning.statedevelopment.qld.gov.au. If the development application involves:*

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

**Waterway barrier works**

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

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

☒ No

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

**Marine activities**

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

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

☒ No

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

**Quarry materials from a watercourse or lake**

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

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

***Note**: Contact the Department of Resources at www.resources.qld.gov.au and www.business.qld.gov.au for further information.*

**Quarry materials from land under tidal waters**

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

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

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

**Referable dams**

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

☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application

☒ No

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

**Tidal work or development within a coastal management district**

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

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

☒ No

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

**Queensland and local heritage places**

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

☐ Yes – details of the heritage place are provided in the table below

☒ No

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

*For a heritage place that has cultural heritage significance as a local heritage place and a Queensland heritage place, provisions are in place under the Planning Act 2016 that limit a local categorising instrument from including an assessment benchmark about the effect or impact of, development on the stated cultural heritage significance of that place. See guidance materials at www.planning.statedevelopment.qldgov.au for information regarding assessment of Queensland heritage places.*

| Name of the heritage place: | | Place ID: | |
|---|---|---|---|

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

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

☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)

☒ No

**Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation**

23.15) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

☐ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered

☒ No

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

# PART 8 – CHECKLIST AND APPLICANT DECLARATION

**24) Development application checklist**

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

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

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

Date received: Reference number(s):

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

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

# Change application form

***Planning Act Form 5 (version 1.2 effective 7 February 2020) made under Section 282 of the Planning Act 2016.***

This form is to be used for a change application made under section 78 of the *Planning Act 2016*. It is important when making a change application to be aware of whether the application is for a minor change that will be assessed under section 81 of the *Planning Act 2016* or for an other change that will be assessed under section 82 of the *Planning Act 2016*.

An applicant must complete all parts of this form, and provide any supporting information that the form identifies as being required to accompany the change application, unless stated otherwise. Additional pages may be attached if there is insufficient space on the form to complete any part.

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

## PART 1 – APPLICANT DETAILS

| 1) Applicant details | |
|---|---|
| Applicant name(s) (*individual or company full name*) | Jacqshar Pty Ltd |
| Contact name *(only applicable for companies)* | Evan Yelavich – Planning Plus |
| Postal address *(P.O. Box or street address)* | PO Box 399 |
| Suburb | REDLYNCH |
| State | QLD |
| Postcode | 4870 |
| Country | AUS |
| Email address *(non-mandatory)* | |
| Mobile number *(non-mandatory)* | |
| Applicant's reference number(s) *(if applicable)* | |

**2) Owner's consent - Is written consent of the owner required for this change application?**

***Note**: Section 79(1A) of the Planning Act 2016 states the requirements in relation to owner's consent.*

☒ Yes – the written consent of the owner(s) is attached to this change application
☐ No

## PART 2 – LOCATION DETAILS

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

**3.1) Street address and lot on plan**

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

| | | | | |
|---|---|---|---|---|
| a) | Unit No. | Street No. | Street Name and Type | Suburb |
| | | | Kennedy Highway | Kuranda |
| | Postcode | Lot No. | Plan Type and Number *(e.g. RP, SP)* | Local Government Area(s) |
| | 4881 | 46 | SP328230 | Mareeba |
| b) | Unit No. | Street No. | Street Name and Type | Suburb |
| | | | Kennedy Highway | Kuranda |
| | Postcode | Lot No. | Plan Type and Number *(e.g. RP, SP)* | Local Government Area(s) |
| | 4881 | 175 | FTY1871 | Mareeba |

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

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

☐ Coordinates of premises by longitude and latitude

| Longitude(s) | Latitude(s) | Datum | Local Government Area(s) *(if applicable)* |
|---|---|---|---|
| | | ☐ WGS84<br>☐ GDA94<br>☐ Other: | |

☐ Coordinates of premises by easting and northing

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

3.3) Additional premises

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

☐ Not required

# PART 3 – RESPONSIBLE ENTITY DETAILS

4) Identify the responsible entity that will be assessing this change application

***Note**: see section 78(3) of the Planning Act 2016*

Mareeba Shire Council

# PART 4 – CHANGE DETAILS

5) Provide details of the existing development approval subject to this change application

| Approval type | Reference number | Date issued | Assessment manager/approval entity |
|---|---|---|---|
| ☒ Development permit<br>☐ Preliminary approval | MCU/23/0009 | 10/08/23 | MSC |
| ☐ Development permit<br>☐ Preliminary approval | | | |

6) Type of change proposed

6.1) Provide a brief description of the changes proposed to the development approval *(e.g. changing a development approval for a five unit apartment building to provide for a six unit apartment building)*:

Expansion of proposed quarry extraction area.

6.2) What type of change does this application propose?

☐ Minor change application – proceed to Part 5

☒ Other change application – proceed to Part 6

# PART 5 – MINOR CHANGE APPLICATION REQUIREMENTS

**7) Are there any affected entities for this change application**

☐ No – proceed to Part 7

☐ Yes – list all affected entities below and proceed to Part 7

***Note**: section 80(1) of the Planning Act 2016 states that the person making the change application must give notice of the proposal and the details of the change to each affected entity as identified in section 80(2) of the Planning Act 2016.*

| Affected entity | Pre-request response provided? (*where a pre-request response notice for the application has been given, a copy of the notice must accompany this change application)* | Date notice given *(where no pre-request response provided)* |
|---|---|---|
| | ☐ No<br>☐ Yes – pre-request response is attached to this change application | |
| | ☐ No<br>☐ Yes – pre-request response is attached to this change application | |
| | ☐ No<br>☐ Yes – pre-request response is attached to this change application | |

# PART 6 – OTHER CHANGE APPLICATION REQUIREMENTS

***Note**: To complete this part it will be necessary for you to complete parts of DA Form 1 – Development application details and in some instances parts of DA Form 2 – Building work details, as mentioned below. These forms are available at https://planning.dsdmip.qld.gov.au.*

**8) Location details - Are there any additional premises included in this change application that were not part of the original development approval?**

☐ No

☒ Yes

**9) Development details**

**9.1) Is there any change to the type of development, approval type, or level of assessment in this change application?**

☒ No

☐ Yes – the completed Sections 1 and 2 of Part 3 (Development details) of *DA Form 1 – Development application details* as these sections relate to the new or changed aspects of development are provided with this application.

**9.2) Does the change application involve building work?**

☒ No

☐ Yes – the completed Part 5 (Building work details) of *DA Form 2 – Building work details* as it relates to the change application is provided with this application.

**10) Referral details – Does the change application require referral for any referral requirements?**

***Note**: The application must be referred to each referral agency triggered by the change application as if the change application was the original development application including the proposed change.*

☐ No

☒ Yes – the completed Part 5 (Referral details) of *DA Form 1 – Development application details* as it relates to the change application is provided with this application. Where referral is required for matters relating to building work the Referral checklist for building work is also completed.

**11) Information request under Part 3 of the DA Rules**

☒ I agree to receive an information request if determined necessary for this change application

☐ I do not agree to accept an information request for this change application

***Note**: By not agreeing to accept an information request I, the applicant, acknowledge:*

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

*Further advice about information requests is contained in the DA Forms Guide: Forms 1 and 2.*

## 12) Further details

☒ Part 7 of *DA Form 1 – Development application details* is completed as if the change application was a development application and is provided with this application.

# PART 7 – CHECKLIST AND APPLICANT DECLARATION

## 13) Change application checklist

| | |
|---|---|
| I have identified the:<br>• responsible entity in 4); and<br>• for a minor change, any affected entities; and<br>• for an other change all relevant referral requirement(s) in 10)<br>***Note**: See the Planning Regulation 2017 for referral requirements* | ☒ Yes |
| For an other change application, the relevant sections of *DA Form 1 – Development application details* have been completed and is attached to this application | ☒ Yes<br>☐ Not applicable |
| For an other change application, where building work is associated with the change application, the relevant sections of *DA Form 2 – Building work details* have been completed and is attached to this application | ☐ Yes<br>☒ Not applicable |
| Supporting information addressing any applicable assessment benchmarks is attached to this application<br>***Note**: This includes any templates provided under 23.6 and 23.7 of DA Form 1 – Development application details that are relevant as a result of the change application, a planning report and any technical reports required by the relevant categorising instrument(s) (e.g. the local government planning scheme, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning report template.* | ☒ Yes |
| Relevant plans of the development are attached to this development application<br>***Note**: Relevant plans are required to be submitted for all relevant aspects of this change application. For further information, see DA Forms Guide: Relevant plans.* | ☒ Yes |

## 14) Applicant declaration

☒ By making this change application, I declare that all information in this change application is true and correct.

☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the responsible entity and any relevant affected entity or referral agency for the change application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*.

***Note**: It is unlawful to intentionally provide false or misleading information.*

**Privacy** – Personal information collected in this form will be used by the responsible entity and/or chosen assessment manager, any relevant affected entity or referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the change application.

All information relating to this change application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

# PART 8 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: | Reference number(s):

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

7/05/2026

Department of
Primary Industries

Mr Murray Moule
Jacqshar Pty Ltd
PO Box 993N
**Cairns QLD 4870**

Dear Murray

**Material Change of Use Application for Development Approval by Jacqshar Pty Ltd for Extractive Industry (Quarry) including Ancillary Uses on part of Lot 175 plan FTY1871 – Request for Owner's Consent on DA Form 1 – Development application details**

Reference is made to the request for owner's consent required to accompany the development application for a material change of use (extractive industry) and the associated environmentally relevant activities on part of Lot 175 Plan FTY1871.

The Department of Primary Industries ('this Department') hereby gives owner's consent to the above application for development approval for a material change of use on Lot 175 Plan FTY1871 known as Formartine State Forest for the above purpose.

This application for development approval is consistent with Sales Permit 2025024, which has been issued by the Department under the *Forestry Act 1959* and is held by Jacqshar Pty Ltd to get quarry material from the specified part of Lot 175 Plan FTY1871 known as Formartine State Forest.

Although owner's consent for the development application has been provided, you are always required to comply with the terms and conditions of Sales Permit 2025024 granted under the *Forestry Act 1959.*

Further, you will only be able to undertake the activities authorised by the development approval as they relate to operations under Sales Permit 2025024:

- if and when the development application has been approved by the assessment manager, and only in accordance with the conditions of that approval; and
- once evidence has been provided to this Department that the development approval has been obtained.

A copy of this letter is to be attached to your 'DA Form 1 – Development application details' as the required evidence of owner's consent.

You will also need to comply with all other legislative and regulatory requirements which may also include approvals that are not part of the assessment of the development application under the *Planning Act 2016* (Planning Act).

Further, please note that the above consent will expire on 10/05/2027. Should the development application not be lodged with the assessment manager prior to this date, you will be required again to lodge the IDAS Form 1 and any attachments with this Department with a further request for owner's consent and any further request will need to be reconsidered by this Department.

If you require any further information regarding this matter, please do not hesitate to contact Matthew Barry Operations Manager Quarry Material, North on 0476 849 993 or email matthew.barry@dpi.qld.gov.au .

Yours sincerely



**Matthew Barry**
**Operations Manager Quarry Material, North**
**Department of Primary Industries, Forestry**
A duly authorised delegate of the Chief Executive
under the current Land Act (Ministerial) Delegation Forestry

Author: Tania McCarthy
Ref number: 2026/001116
Directorate: Vegetation Management Unit
Phone: 135 834

Department of
**Natural Resources and Mines, Manufacturing and Regional and Rural Development**

25 May 2026

C/- Planning Plus
PO Box 399
Redlynch 4870

Email evan@planningplusqld.gov.au

Dear Mr Yelavich,

**Application for a relevant purpose determination under section 22A of the *Vegetation Management Act 1999* for the clearing of native vegetation on lot 46 SP328230 - Mareeba Shire Council**

I refer to your application submitted to the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (the department) on 6 May 2026.

As the delegate for the Chief Executive, I have considered your request and am satisfied that the proposed development to clear vegetation for the purpose of an extractive industry meets the relevant requirements of section 22A of the *Vegetation Management Act 1999*. The areas determined to be for a relevant purpose are shown as area A on the attached Relevant Purpose Determination Plan (RPDP 2026/001116).

This decision is based on:

- the development proposal and information you submitted to the department on 6 May 2026
- revised application area map received 20/05/2026
- circumstances at the time of this determination; and
- the attached RPDP.

Should your proposal change (e.g. development footprint) or circumstances associated with your proposal change (e.g. legislation changes, regional ecosystem mapping changes), you will need to request another section 22A relevant purpose determination.

This relevant purpose determination is valid for two years and will expire on 25/05/2026.

**Please note that this letter is not a development approval to carry out vegetation clearing.** You will need to apply for a development approval from your local Council, or the Department of State Development, Infrastructure and Planning (DSDIP) under the *Planning Act 2016.*

Prior to lodging a development application, it is strongly recommended that, you arrange a pre-lodgement meeting through the State Assessment and Referral Agency (SARA) to identify all relevant State legislation, approvals and application requirements.

Other relevant Commonwealth or State approvals may also be required to undertake vegetation clearing. An indicative list of other legislation is provided in Attachment 1.

Should you require any additional information please contact your local SARA office as below:

| | |
|---|---|
| SARA | Cairns |
| Postal address: | PO Box 2358, Cairns Qld 4870 |
| Telephone: | 4037 3214 |
| Email: | cairnssara@dsdip.qld.gov.au |

Should you have any enquiries or require assistance regarding this request, please do not hesitate to contact Tania, Natural Resource Management Officer on telephone 135 834 quoting the above reference number.

Yours sincerely



Mike McGahan
**Senior Natural Resource Management Officer (VM1)**

1
AP19245

45
RP851442

45
RP851442

ROAD

46
SP328230

46
SP328230

729
N157356

Owen Creek

46
SP328230

A1

A2

1

15

Haren Creek

46
RP851444

KENNEDY HIGHWAY

175
FTY1871

783
N157406

**Derived Reference Points**

Datum: GDA2020
Projection: GDA2020 MGA Zone 55
All reference points continue sequentially when labels are not shown

| Part ID | Unique ID | Easting | Northing |
|---|---|---|---|
| A1 | 1 | 350231 | 8136016 |
| A1 | 2 | 350241 | 8136014 |
| A1 | 3 | 350252 | 8136016 |
| A1 | 4 | 350263 | 8136020 |
| A1 | 5 | 350273 | 8136021 |
| A1 | 6 | 350286 | 8136007 |
| A1 | 7 | 350140 | 8136020 |
| A1 | 8 | 350222 | 8136064 |
| A1 | 9 | 350232 | 8136056 |
| A1 | 10 | 350226 | 8136051 |
| A1 | 11 | 350217 | 8136044 |
| A1 | 12 | 350217 | 8136034 |
| A1 | 13 | 350224 | 8136023 |
| A1 | 14 | 350231 | 8136016 |
| A2 | 15 | 350358 | 8136001 |
| A2 | 16 | 350357 | 8136000 |
| A2 | 17 | 350350 | 8136001 |
| A2 | 18 | 350351 | 8136001 |
| A2 | 19 | 350353 | 8136002 |
| A2 | 20 | 350358 | 8136001 |

Scale: 1:6 000 @ A3 paper size

0 100 200 300 400 500 metres

Projection: GDA2020 MGA Zone 55 Datum: GDA2020

Notes: Derived Reference Points are provided to assist in the location of area boundaries. Responsibility for locating these boundaries lies solely with the landholder.

Watercourse and drainage feature locations shown on the Relevant Purpose Determination Plan are derived from the certified Vegetation Management Watercourse and Drainage Feature Map. These alignments are approximate only and require ground truthing to identify the exact location of the watercourse or drainage feature.

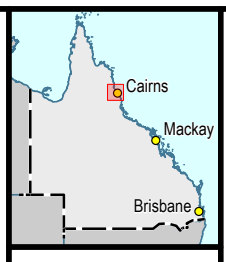
The property boundaries shown on this plan are APPROXIMATE ONLY. They are NOT an accurate representation of the legal boundaries.

**This plan must be read in conjunction with Relevant Determination Letter 2026/001116**

LEGEND

- Derived Reference Start Points
- Subject Lot(s)
- Area A
- Watercourse and/or drainage feature (Stream order label)

Note: This is a colour map and must be reproduced in colour




N

# Relevant Purpose Determination Plan

## Plan of Area A (Parts $A^1$ - $A^2$) in Lot 46 on Plan SP328230

Version: 1

eLVAS Case ID: 2026/001116

Queensland Government

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**RPDP 2026/001116**

**Sheet 1 of 1**

VMGIS-NR-4724

**Attachment 1 - Legislation and Acts**

| Activity | Legislation | Agency | Contact details |
|---|---|---|---|
| Interference with overland flow | *Water Act 2000* | Department of Local Government, Water and Volunteers (Queensland Government) | Ph: 13 QGOV (13 74 68) www.dlgwv.qld.gov.au |
| Earthworks, significant disturbance | *Soil Conservation Act 1986* | Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (Queensland Government) | Ph: 13 QGOV (13 74 68) www.nrmmrrd.qld.gov.au |
| Indigenous Cultural Heritage | *Aboriginal Cultural Heritage Act 2003* *Torres Strait Islander Cultural Heritage Act 2003* | Department of Women, Aboriginal and Torres Strait Islander Partnerships and Multiculturalism (Queensland Government) | Ph. 13 QGOV (13 74 68) www.dwatsipm.qld.gov.au |
| Mining and environmentally relevant activities<br>Infrastructure development (coastal)<br>Heritage issues<br><br>Protected plants and protected areas[1] | *Environmental Protection Act 1994* *Coastal Protection and Management Act 1995* *Queensland Heritage Act 1992* *Nature Conservation Act 1992* | Department of the Environment, Tourism, Science and Innovation (Queensland Government) | Ph: 13 QGOV (13 74 68) www.detsi.qld.gov.au |
| Koala mapping and regulations | *Nature Conservation Act 1992* | Department of the Environment, Tourism, Science and Innovation (Queensland Government) | Ph: 13 QGOV (13 74 68) www.detsi.qld.gov.au |

[1] In Queensland, all plants that are native to Australia are protected plants under the *Nature Conservation Act 1992,* which endeavours to ensure that protected plants (whether whole plants or protected plants parts) are not illegally removed from the wild, or illegally traded. Prior to ***clearing***, you should check the flora survey trigger map to determine if the ***clearing*** is within a high-risk area by visiting For further information or assistance on the protected plants flora survey trigger map for your property, contact the Department of the Environment, Tourism, Science and Innovation on 13QGOV (13 74 68) or email palm@detsi.qld.gov.au.

| | | | |
|---|---|---|---|
| Interference with fish passage in a watercourse, mangroves<br>Forest activities | *Fisheries Act 1994*<br>*Forestry Act 1959*[2] | Department of Primary Industries (Queensland Government) | Ph: 13 25 23<br>www.dpi.qld.gov.au |
| Matters of National Environmental Significance including listed threatened species & ecological communities | *Environment Protection and Biodiversity Conservation Act 1999* | Department of Climate Change, Energy, the Environment and Water<br>(Australian Government) | Ph: 1800 920 528<br>www.dcceew.gov.au |
| Development and planning processes | *Planning Act 2016*<br>*State Development and Public Works Organisation Act 1971* | Department of State Development, Infrastructure and Planning<br>(Queensland Government) | Ph: 13 QGOV (13 74 68)<br>www.planning.qld.gov.au |
| Road corridor permits | *Transport Infrastructure Act 1994* | Department of Transport and Main Roads<br>(Queensland Government) | Ph: 13 QGOV (13 74 68)<br>www.tmr.qld.gov.au |
| Wet Tropics World Heritage Area | *Wet Tropics World Heritage Protection and Management Act 1993* | Wet Tropics Management Authority | Ph: (07) 4241 0500<br>www.wettropics.gov.au |
| Local government requirements | *Local Government Act 2009*<br>*Planning Act 2016* | Your relevant local government office | |

[2] Contact the Department of Primary Industries before ***clearing:***

- Any sandalwood on state-owned land (including leasehold land)
- On freehold land in a 'forest consent area'
- More than five hectares on state-owned land (including leasehold land) containing commercial timber species listed in parts 2 or 3 of Schedule 6 of the Vegetation Management Regulation 2023 and located within any of the following local government management areas–Banana, Bundaberg Regional, Fraser Coast Regional, Gladstone Regional, Isaac Regional, North Burnett Regional, Somerset Regional, South Burnett Regional, Southern Downs Regional, Tablelands Regional, Toowoomba Regional, Western Downs Regional.

# Annexure 2: QLD Globe Aerial Overlay

16°50'49"S 145°35'16"E

16°50'49"S 145°36'11"E




16°51'44"S 145°35'16"E

16°51'44"S 145°36'11"E

A product of

Queensland Globe



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Legend located on next page

N

0 100 metres

Scale: 1:6000

Printed at: A3

Print date: 1/5/2026

Not suitable for accurate measurement.
**Projection:** Web Mercator EPSG 102100 (3857)

For more information, visit https://qldglobe.information.qld.gov.au/help-info/Contact-us.html

Queensland Government

Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development

## Legend

### Watercourse parcel

### Road parcel

### Land parcel

Parcel

### Land parcel - gt 1 ha

Parcel

### Land parcel - gt 10 ha

Parcel

### Easement parcel

### Strata parcel

### Volumetric parcel

### Land parcel - gt 1000 ha

Parcel

### Land parcel label

### Land parcel label - gt 1 ha

### Land parcel label - gt 10 ha

### Land parcel label - gt 1000 ha

### Roads and tracks

- Motorway
- Highway
- Secondary
- Connector
- Local
- Restricted Access Road
- Mall
- Busway
- Bikeway
- Restricted Access Bikeway
- Walkway
- Restricted Access Walkway
- Non-vehicular Track
- Track
- Restricted Access Track
- Ferry
- Proposed Thoroughfare

### Green bridges

### Bridges

### Tunnels

### Railway stations

### Railways

## Attribution

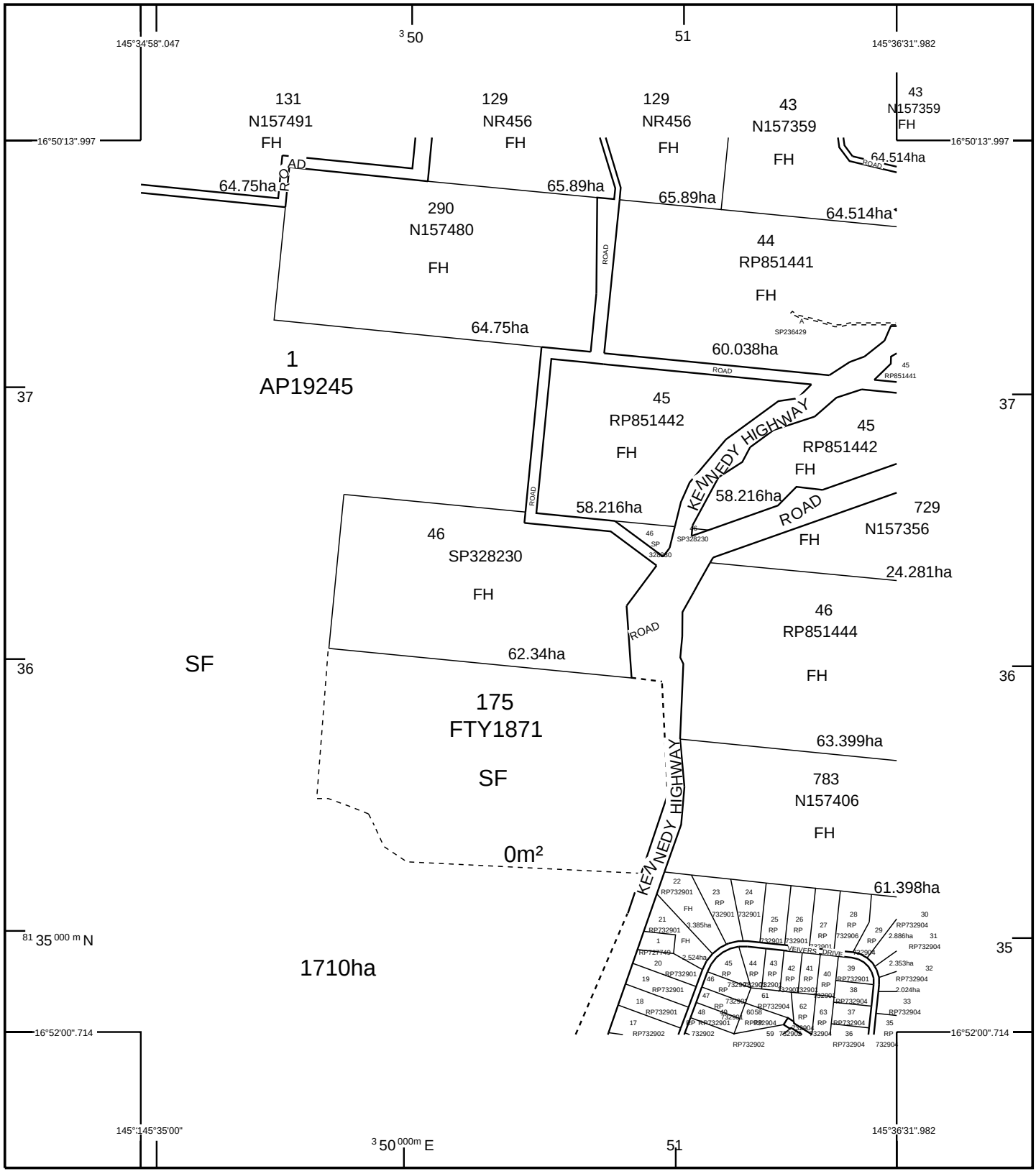
Vantor

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# Annexure 3: SmartMap




STANDARD MAP NUMBER
8064-34224

0 400 800 1200 1600 2000 m

HORIZONTAL DATUM:GDA94 ZONE:55 SCALE 1 : 20000

**SmartMap**

An External Product of
SmartMap Information Services

Based upon an extraction from the
Digital Cadastral Data Base

MAP WINDOW POSITION &
NEAREST LOCATION

145°35'45".014
16°51'07".355
SPEEWAH
5.36 KM

## SUBJECT PARCEL DESCRIPTION

DCDB

| | |
|---|---|
| Lot/Plan | 46/SP328230 |
| Area/Volume | 62.34ha |
| Tenure | FREEHOLD |
| Local Government | MAREEBA SHIRE |
| Locality | KURANDA |
| Segment/Parcel | 9223/71 |

## CLIENT SERVICE STANDARDS

PRINTED 16/02/2026

DCDB 15/02/2026 (Lots with an area less than 3000m² are not shown)

Users of the information recorded in this document (the Information) accept all responsibility and risk associated with the use of the Information and should seek independent professional advice in relation to dealings with property.

Despite Department of Resources best efforts, RESOURCES makes no representations or warranties in relation to the Information, and, to the extent permitted by law, exclude or limit all warranties relating to correctness, accuracy, reliability, completeness or currency and all liability for any direct, indirect and consequential costs, losses, damages and expenses incurred in any way (including but not limited to that arising from negligence) in connection with any use of or reliance on the Information

For further information on SmartMap products visit
https://www.qld.gov.au/housing/buying-owning-home/property-land-valuations/smartmaps

GDA

Queensland Government

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# Annexure 4: Title Searches

# Current Title Search

**Queensland Titles Registry Pty Ltd**
**ABN 23 648 568 101**

| | | | |
|---|---|---|---|
| **Title Reference:** | **51306034** | **Search Date:** | 27/10/2023 11:47 |
| **Date Title Created:** | 20/01/2023 | **Request No:** | 46105864 |
| **Previous Title:** | 50425939, 51303635 | | |

## ESTATE AND LAND

Estate in Fee Simple

LOT 46 SURVEY PLAN 328230
Local Government: MAREEBA

## REGISTERED OWNER

Dealing No: 722173113 13/12/2022

JACQSHAR PTY LTD A.C.N. 102 876 924

## EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 20114242 (POR 46V)
Deed of Grant No. 40080015 (Lot 47 on SP 328229)

## ADMINISTRATIVE ADVICES

NIL

## UNREGISTERED DEALINGS

NIL

** End of Current Title Search **

COPYRIGHT QUEENSLAND TITLES REGISTRY PTY LTD [2023]
Requested by: D-ENQ TITLES QUEENSLAND

# Annexure 5: SDAP Mapping

## Matters of Interest for all selected Lot Plans

*Queensland waterways for waterway barrier works*
*Water resource planning area boundaries*
*Regulated vegetation management map (Category A and B extract)*
*Area within 25m of a State-controlled road*
*State-controlled road*

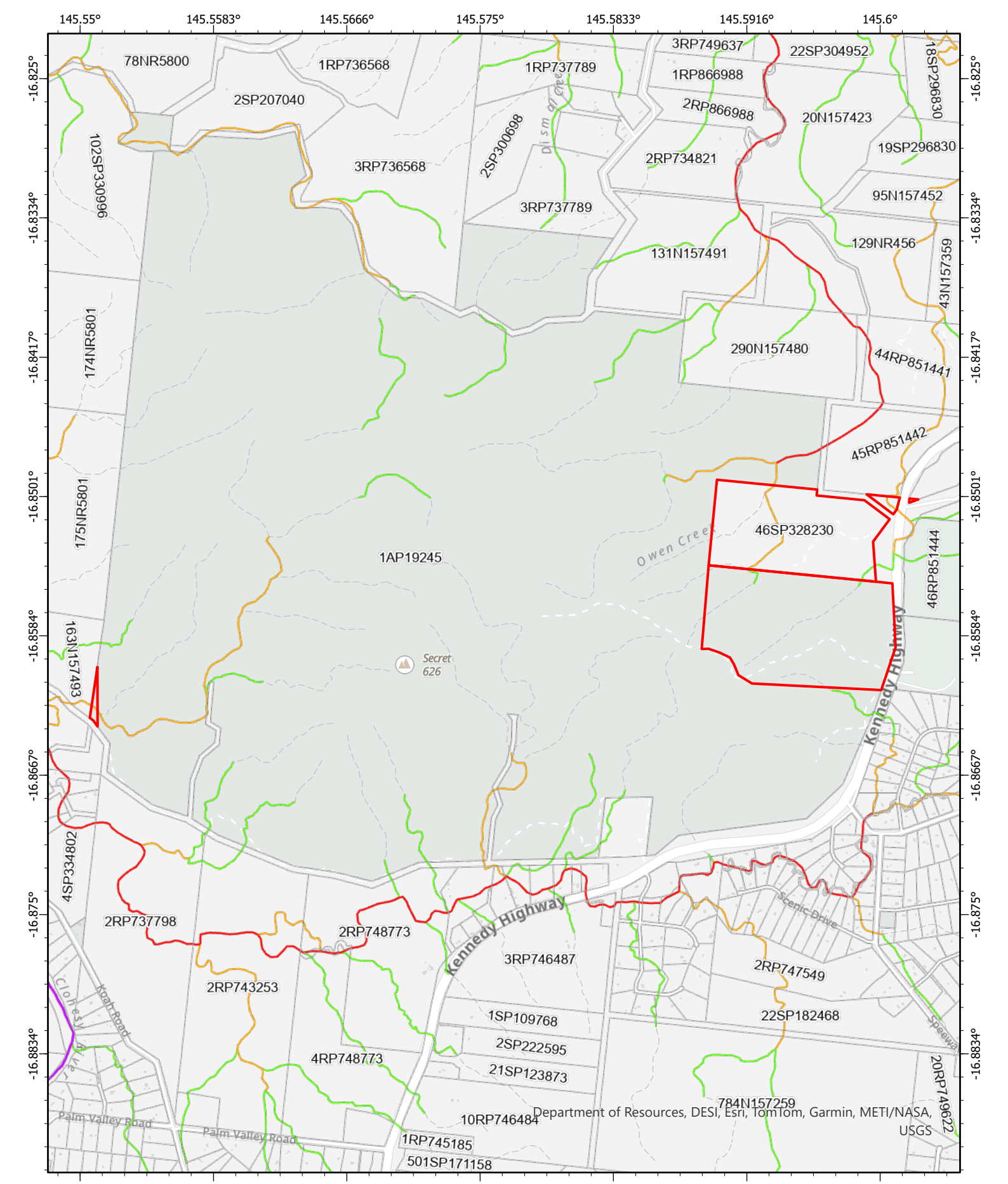
## Matters of Interest by Lot Plan

**Lot Plan: 46SP328230 (Area: 623400 m²)**

*Queensland waterways for waterway barrier works*
*Water resource planning area boundaries*
*Regulated vegetation management map (Category A and B extract)*
*Area within 25m of a State-controlled road*

**Lot Plan: 175FTY1871**

*Queensland waterways for waterway barrier works*
*Water resource planning area boundaries*
*Regulated vegetation management map (Category A and B extract)*
*State-controlled road*
*Area within 25m of a State-controlled road*




Queensland waterways for waterway barrier works

Risk of impact

- Low
- Moderate
- High
- Major

Date: 17/02/2026

N

Scale: 1:33,400

0 460 920 1,380

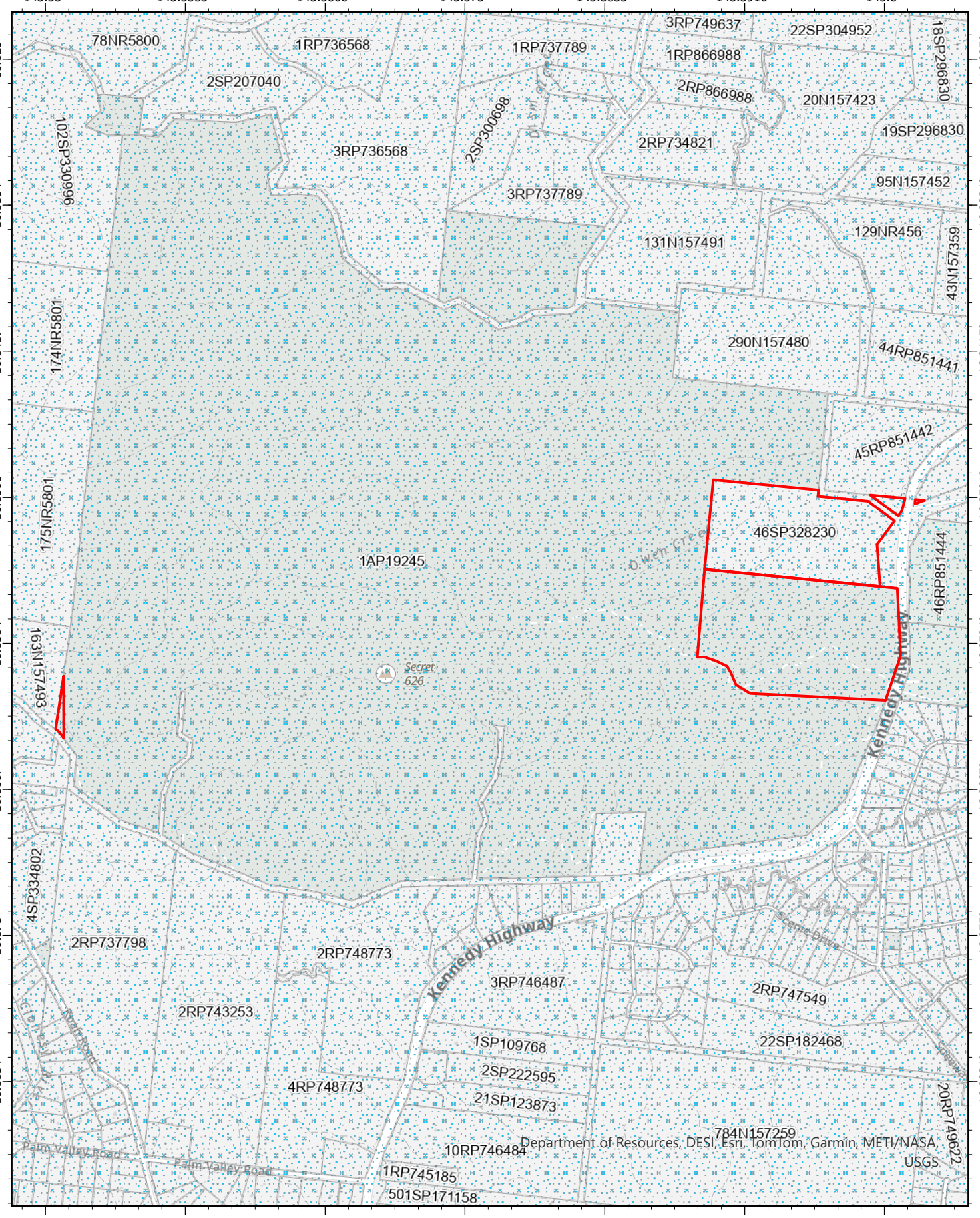
Metres

Queensland Government

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Water resource planning area boundaries

Date: 17/02/2026

N

Scale: 1:33,400

0 460 920 1,380

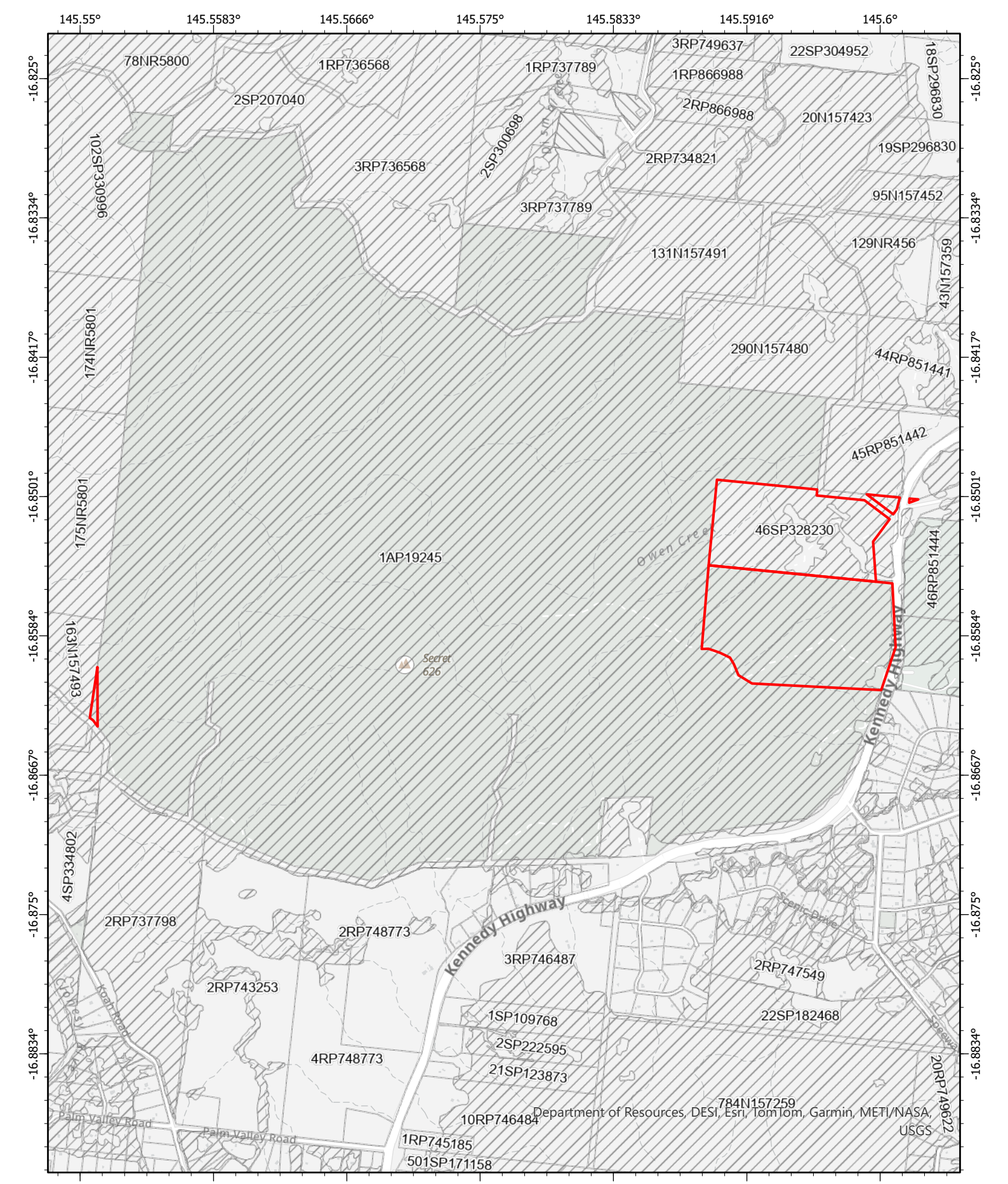
Metres

Queensland Government

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Regulated vegetation management map (Category A and B extract)

Category A on the regulated vegetation management map

Category B on the regulated vegetation management map

Date: 17/02/2026

N

Scale: 1:33,400

0 460 920 1,380

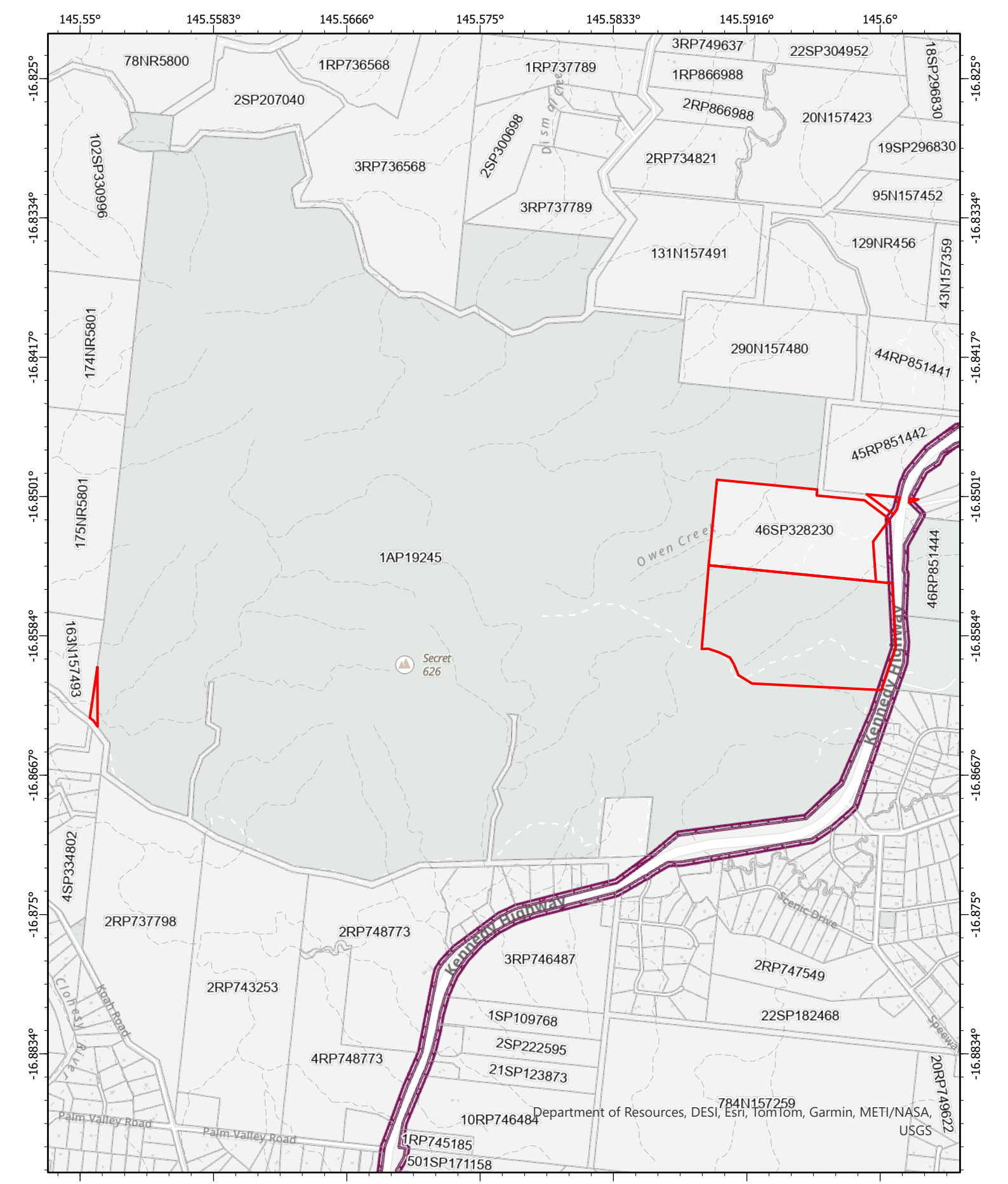
Metres

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Area within 25m of a State-controlled road

Date: 17/02/2026

N

Scale: 1:33,400

0 460 920 1,380

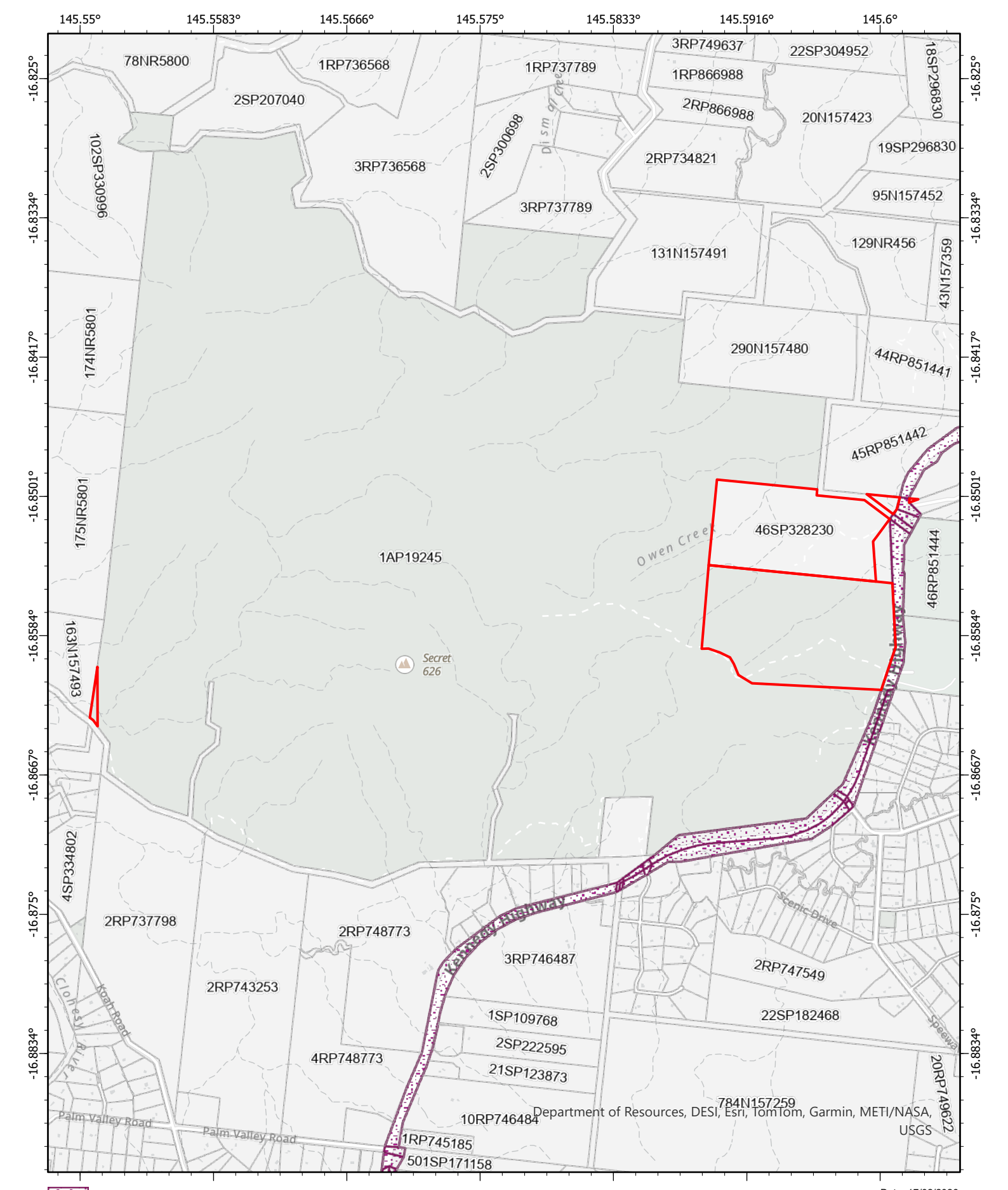
Metres

Queensland Government

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State-controlled road

Date: 17/02/2026

N

Scale: 1:33,400

0 460 920 1,380

Metres

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# Annexure 6: Existing MCU Approval

Mareeba SHIRE COUNCIL

65 Rankin Street
PO Box 154 MAREEBA QLD 4880

**P:** 1300 308 461
**F:** 07 4092 3323

**W:** www.msc.qld.gov.au
**E:** info@msc.qld.gov.au

10 August 2023

Senior Planner: Carl Ewin
Direct Phone: (07) 4086 4656
Our Reference: MCU/23/0009
Your Reference: 18-13/000895

Jacqshar Pty Ltd
C/- Planning Plus
PO Box 399
REDLYNCH QLD 4870

Dear Applicants,

# Decision Notice
## *Planning Act 2016*

I refer to your application and advise that on 8 August 2023, under delegated authority, Council decided to approve the application in full subject to conditions.

Details of the decision are as follows:

**APPLICATION DETAILS**

| | |
|---|---|
| Application No: | MCU/23/0009 |
| Street Address: | 1886 Kennedy Highway, Kuranda |
| Real Property Description: | Lot 46 on SP328230 |
| Planning Scheme: | Mareeba Shire Council Planning Scheme 2016 |

**DECISION DETAILS**

| | |
|---|---|
| Type of Decision: | Approval |
| Type of Approval: | Material Change of Use<br>Extractive Industry (Expansion of Existing Quarry) |
| Date of Decision: | 8 August 2023 |

## CURRENCY PERIOD OF APPROVAL

The currency period for this development approval is six (6) years starting the day that this development approval takes effect. (Refer to Section 85 "Lapsing of approval at end of currency period" of the *Planning Act 2016*.)

## INFRASTRUCTURE

Where conditions relate to the provision of infrastructure, these are non-trunk infrastructure conditions unless specifically nominated as a "***necessary infrastructure condition***" for the provision of trunk infrastructure as defined under Chapter 4 of the *Planning Act 2016*.

## ASSESSMENT MANAGER CONDITIONS

(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, 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 commencement of the use except where specified otherwise in these conditions of approval.

   2.2 Prior to the commencement of use, the applicant must notify Council that all the conditions of the development permit have been complied with, 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 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 commencement of the use and at the rate applicable at the time of payment.

3.4 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.

3.5 Hours of Operation

All operations pursuant to the extractive industry, or in any way connected with the extractive industry will, for site operations and for removal of material, be limited to the hours between 7.00 am and 6.00 pm Mondays to Friday and 7:00am to 5:00pm Saturdays (except Public Holidays), PROVIDED ALWAYS that the Council will have the right at any time, and from time to time, to fix other hours of operation, and upon the fixing of any such other hours of operation pursuant to the permit, or in any way connected therewith, the extractive industry will be limited to such other hours. The Applicant will not be allowed to conduct nor permit nor suffer to be conducted, any extractive industry operation nor run nor start any motors, machinery, or the like, nor remove any materials from the said land on any Sunday or Public Holiday, or at any time outside the hours mentioned or such other hours as will be fixed by Council.

3.6 The Applicant shall provide Council with records of quantities of material extracted from the site on a monthly basis.

3.7 All operations pursuant to the extractive industry must be carried out in accordance with the Integrated Site Management Plan, except where modifications are required by the conditions of this approval or the related Environmental Authority.

3.8 The applicant will be required to take every precaution to avoid spillage and any spillage which occurs on any public road, shall be removed at the end of each working day or within four (4) hours of any verbal requirement by Council's delegated officer.

3.9 Scale and Intensity

The combined extraction volume of development approvals MC2003/27 and MCU/23/0009 must not exceed 100,000 tonnes per annum.

3.10 Rehabilitation

A Site Rehabilitation Management Plan is to be prepared by a suitably qualified and experienced person detailing the timing/staging of vegetation removal, method of removal and the sequence of operations and rehabilitation works.

Site rehabilitation works must be provided in a progressive manner in accordance with extraction sequences and staging. The method of rehabilitation needs to be detailed with appropriate revegetation strategies indicated including the species list to be used including plant source.

All site rehabilitation is to occur in accordance with the approved Site Rehabilitation Management Plan.

3.11 Prevention of the spread of weeds and pests

The applicant must ensure the development is carried out in a manner that prevents the spread of weeds, seeds or other pests into clean areas or away from any existing infested areas.

## REFERRAL AGENCIES

The referral agencies applicable to this application are:

- Schedule 10, Part 3, Division 4, Table 3 - Clearing native vegetation.
- Schedule 10, Part 9, Division 4, Subdivision 1, Table 1 – State transport infrastructure thresholds (Purpose 17 – Extractive industry)
- Schedule 10, Part 9, Division 4, Subdivision 2, Table 4 – Material change of use near a State transport corridor

A copy of any referral agency conditions are attached.

## APPROVED PLANS

The following plans are Approved plans for the development:

| Plan/Document Number | Plan/Document Title | Prepared by | Dated |
|---|---|---|---|
| 016-2302-00-DRG-0001A | Quarry Expansion Plan | Neon Consulting | 16.03.23 |
| 016-2302-00-DRG-0002A | Waterway Top of Bank Assessment | Neon Consulting | 16.03.23 |

## ADVISORY NOTES

The following notes are included for guidance and information purposes only and do not form part of the assessment manager conditions:

(D) ASSESSMENT MANAGER'S ADVICE

(a) 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.

(b) Compliance with Acts and Regulations

The erection and use of the building must comply with the Building Act and all other relevant Acts, Regulations and Laws, and these approval conditions.

(c) 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.dcceew.gov.au.

(d) 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.dsdsatsip.qld.gov.au.

(e) Transportation of Soil

All soil transported to or from the site must be covered to prevent dust or spillage during transport. If soil is tracked or spilt onto the road pavements as a result of works on the subject site, it must be removed prior to the end of the working day and within four (4) hours of a request from a Council Officer.

(f) Electric Ants

Electric ants are designated as restricted biosecurity matter under the *Biosecurity Act 2014*.

Certain restrictions and obligations are placed on persons dealing with electric ant carriers within the electric ant restricted zone. Movement restrictions apply in accordance with Sections 74–77 of the *Biosecurity Regulation 2016*. Penalties may be imposed on movement of electric ant carriers and electric ants in contravention of the legislated restrictions. It is the responsibility of the applicant to check if the nominated property lies within a restricted zone.

All persons within and outside the electric ant biosecurity zone have an obligation (a ***general biosecurity obligation***) to manage biosecurity risks and threats that are under their control, they know about, or they are expected to know about. Penalties may apply for failure to comply with a general biosecurity obligation.

For more information please visit the electric ant website at Electric ants in Queensland | Business Queensland or contact Biosecurity Queensland 13 25 23.

## PROPERTY NOTES

Not Applicable.

## FURTHER DEVELOPMENT PERMITS REQUIRED

Not Applicable.

## SUBMISSIONS

Not Applicable.

## RIGHTS OF APPEAL

You are entitled to appeal against this decision. A copy of the relevant appeal provisions from the *Planning Act 2016* is attached.

During the appeal period, you as the applicant may suspend your appeal period and make written representations to council about the conditions contained within the development approval. If council agrees or agrees in part with the representations, a "negotiated decision notice" will be issued. Only one "negotiated decision notice" may be given. Taking this step will defer your appeal period, which will commence again from the start the day after you receive a "negotiated decision notice".

## OTHER DETAILS

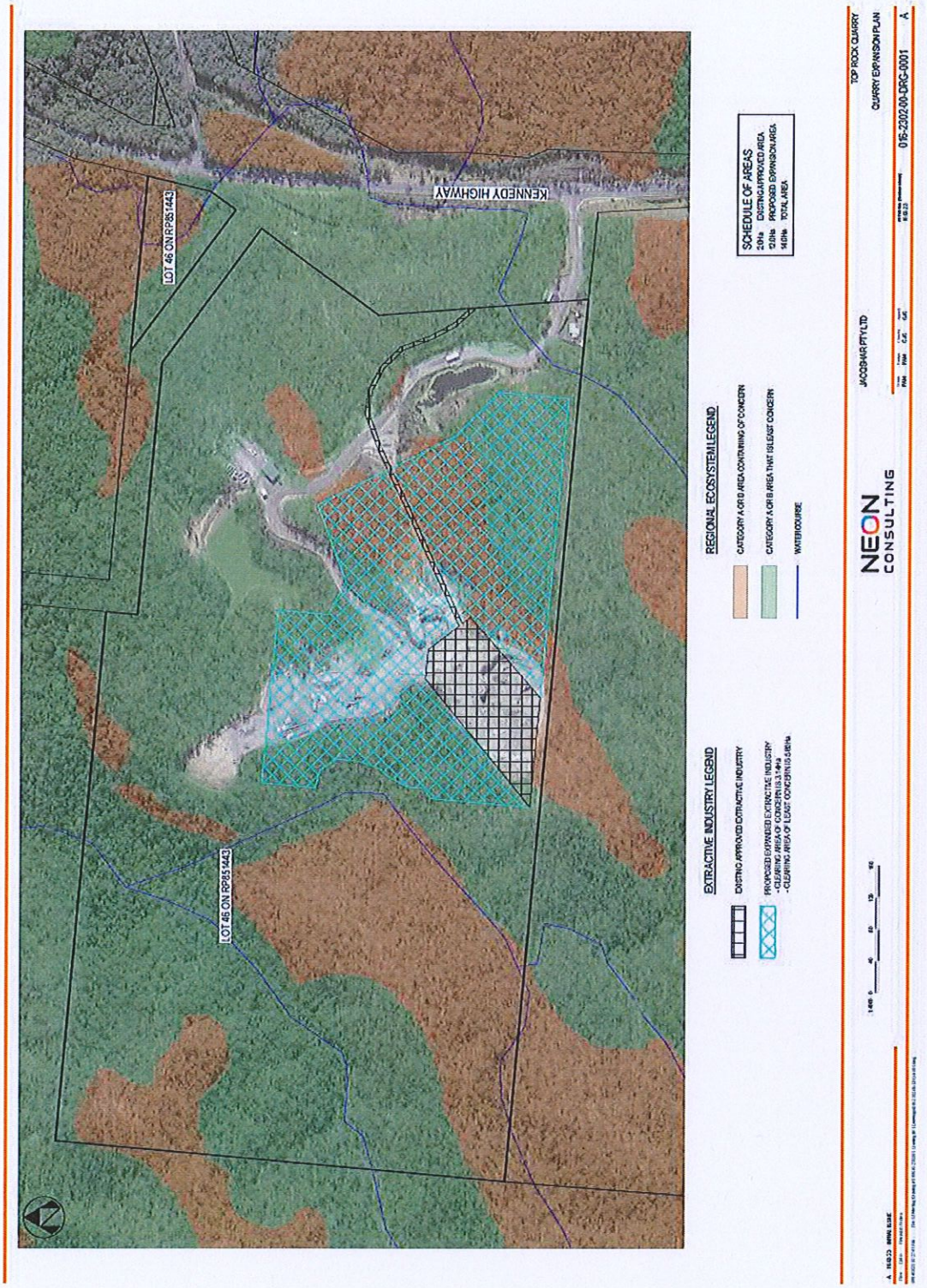
If you wish to obtain more information about Council's decision, electronic copies are available on line at www.msc.qld.gov.au, or at Council Offices.

Yours faithfully

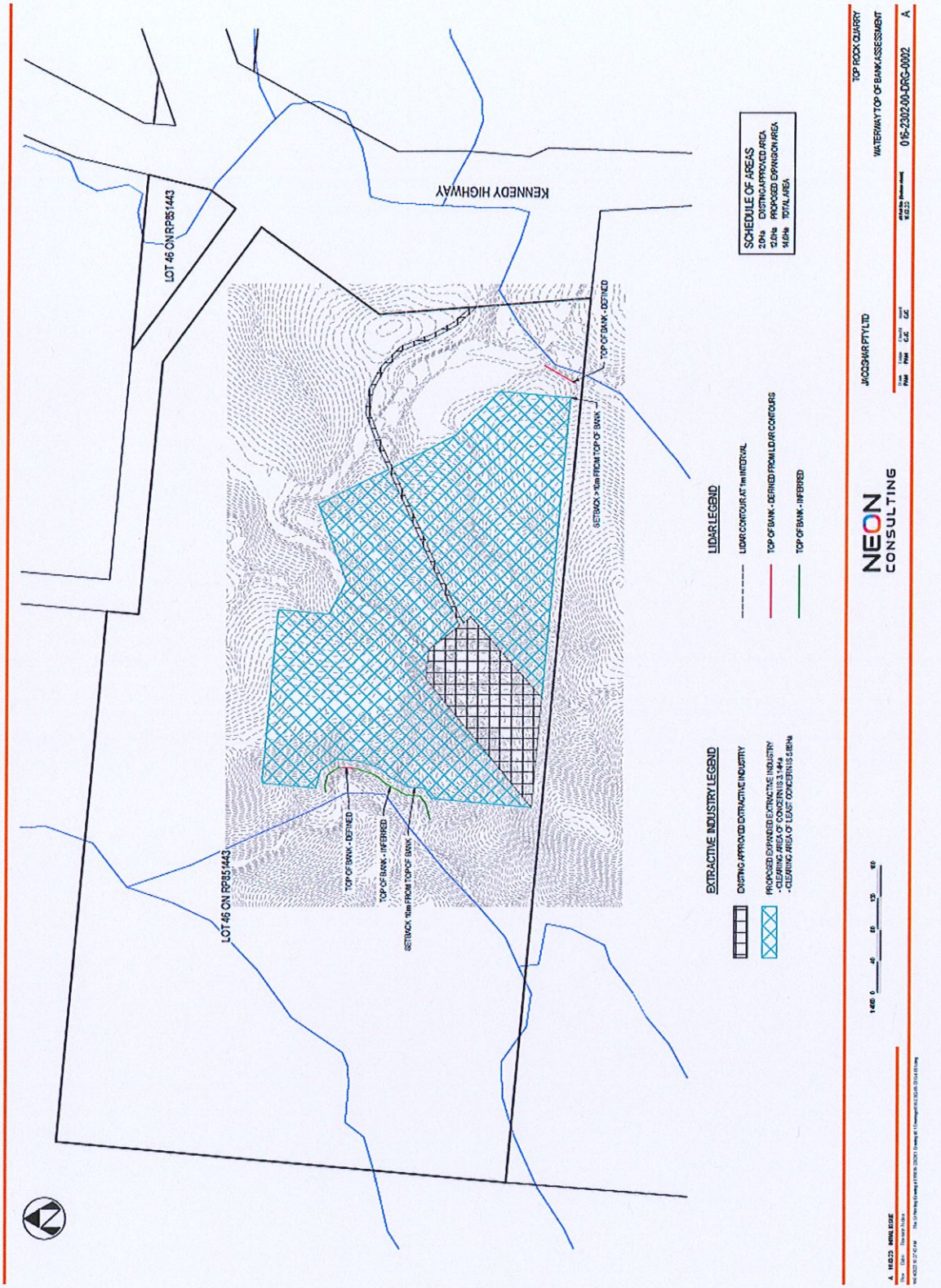
**BRIAN MILLARD**
**COORDINATOR PLANNING SERVICES**

Enc: Approved Plans/Documents
Referral Agency Response
Appeal Rights

## Approved Plans/Documents




10/8/2023


KENNEDY HIGHWAY
LOT 46 ON RP851443
LOT 46 ON RP851443
TOP OF BANK - DEFINED
TOP OF BANK - INFERRED
SETBACK 10m FROM TOP OF BANK
SETBACK >10m FROM TOP OF BANK
TOP OF BANK - DEFINED
SCHEDULE OF AREAS
2.0Ha EXISTING APPROVED AREA
12.0Ha PROPOSED EXPANSION AREA
14.0Ha TOTAL AREA
LIDAR LEGEND
LIDAR CONTOUR AT 1m INTERVAL
TOP OF BANK - DERIVED FROM LIDAR CONTOURS
TOP OF BANK - INFERRED
EXTRACTIVE INDUSTRY LEGEND
EXISTING APPROVED EXTRACTIVE INDUSTRY
PROPOSED EXPANDED EXTRACTIVE INDUSTRY
- CLEARING AREA OF CONCERN IS 3.1Ha
- CLEARING AREA OF LOAD CONCERN IS 6.8Ha
NEON CONSULTING
JACQSHAR PTY LTD
TOP ROCK QUARRY
WATERWAY TOP OF BANK ASSESSMENT
015-2302.00-DRG-0002
A
A 16.8.23 MINE EDGE

10/8/2023

# Referral Agency Response

RA6-N

Queensland Government

SARA reference: 2305-34663 SRA
Council reference: MCU/23/0009
Applicant reference: 18-13/000895

28 June 2023

Mareeba Shire Council
PO Box 154
MAREEBA QLD 4880
info@msc.qld.gov.au

Attention: Carl Ewin

Dear Mr Ewin

## SARA referral agency response—1886 Kennedy Highway, Kuranda

(Referral agency response given under section 56 of the *Planning Act 2016*)

The development application described below was confirmed as properly referred by the State Assessment and Referral Agency (SARA) on 18 May 2023.

### Response

| | |
|---|---|
| Outcome: | Referral agency response – with conditions |
| Date of response: | 28 June 2023 |
| Conditions: | The conditions in **Attachment 1** must be attached to any development approval |
| Advice: | Advice to the applicant is in **Attachment 2** |
| Reasons: | The reasons for the referral agency response are in **Attachment 3** |

### Development details

| | | |
|---|---|---|
| Description: | Development Permit | Material change of use - Extractive Industry (Quarry expansion) |
| SARA role: | Referral agency | |
| SARA trigger: | Schedule 10, Part 3, Division 4, Table 3, Item 1 (Planning Regulation 2017) – Clearing native vegetation<br>Schedule 10, Part 9, Division 4, Subdivision 2, Table 1, Item 1 (Planning Regulation 2017) - State transport infrastructure thresholds | |



DA Advisory Team (DAAT)
Level 13, 1 William Street, Brisbane
PO Box 15009 CITY EAST QLD 4002

2305-34663 SRA

| | |
|---|---|
| | Schedule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1 (Planning Regulation 2017) – State transport corridors |
| SARA reference: | 2305-34663 SRA |
| Assessment manager: | Mareeba Shire Council |
| Street address: | 1886 Kennedy Highway, Kuranda |
| Real property description: | Lot 46 on SP328230 |
| Applicant name: | Jacqshar Pty Ltd c/- Planning Plus |
| Applicant contact details: | PO Box 399<br>REDLYNCH QLD 4870<br>info@planningplusqld.com.au |
| *Human Rights Act 2019* considerations: | A consideration of the 23 fundamental human rights protected under the *Human Rights Act 2019* has been undertaken as part of this decision. It has been determined that this decision does not limit human rights. |

## Representations

An applicant may make representations to a concurrence agency, at any time before the application is decided, about changing a matter in the referral agency response (s.30 Development Assessment Rules). Copies of the relevant provisions are in **Attachment 4**.

A copy of this response has been sent to the applicant for their information.

For further information please contact Leanne Simpson, Principal Planning Officer, on 5352 9707 or via email DAAT@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Phil Joyce
**Acting Executive Director, Planning Group**

cc Jacqshar Pty Ltd c/- Planning Plus, info@planningplusqld.com.au

enc Attachment 1 - Referral agency conditions
Attachment 2 - Advice to the applicant
Attachment 3 - Reasons for referral agency response
Attachment 4 - Representations about a referral agency response provisions
Attachment 5 - Documents referenced in conditions

2305-34663 SRA

## Attachment 1—Referral agency conditions

(Under section 56(1)(b)(i) of the *Planning Act 2016* the following conditions must be attached to any development approval relating to this application) (Copies of the documents referenced below are found at Attachment 5)

| No. | Conditions | Condition timing |
|---|---|---|
| **Material change of use – Extractive industry (Quarry expansion)** | | |
| Schedule 10, Part 3, Division 4, Table 3, Item 1 – Clearing native vegetation - The chief executive administering the *Planning Act 2016* nominates the Director-General of Department of Resources to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s): | | |
| 1. | Clearing of native vegetation must:<br>(a) only occur within area A ($A^1$ - $A^4$) as shown on the attached:<br>(i) Vegetation Management Plan, prepared by Queensland Government, reference VMP 2305-34663-SRA, Sheet 1, Version 1, dated 2023; and<br>(ii) Attachment to Plan: 2305-34663-SRA, Derived Reference Points, prepared by Queensland Government, no reference and undated. | At all times |
| 2. | Enter into an agreed delivery arrangement to deliver an environmental offset, in accordance with the *Environmental Offsets Act 2014*, to counterbalance the significant residual impacts on the matter/s of state environmental significance being:<br>(a) clearing prescribed regional ecosystems that are *of concern* regional ecosystems being:<br>• 3.17 hectares of *Of Concern* Regional Ecosystem 7.11.33a<br>(b) 7.89 hectares of Essential habitat for Litoria serrata (tapping green eyed frog) within the following regional ecosystems:<br>• 3.17 hectares of *Of Concern* Regional Ecosystem 7.11.33a<br>• 4.73 hectares of *Least Concern* Regional Ecosystem 7.11.51a | Prior to commencing any works that impact on clearing prescribed regional ecosystems that are *Of concern* regional ecosystems and clearing defined regional ecosystems that are Essential habitat |

2305-34663 SRA

## Attachment 2—Advice to the applicant

| General advice | |
|---|---|
| 1. | Terms and phrases used in this document are defined in the *Planning Act 2016*, its regulation or the State Development Assessment Provisions (SDAP) (version 3.0). If a word remains undefined it has its ordinary meaning. |

2305-34663 SRA

## Attachment 3—Reasons for referral agency response

(Given under section 56(7) of the *Planning Act 2016*)

**The reasons for the SARA's decision are:**

- The application is for a Development Permit for Material Change of Use – Extractive industry (Quarry expansion)
- The site is within 25m of a state-controlled road (Kennedy Highway)
- The proposed development involves a total assessable clearing area of 5.92 hectares of Category B Least concern regional ecosystem and 3.17 hectares of Category B Of concern regional ecosystem.
- The application requires assessment by SARA against the *State Development Assessment Provisions* (SDAP), version 3.0:
  - State code 1: Development in a state-controlled road environment
  - State code 6: Protection of state transport networks
  - State code 16: Native vegetation clearing
- SARA has assessed the development against State codes 1 and 6 and found the development complies with the relevant performance outcomes as appropriate access is provided to the site and the proposal does not seek to increase the extraction limit already approved on the site.
- SARA has assessed the development against State code 16 and found the development complies with the relevant performance outcomes as:
  - the proposal seeks to avoid and minimise impacts on native vegetation
  - clearing associated with the development maintains the composition, structure and function of the regional ecosystem
  - clearing associated with the development maintains ecological processes and ensures the regional ecosystem remains in the landscape
  - environmental offsets will be provided through an agreed delivery arrangement in accordance with the *Environmental Offsets Act 2014* to counterbalance the significant residual impacts on matters of state environmental significance.

**Material used in the assessment of the application:**

- the development application material and submitted plans
- *Planning Act 2016*
- Planning Regulation 2017
- the SDAP (version 3.0), as published by SARA
- the Development Assessment Rules
- SARA DA Mapping system
- section 58 of the *Human Rights Act 2019*

## Attachment 4—Representations about a referral agency response provisions

(page left intentionally blank)

2305-34663 SRA

## Attachment 5—Documents referenced in conditions

(page left intentionally blank)

## Development Assessment Rules—Representations about a referral agency response

The following provisions are those set out in sections 28 and 30 of the Development Assessment Rules[1] regarding **representations about a referral agency response**

## Part 6: Changes to the application and referral agency responses

### 28 Concurrence agency changes its response or gives a late response

28.1. Despite part 2, a concurrence agency may, after its referral agency assessment period and any further period agreed ends, change its referral agency response or give a late referral agency response before the application is decided, subject to section 28.2 and 28.3.

28.2. A concurrence agency may change its referral agency response at any time before the application is decided if—

(a) the change is in response to a change which the assessment manager is satisfied is a change under section 26.1; or

(b) the Minister has given the concurrence agency a direction under section 99 of the Act; or

(c) the applicant has given written agreement to the change to the referral agency response.[2]

28.3. A concurrence agency may give a late referral agency response before the application is decided, if the applicant has given written agreement to the late referral agency response.

28.4. If a concurrence agency proposes to change its referral agency response under section 28.2(a), the concurrence agency must—

(a) give notice of its intention to change its referral agency response to the assessment manager and a copy to the applicant within 5 days of receiving notice of the change under section 25.1; and

(b) the concurrence agency has 10 days from the day of giving notice under paragraph (a), or a further period agreed between the applicant and the concurrence agency, to give an amended referral agency response to the assessment manager and a copy to the applicant.

1 Pursuant to Section 68 of the *Planning Act 2016*

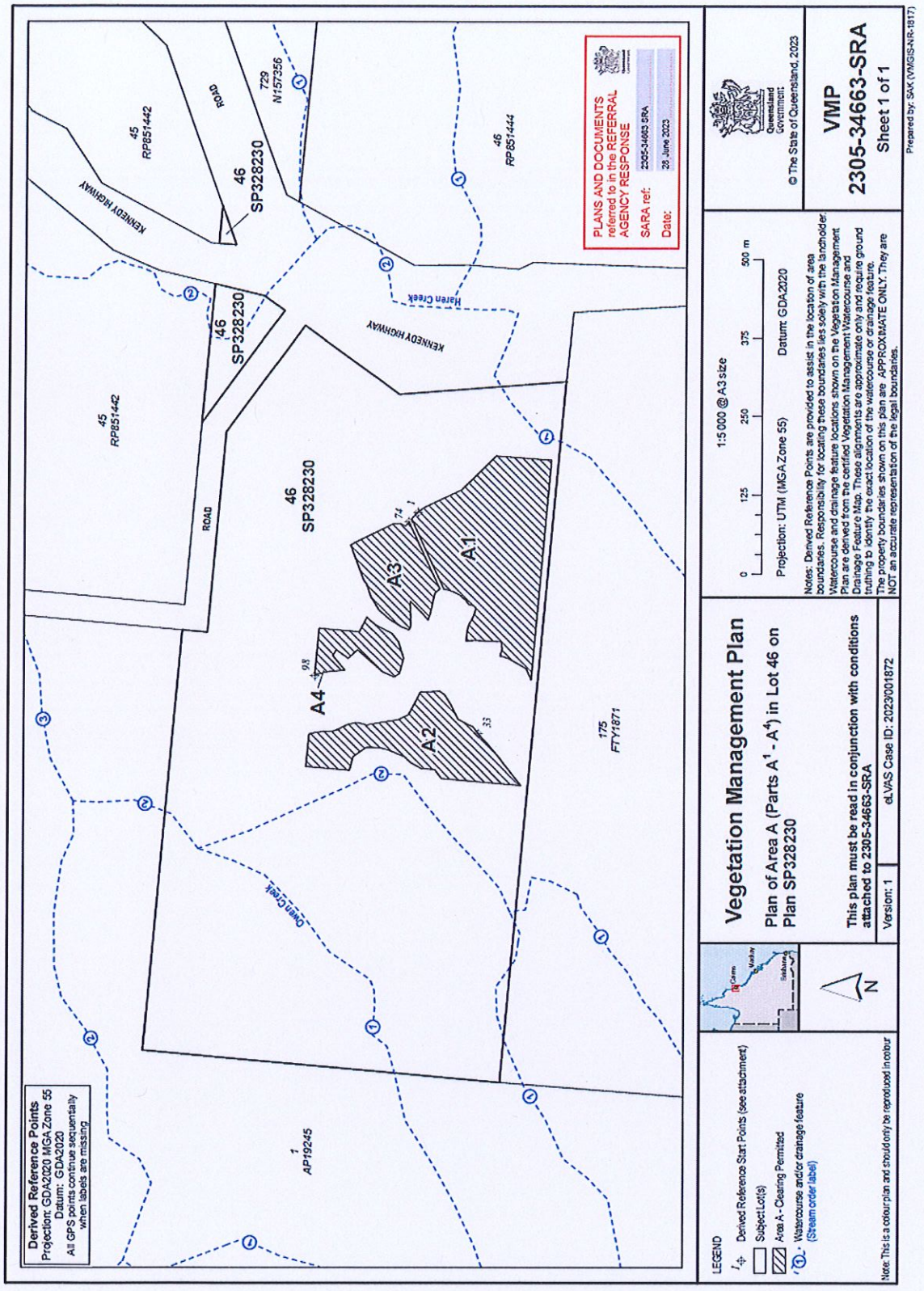
2 In the instance an applicant has made representations to the concurrence agency under section 30, and the concurrence agency agrees to make the change included in the representations, section 28.2(c) is taken to have been satisfied.

## Part 7: Miscellaneous

### 30 Representations about a referral agency response

30.1. An applicant may make representations to a concurrence agency at any time before the application is decided, about changing a matter in the referral agency response.[3]

[3] An applicant may elect, under section 32, to stop the assessment manager's decision period in which to take this action. If a concurrence agency wishes to amend their response in relation to representations made under this section, they must do so in accordance with section 28.


Derived Reference Points
Projection: GDA2020 MGA Zone 55
Datum: GDA2020
All GPS points continue sequentially when labels are missing
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2305-34663 SRA
Date: 28 June 2023
KENNEDY HIGHWAY
ROAD
Owen Creek
Haren Creek
45 RP851442
46 SP328230
729 N157356
46 RP851444
175 FTY1871
1 AP19245
A1
A2
A3
A4
74
98
33
1:5 000 @ A3 size
0 125 250 375 500 m
Projection: UTM (MGA Zone 55) Datum: GDA2020
Notes: Derived Reference Points are provided to assist in the location of area boundaries. Responsibility for locating these boundaries lies solely with the landholder. Watercourse and drainage feature locations shown on the Vegetation Management Plan are derived from the certified Vegetation Management Watercourse and Drainage Feature Map. These alignments are approximate only and require ground truthing to identify the exact location of the watercourse or drainage feature. The property boundaries shown on this plan are APPROXIMATE ONLY. They are NOT an accurate representation of the legal boundaries.
Queensland Government
© The State of Queensland, 2023
VMP
2305-34663-SRA
Sheet 1 of 1
Prepared by: SAK (VMGIS-NR-1817)
LEGEND
Derived Reference Start Points (see attachment)
Subject Lot(s)
Area A - Clearing Permitted
Watercourse and/or drainage feature (Stream order label)
Note: This is a colour plan and should only be reproduced in colour
N
Vegetation Management Plan
Plan of Area A (Parts A1 - A4) in Lot 46 on Plan SP328230
This plan must be read in conjunction with conditions attached to 2305-34663-SRA
Version: 1
dLVAS Case ID: 2023/001872

PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

SARA ref: 2305-34663 SRA

Date: 28 June 2023

# Attachment to Plan: 2305-34663-SRA
## Derived Reference Points
## Datum: GDA2020, Projection: MGA Zone 55

Notes: Derived Reference Points are provided to assist in the location of area boundaries.
Responsibility for locating these boundaries lies solely with the landholder and delegated contractor(s).
Coordinates start at a point indicated on the accompanying plan and proceed in a clockwise direction.

| Part ID | Unique ID | Easting | Northing |
|---|---|---|---|
| A1 | 1 | 350618 | 8136183 |
| A1 | 2 | 350625 | 8136172 |
| A1 | 3 | 350653 | 8136113 |
| A1 | 4 | 350708 | 8136059 |
| A1 | 5 | 350701 | 8135971 |
| A1 | 6 | 350352 | 8136002 |
| A1 | 7 | 350369 | 8136009 |
| A1 | 8 | 350385 | 8136037 |
| A1 | 9 | 350389 | 8136047 |
| A1 | 10 | 350389 | 8136051 |
| A1 | 11 | 350401 | 8136048 |
| A1 | 12 | 350412 | 8136049 |
| A1 | 13 | 350414 | 8136089 |
| A1 | 14 | 350413 | 8136105 |
| A1 | 15 | 350428 | 8136103 |
| A1 | 16 | 350439 | 8136101 |
| A1 | 17 | 350449 | 8136095 |
| A1 | 18 | 350458 | 8136092 |
| A1 | 19 | 350466 | 8136090 |
| A1 | 20 | 350470 | 8136094 |
| A1 | 21 | 350471 | 8136101 |
| A1 | 22 | 350479 | 8136106 |
| A1 | 23 | 350482 | 8136110 |
| A1 | 24 | 350488 | 8136115 |
| A1 | 25 | 350489 | 8136119 |
| A1 | 26 | 350491 | 8136124 |
| A1 | 27 | 350491 | 8136124 |
| A1 | 28 | 350495 | 8136135 |
| A1 | 29 | 350495 | 8136140 |
| A1 | 30 | 350607 | 8136193 |
| A1 | 31 | 350608 | 8136192 |
| A1 | 32 | 350618 | 8136183 |
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| A2 | 35 | 350250 | 8136071 |
| A2 | 36 | 350226 | 8136051 |
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| A2 | 46 | 350240 | 8136228 |
| A2 | 47 | 350243 | 8136244 |
| A2 | 48 | 350243 | 8136263 |
| A2 | 49 | 350229 | 8136284 |
| A2 | 50 | 350207 | 8136289 |
| A2 | 51 | 350213 | 8136358 |
| A2 | 52 | 350265 | 8136354 |
| A2 | 53 | 350267 | 8136344 |
| A2 | 54 | 350269 | 8136334 |
| A2 | 55 | 350269 | 8136323 |
| A2 | 56 | 350270 | 8136313 |
| A2 | 57 | 350274 | 8136303 |
| A2 | 58 | 350280 | 8136293 |
| A2 | 59 | 350282 | 8136281 |
| A2 | 60 | 350283 | 8136277 |

| Part ID | Unique ID | Easting | Northing |
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| A2 | 64 | 350295 | 8136196 |
| A2 | 65 | 350318 | 8136184 |
| A2 | 66 | 350332 | 8136178 |
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| A2 | 69 | 350313 | 8136129 |
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| A2 | 71 | 350279 | 8136099 |
| A2 | 72 | 350277 | 8136094 |
| A2 | 73 | 350266 | 8136086 |
| A3 | 74 | 350602 | 8136197 |
| A3 | 75 | 350496 | 8136147 |
| A3 | 76 | 350496 | 8136147 |
| A3 | 77 | 350489 | 8136155 |
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| A3 | 79 | 350466 | 8136160 |
| A3 | 80 | 350456 | 8136162 |
| A3 | 81 | 350447 | 8136166 |
| A3 | 82 | 350456 | 8136174 |
| A3 | 83 | 350476 | 8136194 |
| A3 | 84 | 350453 | 8136194 |
| A3 | 85 | 350435 | 8136194 |
| A3 | 86 | 350431 | 8136196 |
| A3 | 87 | 350435 | 8136208 |
| A3 | 88 | 350447 | 8136227 |
| A3 | 89 | 350462 | 8136244 |
| A3 | 90 | 350483 | 8136256 |
| A3 | 91 | 350505 | 8136264 |
| A3 | 92 | 350509 | 8136268 |
| A3 | 93 | 350566 | 8136269 |
| A3 | 94 | 350569 | 8136222 |
| A3 | 95 | 350569 | 8136210 |
| A3 | 96 | 350596 | 8136202 |
| A3 | 97 | 350602 | 8136197 |
| A4 | 98 | 350358 | 8136345 |
| A4 | 99 | 350433 | 8136338 |
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| A4 | 101 | 350451 | 8136263 |
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| A4 | 103 | 350438 | 8136249 |
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| A4 | 106 | 350366 | 8136205 |
| A4 | 107 | 350361 | 8136211 |
| A4 | 108 | 350356 | 8136219 |
| A4 | 109 | 350364 | 8136238 |
| A4 | 110 | 350399 | 8136277 |
| A4 | 111 | 350386 | 8136292 |
| A4 | 112 | 350399 | 8136311 |
| A4 | 113 | 350390 | 8136316 |
| A4 | 114 | 350367 | 8136298 |
| A4 | 115 | 350364 | 8136331 |
| A4 | 116 | 350361 | 8136333 |
| A4 | 117 | 350360 | 8136343 |
| A4 | 118 | 350359 | 8136344 |
| A4 | 119 | 350358 | 8136344 |
| A4 | 120 | 350358 | 8136345 |

| Part ID | Unique ID | Easting | Northing |
|---|---|---|---|

# Appeal Rights

*PLANNING ACT 2016 & THE PLANNING REGULATION 2017*

**Chapter 6 Dispute resolution**

**Part 1 Appeal rights**

**229 Appeals to tribunal or P&E Court**

(1) Schedule 1 of the *Planning Act 2016* states –
  (a) Matters that may be appealed to –
    (i) either a tribunal or the P&E Court; or
    (ii) only a tribunal; or
    (iii) only the P&E Court; and
  (b) The person-
    (i) who may appeal a matter (**the *appellant***); and
    (ii) who is a respondent in an appeal of the matter; and
    (iii) who is a co-respondent in an appeal of the matter; and
    (iv) who may elect to be a co-respondent in an appeal of the matter.

(Refer to Schedule 1 of the Planning Act 2016)

(2) An appellant may start an appeal within the appeal period.
(3) The ***appeal period*** is –
  (a) for an appeal by a building advisory agency – 10 business days after a decision notice for the decision is given to the agency; or
  (b) for an appeal against a deemed refusal – at any time after the deemed refusal happens; or
  (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises – 20 business days after a notice us published under section 269(3)(a) or (4); or
  (d) for an appeal against an infrastructure charges notice – 20 business days after the infrastructure charges notice is given to the person; or
  (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given – 30 business days after the applicant gives the deemed approval notice to the assessment manager; or
  (f) for any other appeal – 20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

  *Note –*
  *See the P&E Court Act for the court's power to extend the appeal period.*

(4) Each respondent and co-respondent for an appeal may be heard in the appeal.
(5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
(6) To remove any doubt. It is declared that an appeal against an infrastructure charges notice must not be about-

(a) the adopted charge itself; or
(b) for a decision about an offset or refund-
    (i) the establishment cost of trunk infrastructure identified in a LGIP; or
    (ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

**230 Notice of appeal**

(1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that-
    (a) is in the approved form; and
    (b) succinctly states the grounds of the appeal.
(2) The notice of appeal must be accompanied by the required fee.
(3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to –
    (a) the respondent for the appeal ; and
    (b) each co-respondent for the appeal; and
    (c) for an appeal about a development application under schedule 1, table 1, item 1 – each principal submitter for the development application; and
    (d) for and appeal about a change application under schedule 1, table 1, item 2 – each principal submitter for the change application; and
    (e) each person who may elect to become a co-respondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
    (f) for an appeal to the P&E Court – the chief executive; and
    (g) for an appeal to a tribunal under another Act – any other person who the registrar considers appropriate.
(4) The *service period* is –
    (a) if a submitter or advice agency started the appeal in the P&E Court – 2 business days after the appeal has started; or
    (b) otherwise – 10 business days after the appeal is started.
(5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
(6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

231 Other appeals

(1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
(2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
(3) A person who, but for subsection (1) could have made an application under the Judicial Review Act 1991 in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.
(4) In this section –
    *decision* includes-
    (a) conduct engaged in for the purpose of making a decision; and

(b) other conduct that relates to the making of a decision; and
(c) the making of a decision or failure to make a decision; and
(d) a purported decision ; and
(e) a deemed refusal.

*non-appealable,* for a decision or matter, means the decision or matter-
(a) is final and conclusive; and
(b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and
(c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

232 Rules of the P&E Court

(1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.
(2) However, the P&E Court may hear and decide an appeal even if the person has not complied with the rules of the P&E Court.

# Annexure 7: Sales Permit

Queensland Government

# SALES PERMIT 2025024

## FOR GETTING QUARRY MATERIAL

granted by

**State of Queensland acting through the Director-General of the Department of Primary Industries ABN 66 934 348 189 in the capacity of Chief Executive pursuant to the *Forestry Act 1959* (Chief Executive)**

to

**JACQSHAR PTY LTD (ACN 102 876 924) (Permittee)**

**Background:** The Chief Executive has granted the Permittee this Sales Permit under sections 46 and 56 of the *Forestry Act 1959* (Qld) (**Act**) by which the Chief Executive agrees to sell and the Permittee agrees to purchase Quarry Material in accordance with the terms and conditions of this Sales Permit and the Act.

**Privacy Statement:** The Department collects personal information from the Permittee to manage activities conducted under the authority of this Sales Permit and the *Forestry Act 1959*. The information will only be used for this purpose and will not otherwise be used or disclosed unless authorised or required by law. Personal information will be handled in accordance with the *Information Privacy Act 2009*. Any privacy questions should be directed to privacy@dpi.qld.gov.au.

**Competition and Consumer Law Statement:** This Sales Permit is granted for resource extraction under the *Forestry Act 1959* and is not a standard form contract for goods and services.

## Terms and conditions

## 1. Permit

1.1 This Sales Permit authorises the Permittee to Get the Sale Quantity of Quarry Material from the Supply Zone in accordance with the Act and the terms and conditions of this Sales Permit.

**No Warranty**

1.2 To the extent permitted by law, the Chief Executive does not give any warranty in respect of:

(a) the type, quality or quantity of Quarry Material the subject of this Sales Permit; or

(b) access to the Supply Zone or Access Roads or the Quarry Material,

and the Permittee agrees that it has entered into this Sales Permit having conducted its own investigations and at the Permittee's own risk.

1.3 The grant of this Sales Permit does not constitute a representation or warranty that any extension, renewal or variation of this Sales Permit will be agreed to by the Chief Executive. Any such extension, renewal or variation will be agreed at the sole discretion of the Chief Executive, subject to applicable laws and in accordance with clause 11.

## 2. Commencement and Term

2.1 This Sales Permit commences on the Commencement Date and, unless terminated earlier by agreement between the parties, or otherwise in accordance with the terms of this Sales Permit, will expire on the Expiry Date.

## 3. Approvals and commencement of Quarrying Operations

3.1 The Permittee may only Get Quarry Material from an Operational Area in the Supply Zone.

3.2 Within the time period specified in Item 5 of Schedule 4, the Permittee must:

(a) obtain the following approvals and permits, as required for the Permittee's Quarrying Operations:

(i) Development Approval and Environmental Authority, as applicable;

(ii) any permits required under *the Environment Protection and Biodiversity Conservation Act 1999* (Cth); and

(iii) any other approval, permit or other authority required to be obtained under Commonwealth, State or Local Government laws for the Quarrying Operations; and

(b) in respect of clause 3.2(a)(i):

(i) provide to the Chief Executive a copy of the Development Approval and the Environmental Authority; or

(ii) give Notice and proof that Development Approvals or Environmental Approvals are not required to carry out Quarrying Operations under this clause 3; and

(c) in respect of any other permits and approvals required under clauses 3.2(a)(ii) and 3.2(a)(iii):

(i) notify the Chief Executive by Notice that the Permittee holds such approvals and permits; or

(ii) if a particular approval, permit or other authority that would ordinarily be required for the carrying out of Quarrying Operations under this clause 3 is not, in fact, required, give Notice and proof of this fact to the Chief Executive, to the Chief Executive's satisfaction.

3.3 If the Permittee does not comply with all requirements under clause 3.2, the Chief Executive may, at its sole discretion, by reasonable Notice:

(a) terminate this Sales Permit; or

(b) suspend this Sales Permit; or

(c) agree to grant an extension of time for the Permittee to comply with clause 3.2.

3.4 It is a matter for the Permittee to seek the Chief Executive's written approval to grant an extension of time under clause 3.3(c). The Permittee must provide evidence to the Chief Executive that the Chief Executive considers reasonably necessary to facilitate its decision under clause 3.3(c). Whether the Chief Executive approves an extension of time in any case is a matter of discretion, and such approval may be given conditionally.

3.5 The Permittee must not conduct Quarrying Operations until the Permittee has done the following:

(a) complied with all requirements under clause 3.2;

(b) had the Quarry Management Plan for the Supply Zone approved by the Chief Executive by Notice under clause 25.1;

(c) provided the Chief Executive with the Cover of Account as required under clause 6;

(d) provided the Chief Executive with a copy of a Terrain Survey for the Supply Zone or the relevant Operational Area/s, if required under clause 4.1;

(e) had its proposed measuring method or equipment for the Supply Zone approved by the Chief Executive and the Permittee has documented its measuring, recording, accounting and declaration procedures in accordance with clause 4.4;

(f) provided the Chief Executive with evidence of the insurances required under clause 24;

(g) provided the Chief Executive with the contact details for the Permittee's Site Senior Executive in accordance with clause 1(e) of Schedule 2;

(h) if applicable, provided a Notice to the Chief Executive about the Permittee's Site Safety Management System in accordance with clause 1(f) of Schedule 2; and

(i) as applicable, complied with clauses 19.9(b) and 19.9(c) in regard to Deed Polls.

## 4. Measuring and declaration of Quarry Material

**Requirement to undertake Terrain Survey**

4.1 If specified in Item 6 of Schedule 4 that a Terrain Survey is required or if the Chief Executive gives Notice to the Permittee that a Terrain Survey is required:

(a) the Permittee must, at its cost, promptly engage an Approved Surveyor to complete a Terrain Survey of the relevant Operational Area/s or the Supply Zone (as directed by the Chief Executive);

(b) the Permittee must give the results of the Terrain Survey (including the relevant Survey Map) to the Chief Executive:

(i) prior to the commencement of Quarrying Operations in the relevant Operational Area/s; or

(ii) where a Terrain Survey is required by Notice by the Chief Executive after the commencement of Quarrying Operations in the relevant Operational Area/s, within 28 days of the Notice being given; and

(c) the Permittee must retain copies of all survey data and other Records used by the Approved Surveyor and if requested by the Chief Executive provide these to the Chief Executive within 28 days of a written request to do so.

**Requirement to undertake Quantity Survey or periodic Quantity Surveys**

4.2 If:

(a) it is specified in Item 6 of Schedule 4 that periodic Quantity Surveys are required for the periods specified in Item 6 of Schedule 4; or

(b) the Chief Executive gives Notice to the Permittee requiring the Permittee to carry out periodic Quantity Surveys for the periods specified by the Chief Executive; or

(c) the Chief Executive gives Notice to the Permittee requiring the Permittee to carry out one or more Quantity Surveys,

the Permittee must, for each instance where a Quantity Survey is required and at its cost:

(d) engage an Approved Surveyor to:

(i) undertake a Quantity Survey of the area/s specified by the Chief Executive; and

(ii) (unless there has been no prior Quantity Survey or Terrain Survey that includes the surveyed area) calculate the quantity of Quarry Material actually removed from the surveyed area between:

(A) the date of the relevant Quantity Survey; and

(B) the date of the immediately preceding Quantity Survey or Terrain Survey (or the date of an earlier Quantity Survey or Terrain Survey nominated by the Chief Executive by Notice);

(e) instruct the Approved Surveyor to apply the relevant Conversion Factors to calculate the quantity of Quarry Material removed from the surveyed area and produce a report (**Quantity Survey Report**);

(f) give the Quantity Survey Report to the Chief Executive by the date/s specified by the Chief Executive;

(g) retain a copy of all survey data and other Records used by the Approved Surveyor and if requested by the Chief Executive provide these to the Chief Executive within 28 days of the request; and

(h) comply with the Chief Executive's requirements which may include but are not limited to:

(i) providing additional information or data;

(ii) engaging an Approved Surveyor to undertake further Quantity Surveys;

(iii) providing reasons for any difference between the quantity of Quarry Material declared by the Permittee and the results of the Quantity Survey Report; and/or

(iv) paying for the quantity of Quarry Material stated in the Quantity Survey Report, if the Chief Executive considers that there is a significant unexplained difference in the quantity of Quarry Material declared by the Permittee and the results of the Quantity Survey Report for the same relevant period.

**Variation of Conversion Factors**

4.3 The Chief Executive may vary the Conversion Factors at any time by giving Notice to the Permittee of the changes to the Conversion Factors. The Chief Executive will make reasonable efforts to consult with the Permittee in good faith before varying the Conversion Factors.

**Measuring methods and documentation**

4.4 The Permittee may use any of the following methods to measure the quantity of Quarry Material removed from the Supply Zone:

(a) through the use of Weighbridges;

(b) through the use of Scale Equipped Loader Buckets;

(c) through the use of Other Scale Equipment;

(d) by Volumetric Truck Count;

(e) through the use of Volumetric Loader Buckets; and/or

(f) by an Other Measuring Method,

however, the Permittee must:

(g) first obtain the Chief Executive's written approval, for the use of the proposed measuring method for the Supply Zone;

(h) accurately document the procedures to be used for measuring, recording, accounting and declaring Quarry Material under this Sales Permit to ensure that the Permittee complies with the requirements of clause 4, including as applicable:

(i) the Conversion Factors (if any) used;

(ii) the volumetric capacity of any applicable loading plant and equipment; and

(iii) the load carrying capacity of any applicable plant and equipment, and

(i) when required by Notice by the Chief Executive, provide the Chief Executive with a full copy of the Permittee's documented procedures within 28 days of that request.

4.5 If, in measuring the quantity of Quarry Material removed from the Supply Zone, the Permittee uses:

(a) a Volumetric Truck Count, the Permittee must maintain an accurate daily load record of the quantity of Quarry Material removed from the Supply Zone by each truck or other vehicle (recorded in Cubic Metres or Tonnes as applicable) using the measuring method and equipment approved by the Chief Executive for the Supply Zone; or

(b) Volumetric Loader Buckets, the Permittee must maintain an accurate daily record of the quantity of Quarry Material removed from the Supply Zone (recorded in Cubic Metres or Tonnes as applicable) in accordance with the approved measuring method and equipment approved by the Chief Executive for the Supply Zone; or

(c) Scale Equipped Loader Buckets, Other Scale Equipment or Weighbridges:

(i) that equipment must be properly installed, certified and maintained in accordance with the *National Measurement Act 1960* (Cth); and

(ii) the Permittee must accurately record and maintain a daily tally of the quantity of Quarry Material removed from the Supply Zone; or

(d) an Other Measuring Method, the Permittee must ensure that it maintains accurate records of the daily quantity of Quarry Material removed from the Supply Zone (recorded in Cubic Metres or Tonnes as applicable) consistent with the measuring method and equipment approved by the Chief Executive for the Supply Zone.

**Periodic Declarations**

4.6 For each Declaration Period the Permittee must:

(a) complete a Periodic Declaration, including details of the type and quantity of Quarry Material removed from the Supply Zone during the Declaration Period; and

(b) submit the completed Periodic Declaration for the Supply Zone to the address at Item 7 of Schedule 4 (or to such other address notified by Notice by the Chief Executive from time to time) within the time specified in Item 7 of Schedule 4 following the end of the Declaration Period.

4.7 If there are no removals of Quarry Material for a particular Declaration Period, the Permittee must still complete and submit a Periodic Declaration, showing 'NIL' removals, in accordance with clause 4.6(b).

4.8 If the Permittee fails to supply a completed Periodic Declaration by the date specified in Item 7 of Schedule 4 or if the Chief Executive is of the view that the information on a Periodic Declaration is inaccurate, incomplete or illegible, the Permittee will be in breach of this Sales Permit and the Chief Executive may, in addition to the rights conferred under the Act and this Sales Permit, determine the amount payable for any such period and may issue a Notice, itemising the determined quantity and the applicable Value of the Quarry Material, to the Permittee for the Permittee to pay by the date specified in the Notice.

**Removal Dockets**

4.9 If specified in Item 8 of Schedule 4 (or as subsequently required by the Chief Executive by Notice), the quantity of Quarry Material removed in each vehicular load from the Supply Zone must be recorded on a Removal Docket prior to its removal from the Supply Zone. Each Removal Docket must be fully completed, accurate and legible.

4.10 Subject to clause 4.9, the driver of any vehicle loaded with Quarry Material removed from the Supply Zone under this Sales Permit must be able to provide a fully completed Removal Docket to the Chief Executive, upon reasonable request, at any time unless, at the Chief Executive's sole discretion, an alternate procedure has been agreed to in writing by the Chief Executive.

**Other Records**

4.11 If:

(a) the approved measuring method and equipment for the Supply Zone is:

(i) Volumetric Truck Counts;

(ii) Volumetric Loader Bucket;

(iii) an Other Measuring Method; or

(iv) a Scale Equipment Loader Bucket or Other Scale Equipment that is not capable of producing a printed docket of the quantity of Quarry Material removed from the Supply Zone,

(b) the completion of Removal Dockets is required under clause 4.9; and

(c) the Permittee is requested in writing by the Chief Executive,

following the end of each Declaration Period, the Permittee must include signed copies of the Removal Dockets with the Periodic Declaration provided to the Chief Executive in accordance with the procedure set out in clause 4.6(b).

4.12 If the Permittee's measuring method or equipment for the Supply Zone is a Scale Equipped Loader Bucket, Other Scale Equipment or a Weighbridge and, by itself or via an integrated system approved by Notice by the Chief Executive, the equipment used is capable of producing a printed docket or other document specifying the quantity of Quarry Material removed from the Supply Zone (**Weight Based System**) the Permittee must:

(a) itemise and record the quantity of Quarry Material removed from the Supply Zone on dockets or other documents produced by the Weight Based System; and

(b) following the end of each Declaration Period, if requested by Notice by the Chief Executive, include a copy of all Records produced by the Weight Based System for each load or other quantity of Quarry Material removed from the Supply Zone with the Periodic Declaration for that Declaration Period in accordance with the procedure set out in clause 4.6(b).

**Blast Report**

4.13 If specified in Item 9 of Schedule 4 (or if required by the Chief Executive by Notice to the Permittee), each time explosives are used to Get Quarry Material, the Permittee must provide the Blast Report showing the quantity of Quarry Material released by the blast to the Chief Executive. The Blast Report must be provided to the Chief Executive by the date, and to the address specified in Item 9 of Schedule 4.

**Records**

4.14 The Permittee must:

(a) keep all Records for 7 years from the expiration or termination of this Sales Permit;

(b) allow, during Business Hours, the Chief Executive to inspect and make copies or extracts from the Records; and

(c) supply such further information regarding entries or information in the Records as may be reasonably required by the Chief Executive.

## 5. Values payable for Quarry Material

5.1 For each unit of Quarry Material removed from the Supply Zone, the Permittee must pay the Chief Executive the Value/s per unit specified in Item 10 of Schedule 4.

5.2 The Permittee must pay the Chief Executive for the quantity of Quarry Material the Permittee removes from the Supply Zone for each Declaration Period as calculated by either the Permittee or the Chief Executive in accordance with clause 4, and Accounts will be issued to the Permittee by the Chief Executive.

5.3 The Permittee forfeits its rights to any Quarry Material remaining on the Supply Zone (whether stockpiled, processed or otherwise) on the expiration or termination of this Sales Permit, regardless of whether or not the Permittee has paid for the Quarry Material.

**Value Reviews**

5.4 The Value/s payable for Quarry Material will be adjusted on 1 July each Year. The first Value Review will be carried out on the date specified in Item 10 of Schedule 4.

5.5 At each Yearly Value Review the Chief Executive will adjust the Value by the percentage change in the Consumer Price Index (All Groups) Brisbane during the preceding twelve (12) months to 31 March, as published by the Australian Bureau of Statistics.

5.6 The Chief Executive may also carry out a General Value Review. The first General Value Review will be on the date specified in Item 10 of Schedule 4 and then every 5 year anniversary. In carrying out the General Value Review, the Chief Executive will take into account a number of factors including, but not limited to:

(a) the general value of competitive grades of Quarry Material or equivalent products; and

(b) any change in relativity between these prices and the movement in the Consumer Price Index (All Groups) Brisbane or other relevant indices, including the causes thereof.

5.7 The adjusted Value following a Value Review or a General Value Review will be put into effect by a Notice from the Chief Executive in accordance with clause 11.2.

5.8 Irrespective of when the Value Review or the General Value Review is carried out, the reviewed Value is payable by the Permittee from the due date of the most recent Value Review or General Value Review or such other later date as determined by the Chief Executive and advised to the Permittee by Notice.

5.9 If the Consumer Price Index (All Groups) Brisbane as published by the Australian Bureau of Statistics is discontinued or modified, the Chief Executive will determine, by Notice, an appropriate replacement indexation mechanism and the commencement of its implementation for the purpose of the Value Review and the General Value Review.

## 6. Cover of Account and Secured Amount

**Provision of a Cover of Account**

6.1 The Permittee must provide to the Chief Executive the Cover of Account to secure payment of all monies under this Sales Permit owed by it, for purposes including, but not limited to:

(a) payment of overdue Accounts;

(b) rectification of any breach of this Sales Permit and/or Other Sales Permits;

(c) completion of works, removal of infrastructure and/or other requirements of the Quarry Management Plan; or

(d) rectification or repair of any damage arising from any Quarrying Operation which is not rectified or repaired to the Chief Executive's satisfaction.

6.2 Unless otherwise approved by Notice by the Chief Executive, the Cover of Account must be in the form of one or more unconditional, on demand and irrevocable bank guarantees from an Approved Financial Institution, on terms acceptable to the Chief Executive (at its sole discretion). For the avoidance of doubt, the Cover of Account may be for a higher amount than the Secured Amount because it may also be used as a cover of account for the secured amounts under Other Sales Permits.

6.3 The Cover of Account may also be held by the Chief Executive as security for the Permittee's performance under Other Sales Permits in respect of amounts owing or claimable in terms similar to clause 6.1.

**Recourse**

6.4 The Chief Executive may, at any time and without limiting the rights of the Chief Executive, apply the whole or any part of the Cover of Account in respect of amounts owing or claimable under this Sales Permit (or Other Sales Permits) where:

(a) an Account has been rendered to the Permittee by the Chief Executive and the Permittee has failed to pay that Account in accordance with its terms; or

(b) the Chief Executive is owed, or in good faith claims it is owed, any money by the Permittee under this Sales Permit (including under indemnity); or

(c) the Chief Executive has incurred or may incur costs for which the Permittee is or may be liable under this Sales Permit; or

(d) the Chief Executive has incurred or may incur costs to exercise a right under this Sales Permit in respect of money owing by the Permittee to the Chief Executive.

6.5 The Permittee must ensure that the aggregated amount outstanding under this Sales Permit and all Other Sales Permits (including for Quarry Material removed from the Supply Zone or any supply zone or endorsed quarry area under any Other Sales Permits, not yet declared by the Permittee or invoiced by the Chief Executive) does not at any time exceed the amount of the Cover of Account.

**Obligation to maintain level of Cover of Account**

6.6 If the Chief Executive applies all or any part of the Cover of Account, the Permittee must restore the amount of the Cover of Account, including, if necessary, providing a fresh Cover of Account, within the time period specified by Notice from the Chief Executive.

6.7 Until such time as the total amount of the Cover of Account has been restored, the Chief Executive may, by Notice, suspend this Sales Permit or limit the quantity of Quarry Material that the Permittee may Get under this Sales Permit.

**Review of Secured Amount**

6.8 At any time during the Term of this Sales Permit the Chief Executive may review and vary the Secured Amount. The parties agree to consult in good faith about a variation of the Secured Amount, however following consultation the Chief Executive may, in its sole discretion, vary the amount of the Secured Amount by Notice to the Permittee and require compliance by a date specified in the Notice.

6.9 If the Chief Executive varies the Secured Amount under clause 6.8 and the amount is an increase, the Permittee must ensure that the Cover of Account is updated within the time period specified in the Notice. Until such time as the Permittee complies with the Notice provided under clause 6.8, the Chief Executive may, by Notice, limit the quantity of Quarry Material that the Permittee may Get under this Sales Permit.

**Return of Cover of Account**

6.10 The Chief Executive will return the Cover of Account within 60 Business Days from the expiration or termination or approved novation or assignment of this Sales Permit, less any amount owing to the Chief Executive or otherwise deducted under the terms of this Sales Permit, unless:

(a) the Cover of Account is security for money owed under Other Sales Permits; or

(b) notified issues exist and the Chief Executive by Notice has advised the Permittee that the held Cover of Account will not be returned until the notified issues are resolved; or

(c) the Cover of Account was realised by the Chief Executive and a fresh Cover of Account was not provided in accordance with clause 6.6.

## 7. Accounts

7.1 The Chief Executive will, when applicable, forward an Account to the Permittee for payment for Quarry Material removed or other monies owing under this Sales Permit.

7.2 Except as otherwise agreed by the Chief Executive by Notice, when the Chief Executive sends the Permittee an Account for an amount due under this Sales Permit the Permittee must pay the amount stated in the Account by the due date stated in the Account or, if not stated in the Account, within 30 days from the date of the Account.

7.3 If the Permittee fails to pay any amount/s payable under this Sales Permit by the due date, the Permittee may, at the Chief Executive's absolute discretion, be required to pay interest, accrued daily on the outstanding amount, at a rate equal to the Commonwealth Bank of Australia's monthly overdraft index rate from time to time.

**Seizure of Quarry Material**

7.4 If the Permittee fails to comply with its obligations to pay for Quarry Material under this Sales Permit, then, in addition to the rights of the Chief Executive under the Act and this Sales Permit, the Chief Executive may if necessary, seize and detain or remove the Quarry Material for which money is owing.

7.5 For the purpose of clause 7.4, the Permittee grants to the Chief Executive an irrevocable licence to enter the land or premises:

(a) owned or controlled by the Permittee; or

(b) of any associated company or agent where the Quarry Material is located,

without liability for trespass or any resulting damage and retake possession of the Quarry Material.

## 8. Minimum Quantity

8.1 The Permittee agrees to Get the Minimum Quantity specified in Item 12 of Schedule 4 for each Performance Year with the end date of the first Performance Year specified in Item 12 of Schedule 4.

8.2 If the Permittee fails to Get the Minimum Quantity in any Performance Year, the Permittee must pay the Chief Executive a sum determined by the Chief Executive, at is sole discretion, that must not exceed the difference between the Value of the Minimum Quantity and the Value of the Quarry Material actually Got in that Performance Year, based on the Values and the types of Quarry Material applicable for that period under clause 5.

8.3 The Chief Executive may, at its sole discretion, take into consideration factors including, but not limited to:

(a) the quantity of Quarry Material Got from the Supply Zone in the previous Performance Year; and

(b) the Commencement Date of this Sales Permit,

in making a determination under clause 8.2 for the Performance Year under consideration.

8.4 At any time during the Term of this Sales Permit the Chief Executive may vary the Minimum Quantity in accordance with clause 11.2. The Chief Executive will make reasonable efforts to consult with the Permittee in good faith before varying the Minimum Quantity.

## 9. Damage

9.1 In carrying out Quarrying Operations authorised by this Sales Permit, the Permittee must exercise all reasonable care to avoid causing damage to any roads, fences, structures, or other improvements and property, including cultivated land and crops.

9.2 If the Chief Executive is satisfied that damage to roads, fences, structures, or other improvements and property has been caused by a person acting under the authority of this Sales Permit, the Chief Executive may, by Notice, require the Permittee to rectify or repair the damage.

9.3 If the damage is not rectified or repaired to the satisfaction of the Chief Executive within the time stated in the Notice, without limiting the rights of the Chief Executive, the Chief Executive may arrange for the repair or rectification of the damage, at the Permittee's cost.

## 10. Access Road and Road use

10.1 Vehicles entering or leaving the Supply Zone must only use Access Roads or Roads. No other road or route may be used unless with the prior written approval of the Chief Executive.

10.2 The Permittee must comply with any law, direction or policy of Commonwealth, State and Local Governments in relation to the use of Roads.

10.3 The Permittee must maintain all Access Roads, at the Permittee's cost, in a condition satisfactory to the Chief Executive.

## 11. Amendment and variation

11.1 Unless otherwise provided in this Sales Permit, the parties may vary this Sales Permit at any time by an agreement in writing executed by both parties.

11.2 Notwithstanding clause 11.1, the Chief Executive may, acting reasonably, by Notice to the Permittee:

(a) extend under clause 3.3, the time period specified under clause 3.2;

(b) vary the Value/s in accordance with clause 5;

(c) vary the Secured Amount under clause 6.8;

(d) vary the Minimum Quantity under clause 8.4;

(e) vary the Supply Zone or the Sale Quantity under clause 13.2;

(f) require the Permittee to vary the Quarry Management Plan under clause 25.8; and/or

(g) vary the Supply Zone and the Sale Quantity under clause 38.3.

## 12. Assignment and novation

12.1 The Permittee must not novate or assign or otherwise part with the rights and obligations in this Sales Permit without the prior written consent of the Chief Executive.

12.2 Whether or not consent under clause 12.1 is given is at the sole discretion of the Chief Executive, and any consent may be subject to such terms and conditions as the Chief Executive reasonably thinks fit, including but not limited to the following:

(a) there must be no existing unresolved breach by the Permittee of the terms and conditions of this Sales Permit, which has not been waived by the Chief Executive in accordance with clause 36.1;

(b) the Permittee must have demonstrated to the satisfaction of the Chief Executive that the proposed novatee or assignee is a respectable and financially responsible person capable of complying with this Sales Permit, specifically:

(i) the proposed novatee must enter into a deed with the Chief Executive to effect the change of ownership of the Sales Permit; or

(ii) the proposed assignee must enter into a deed with the Chief Executive that the proposed assignee will duly perform and observe the terms and conditions on the Permittee's part in this Sales Permit; and

(iii) the proposed novatee or assignee must provide a Cover of Account for the Secured Amount.

**Change in control of the Permittee**

12.3 If the Permittee is a company and a change in control of the Permittee has occurred, the Permittee will be deemed to have assigned this Sales Permit in contravention of clause 12.1 if a change in control occurs without the prior written consent of the Chief Executive, which consent must not be unreasonably withheld but may be subject to conditions imposed by the Chief Executive acting reasonably. The Permittee must by Notice to the Chief Executive within 5 Business Days of becoming aware of any proposed change in control of the Permittee inform the Chief Executive of this change in control of the Permittee and the Chief Executive may require that the Permittee provide information regarding the Permittee's financial and

managerial capabilities under the proposed arrangement, so that the Chief Executive can be satisfied of the Permittee's capability to comply with the terms and conditions of this Sales Permit.

12.4 For the purposes of clause 12.3, a 'change in control of the Permittee' means that there is such a change in the composition of the board of directors, the shareholders or change in the voting rights which, in the reasonably held opinion of the Chief Executive, will have, or is likely to have, the effect of putting the Permittee under the control (direct or indirect) of persons different from those in control at the commencement of this Sales Permit, or the date of novation to the current Permittee (as applicable).

**Chief Executive's costs of assignment, novation, or change in control**

12.5 The Permittee must pay the Chief Executive all reasonable costs, charges and expenses of and incidental to the investigation of respectability, insolvency and suitability or otherwise of the proposed novatee or assignee or of the Permittee in the event of a change in control occurring as well as any of the Chief Executive's costs incidental to any novation or assignment or change in control.

## 13. Aboriginal Cultural Heritage and/or Torres Strait Islander Cultural Heritage

13.1 If, in the course of Quarrying Operations, the Permittee identifies or uncovers any Cultural Heritage or are made aware of new information relevant to existing identified Cultural Heritage, the Permittee must, in addition to complying with all statutory reporting conditions:

(a) advise the Chief Executive of the Cultural Heritage by Notice within 7 days; and

(b) immediately cease all activities that threatens the existence and preservation of that Cultural Heritage.

13.2 If the Permittee does not comply with this clause or Cultural Heritage is identified or uncovered in the Supply Zone, the Chief Executive may, at its sole discretion, do one or more of the following by Notice:

(a) reduce the Supply Zone and, if applicable, the Operational Area/s to the extent that the Chief Executive is satisfied that future Quarrying Operations will not harm or have a significant adverse impact on the Cultural Heritage;

(b) reduce the Sale Quantity;

(c) suspend Quarrying Operations under this Sales Permit until the Chief Executive is satisfied that the Permittee can comply with its Cultural Heritage Duty of Care; or

(d) terminate this Sales Permit.

13.3 The Permittee's obligations under this clause are in addition to the Permittee's obligations under the *Aboriginal Cultural Heritage Act 2003* (Qld) and/or the *Torres Strait Islander Cultural Heritage Act 2003*.

## 14. Confidential Information

14.1 Subject to clause 14.2, a Recipient must not disclose Confidential Information to a third party.

14.2 A Recipient may disclose Confidential Information:

(a) with the other party's prior written consent;

(b) to a professional adviser, financial adviser, banker, financier or auditor where that person is obliged to keep the information disclosed confidential;

(c) to any of its Representatives who are bound to keep the information confidential and to whom it is necessary to disclose the information;

(d) in order to comply with its obligations; or to exercise its rights under this Sales Permit;

(e) to comply with the law, or a requirement of a regulatory body (including any relevant stock exchange);

(f) to the extent necessary to enforce its rights or defend a claim or action under this Sales Permit; or

(g) where that party is the Chief Executive:

(i) to the responsible Minister administering the Department and their personal and departmental advisers;

(ii) in response to a request by the Parliament or a Committee of the Parliament of the State of Queensland; or

(iii) where disclosure is required to be made in accordance with established governmental policies, procedures or for public accountability purposes.

14.3 If a party becomes aware of a suspected or actual breach of this clause 14, the party will immediately notify the other party by Notice and take reasonable steps required to prevent or stop the suspected or actual breach.

14.4 The Recipient will not be required after the Expiry Date to destroy copies of any computer records or files containing the Confidential Information which have been created pursuant to automatic archiving or back-up procedures on secured central storage servers and which cannot reasonably be deleted. In this case the obligation of confidentiality under this clause 14 will continue to apply.

14.5 The Permittee and the Chief Executive agree and acknowledge that damages are an inadequate remedy for a breach of this clause 14.

## 15. Dispute resolution

15.1 Subject to clause 15.6, disputes between the parties will adhere to the following procedure prior to the commencement of litigation or other external dispute resolution proceedings.

15.2 The Contact for one party may notify the Contact for the other party in writing of the occurrence of a dispute (**Dispute Notice**) and the Contacts will try to resolve the dispute through negotiation.

15.3 If the Contacts are unable to resolve the dispute within 14 days from the receipt of the Dispute Notice, the dispute is to be referred to:

(a) for the Permittee, the person holding the position of Chief Executive Officer (or equivalent), or their delegate; and

(b) for the Chief Executive, an officer who is delegated to sign this Sales Permit, or their delegate,

for resolution.

15.4 If the dispute is not resolved within 15 Business Days after its referral to the representative of each of the parties as listed in clause 15.3, either party may refer the dispute to a mediator and on terms agreed by the parties with costs to be shared equally between the parties.

15.5 If the parties cannot agree upon:

(a) a mediator, or

(b) terms for mediation,

either party may request the President of the Queensland Law Society to nominate a mediator and/or direct terms.

15.6 Nothing in this clause prevents either party from commencing court proceedings relating to any dispute arising from the Sales Permit at any time where that party seeks urgent interlocutory relief.

15.7 Each party will continue to perform this Sales Permit despite the existence of a dispute or any proceedings under this clause.

## 16. Exercise of discretion

If a party is granted discretion or the ability to determine any matter under this Sales Permit without reference to the other party, that discretion or ability must be exercised reasonably, unless the discretion is defined as being sole discretion.

## 17. Fires

17.1 The Permittee must act promptly and safely do everything reasonably within its power and at its expense to prevent, extinguish or control any unauthorised fire which:

(a) originates as a result of Quarrying Operations;

(b) originates on the Supply Zone; or

(c) enters the Supply Zone (but only to the extent that the fire is within the Supply Zone).

17.2 If the Supply Zone is on a State Forest, a Timber Reserve or a Forest Entitlement Area, the Permittee must also comply with section 63 of the Act.

## 18. Force Majeure

If a party is prevented in whole or in part from carrying out its obligations under this Sales Permit (other than an obligation to pay money) as a result of a Force Majeure Event, and that party:

(a) gives the other party prompt Notice of that Force Majeure Event, including reasonable particulars, and insofar as can be estimated, details of the probable extent to which it will be unable to perform or be delayed in performing that obligation; and

(b) takes all action reasonably practicable to remove that Force Majeure Event as quickly as possible, and to mitigate any loss suffered by the other party as a result of the failure to carry out the obligation,

that obligation is suspended so far as it is affected by the Force Majeure Event during the continuance of that Force Majeure Event and that party will be allowed a reasonable extension of time to perform its obligations.

## 19. Release and indemnity

19.1 The Permittee releases to the full extent permitted by law, the Chief Executive, the Department and its Representatives from all actions, claims, proceedings or demands and in respect of any loss, death, injury, illness or damage (whether personal or property, and whether special, direct, indirect or consequential, including consequential financial loss and including for negligence) arising from or in connection with this Sales Permit save to the extent directly caused by the negligence of the Chief Executive, the Department or its Representatives.

19.2 The Chief Executive, the Department and its Representatives will not in any circumstances (including for negligence) be liable for any loss of revenue, loss of profit, loss of anticipated savings or business, loss of opportunity (including opportunity to enter into or complete arrangements with third parties), loss of data or goodwill, loss of reputation or any indirect or consequential loss whether arising in contract, tort (including negligence) or otherwise, in connection with this Sales Permit.

19.3 The Permittee is liable for and indemnifies the Chief Executive, the Department and its Representatives against all liability, loss, costs and expenses (including any actions, claims, proceedings or demand brought by any third party, and any legal fees, costs and disbursements on a solicitor and own client basis) arising from or incurred in connection with:

(a) this Sales Permit or the Quarrying Operations;

(b) any default by the Permittee or the Permittee's Representatives under this Sales Permit;

(c) any unlawful, wilful or negligent act or omission of the Permittee, the Permittee's Representatives, or any person for whose conduct the Permittee is liable;

(d) personal injury (including sickness and death) or property damage or loss in connection with the performance (or attempted or purported performance or non-performance) of

Quarrying Operations or any other activity in connection with this Sales Permit or a breach of this Sales Permit by the Permittee; and

(e) any compensation to which the Native Title Holders are entitled under the *Native Title Act 1993* (Cth) for the grant of this Sales Permit or the Quarrying Operations.

19.4 The Permittee's liability to indemnify the Chief Executive, the Department and its Representatives under clause 19.3 will be reduced proportionally to the extent that any negligent act or omission or breach of this Sales Permit by the Chief Executive caused the loss or liability.

19.5 The indemnity granted in clause 19.3 is in addition to and not exclusive of any other remedies the Chief Executive may have against the Permittee at law.

19.6 It is not necessary for the Chief Executive to incur expense or to make a payment before enforcing a right of indemnity conferred by this Sales Permit.

19.7 The Permittee indemnifies the Landholder against all liability, loss, costs and expenses (including any actions, claims, proceedings or demand brought by any third party, and any legal fees, costs and disbursements) arising from or incurred in connection with:

(a) any unlawful, wilful or negligent act or omission by the Permittee, the Permittee's Representatives, or any person for whose conduct the Permittee is liable; and

(b) personal injury (including sickness and death) or property damage or loss in connection with the performance (or attempted or purported performance or non-performance) of Quarrying Operations or any other activity in connection with this Sales Permit.

19.8 The Permittee's liability to indemnify the Landholder under clause 19.7 will be reduced proportionally to the extent that any negligent act or omission by the Landholder caused the loss or liability.

19.9 The parties to this Sales Permit acknowledge and agree that in respect of clause 19.7:

(a) the signing of the Sales Permit by the Chief Executive is an acceptance on behalf of the Landholder of the promises contained in clause 19.7; and

(b) the Permittee must, if requested by the Chief Executive, sign any further documents or do anything further required by the Chief Executive to ensure that the promises contained in clause 19.7 are enforceable by the Landholder against the Permittee, including completing a Deed Poll or Deed Polls which will be provided by the Chief Executive to the Permittee in the format as shown in Schedule 5 to this Sales Permit.

(c) if the Chief Executive requests that the Permittee complete and sign a Deed Poll or Deed Polls, the Permittee must in each case provide the original signed Deed Poll to the Landholder and a PDF copy to the Chief Executive.

## 20. Use of Supply Zone

The Permittee must not access or use, or permit or allow to be accessed or used, any part of the Supply Zone for any purpose that is inconsistent with the Permittee's rights and obligations:

(a) under this Sales Permit;

(b) under the Act;

(c) in the Development Approval, the Environmental Authority; or

(d) under Local Government, State or Commonwealth legislation and regulations.

## 21. Mechanical Equipment

21.1 The Chief Executive may examine any item of Mechanical Equipment brought onto the Supply Zone.

21.2 The Permittee must maintain all Mechanical Equipment brought onto the Supply Zone, including that belonging to any other party, in good working order, fit for its designed purpose, and in such a condition that it does not constitute a safety, environmental and/or fire threat.

## 22. Notices

22.1 Subject to clauses 22.2 and 22.3 all Notices under this Sales Permit must be in writing and, unless otherwise specified in this Sales Permit, must be delivered by:

(a) hand;

(b) pre-paid post; or

(c) email,

to the relevant Contact and address specified in Item 1 of Schedule 4, or any substitute address as may be notified in writing to the relevant Contact from time to time.

22.2 Notices:

(a) under clauses 3.3(a), 11.2(e), 11.2(g), 13.2, 37.1(f), 38.4 of the terms and conditions and clause 4(a)(v) of Schedule 2; or

(b) of changes of bank details; or

(c) of change of Contact address,

may not be sent by email. For the avoidance of doubt, a party may provide a copy of a notice under this clause by email, but the actual notice must be given in accordance with clause 22.1(a) or 22.1(b).

22.3 Notice will be deemed to be given:

(a) where sent by pre-paid post - on the fifth Business Day after the date of posting;

(b) where hand delivered – on delivery; or

(c) where sent by email the earlier of:

(i) when the sender receives an automated message confirming delivery; or

(ii) when the sender receives an email response from the recipient (not including an automated response); or

(iii) 4 hours after the time sent (as recorded on the device from which the sender sent the email) unless the sender receives an automated message that the email has not been delivered,

as the case may be, but if the communication is taken to have been received on a day that is not a Business Day or later than 5.00pm on a Business Day, the communication is taken to have been received at 9.00am on the next Business Day.

## 23. Retention of title

23.1 All Quarry Material remains the property of the State until it is paid for by the Permittee to the Chief Executive.

23.2 Until title to the Quarry Material passes to the Permittee, and without prejudice to any other rights of the Chief Executive, the Permittee must keep the Quarry Material free of any mortgage, security interest or other encumbrance and the Permittee possesses the Quarry Material as bailee only, but the Permittee bears all risk in relation to the Quarry Material.

## 24. Insurance

24.1 The Permittee must effect and maintain for the Term of this Sales Permit the following insurances:

(a) insurance under the *Workers' Compensation and Rehabilitation Act 2003* (Qld) as required by law in relation to all persons conducting Quarrying Operations; and

(b) a public liability insurance policy for not less than $20,000,000 arising from any one event in respect of the death of, or injury to persons, or loss or damage to property.

24.2 The insurance policies required under clause 24.1 must be with an Appropriate Insurer.

24.3 The Permittee must ensure that the insurance policies that the Permittee has effected pursuant to this clause cover all of the Permittee's invitees, Operators and Representatives, and cover the Quarrying Operations under this Sales Permit.

24.4 The Permittee must, within 5 Business Days of a request by the Chief Executive, acting reasonably, provide copies of certificates of currency for the insurances required under this clause 24.

24.5 If the Permittee is an individual or sole trader, then clause 24.1(a) is satisfied if the Permittee maintains:

(a) personal accident insurance covering all medical treatment, hospitalisation and medical expenses; and

(b) income protection insurance; and

(c) death and disability insurance,

equivalent to the coverage and entitlements provided to employees under the statutory provisions of the *Workers Compensation and Rehabilitation Act 2003* (Qld).

24.6 The Permittee must take such reasonable steps as are necessary to ensure that the Permittee's Operators take out and maintain a public liability insurance policy which meets the requirements of this clause 24.

## 25. Quarry Management Plan

**Quarry Management Plan**

25.1 The Permittee must not conduct Quarrying Operations under this Sales Permit until the Chief Executive has approved by Notice a Quarry Management Plan or, where applicable, any amended Quarry Management Plan, for the Supply Zone.

25.2 The Permittee must prepare a Quarry Management Plan that covers the Supply Zone. While the Chief Executive may provide the Permittee with further advice on the required content and coverage of a Quarry Management Plan, a Quarry Management Plan must (to the extent they are not adequately addressed in the Development Approval, the Environmental Authority and the plans or other documents the Permittee has prepared to fulfil the requirements of the Development Approval, the Environmental Authority and Local Government, State and Commonwealth legislation and regulations) contain the following:

(a) a description of the Permittee's working plan for the quarry within the Supply Zone;

(b) the layout of the quarry within the Supply Zone and the associated infrastructure;

(c) the layout of any applicable Roads or Access Roads;

(d) the measures to be taken by the Permittee to manage any safety risks, environmental impacts, pests and weeds, adjacent land use impacts, and any excluded or buffer areas within the Supply Zone;

(e) the assessment technique to identify, before clearing or disturbance, the commercially viable areas for Quarry Material extraction;

(f) the maximum area of cleared, quarried and/or un-rehabilitated land that will not be exceeded at nominated points in time;

(g) the extent and nature of the progressive rehabilitation works and undertakings to be implemented for worked out areas;

(h) a description of the final landform to be prepared post-rehabilitation; and

(i) any other matters or requirements as required by the Chief Executive.

25.3 The Quarry Management Plan must not be inconsistent with the Development Approval or the Environmental Authority.

25.4 All Quarrying Operations must at all times comply with the relevant Quarry Management Plan.

25.5 The Permittee must immediately, upon cessation of Quarrying Operations on the Supply Zone, or any part of the Supply Zone:

(a) undertake any required works in the disturbed area, in accordance with the Quarry Management Plan;

(b) undertake works to ensure that there are no adverse impacts to the environment (e.g. the spreading of noxious weeds or the creation of pollution) that are associated with Quarrying Operations; and

(c) progressively rehabilitate each part of the Supply Zone where Quarrying Operations have ended as required under the Quarry Management Plan.

25.6 The Quarry Management Plan must be updated by the Permittee as necessary to maintain its currency and to accommodate any revised arrangements in the Quarrying Operations.

25.7 The Chief Executive may, by Notice, require the Permittee to update the Quarry Management Plan.

25.8 Any variation, amendment, update or revision of the Quarry Management Plan under clause 25.6 or 25.7 will not take effect without the approval by Notice of the Chief Executive in accordance with clause 11.2.

## 26. Legislation, other Authorities and Safety Conditions

26.1 The Permittee must hold and keep current all relevant licences, approvals, permits and other authorities obtained in accordance with clause 3.2 required under all relevant State, Commonwealth and Local Government legislation and/or regulations in respect of the Quarrying Operations conducted under this Sales Permit.

26.2 All Quarrying Operations must at all times comply with:

(a) all relevant State, Commonwealth and Local Government legislation and/or regulations; and

(b) all relevant approvals, permits and other authorities, including, as applicable, but not limited to a Development Approval, an Environmental Authority, a permit or approval under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) or any other legislation.

26.3 If the Chief Executive reasonably suspects that aspects of any Quarrying Operations may not be in compliance with legislation and regulations administered by another agency, the Chief Executive may refer the suspected non-compliance to the responsible agency. The Chief Executive will advise the Permittee by Notice of each referral to another agency.

26.4 The Permittee must advise the Chief Executive by Notice when the Permittee receives notification or advice that any Quarrying Operation is in breach of, or require corrective action under, Commonwealth, State and/or Local Government legislation and/or regulations. This Notice must be provided to the Chief Executive within 5 Business Days of the Permittee's receipt of such notification or advice.

26.5 Each time there is a change, variation or an amendment to the Development Approval or to the Environmental Authority the Permittee must by Notice provide the Chief Executive with a copy of the changed, varied or amended Development Approval or Environmental Authority.

**Safety Conditions**

26.6 The Permittee must comply with the safety conditions in Schedule 2.

## 27. Removal of Operator

27.1 If, in the opinion of the Chief Executive, an Operator is not a fit and proper person to remain in the Supply Zone, the Chief Executive may direct the Permittee verbally and later by written Notice to remove the Operator immediately from the Supply Zone and/or not allow that person on any supply zone or endorsed quarry area controlled by the Permittee without the prior written consent of the Chief Executive.

27.2 In determining whether a person is not a fit or proper person under clause 27.1 the Chief Executive may have regard to matters such as whether the person has behaved in a manner:

(a) likely to cause danger to themselves or to any other person;

(b) contrary to the terms and conditions of this Sales Permit or any other permit granted by the Chief Executive;

(c) which may be considered environmentally irresponsible; and/or

(d) which is considered unprofessional in their dealings with the Chief Executive or with the Chief Executive's staff and employees.

27.3 Whether or not the Chief Executive consents to an Operator that it deemed not a fit and proper person to re-enter any supply zone or endorsed quarry area is at the sole discretion of the Chief Executive and any consent may be subject to such reasonable terms and conditions as the Chief Executive thinks fit.

27.4 A determination by the Chief Executive under this clause is final and is not subject to clause 15.

## 28. Rights of entry and management of public access

28.1 The Permittee has a non-exclusive right to enter the Supply Zone under the Act, for the purpose of conducting Quarrying Operations under this Sales Permit, such access being subject to any direction by the owner of any mining lease over the Supply Zone or in the vicinity of the Supply Zone, for safety reasons.

28.2 The Permittee must not access any other land adjoining or in the vicinity of the Supply Zone (other than any Access Road or Road) without the Chief Executive's prior approval in writing (where the Chief Executive is able to provide approval).

28.3 The Permittee must erect and maintain a sign, to the satisfaction of the Chief Executive, at each entrance to the Supply Zone on each Access Road or (if applicable) Road stating the Permittee's name, the process for access onto the Supply Zone and a contact telephone number.

## 29. GST

29.1 Words defined in the GST Legislation have the same meaning in this clause 29.

29.2 If a party is required under this Sales Permit to reimburse or pay to another party an amount calculated by reference to a cost, expense, or an amount paid or incurred by that party, the amount of the reimbursement or payment will be reduced by the amount of any input tax credits to which that party (or an entity on whose behalf the party is acting) is entitled in respect of any acquisition relating to that cost, expense or other amount.

29.3 If GST is payable by an entity (**Supplier**) in relation to any supply that it makes under or in connection with this Sales Permit, the parties agree that:

(a) any consideration (including the value of any non-monetary consideration) provided for that supply under or in connection with this Sales Permit other than under this clause 29 (**Agreed Amount**) is exclusive of GST unless otherwise specified;

(b) an additional amount will be payable by the party providing consideration for that supply (**Receiver**) equal to the amount of GST payable by the Supplier on that supply;

(c) the additional amount is payable at the same time as any part of the Agreed Amount is to be first provided for that supply and the Supplier will provide a Tax Invoice to the Receiver in respect of that supply, no later than that time; and

(d) to the extent, if any, that any consideration (or part thereof) is specified in this Sales Permit to be inclusive of GST, that consideration (or the relevant part) will be excluded from the Agreed Amount for the purposes of calculating the additional amount under clause 29.3(b).

## 30. Applicable law

30.1 This Sales Permit will be governed by and construed according to the law of the State of Queensland, and the parties hereby agree to submit to the exclusive jurisdiction of the courts of the State of Queensland.

30.2 The Permittee must comply with all relevant Local Government, State and Commonwealth legislation and regulations.

## 31. Entire agreement

This Sales Permit constitutes the entire agreement between the Permittee and the Chief Executive with respect to its subject matter and supersedes all previous negotiations, commitments and writings with respect to that subject matter.

## 32. Counterparts

This Sales Permit may be signed in any number of counterparts and by the parties on separate counterparts and counterparts may be exchanged electronically. Each counterpart constitutes an original of this Sales Permit, and all together constitute one Sales Permit.

## 33. Severance

If any provision of this Sales Permit is prohibited, void, invalid or unenforceable the provision will be ineffective and severed from this Sales Permit to that extent possible without affecting any other provision of this Sales Permit.

## 34. No implied terms

To the full extent permitted by law and other than as expressly set out in this Sales Permit the parties exclude all implied terms, conditions and warranties.

## 35. No fettering

Nothing in this Sales Permit will restrain, limit, fetter, act as an estoppel, or as an agreement about the making of a decision or exercise of any power under law, or exercise of any discretion by the State of Queensland and its Representatives.

## 36. Waiver

36.1 No right under this Sales Permit is to be taken as being waived except by Notice signed by the party waiving the right.

36.2 The failure by a party to enforce any clause of this Sales Permit or any forbearance, delay or indulgence granted by that party to another party is not to be construed as a waiver of its rights under this Sales Permit.

36.3 The waiver by either party of a breach of a clause by the other party will not be a waiver of any other clause or subsequent breach of that clause.

## 37. Suspension and termination

37.1 If the Permittee:

(a) breaches any term of this Sales Permit or any provision of the Act;

(b) does not comply with a Notice provided under this Sales Permit, or a reasonable direction of the Chief Executive in relation to Quarrying Operations; or

(c) becomes insolvent, bankrupt, subject to any form of external administration or enters into an arrangement with the Permittee's creditors or otherwise takes advantage of any laws in force in connection with insolvent debtors or is wound up, voluntarily or involuntarily,

the Chief Executive may, by Notice, do one or more of the following, at the Chief Executive's sole discretion:

(d) require the Permittee to rectify the breach, and/or remedy the cause of the breach within the period specified in the Notice;

(e) suspend this Sales Permit for such time as stated in the Notice; and/or

(f) terminate this Sales Permit.

37.2 Any suspension or termination of this Sales Permit by the Chief Executive will have no impact on its obligations to pay monies and comply with continuing obligations under this Sales Permit, subject to the conditions (if any) stated in the Notice by the Chief Executive.

37.3 If the Chief Executive suspends or terminates this Sales Permit, the Permittee is not entitled to claim or receive any refund for Quarry Material paid for, or any compensation or damages for that suspension or termination.

37.4 The Permittee must not enter the Supply Zone or conduct any Quarrying Operations during any period of suspension, except with the prior written consent of, and in accordance with the conditions specified by, the Chief Executive.

37.5 If the Chief Executive suspends or terminates this Sales Permit, the Chief Executive may charge the Permittee or recover from the Cover of Account any increased costs and/or administration costs incurred.

37.6 Termination of this Sales Permit will not prejudice any rights of the State under this Sales Permit, at common law, under statute, in equity or otherwise.

37.7 Nothing in this Sales Permit restricts the Chief Executive's powers under the Act in relation to a breach of this Sales Permit.

## 38. Native Title Assessment

38.1 The Permittee must comply with the requirements of any Native Title Assessment for the Supply Zone which applies to it, as described in Item 13 of Schedule 4.

38.2 Where the Native Title Assessment for all or part of the Supply Zone under Item 13 of Schedule 4 is shown as Module:

(a) K:

(i) the Quarry Material Got by the Permittee under this Sales Permit from the relevant part of the Supply Zone can and must only be used for Facilities for Services to the Public;

(ii) the Permittee must permit Native Title Holders reasonable access to the land or waters within the relevant part of the Supply Zone, except while there is active Quarrying Operations, or for reasons of health and safety; and

(iii) the Permittee acknowledges that if it proposes to use Quarry Material removed from the relevant part of the Supply Zone for a purpose other than for Facilities for Services to the Public, the Chief Executive will be required to undertake a new Native Title Assessment which will be undertaken at the Permittee's sole expense and, where applicable, the Permittee must bear the costs of any required actions and outcomes. Any requested variation to this Sales Permit, including to Schedule 4, will in the first instance be dependent on the outcome of this new Native Title Assessment.

(b) J:

(i) the quantity of Quarry Material that may be removed under this Sales Permit from the Supply Zone is strictly limited to the Sale Quantity as shown in Item 4 of Schedule 4; and

(ii) if the Permittee applies to the Chief Executive to increase the Sale Quantity for the Supply Zone, it acknowledges that the Chief Executive will be required to undertake a new Native Title Assessment which will be undertaken at the Permittee's sole expense and, where applicable, the Permittee must bear the costs of any required actions and outcomes. Any requested variation to this Sales Permit for the Supply Zone will in the first instance be dependent on the outcome of this new Native Title Assessment.

(c) GE:

(i) the quantity of Quarry Material that may be removed from the Supply Zone is strictly limited to the Sale Quantity shown in Item 4 of Schedule 4 and Quarry Material must only be Got from above the natural surface of the land; and

(ii) if the Permittee applies to the Chief Executive to increase the Sale Quantity for the Supply Zone or the Permittee wishes to Get Quarry Material from below the natural surface of the land, it acknowledges that the Chief Executive will be

required to undertake a new Native Title Assessment which will be undertaken at the Permittee's sole expense and, where applicable, the Permittee must bear the costs of required actions and outcomes. Any requested variation to this Sales Permit for the Supply Zone will in the first instance be dependent on the outcome of this new Native Title Assessment.

(d) F:

(i) if the issue of this Sales Permit was the result of a non-claimant application the Permittee has made under Subdivision F of Division 3 of Part 2 of the *Native Title Act 1993* (Cth), and this non-claimant application has been withdrawn, it acknowledges that the Chief Executive will be required to undertake a new Native Title Assessment which will be undertaken at the Permittee's sole expense and, where applicable, the Permittee must bear the costs of required actions and outcomes. Any requested variation to this Sales Permit for the Supply Zone will in the first instance be dependent on the outcome of this new Native Title Assessment.

(e) AC:

(i) if an ILUA authorises the issue of this Sales Permit, it is a condition of this Sales Permit that the Permittee complies with the requirements of the ILUA and any ancillary agreement to the ILUA.

(f) AB, BA, CA, or CB:

(i) Native Title does not exist, or the issue of the Sales Permit does not impact on Native Title rights and interests. There are no additional requirements.

38.3 If there is a determination that Exclusive Native Title exists over part of the Supply Zone, the Chief Executive will give Notice to the Permittee and the Chief Executive may, at its sole discretion and from the date specified in the Notice:

(a) amend the Supply Zone to exclude the area where a determination of Exclusive Native Title applies;

(b) reduce the Sales Quantity; and

(c) vary the Access Road, as applicable; or

(d) terminate the Sales Permit.

38.4 If there is a determination that Exclusive Native Title exists over the whole of the Supply Zone, the Chief Executive will give Notice to the Permittee and this Sales Permit will be deemed to be terminated from the date specified in the Notice.

## 39. Special Conditions and precedence

39.1 The parties agree to be bound by any Special Conditions in Item 14 of Schedule 4.

39.2 The parties agree that the Special Conditions take precedence over the terms of this Sales Permit.

39.3 Where any inconsistency exists between:

(a) the Special Conditions;

(b) the terms and conditions of this Sales Permit including Schedule 1;

(c) Schedule 2;

(d) Schedule 3;

(e) Schedule 4 (other than the Special Conditions); and

(f) any other schedules or annexures to this Sales Permit,

the provisions will take precedence in that order to the extent necessary to resolve the inconsistency.

## 40. Survival

In addition to any other clauses expressed to survive termination of this Sales Permit, clauses 5, 6, 7, 8.2, 9, 14, 19, 22, 23, 29, 30, 31, 32, 33, 34, 36, 37, 39 and 40 and Schedule 1 survive the termination of this Sales Permit.

# Schedule 1 Definitions and Interpretation

## 1. Definitions

In this Sales Permit, where commencing with a capital letter and unless the contrary intention appears or the context otherwise requires:

**Access Road** means a road approved for use to access or leave the Supply Zone as identified in the map/s in Schedule 3, excluding Roads.

**Account** means a Tax Invoice or statement of any amount owing under this Sales Permit.

**Act** means the *Forestry Act 1959* (Qld).

**Appropriate Insurer** means an insurer which:

(a) is authorised under the *Insurance Act 1973* (Cth); and

(b) is registered with the Australian Prudential Regulation Authority as an authorised insurer.

**Approved Financial Institution** means a financial institution registered in Australia and operating as a bank, credit union or building society.

**Approved Surveyor** means a Registered Surveyor or another suitably qualified and experienced person approved by the Chief Executive.

**Blast Report** means the report or Tax Invoice received from a contractor or agent detailing the quantity of Quarry Material Got from shot/s fired, when explosives are used to Get Quarry Material.

**Business Day** means a day that is not a Saturday, Sunday or a public holiday in the location where this Sales Permit is granted (as so specified in Item 1 of Schedule 4) or any day between the period starting on 25 December each year and ending on 2 January the following year.

**Business Hours** means between 9.00am and 5.00pm on a Business Day.

**Commencement Date** means the date so specified in Item 2 of Schedule 4.

**Competency** means the demonstrated skill and knowledge required to carry out a given task to a standard necessary for the safety and health of persons.

**Confidential Information** means all information, trade secrets and knowledge of or disclosed by a party (**Discloser**) to another party (**Recipient**) that:

(a) is by its nature confidential, including information about Values under this Sales Permit, or the Permittee's customers;

(b) is designated or marked by the Discloser as confidential; or

(c) the Recipient ought to know is confidential,

but does not include information which:

(d) is or becomes public knowledge other than by breach of this Sales Permit or any other confidentiality obligation; and

(e) is independently developed by a party while having no knowledge of or access to the other party's Confidential Information.

**Consumer Price Index (All Groups) Brisbane** means the consumer price index as it applies to Brisbane.

**Contact** means the contact person named for each party in Item 1 of Schedule 4 or a person occupying the same Contact Position described in Item 1 of Schedule 4.

**Conversion Factors** means the factor/s that (subject to clause 4.3) are set out in Item 6 of Schedule 4 to be used to:

(a) convert a quantity of Quarry Material in in-situ Cubic Metres to the quantity in loose, extracted, or processed Cubic Metres or vice versa; and/or

(b) convert a quantity of Quarry Material in loose, extracted, or processed Cubic Metres to the quantity in Tonnes or vice versa.

**Cover of Account** means the securities held by the Chief Executive for a sum at least as much as the aggregate of the Secured Amount (in accordance with clause 6) and all secured amounts under Other Sales Permits.

**Cubic Metre** means the quantity of Quarry Material measuring 1 cubic metre after extracting and processing and, as applicable, at the time of its removal from the Supply Zone.

**Cultural Heritage** means Aboriginal Cultural Heritage as defined in the *Aboriginal Cultural Heritage Act 2003* (Qld) and/or Torres Strait Islander Cultural Heritage as defined in the *Torres Strait Islander Cultural Heritage Act 2003*.

**Cultural Heritage Duty of Care** has the meaning given under the *Aboriginal Cultural Heritage Act 2003* (Qld) and/or the *Torres Strait Islander Cultural Heritage Act 2003* as applicable.

**Dangerous Event** means an event caused by specified High Risk Plant, or an event at a workplace caused by a workplace activity, if the event involves or could have involved exposure of persons to Risk to their health and safety because of:

(a) collapse, overturning, failure or malfunction of, or damage to, an item of specified High-Risk Plant or other Mechanical Equipment;

(b) collapse or failure of an excavation or of any shoring supporting an excavation;

(c) collapse or partial collapse of any part of a building or other structure;

(d) damage to any load bearing member of, or the failure of any brake, steering device or other control device of, a crane, hoist, conveyor, lift or escalator;

(e) implosion, explosion or fire;

(f) escape, spillage or leakage of any hazardous material or dangerous goods;

(g) fall or release from a height of any Plant, substance or object;

(h) damage to a boiler, pressure vessel or refrigeration Plant; or

(i) uncontrolled explosion, fire or escape of gas or steam.

**Declaration Period** means the period specified in Item 7 of Schedule 4 or such other period as notified by Notice by the Chief Executive in writing from time to time.

**Deed Poll** means a deed poll in the format as shown in Schedule 5, which will be provided to the Permittee by the Chief Executive (if required).

**Department** means the Department of Primary Industries on behalf of the State of Queensland or any successor department or agency responsible for administering the provisions of the Act related to State-owned Quarry Material.

**Development Approval** has the same meaning as defined in the *Planning Act 2016* (Qld) or the *State Development and Public Works Organisation Act 1971* (Qld), as applicable, and includes the Development Approval for any Quarrying Operations.

**Environmental Authority** has the same meaning as defined in the *Environmental Protection Act 1994* (Qld) and includes the Environmental Authority for any Quarrying Operations.

**Event** means and includes a Dangerous Event, Work Caused Illness and a Serious Bodily Injury.

**Exclusive Native Title** means Native Title rights and interests that confer possession, occupation, use and enjoyment of the land on the Native Title Holders to the exclusion of all others.

**Expiry Date** means the date so specified in Item 2 of Schedule 4.

**Facilities for Service to the Public** means a facility described section 24KA(2) of the *Native Title Act 1993* (Cth) that is or will be operated for the general public.

**Force Majeure Event** means any circumstances, other than an industrial dispute, that is not caused by or within the reasonable control of a party (**Affected Party**), whether directly or indirectly, but only to the extent that:

(a) despite the exercise of reasonable diligence, it cannot be (or be caused to be) prevented, avoided or removed by the Affected Party;

(b) it materially adversely affects (in cost and/or time) the Affected Party's ability to perform its obligations under this Sales Permit;

(c) the Affected Party has taken all reasonable precautions, due care and reasonable alternative measures in order to avoid the effect of the circumstance on its ability to perform its obligations under this Sales Permit (and to mitigate the consequences of it); and

(d) the circumstance is not the direct or indirect result of the Affected Party's failure to perform any of its obligations under this Sales Permit,

and includes:

(e) acts of God, lightning strikes, earthquakes, floods, droughts, storms, mudslides, explosions, fires or other natural disasters, pandemics, epidemics, acts of war, acts of public enemies, riots, civil commotions, malicious damage, invasions, sabotage, blockades and revolution;

(f) strikes, lockouts, work bans, blockades or picketing, limitation of work or other industrial disturbance, other than an industrial dispute; and

(g) the failure of a third party to supply goods, works or utilities provided such a failure is due to a Force Majeure Event affecting the third party.

**Forest Entitlement Area** has the meaning as defined in the Act.

**General Value Review** means a review carried out in accordance with clause 5.6.

**Get** has the same meaning as defined in the Act.

**GST** has the same meaning as defined in the GST Legislation.

**GST Legislation** means *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

**High-Risk Plant** means any Plant which has a higher than normal risk associated with its operation.

**Immediate Danger Zone** means that part of the Supply Zone within the immediate vicinity of quarrying activities being carried out at the material time.

**Indigenous Land Use Agreement** or **ILUA** means an indigenous land use agreement as defined in the *Native Title Act 1993* (Cth) and registered under Subdivision B or Subdivision C of Division 3 of Part 2 of the *Native Title Act 1993* (Cth).

**Landholder** means a person having an interest in land within the Supply Zone, in whole or in part, and includes any successors in title.

**Local Government** has the same meaning as defined in the *Local Government Act 2009* (Qld).

**Lost Time Incident** means any work-related injury or disease which results in the temporary incapacity of a worker where they cannot perform their regular or alternate duties on the next working day, after the day on which the injury or disease occurred.

**Mechanical Equipment** means and includes, but is not limited to, all items of Plant or equipment used by the Permittee, its Representatives, invitees or Operators on the Supply Zone.

**Minimum Quantity** means the quantity of Quarry Material specified in Item 12 of Schedule 4.

**Minor Accident** means an accident or injury that does not require hospitalisation but does require treatment or assessment by a medical practitioner.

**Native Title** has the same meaning as defined in the *Native Title Act 1993* (Cth).

**Native Title Assessment** means the assessment made in accordance with the *Native Title Act 1993* (Cth) regarding the Getting of Quarry Material, the issue of this Sales Permit, and change to the position or the dimensions of the Supply Zone.

**Native Title Holders** has the same meaning as defined in the *Native Title Act 1993* (Cth).

**Notice** means a written notice that must be provided in accordance with clause 22, and which is formal notice under this Sales Permit.

**Operational Area** means a part of the Supply Zone where Quarrying Operations may be conducted as shown in the map/s in Schedule 3. Where an Operational Area is not specifically shown in any of the map/s, the Operational Area is the Supply Zone less any identified excluded or buffer areas.

**Operator** means the Permittee, its employees, contractors, sub-contractors or any other persons engaged or employed from time to time for the performance of Quarrying Operations or an invitee of any Operator to a Supply Zone.

**Other Measuring Method** means a measuring method approved by Notice by the Chief Executive other than Other Scale Equipment, Scale Equipped Loader Bucket, Volumetric Truck Counts or Weighbridge, that is certified and maintained in accordance with the *National Measurement Act 1960* (Cth) (if applicable) and is used by the Permittee to measure the mass of the Quarry Material removed from the Supply Zone or Got under this Sales Permit. Other Measuring Method could include by Blast Report solely or supported by other measuring methods or processes.

**Other Sales Permits** means any other sales permits for Quarry Material issued pursuant to the Act and held by the Permittee.

**Other Scale Equipment** means a measuring device or equipment, other than a Scale Equipped Loader Bucket or a Weighbridge, for determining the weight of Quarry Material, that is certified and maintained in accordance with the *National Measurement Act 1960* (Cth) and is approved by Notice by the Chief Executive.

**Performance Year** means, regarding the Minimum Quantity, the 12 month period preceding to the end date specified in Item 12 of Schedule 4 for the first Performance Year and thereafter each subsequent 12 month period.

**Periodic Declaration** means a document in the form provided or approved by the Chief Executive for the purpose of entering information about the Quarry Material removed from the Supply Zone during a Declaration Period, including any other document supporting the removal quantity if requested by Notice by the Chief Executive.

**Permittee** means the party listed as “Permittee” at Item 1 of Schedule 4.

**Plant** means any plant and equipment, including but not limited to any excavator, loader, dozer, scraper or truck, used by the Permittee or on the Permittee’s behalf in connection with the Quarrying Operations undertaken under this Sales Permit.

**Quantity Survey** means a survey of an area Notified by the Chief Executive undertaken by an Approved Surveyor to determine the topography of the area as at the date of the Quantity Survey and used to calculate the quantity of Quarry Material removed from the surveyed area between the date of the Quantity Survey and the date of an earlier Terrain Survey or Quantity Survey.

**Quarry Management Plan** means the Quarry Management Plan required under clause 25, as amended and approved from time to time.

**Quarry Material** has the same meaning as defined in the Act but excludes Topsoil in all situations and, if applicable, includes the types of Quarry Material specified and defined in Item 10 of Schedule 4.

**Quarrying Operations** means any activity undertaken for the purpose of, or in association with, Getting Quarry Material pursuant to this Sales Permit, including, but not limited to:

(a) entering the Supply Zone to Get Quarry Material;

(b) the removal of Quarry Material from the Supply Zone;

(c) the construction, maintenance and use of buildings, Weighbridge, water storage facilities, fencing, and other facilities, infrastructure or works in the Supply Zone; and

(d) the construction, maintenance and use of Access Roads.

**Records** means all information necessary to:

(a) record all operations under this Sales Permit and accurate details of all Quarry Material Got from the Supply Zone, including, but not limited to, Periodic Declarations, Removal Dockets, procedures documented under clause 4.4, records maintained under clause 4.5, and (if applicable) records produced by any Scale Equipped Bucket Loader, Other Scale Equipment and/or Weighbridge;

(b) record where the Quarry Material removed from the Supply Zone was used and/or to whom the Permittee sold or supplied the Quarry Material to; and

(c) compile each Terrain Survey and Quantity Survey, as applicable.

**Recipient** means a person or entity receiving Confidential Information.

**Registered Surveyor** has the same meaning as defined in the *Surveyors Act 2003* (Qld).

**Removal Docket** means a document, in the form provided by the Chief Executive, or in another form approved by the Chief Executive, providing details of each vehicular load of Quarry Material Got under this Sales Permit and removed from the Supply Zone, and any other information as required on the document.

**Representative** means an employee, agent, officer, director, contractor, subcontractor or other authorised representative of a party.

**Risk** means risk of death, injury or illness.

**Road** means:

(a) a State-controlled road (as defined in the *Transport Infrastructure Act 1994* (Qld)); or

(b) a road administered by the Local Government/s applicable to the Supply Zone.

**Safety Sign** means a sign which is clearly legible and provides adequate notice to all persons who may be exposed to the hazard, of the presence and nature of the hazard, and is designed in accordance with *AS 1319 – Safety Signs for the Occupational Environment*.

**Sale Quantity** means the amount of Quarry Material specified in Item 4 of Schedule 4, or as adjusted by clause 13.2.

**Sales Permit** means this Sales Permit and includes all schedules and annexures.

**Scale Equipped Loader Bucket** means a machine used for the loading of Quarry Material that measures the mass of the Quarry Material, using scales as certified and maintained in accordance with the *National Measurement Act 1960* (Cth), as it is being loaded for transportation for removal from the Supply Zone.

**Secured Amount** means the amount specified in Item 11 of Schedule 4, or as varied by the Chief Executive under clause 6.

**Serious Bodily Injury** means an injury to a person that causes:

(a) the injured person's death; or

(b) the loss of a distinct part or an organ of the injured person's body; or

(c) the injured person to be absent from the person's voluntary or paid employment for more than 4 days; or

(d) a person to be admitted to a hospital as an in-patient.

**Site Safety Management System** means a documented and auditable safety and health management system for the Supply Zone and the associated Quarrying Operations that identifies risk management elements, practices and resources for developing, implementing, maintaining, reviewing and continually improving policies and practices to ensure the safety and health of persons who may be affected by Quarrying Operations.

**Site Senior Executive** means the most senior official employed or otherwise engaged by the Permittee and who is located at or near the Supply Zone and has responsibility for the Quarrying Operations within the Supply Zone.

**Special Conditions** means any special conditions specified in Item 14 of Schedule 4.

**State** means the State of Queensland.

**State Forest** has the same meaning as defined in the Act.

**Supply Zone** means that area within the lot/s on plan/s specified in Item 3 of Schedule 4 and identified as the Supply Zone on the map/s in Schedule 3.

**Survey Map** means a cartographic plan image of the Supply Zone, any applicable Operational Areas, or any other areas specified by the Chief Executive, produced by an Approved Surveyor as part of a Terrain Survey, detailing contours at not more than 0.5 metre intervals, the boundaries of the surveyed area, water drainage, and the locations of infrastructure, Roads, Access Roads, stockpiles and other relevant features required by the Chief Executive.

**Tax Invoice** has the same meaning as defined in the GST Legislation.

**Term** means the period commencing on the Commencement Date and ending on the Expiry Date, unless this Sales Permit is terminated earlier in accordance with the terms of this Sales Permit or varied in accordance with clause 11.

**Terrain Survey** means a survey undertaken by an Approved Surveyor before the commencement of the relevant Quarrying Operations to:

(a) determine the topography of the Supply Zone, any Operational Areas specified, or any other areas specified by the Chief Executive and prepare a Survey Map; and

(b) provide an initial baseline for the purposes of future calculations of the quantity of Quarry Material taken from the surveyed area.

**Timber Reserve** has the same meaning as defined in the Act.

**Tonne** means the quantity of Quarry Material measuring one metric tonne of Quarry Material at the time of its weighing on the Scale Equipment Loader Bucket, Other Scale Equipment or Weighbridge at the time of its removal from the Supply Zone.

**Topsoil** has the same meaning as defined in the Act.

**Value** means the amount, as specified in Item 10 of Schedule 4 and adjusted under clauses 5.4 and 5.6, payable by the Permittee for each Tonne or Cubic Metre, as applicable, of Quarry Material Got under this Sales Permit, exclusive of GST, or as adjusted from time to time as a result of the Value Reviews and General Value Reviews. The price payable by the Permittee is the Value plus GST.

**Value Review** means a review conducted under clause 5 of this Sales Permit.

**Volumetric Loader Bucket** means a loader bucket or other container, for which the Permittee knows and regularly verifies its measured cubic volume capacity, to determine the quantity of Quarry Material removed from the Supply Zone.

**Volumetric Truck Count** means the Permittee's tallying system for counting and recording the number of truck and/or other vehicle loads of Quarry Material removed from the Supply Zone and of the known volumetric and/or weight carrying capacity (as applicable) of each truck or other vehicle used.

**Work Caused Illness** means:

(a) an illness contracted by a person to which work, a workplace, a workplace activity or specified High Risk Plant was a significant contributing factor; or

(b) the recurrence, aggravation, acceleration, exacerbation or deterioration in a person of an existing illness if a, workplace, a workplace activity or specified High Risk Plant was a significant contributing factor to the recurrence, aggravation, acceleration, exacerbation or deterioration.

**Weighbridge** means any weighbridge certified and maintained in accordance with the *National Measurement Act 1960* (Cth) and approved by Notice by the Chief Executive for use to measure the mass of the Quarry Material removed from the Supply Zone.

**Year** means a financial year beginning 1 July of a calendar year and ending 30 June the next calendar year.

## 2. Interpretation

In this Sales Permit:

(a) headings are for convenience only and do not affect interpretation,

and unless the context indicates a contrary intention:

(b) if the Permittee constitutes more than one person, then that expression refers to all persons, and the obligations under this Sales Permit binds those persons jointly and severally;

(c) 'person' includes an individual, the estate of an individual, a corporation, an authority, an association or a joint venture (where incorporated), a partnership and a trust;

(d) a reference to a party includes that party's executors, administrators, successors and permitted assigns, including persons taking by way of novation and, in the case of a trustee, includes a substituted or an additional trustee;

(e) a reference to a document (including this Sales Permit) is to that document as varied, novated, ratified or replaced from time to time;

(f) a reference to a statute includes its delegated legislation and a reference to a statute, delegated legislation, code of practice or a provision of either includes consolidations, amendments, re-enactments and replacements;

(g) a word importing the singular includes the plural (and vice versa), and a word indicating a gender includes every other gender;

(h) a reference to a party, clause, schedule, attachment or annexure is a reference to a party, clause, schedule, attachment or annexure to or of this Sales Permit, and a reference to this Sales Permit includes all schedules, attachments and annexures to it;

(i) 'includes' in any form is not a word of limitation;

(j) a reference to $ or dollar is to Australian currency;

(k) if a word or phrase is given a defined meaning, any other part of speech or grammatical form of that word or phrase has a corresponding meaning; and

(l) no rule of construction will apply to a provision of this Sales Permit to the disadvantage of a party merely because that party drafted the provision or would otherwise benefit from it.

## Schedule 2 Safety Conditions

### 1. General

(a) The Permittee must comply and ensure that all its Operators comply with these Safety Conditions, in addition to the obligations as applicable to any Quarrying Operations under the *Work Health and Safety Act 2011* (Qld) or under the *Mining and Quarrying Safety and Health Act 1999* (Qld) and the *Mining and Quarrying Safety and Health Regulation 2017* (Qld).

(b) Without limiting the obligations and responsibilities contained in all relevant laws and codes of practice the Permittee must ensure that:

(i) all Mechanical Equipment, other vehicle and machinery being used in connection with any Quarrying Operations is fit for purpose, has the appropriate operator protective structures and fittings applicable to its use, and has the appropriate registration or permit applicable to its use; and

(ii) all Operators operating Mechanical Equipment being used in connection with any Quarrying Operations have the Competency required to operate such Mechanical Equipment and hold all relevant licences or certificates of Competency required to operate such Mechanical Equipment.

(c) The Permittee must ensure that at all times on the Supply Zone that Quarrying Operations and any act associated with the Quarrying Operations are undertaken in a manner that eliminates or reduces the occurrence of a Dangerous Event.

(d) The Permittee must adopt and implement appropriate measures and procedures that:

(i) identify and assess Risks;

(ii) eliminates or minimises exposure to Risk;

(iii) is reviewed on a regular basis; and

(iv) prompts it to take reasonable precautions and exercise proper diligence to ensure the obligations pursuant to this Schedule 2 are met.

(e) The Permittee must by Notice notify the Chief Executive, before Quarrying Operations commence, of the name and contact details of the Site Senior Executive who will represent the Permittee on the Supply Zone, and in addition to this obligation, the Permittee must at all times during the Term of this Sales Permit keep the Chief Executive notified of the name and contact details of any replacement personnel appointed to the Senior Site Executive position.

(f) Where required under either the *Work Health and Safety Act 2011* (Qld) or the *Mining and Quarrying Safety and Health Act 1999* (Qld) for a Quarrying Operation, the Permittee must have a Site Safety Management System in place and provide a Notice confirming this to the Chief Executive before that Quarrying Operation commences under this Sales Permit.

### 2. Accident reporting

(a) The Permittee must by Notice report to the Chief Executive the details of any Event, whether directly or indirectly attributed to the performance of this Sales Permit, which may compromise the normal productive operation of the Quarrying Operations, and/or causing death or hospitalisation of a person, within 24 hours of the occurrence of the Event.

(b) The Permittee must by Notice report to the Chief Executive Minor Accidents and Lost Time Incidents within 7 days of the occurrence of the Minor Accident or Lost Time Incident.

### 3. Roadside activities

The Permittee must temporarily close an Access Road at all access points to an Immediate Danger Zone by the use of Safety Signs, appropriate authorised temporary barriers and/or

traffic control personnel whenever acts done in the performance of this Sales Permit constitute a hazard to users of an Access Road.

## 4. Action on non-compliance

(a) If the Permittee or an Operator does not comply with these Safety Conditions the Chief Executive may do one or more of the following, at its sole discretion:

(i) advise the Permittee of the breach and direct, by Notice, that it be rectified within a specified time;

(ii) direct, by Notice, the immediate suspension of Quarrying Operations until the breach is rectified;

(iii) advise the Chief Inspector of Mines - Mineral Mines and Quarries, Resources Safety and Health Queensland of the extent and nature of the breach;

(iv) direct, by Notice, that an Operator be removed from the Supply Zone; or

(v) terminate this Sales Permit by Notice.

(b) In deciding which action to take pursuant to clause 4(a) of this Schedule, the Chief Executive will take into account:

(i) the nature of the breach;

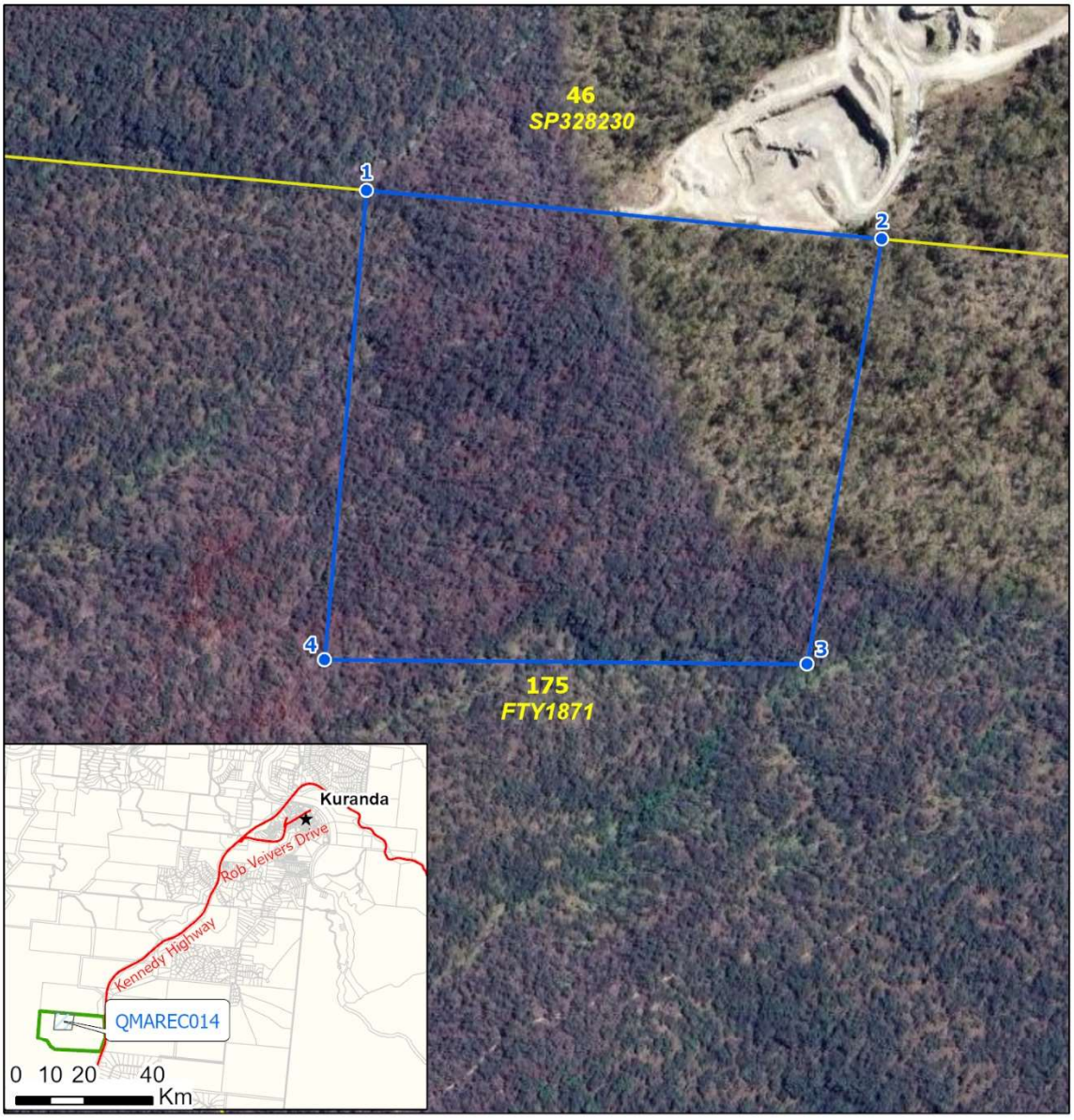
(ii) the severity of the breach;

(iii) previous acts of non-compliance;

(iv) the Permittee’s performance under this Sales Permit; and

(v) any other factor/s the Chief Executive, at its sole discretion, determines relevant.

## Schedule 3 Map/s showing Supply Zone, Operational Area/s and Access Road/s




**SUPPLY ZONE MAP**
**PERMITTEE:** Jacqshar Pty Ltd
**QUARRY NAME:** Top Rock Extension
**SALES PERMIT:** 2025024
**SALE AREA UNIT:** A
**MUID:** QMAREC014
**AREA:** 11.8 Ha
**Part of Lot** 175 **on Plan** FTY1871
**LGA:** Mareeba Shire Council

Supply Zone
Supply Zone Boundary Point
Cadastral Boundary
Lot 175 on FTY1871
Road
Town

N

Prepared by: CroninD
23/10/2025
GDA2020
Map Units: Degree

0 100 200 Metres

1:4,000
Approx. Scale - A4

Queensland Government
Forestry
Department of Primary Industries

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| Supply Zone Boundary Points | | |
|---|---|---|
| Point | Latitude | Longitude |
| 1 | -16.854355 | 145.592049 |
| 2 | -16.854680 | 145.595491 |
| 3 | -16.857518 | 145.594992 |
| 4 | -16.857488 | 145.591769 |

# Schedule 4 Sales Permit Details

## Item 1 Sales Permit Number and Party Details

**Sales Permit number: 2025024**

**Granted in: Gympie**

**Chief Executive:**

| | |
|---|---|
| Department Name: | State of Queensland acting through the Department of Primary Industries |
| ABN/ACN: | 66 934 348 189 |
| Street Address: | Level 12, 275 George Street, Brisbane QLD 4000 |
| Postal Address: | PO Box 652, Cairns Qld 4870 |
| Contact Position | Manager Quarry Material |
| Contact Telephone: | 07 4091 8136 |
| Contact Email (some Notices cannot be given by email): | Fp.Northfma@dpi.qld.gov.au |

**Permittee:**

| | |
|---|---|
| Permittee Name: | Jacqshar Pty Ltd |
| ABN/ACN: | ACN 102 876 924, ABN 14 618 159 623 |
| Street Address: | Unit 5, 2 James St, Cairns North Qld 4870 |
| Postal Address: | Po Box 993N, Cairns North Qld 4870 |
| Contact name | Murray Frederick Moule |
| Contact Telephone: | 0418 772 125 |
| Contact Email (some Notices cannot be given by email): | murray@fgf.com.au |

## Item 2 Term (Schedule 1)

| | |
|---|---|
| Commencement Date: | The date the last party signs the Sales Permit |
| Expiry Date: | 30 September 2035 |

## Item 3 Location of Supply Zone (Schedule 1 and Schedule 3)

The Supply Zone is located on part of Lot 175 on Plan FTY1871 known as ‘Top Rock Extension’.

## Item 4 Sale Quantity (Schedule 1)

| | |
|---|---|
| Sale Quantity: | "All Available", being all the Quarry Material within the Supply Zone that may be extracted in accordance with the Sales Permit. |

## Item 5 Time Period for approvals and permits (clause 3.2)

| | |
|---|---|
| Time Period: | 1 year from the Commencement Date. |

## Item 6 Survey Details (clauses 4.1 and 4.2(a))

| | | |
|---|---|---|
| Terrain Survey: | If requested by the Department | |
| Periodic Quantity Surveys: | No, unless subsequently required by the Department by Notice to the Permittee after the Commencement Date | |
| Period for periodic Quantity Surveys: | Not applicable, unless subsequently required by the Department by Notice to the Permittee | |
| Conversion Factors: | Loose/crushed Cubic Metres → Tonnes: | 1.8 |
| | In-situ Cubic Metres → Tonnes: | 2.7 |
| | *Note: Conversion Factors may be varied under clause 4.3.* | |

## Item 7 Periodic Declaration (clause 4.6 and Schedule 1)

| | |
|---|---|
| Declaration Period: | Each calendar month |
| Address: | Fp.Northfma@dpi.qld.gov.au |
| Time for providing Periodic Declarations: | Within 14 days from the end of each Declaration Period |

## Item 8 Removal Dockets (clause 4.9 and Schedule 1)

| | |
|---|---|
| Removal Dockets required to be completed: | Yes |

## Item 9 Blast Reports (clause 4.13 and Schedule 1)

| | |
|---|---|
| Blast Reports required to be provided: | Yes |
| Time for providing Blast Reports: | At the same time that Periodic Declarations are submitted |
| Address: | Fp.Northfma@dpi.qld.gov.au |

## Item 10 Values payable for Quarry Material and Value Reviews (clause 5 and Schedule 1)

| Value per unit payable for Quarry Material (Note price payable is Value per unit plus GST) | Each type of Quarry Material | Code for type of Quarry Material |
|---|---|---|
| $2.60 per Tonne excluding GST | Hardrock Quarry Material | TMHC |
| $1.30 per Tonne excluding GST | Weathered Quarry Material | TMOM |

| Defined type | Definition |
|---|---|
| Hardrock Quarry Material | means all Quarry Material derived from Competent Rock. |
| Weathered Quarry Material | means all Quarry Material derived from Weathered Rock or Overburden |

**First Value Review date:** 01/07/2026

**First General Value Review date:** 01/07/2030

## Item 11 Secured Amount for Cover of Account (Schedule 1)

Secured Amount: $60,000 including GST

## Item 12 Minimum Quantity (clause 8.1 and Schedule 1)

Minimum Quantity: 5,000 Tonnes

End date of first Performance Year: 31/10/2026

## Item 13 Native Title Assessment for Supply Zone (clauses 38.1 and 38.2)

Native Title Assessment: Module J

## Item 14 Special Conditions (clause 39.1 and Schedule 1)

S.C. 1 The following terms apply to this Sales Permit:

**Competent Rock**: means rock, which is not heavily weathered, is strong, durable and hard, is resistant to erosion or deformation and has a high mechanical strength and requires the use of explosives to extract.

**Weathered Rock**: Means rock that has been affected by exposure to the action of weather and atmospheric conditions and has been altered chemically and physically with subsequent loss of engineering properties and is able to be extracted without the use of explosives.

**Overburden**: means Quarry Material consisting mainly of clay soil or heavily decomposed rock, which is not dimensionally stable.

## Schedule 5 Deed Poll example

**EXAMPLE ONLY – OBTAIN A TEMPLATE FOR USE FROM THE Chief Executive**

**Permittee Details**

| | |
|---|---|
| Permittee Name: | [Insert details] (**Permittee**) |
| Address: | [Insert details] |
| Phone: | [Insert details] |
| Email: | [Insert details] |
| Sales Permit Number | [Insert number] |

**Property Details**

| | |
|---|---|
| Property: | Lot [insert Lot] on Plan [insert Plan] (**Property**) |

1. The Permittee is undertaking quarry activities on the Property which is the location of the quarry material to be removed by the Permittee under the terms of the Sales Permit.
2. The Permittee agrees to indemnify each landholder who has an interest in whole or in part of the Property (including all successors in title) against all liability, loss, costs and expenses (including any actions, claims, proceedings or demand brought by any third party, and any legal fees, costs and disbursements) arising from or incurred in connection with:
   (a) any unlawful, wilful or negligent act or omission by the Permittee, the Permittee's Representatives, or any person for whose conduct the Permittee is liable; and
   (b) personal injury (including sickness and death) or property damage or loss in connection with the performance (or attempted or purported performance or non-performance) of Quarrying Operations or any other activity in connection with this Sales Permit.
3. The Permittee's liability to indemnify the landholder of the Property will be reduced proportionally to the extent that any negligent act or omission by the landholder caused the loss or liability.
4. The construction, performance and validity of this deed shall be in all respects governed by the laws of Queensland.

**Executed as a deed poll**

**Signed, sealed and delivered by**

**[insert Permittee Name]**

_____
Signature of Witness

_____
Name of Witness in full

**EXAMPLE ONLY – DO NOT SIGN**

_____
Signature

Date: _____

## Execution Page

**Executed** as an agreement

Signed for and on behalf of the State of Queensland acting through the Director-General of the Department of Primary Industries ABN 66 934 348 189 in the capacity of Chief Executive pursuant to the Forestry Act 1959 by

_____
(name)

_____
(position)

a person duly authorised to act in that behalf in the presence of:

_____
Signature of Witness

_____
Name of Witness in full

_____
Signature

Date:_____

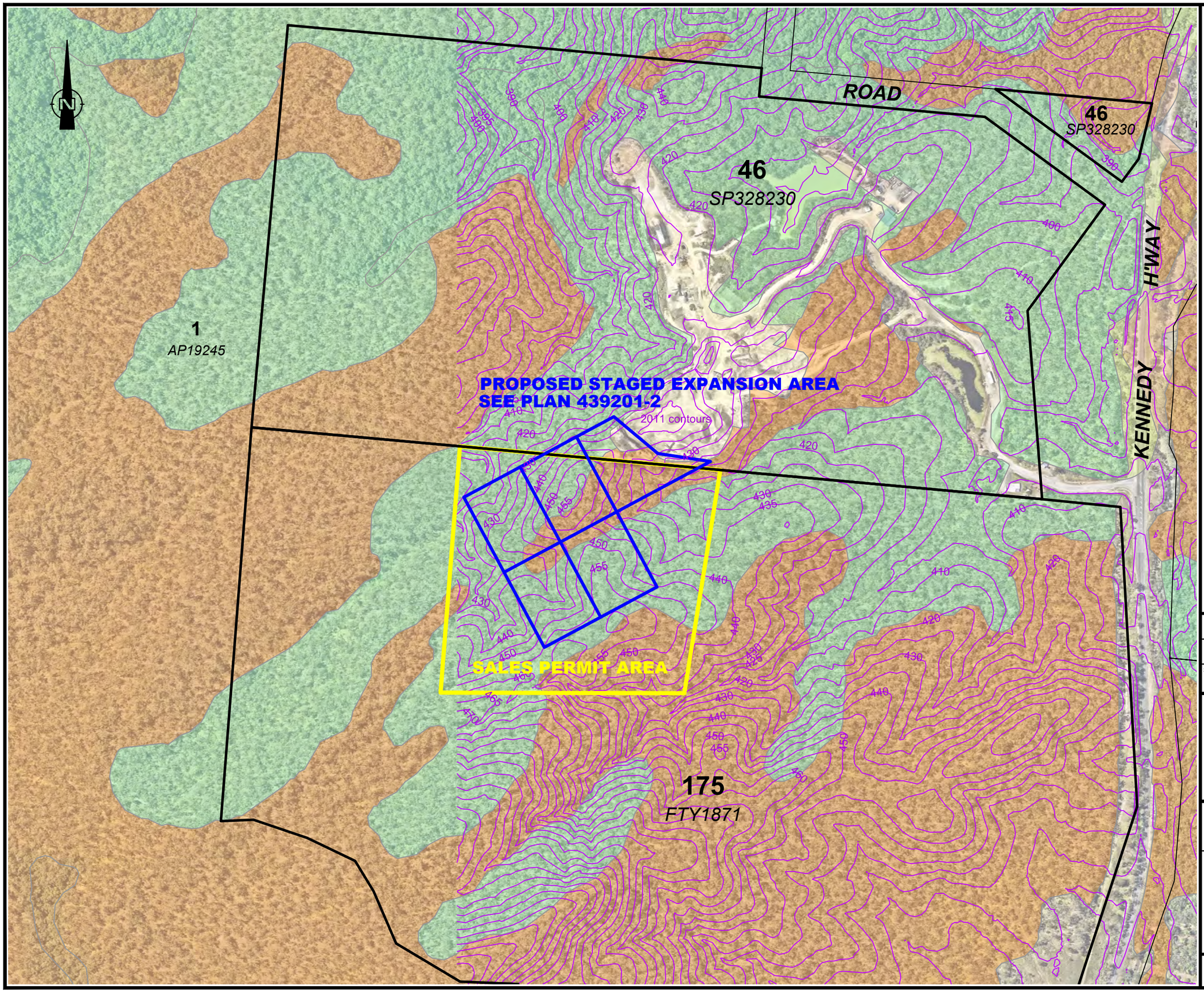
Executed by Jacqshar Pty Ltd (ACN 102 876 924) in accordance with section 127 of the *Corporations Act 2001* (Cth):

_____
Signature of sole Director

Murray Frederick Moule

Date:_____

# Annexure 8: Proposal Plans




**IMPORTANT NOTE**

This plan was prepared as a concept plan only and accuracy of all aspects of the plan have not been verified.
All lots, areas and dimensions are approximate only, Subject to relevant studies, Survey, Engineering and Government approvals.
No reliance should be placed on the plan and RPS AAP Consulting Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this plan.

Boundaries derived from Dept Resources DCDB and are approx only (+/- 57m)

Aerial imagery by NearMap
Date of Capture 23 Oct 2025

Contours & Drainage paths from DNRM DEM - Speewah_2011_Loc_1K_DEM_1m

## NOTES

Level Datum: AHD
Origin of Levels: 2011 DNRM DEM
Meridian: GDA2020 MGA Z55
Contour Interval: 5.0m

## LEGEND

Vegetation management regional ecosystem mapping

- Category A or B area containing of concern regional ecosystems
- Category A or B area that is least concern regional ecosystems

0 50 100 150 200 250
metres

SCALE 1:5000 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE. (A3)

| RPS CLIENT MANAGER | | SURVEYED |
|---|---|---|
| A Kerlin | | |
| COMPILED | | CAD REF |
| AMK | | 439201-1c.DWG |
| SHEET SIZE | SHEET 1 OF SHEETS 2 | |
| A3 | | |

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A TETRA TECH COMPANY

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# FGF DEVELOPMENTS PTY LTD

## TOPROCK QUARRY

## SALES PERMIT SITE PLAN

| SCALE | DATE | DRAWING NO. | ISSUE |
|---|---|---|---|
| 1:5000 | 28/5/2026 | 439201-1 | C |

# PROPOSED STAGED EXPANSION AREA

*5.423 ha*

**46**
*SP328230*

**175**
*FTY1871*

2011 contours

15m x 15m GRID

STAGE 1 1025m²

STAGE 2 1080m²

STAGE 3 1080m²

STAGE 4 1080m²

STAGE 5 1080m²

CH 0.0 CH 15 CH 30 CH 45 CH 60 CH 75 CH 90 CH 105 CH 120 CH 135 CH 150 CH 165 CH 180 CH 195 CH 210 CH 225 CH 240 CH 255 CH 270

CH -15.0 CH -30.0 CH -45.0 CH -60.0

SALES PERMIT AREA

## REGIONAL ECOSYSTEMS AREAS

| | STAGE 1 | | STAGE 2 | | STAGE 3 | | STAGE 4 | | STAGE 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| LOT 46 | 1985m² | 1738m² | 869m² | | | | | | | |
| LOT 176 | 121m² | 5507m² | 5931m² | 4000m² | 9433m² | 1367m² | 9240m² | 1560m² | 9440m² | 1360m² |
| TOTAL | 2106m² | 7245m² | 6800m² | 4000m² | 9433m² | 1367m² | 9240m² | 1560m² | 9440m² | 1360m² |

**IMPORTANT NOTE**

This plan was prepared as a concept plan only and accuracy of all aspects of the plan have not been verified.
All lots, areas and dimensions are approximate only, Subject to relevant studies, Survey, Engineering and Government approvals.
No reliance should be placed on the plan and RPS AAP Consulting Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this plan.

Boundaries derived from Dept Resources DCDB and are approx only (+/- 57m)

Aerial imagery by NearMap
Date of Capture 23 Oct 2025

Contours from DNRM DEM - Speewah_2011_Loc_1K_DEM_1m

## NOTES

Level Datum: AHD
Origin of Levels: 2011 DNRM DEM
Meridian: GDA2020 MGA Z55
Contour Interval: 5.0m

FGF Survey data contours
GDA 2020 / AusGeoid 2020
Date of survey: 25/02/26
Contour Interval: 1.0m

## LEGEND

Vegetation management regional ecosystem mapping

- Category A or B area containing of concern regional ecosystems
- Category A or B area that is least concern regional ecosystems

0 15 30 45 60 75
metres

SCALE 1:1500 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE. (A3)

| | |
|---|---|
| RPS CLIENT MANAGER: A Kerlin | SURVEYED: |
| COMPILED: AMK | CAD REF: 439201-1c.DWG |
| SHEET SIZE: A3 | SHEET OF SHEETS: 2 OF 2 |

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**FGF DEVELOPMENTS PTY LTD**

**TOPROCK QUARRY**

**PROPOSED STAGED EXPANSION AREA**

| SCALE | DATE | DRAWING NO. | ISSUE |
|---|---|---|---|
| 1:1500 | 28/5/2026 | 439201-2 | C |

# Annexure 9: Environmental Assessment Report

# TOP ROCKS QUARRY

## Environmental Assessment Report

R82278 442128
28 May 2026

rpsgroup.com

## Document status

| Version | Purpose of document | Authored by | Reviewed by | Approved by | Review date |
|---|---|---|---|---|---|
| 0 | Environmental Assessment Report | M. Palmer | M. Davis | 28/05/2026 | 28/05/2026 |
| | | | | | |
| | | | | | |

## Approval for issue

Megan Davis 

This report was prepared by RPS within the terms of RPS' engagement with its client and in direct response to a scope of services. This report is supplied for the sole and specific purpose for use by RPS' client. The report does not account for any changes relating the subject matter of the report, or any legislative or regulatory changes that have occurred since the report was produced and that may affect the report. RPS does not accept any responsibility or liability for loss whatsoever to any third party caused by, related to or arising out of any use or reliance on the report.

**Prepared by:**

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# 1 INTRODUCTION

RPS AAP Consulting Pty Ltd has been engaged by Fgf Developments Pty Ltd to prepare and lodge and Environmental Assessment Report for the TopRock Quarry for extraction area expansion. This expansion will extend into Lot 175 FTY1871 adjacent to the current site and Environmental Authority located at the Kennedy Highway, Kuranda on Lot 46 on SP328230 hereafter referred to as "the site". Refer to **Appendix A** for the proposed expansion area.

## 1.1 Site Details

TopRock Quarry is located within the Mareeba Shire Council area, approximately 5 kms from the Kuranda village turnoff on the Kennedy Highway. TopRock is a privately owned and run quarry, set up to supply construction aggregates and road base materials to the local market in and around the Cairns and Tablelands area. This report refers to the proposed staged expansion into Lot 175 FTY1871 as per **Figure 1** below, refer to **Appendix A** for the full Proposed Expansion Plans.

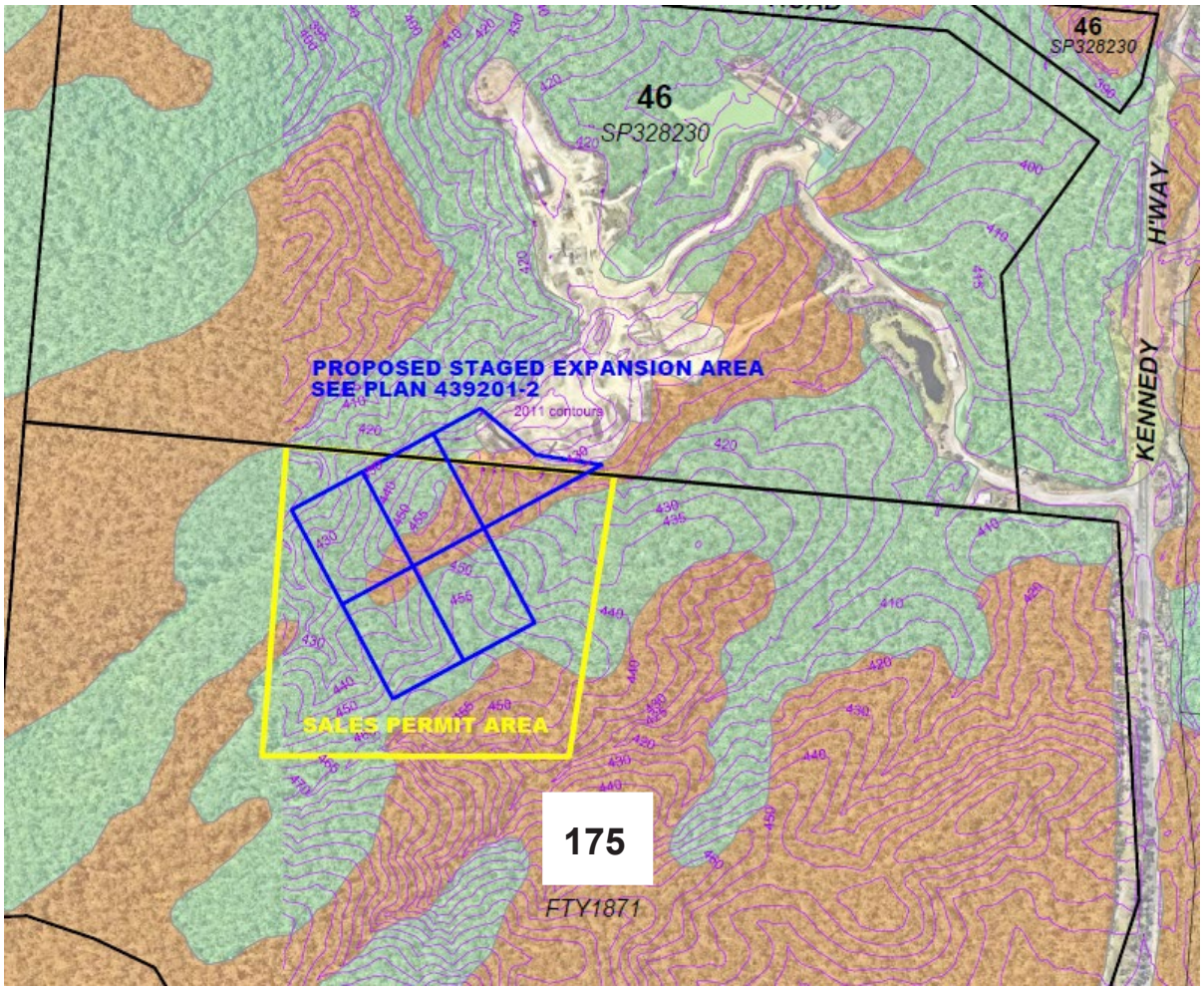



**Figure 1 Proposed staged Expansion area**

## 1.2 Environment Relevant Activity Details

The activity will undertake these Environmentally Relevant Activities (ERA):

- ERA16 Extractive and screening activities Threshold 2(b) extracting between 5000t to 100,000t per year of material, and
- ERA16 Extractive and screening activities Threshold 3(a) screening 5000t to 100,000t per year of material

## 1.3 Purpose of the Environmental Assessment Report

The purpose of this Environmental Assessment Report (EAR) is to provide an overview of the proposed Environmental Authority application incorporating information to address the minimum application requirements prescribed under Section 226A (f) of the *Environmental Protection Act 1994*, which includes but is not limited to:

a. a description of the proposed activity;

b. a description of the environmental values (both onsite and offsite) likely to be affected by the proposed activity;

c. details of any emissions or releases likely to be generated by the proposed activity;

d. a description of the risk and likely magnitude of impacts on the environmental values;

e. details of the management practices proposed to be implemented to prevent or minimise adverse impacts;

f. details of how the land the subject of the application will be rehabilitated after the relevant activity;

g. a description of the proposed measures for minimising and managing waste generated by the relevant activity; and

h. details of any site management plan that relates to the land that is the subject of the application.

# 2 METHODOLOGY

## 2.1 Desktop Assessment

The desktop assessment involved reviewing relevant environmental databases, books, technical reports, maps and legislation to identify ecological values with potential to occur within and surrounding the Project area. Aerial photography of recent and historical imagery (Queensland Globe, 2020) was also assessed.

All database searches were undertaken using a standard 5 km buffer surrounding the Project area (using the approximate central point of the site.

This review included an assessment of the following information:

- Aerial Photograph Interpretation (API) to determine the broad categorisation of vegetation within and surrounding the site and to review the extent of historical clearing and land use, and any other significant environmental features such as watercourses and wetlands (Queensland Globe, 2026).
- Regulated vegetation management map: The most recent version of the DNRM Regulated Vegetation Management mapping including regional ecosystems, essential habitat mapping.
- Wildlife Online database of flora and fauna. This database holds records of plants and animals that have either been sighted or collected within a given radius of the site. The records held in this database are maintained by DETSI.
- The review previous technical reports/impact assessments relevant to the development.

# 3 EXISITING ENVIRONMENT

**Section 3** establishes the regional and local environmental values for the site.

## 3.1 Climate and Weather

A summary of monthly climate statistics from the Bureau of Meteorology, Kuranda Railway Station (31036) is provided in **Table 1** below.

**Table 1 Summary of Regional Climate Statistics (Station 31036)**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean Max | 33.6 | 33.5 | 32.5 | 31.2 | 29.2 | 28.2 | 27.5 | 28.5 | 30.1 | 31.9 | 33.7 | 33.2 | 30.2 |
| Mean Min | 28.7 | 29.4 | 28.9 | 27.4 | 26.0 | 24.4 | 24.2 | 24.8 | 26.7 | 27.6 | 29.3 | 29.2 | 28.3 |
| Mean Rainfall | 417.7 | 423.4 | 443.5 | 234.7 | 108.7 | 72.1 | 51.6 | 43.4 | 38.0 | 50.8 | 79.0 | 189.7 | 2145.3 |

## 3.2 Topography and Drainage

The topography is steep hills with non-perennial seasonal streams. The streams in the area all form part of the Barron River catchment that drains towards the east in the Coral Sea just north of Cairns. The expansion site is nearby to Harren Creek which runs diagonally through sites lot.




**Figure 2 Contours and Waterways (Queensland Globe, 2026)**

## 3.3 Ecology

### 3.3.1 Flora

Majority of the site and the expansion area is mapped as remnant vegetations (Category B) with the current quarry area mapped as (Category X) exempt cleared, refer to **Figure 3** below. The regional ecosystem mapping indicates two of concern communities potentially within the site, refer to **Table 2** and **Figure 2** below for the descriptions.

**Table 2 Regional Ecosystem descriptions**

| Regional Ecosystem ID | BD Status | Community Description |
|---|---|---|
| 7.11.7a | No concern at present | Complex notophyll vine forests (with emergent Agathis robusta). Foothills and uplands of areas excluding the Seaview Range Subregion. Moist rainfall zone. Not a Wetland. (BVG1M: 5c). |
| 7.11.33 | Of concern | Eucalyptus reducta (Queensland stringybark) open forest to woodland. Metamorphics. Not a Wetland. (BVG1M: 9d).<br><br>Vegetation communities in this regional ecosystem include:<br>7.11.33a: Eucalyptus reducta open forest to woodland. Metamorphics. Not a Wetland. (BVG1M: 9d).<br>7.11.33b: Eucalyptus reducta open forest to woodland. Sedimentary rocks. Not a Wetland. (BVG1M: 9d).<br>7.11.33c: Eucalyptus reducta and Syncarpia glomulifera open forest to tall open forest and woodland. Metamorphics. Not a Wetland. (BVG1M: 9d). |
| 7.11.51 | Of concern | Corymbia clarksoniana (Clarkson's bloodwood) and/or Eucalyptus drepanophylla (ironbark) open forest to woodland. Metamorphics. Not a Wetland. (BVG1M: 9c).<br><br>Vegetation communities in this regional ecosystem include:<br>7.11.51a: Corymbia clarksoniana, Eucalyptus tereticornis, E. drepanophylla woodland, low woodland to open forest with Allocasuarina torulosa, Allocasuarina littoralis, Lophostemon suaveolens, Acacia cincinnata, A. flavescens, Banksia aquilonia, Xanthorrhoea johnsonii. Metamorphics. Not a Wetland. (BVG1M: 9c).<br>7.11.51b: Eucalyptus drepanophylla woodland. Foothills and uplands on metamorphics, of the moist to dry rainfall zones. Not a Wetland. (BVG1M: 13c).<br>7.11.51c: Corymbia clarksoniana woodland. Metamorphics. Not a Wetland. (BVG1M: 9c). |

The Regional Ecosystems search report is attached in **Appendix C**.

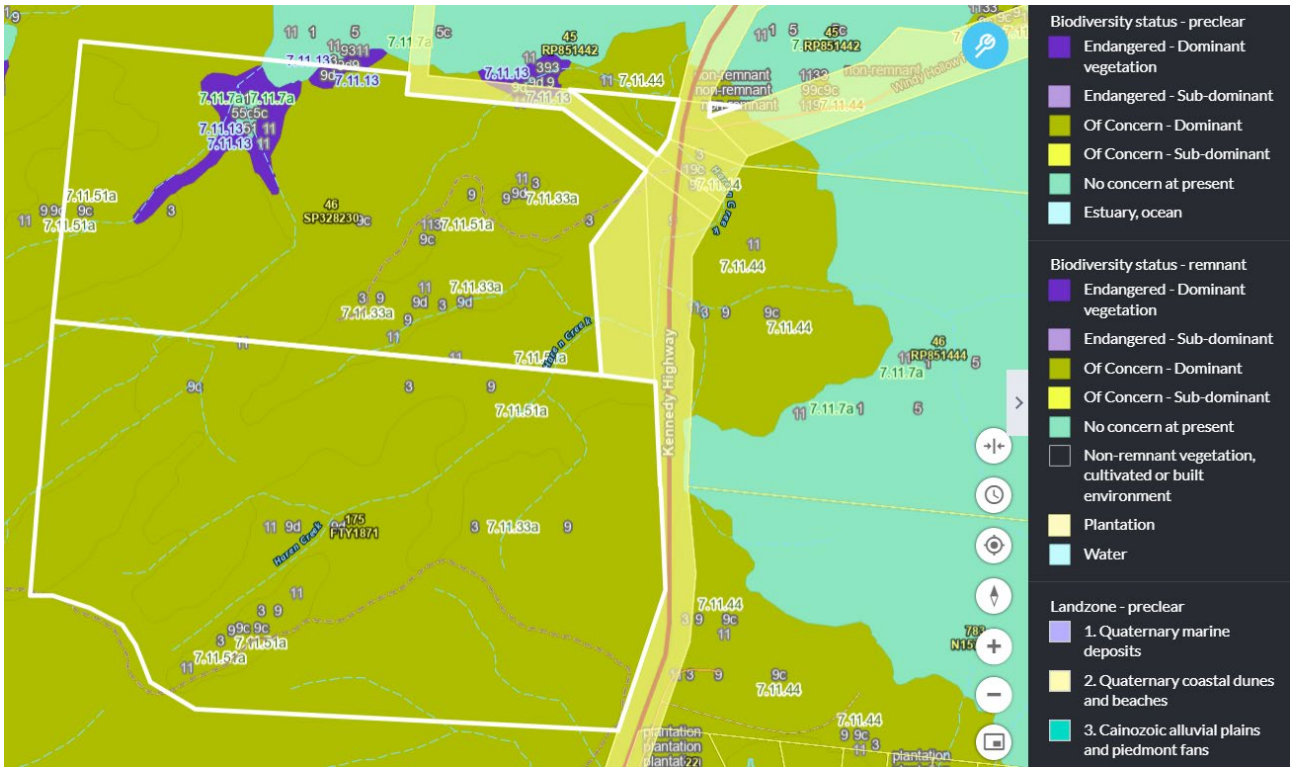



**Figure 3** **Regional Ecosystems (Queensland Globe, May 2026).**

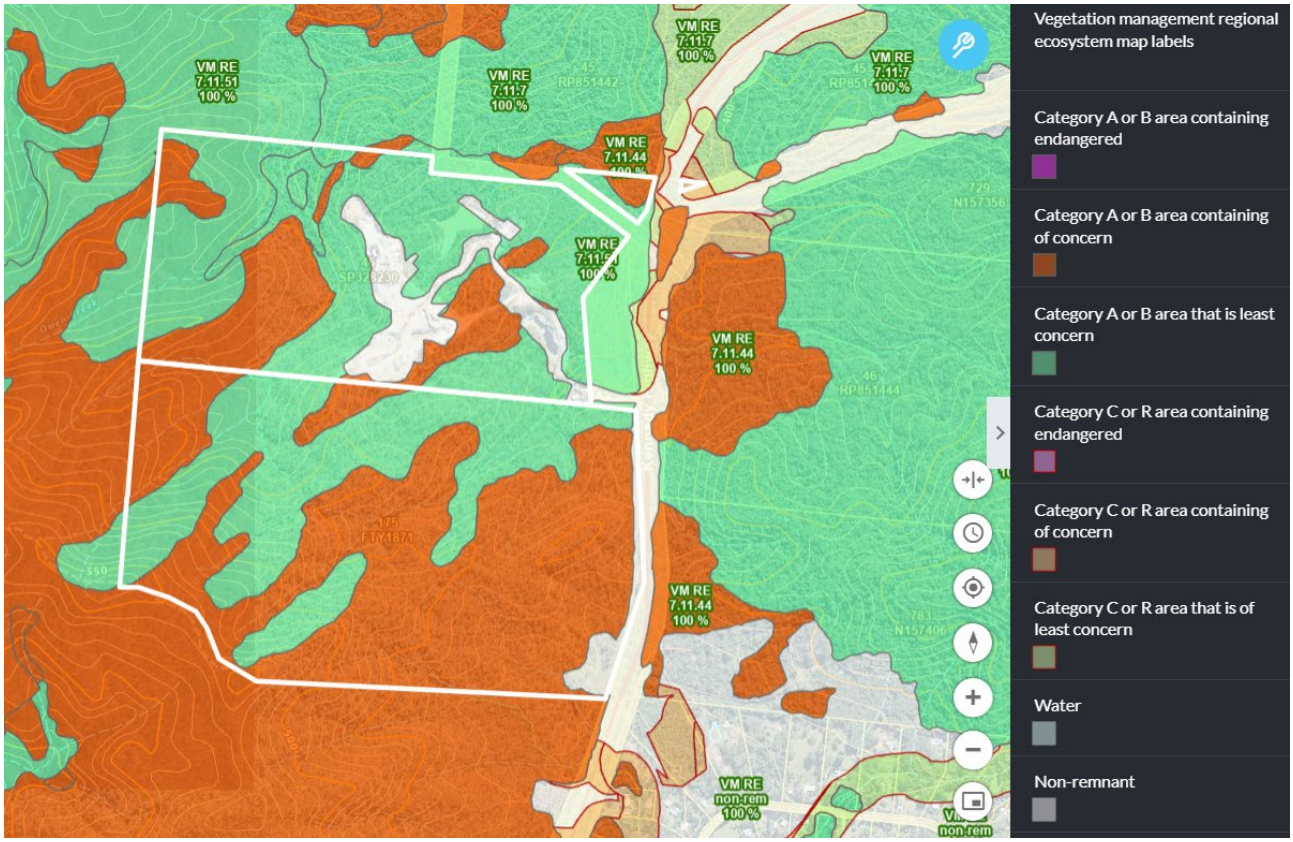



**Figure 4** **Regional Ecosystems category (Queensland Globe, May 2026).**

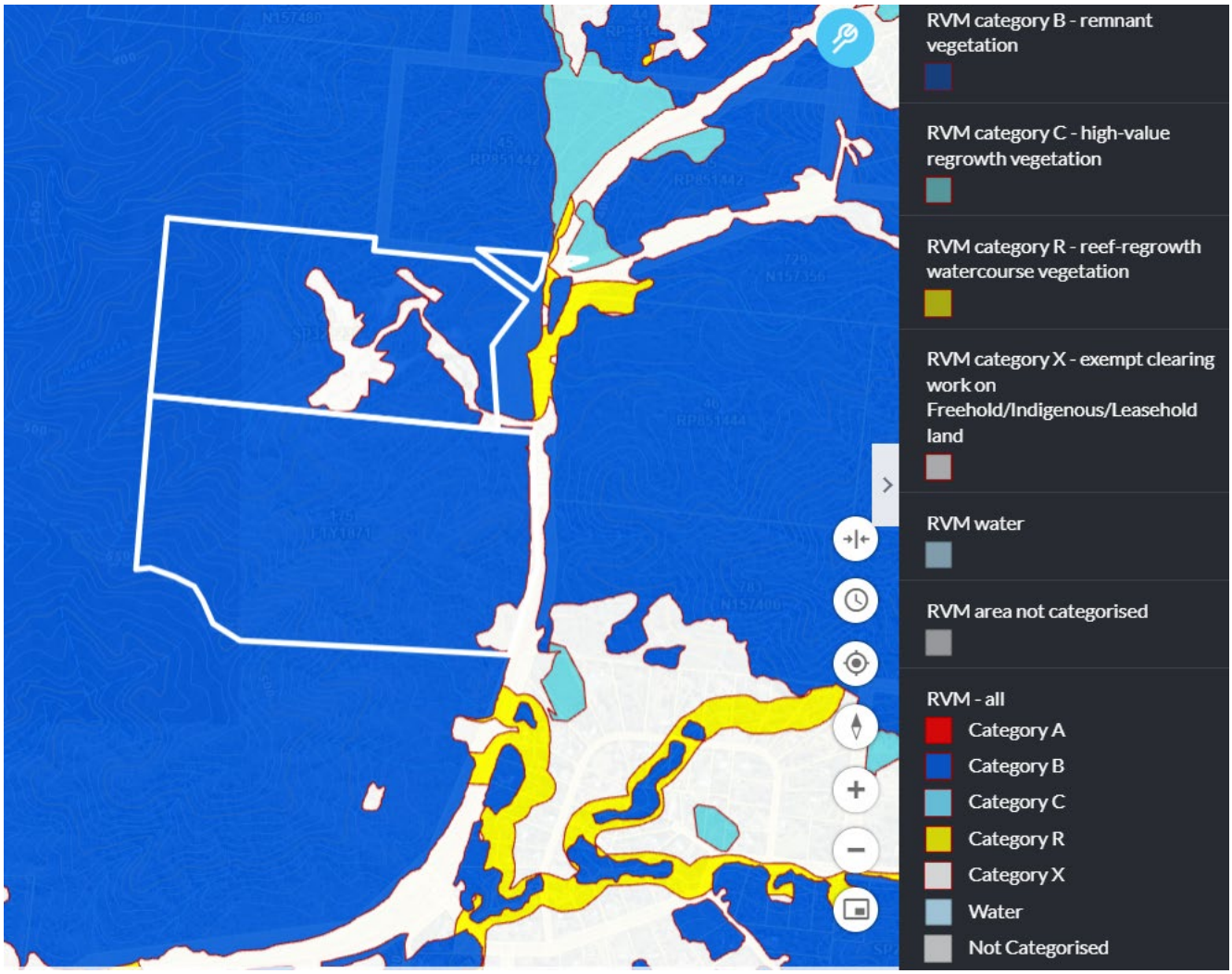



**Figure 5** **Mapped Regulated vegetation (Queensland Globe, May 2026).**

## 3.4 Water

### 3.4.1 Surface water

The surface water at the site is mapped as upland fresh waters under the Environmental Protection (water and wetland biodiversity) Policy 2019 (EPP). Environmental values for the Barron River Basin fresh waters are listed below:

- Aquatic ecosystems;
- Irrigation;
- Farm Supply;
- Aquaculture;
- Stock watering;
- Human Consumption;
- Primary recreation;
- Secondary recreation;
- Drinking water;
- Cultural and spiritual values.

### 3.4.2 Groundwater

There is one registered bore on the site RN157320, refer to **Appendix B** for the bore report.

## 3.5 MSES

The site is mapped as Category B – endangered or of concern vegetation, and MSES regulated essential habitat within the expansion areas. Some areas outside the expansion area but within the site Lot are MSES wildlife habitation endangered or vulnerable. The MSES search report is attached in **Appendix D.**




**Figure 6 MSES (Queensland Globe, May 2026).**

## 3.6 Noise & vibration

The land surrounding the site comprises of production forestry, managed resource management and other minimal use. The sensitive receptors are outlines below in **Figure 5**. The closest sensitive receptor is located 700m northeast being services, with the other two being residential approximately 1 to 1.5km from the site.




**Figure 7 7 Sensitive Receptor Locations (Queensland Globe, 2023)**

# 4 ENVIRONMENTAL VALUES AND RISK ASSESSMENT

## 4.1 Risk Assessment Synopsis

The following section describes risks to environmental values and likely magnitude of the impacts generated by the proposed amendment.

The risk assessment adopted is a qualitative risk-based approach designed to assess risk based on the likelihood of an environmental impact or event occurring (Table 3), and the consequences of the occurrence on the surrounding environmental values (Table 4). The likelihood and consequences are scored between 1 and 5 for each potential impact or event. The risk assessment has been formulated considering potential for impact without control measures put in place to manage potential risk.

**Table 3 Definitions of Likelihood**

| Rating | Descriptor | Score |
|---|---|---|
| Rare | May occur only in exceptional circumstances | 1 |
| Unlikely | Could occur but doubtful | 2 |
| Possible | Might occur at some point in the future | 3 |
| Likely | Will probably occur | 4 |
| Almost Certain | Is expected to occur in most circumstances | 5 |

**Table 4 Definitions of Consequences**

| Rating | Descriptor | Score |
|---|---|---|
| Negligible | Impacts not requiring any treatment or management action | 1 |
| Minor | Nuisance or insignificant environmental harm requiring minor management actions | 2 |
| Moderate | Serious environmental impacts, readily manageable at low cost | 3 |
| Major | Substantial environmental impacts, manageable but at considerable cost and some disruption | 4 |
| Catastrophic | Severe environmental impacts with major consequent disruption and heavy cost | 5 |

The consequence and likelihood scores are then plotted on the risk assessment matrix (Error! Reference source not found.). The final risk level assigned is thus a product of the likelihood and consequence scores. The higher the risk score, the higher the priority is for management.

**Table 5 Risk Assessment Matrix**

| | | Consequence of Said Impact | | | | |
|---|---|---|---|---|---|---|
| Likelihood of an Environmental Impact | | Negligible | Minor | Moderate | Major | Catastrophic |
| | | 1 | 2 | 3 | 4 | 5 |
| Almost Certain | 5 | 5 Medium | 10 High | 15 High | 20 Extreme | 25 Extreme |
| Likely | 4 | 4 Low | 8 Medium | 12 High | 16 High | 20 Extreme |
| Possible | 3 | 3 Low | 6 Medium | 9 Medium | 12 High | 15 High |
| Unlikely | 2 | 2 Low | 4 Low | 6 Medium | 8 Medium | 10 High |

| | | Consequence of Said Impact | | | | |
|---|---|---|---|---|---|---|
| Rare | 1 | 1<br>Low | 2<br>Low | 3<br>Low | 4<br>Low | 5<br>Medium |

## 4.2 Potential Environmental Impacts

Activities associated with the proposed development which have the potential to cause environmental harm and/or nuisance have been outlined in **Table 6**.

This risk assessment is limited to the potential for the activity to impact upon the existing environmental values and does not consider any pre-existing approved impacts taking place on the site.

**Table 6 Identification of Potential Impacts from Extractive Industry on Environmental Values**

| Activity | Potential Impacts<br>Environmental Values Impacted | | | | | |
|---|---|---|---|---|---|---|
| | Air | Water | Noise | Land | Waste | Flora and Fauna |
| Clearing and Grubbing | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Extraction and stockpiling of topsoil | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Extraction of material including blasting | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Crushing of Material | ✓ | ✓ | ✓ | | | ✓ |
| Screening of material | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Stockpiling | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Heavy machinery movement | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Light vehicle movement | ✓ | | ✓ | ✓ | | ✓ |
| Waste storage | | ✓ | | ✓ | ✓ | |
| Fuel/ chemical storage | ✓ | ✓ | | ✓ | | ✓ |

Site activities have been tabulated against environmental values to determine the risk and likely magnitude of impacts and to provide a focus for management strategies, refer to **Table 7** below.

**Table 7 Assessment of Environmental Impacts**

| Activity | Potential Impacts Environmental Values Impacted | | | | | |
|---|---|---|---|---|---|---|
| | Air | Water | Noise | Land | Waste | Flora and Fauna |
| Clearing and grubbing | 3 x 2 = 6 | 4 x 3 = 12 | 4 x 3 = 12 | 3 x 2 = 6 | NA | 4 x 3 = 12 |
| Extraction and stockpiling of topsoil | 3 x 2 = 6 | 4 x 3 = 12 | 4 x 3 = 12 | 4 x 2 = 8 | NA | 4 x 2 = 8 |
| Extraction of material including blasting | 3 x 2 = 6 | 4 x 3 = 12 | 4 x 3 = 12 | 4 x 2 = 8 | NA | 3 x 1 = 3 |
| Crushing of Material | 4 x 3 = 12 | 3 x 2 = 6 | 4 x 3 = 12 | NA | NA | 3 x 1 = 3 |
| Screening of material | 4 x 3 = 12 | 3 x 2 = 6 | 4 x 3 = 12 | 4 x 2 = 8 | NA | 3 x 1 = 3 |
| Stockpiling | 4 x 3 = 12 | 4 x 3 = 12 | 4 x 3 = 12 | 4 x 2 = 8 | NA | 3 x 1 = 3 |
| Heavy machinery movement including haul trucks | 3 x 1 = 3 | 3 x 2 = 6 | 4 x 3 = 12 | 4 x 2 = 8 | NA | 3 x 1 = 3 |
| Light vehicle movement | 2 x 1 = 2 | NA | 2 x 3 = 6 | 2 x 3 = 6 | NA | 2 x 1 = 2 |
| Waste storage | NA | 3 x 1 = 3 | NA | 2 x 3 = 6 | 4 x 2 = 8 | NA |
| Fuel/ chemical storage | 4 x 3 = 12 | 4 x 4 = 16 | NA | 4 x 4 = 16 | NA | 4 x 4 = 16 |

The identification of potential environmental impacts and associated risk matrix above has informed the control measures set out in the Environmental Management Plan (**Appendix C**).

Where impacts are identified on an environmental value, mitigation measures have been implemented to reduce the potential impacts. For example, extraction and stockpiling of topsoil has the potential to result in impacts to air quality including dust emissions, impacts to water quality as a result of contaminated stormwater runoff, impacts to noise from use of heavy machinery, impacts to land as a result of landform and potentially contamination if fuel or oil leaks, impacts to waste would be considered low, and impact to flora and fauna high. The EMP identifies dust controls such as use of the water truck on haul roads or the use of a spotter catcher during clearing of native vegetation to reduce potential risks to environmental values. Further detail is provided in Section 5 below.

# 5 MANAGEMENT

The following section details the management practices proposed that will be implemented to prevent or minimise adverse impacts on Air, Noise, Water, Waste, and Land environmental values as per Schedule 8, Part 3 of the Environmental Protection Regulation 2019 (EP Reg).

## 5.1 Air

The Environmental Objective for Air detailed within Schedule 8, Part 3, Table 1 of the EP Reg states:

*The activity will be operated in a way that protects the environmental values of air.*

Performance Outcomes for Air as detailed in the EP Reg include:

1. *There is no discharge to air of contaminants that may cause an adverse effect on the environment from the operation of the activity.*

2. *All of the following:*

    a. *Fugitive emissions of contaminants from storage, handling and processing of materials and transporting materials within the site are prevented or minimised;*

    b. *Contingency measures will prevent or minimise adverse effects on the environment from unplanned emissions and shut down and start up emissions of contaminants to air; and*

    c. *Releases of contaminants to the atmosphere for dispersion will be managed to prevent or minimise adverse effects on environmental values.*

The *Environmental Protection (Air) Policy 2008* (EPP (Air)) prescribes the Environmental Values that are to be protected or enhanced, which are:

a. *The qualities of the air environment that are conducive to protecting the health and biodiversity of ecosystems;*

b. *The qualities of the air environment that are conducive to human health and wellbeing;*

c. *The qualities of the air environment that are conducive to protecting the aesthetics of the environment, including the appearance of buildings, structures and other property; and*

d. *The qualities of the air environment that are conducive to protecting agricultural use of the environment.*

No measurement or monitoring of the background air quality has been carried out at sensitive receptors for the purpose of this application as no complaints have been received at the existing quarry to date. However, it is expected that air quality would be typical of the pre-existing quarry operations.

Sources of air emissions from the proposed expansion include extraction stockpiling of topsoil (dust), rock crushing rock (dust), extraction of material (dust), screening (dust) and heavy machinery and light vehicle movements (dust and exhaust emissions). There is a low potential for exhaust emissions from heavy machinery and light vehicles to release contaminants and all vehicles are maintained to ensure they are working as efficiently as possible.

Fugitive dust emissions created from the proposed extraction activities will result in discharge to air of contaminants that may cause an adverse effect on the environment as a result of the operation of the activity. As a result, it is proposed that the environmental objective for air will be met via Performance Outcome 2.

The quarry has a significant buffer surrounding the operations which ensures no impacts on nearby sensitive receivers.

Fugitive emissions from storage, handling, processing, and transporting of material within the site will be prevented or minimised as detailed within the Environmental Management Plan, refer to **Appendix C** and the IEMS in **Appendix D**. Specific measures to prevent or minimise impacts to air quality include use of the

water truck when required, undertaking progressive rehabilitation to limit exposed extraction areas, covering (i.e. with grass or mulch for long term overburden stockpiles) or keeping moist all long-term topsoil stockpiles to prevent wind erosion, and enforcing an internal road speed limit of 40km/hr.

## 5.2 Water

The Environmental Objective for Water detailed within Schedule 8, Part 3, Table 1 of the EP Reg states:

"The activity will be operated in a way that protects environmental values of waters".

*Performance Outcomes for Water as detailed in the EP Reg include:*

1. *There is no actual or potential discharge to waters of contaminants that may cause an adverse effect on an environmental value from the operation of the activity.*
2. *All of the following:*
    a. *The storage and handling of contaminants will include effective means of secondary containment to prevent or minimise releases to the environment from spillage or leaks;*
    b. *Contingency measures will prevent or minimise adverse effects on the environment due to unplanned releases or discharges of contaminants to water;*
    c. *The activity will be managed so that stormwater contaminated by the activity that may cause an adverse effect on an environmental value will not leave the site without prior treatment;*
    d. *The disturbance of any acid sulfate soil, or potential acid sulfate soil, will be managed to prevent or minimise adverse effects on environmental values;*
    e. *Acid producing rock will be managed to ensure that the production and release of acidic waste is prevented or minimised, including impacts during operation and after the environmental authority has been surrendered;*
    f. *Any discharge to water or a watercourse or wetland will be managed so that there will be adverse effects due to the altering of existing flow regimes for water or a watercourse or wetland; and*
    g. *For a petroleum activity, the activity will be managed in a way that is consistent with the coal seam gas water management policy, including the prioritisation hierarchy for managing and using coal seam gas water and the prioritisation hierarchy for managing saline waste.*
    h. *the activity will be managed so that adverse effects on environmental values are prevented or minimised.*

The environmental objective for water is proposed to be met via Performance Outcome 2. The Environmental Management Plan and Integrated Site Management Plan includes details on how stormwater will be managed across the site to meet the Department of Environment and Science's Stormwater Guideline for Environmentally Relevant Activities (Version 1.03 dated 9 Oct, 2019).

## 5.3 Wetlands

The Environmental Objective Wetland is detailed within Schedule 8, Part 3, Table 1 of the EP Reg which states:

*"The activity will be operated in a way that protects the environmental values of wetlands."*

Performance Outcomes for Wetlands as detailed in the EP Reg include:

1. There will be no potential or actual adverse effect on a wetland as part of carrying out the activity.
2. The activity will be managed in a way that prevents or minimises adverse effects on wetlands.

There are no mapped wetlands within close proximity to the site therefore the proposed extraction will meet Performance Outcome 1 as there will be no potential or actual adverse effect on a wetland as part of carrying out the activity.

## 5.4 Groundwater

The Environmental Objective for Groundwater detailed within Schedule 8, Part 3, Table 1 of the EP Reg states:

*"The activity will be operated in a way that protects the environmental values of groundwater and any associated surface ecological systems."*

Performance Outcomes for Groundwater as detailed in the EP Reg include:

1. *Both of the following apply—*
    a. *there will be no direct or indirect release of contaminants to groundwater from the operation of the activity;*
    b. *there will be no actual or potential adverse effect on groundwater from the operation of the activity.*
2. *The activity will be managed to prevent or minimise adverse effects on groundwater or any associated surface ecological systems.*

*Note— Some activities involving direct releases to groundwater are prohibited under section 41 of this regulation.*

The application will achieve the environmental objective for groundwater through Performance Outcome 1 as there will be no direct or indirect release of contaminants to groundwater given the groundwater is likely to be at least 20m below ground level and the proposed extraction will predominately be into an elevated hill.

## 5.5 Noise

The Environmental Objective for Noise detailed within Schedule 8, Part 3, Table 1 of the EP Reg which states:

"*The activity will be operated in a way that protects the environmental values of the acoustic environment*".

Performance Outcomes for Noise as detailed in the EP Reg include:

1. *Sound from the activity is not audible at a sensitive receptor.*
2. *The release of sound to the environment from the activity is managed so that adverse effects on environmental values including health and wellbeing and sensitive ecosystems are prevented or minimised.*

In the absence of background, the *Environmental Protection (Noise) Policy 2008* (EPP (Noise)) prescribes the environmental values that are to be protected or enhanced, which are:

a. The qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems
b. The qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following:
    i. Sleep;
    ii. Study or learn; or
    iii. Involved in recreation, including relaxation and conversation.
c. The qualities of the acoustic environment that are conducive to protecting the amenity of the community.

Sources of noise from the proposed expansion include extraction, rock crushing and screening activities and operation of heavy machinery and light vehicles (including increased traffic on public roads). Noise created from the quarry expansion has the potential to impact on all prescribed environmental values for noise. Given the buffer distances and the existing rural nature of the surrounding areas as well as the historical use of the site, there is little potential for environmental nuisance as a result of the proposed extraction footprint expansion.

## 5.6 Land

The Environmental Objective for Land detailed within Schedule 8, Part 3, Table 1 of the EP Reg states:

"*The activity is operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna*".

Performance Outcomes for Land as detailed in the EP Reg include:

1. *There is no actual or potential disturbance or adverse effect to the environmental values of land as part of carrying out the activity.*
2. *All of the following:*

    a. *Activities that disturb land, soils, subsoils, landforms and associated flora and fauna will be managed in a way that prevents or minimise adverse effects on the environmental values of land;*

    b. *Areas disturbed will be rehabilitated or restored to achieve sites that are:*

        i. *Safe to humans and wildlife;*

        ii. *Non-polluting;*

        iii. *Stable; and*

        iv. *Able to sustain an appropriate land use after rehabilitation or restoration.*

    c. *The activity will be managed to prevent or minimise adverse effects on the environmental values of land due to unplanned releases or discharges, including spills and leaks of contaminants; and*

    d. *The application of water or waste to the land is sustainable and is managed to prevent or minimise adverse effects on the composition or structure of soils and subsoils.*

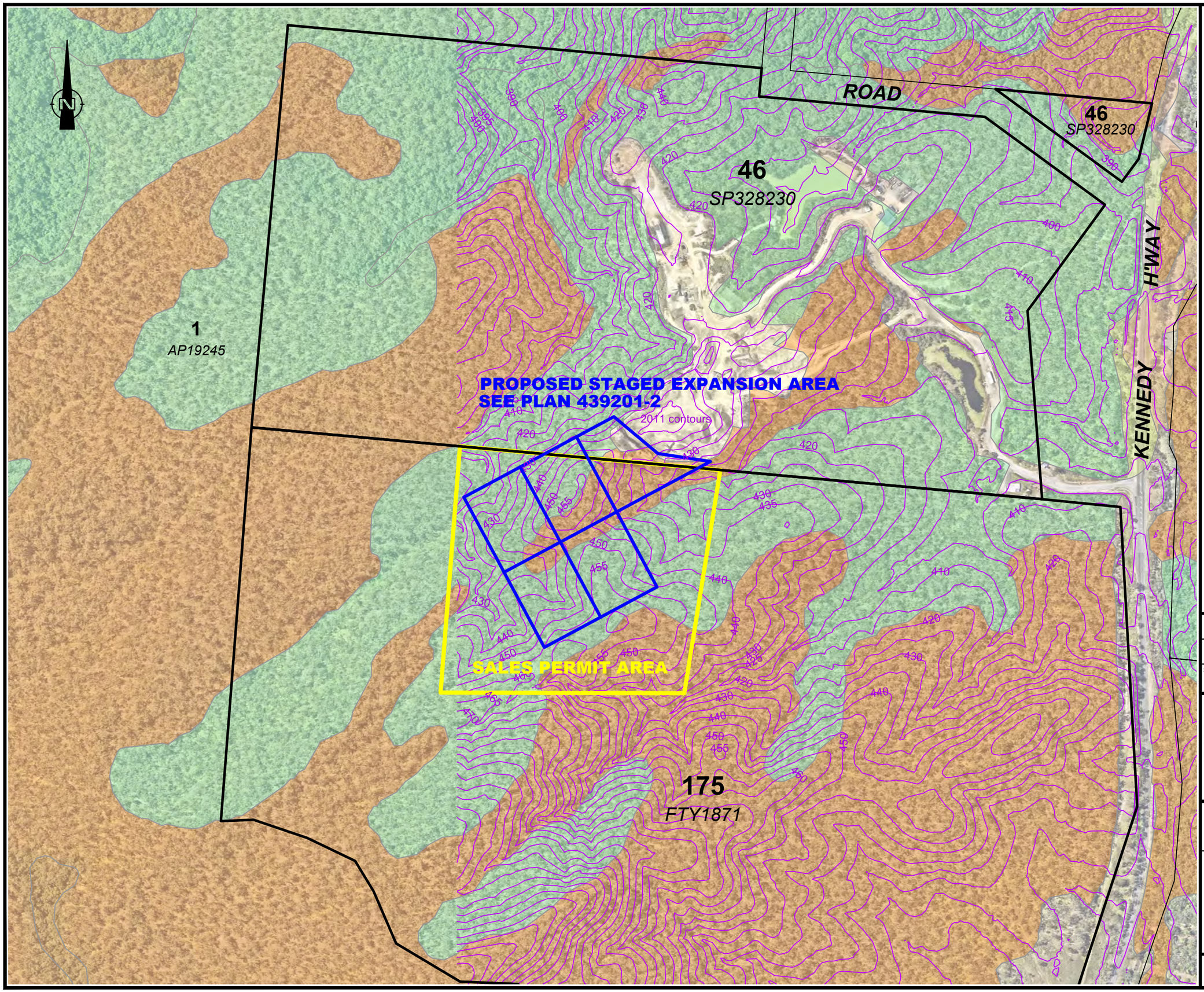
The Environmental Objective for land is proposed to be met via Performance Outcome 2. Given the proposed extraction will disturb land, soils, subsoils, landforms and associated flora and fauna, a detailed land rehabilitation plan will be prepared. This will ensure that areas disturbed will be rehabilitated or restored to a condition that is safe for humans and wildlife, is non-polluted, and has the stability, and the ability to sustain final land use objectives after rehabilitation.

# 6 CONCLUSION

This Environmental Assessment Report has been prepared to support the application for the proposed quarry expansion for Top Rocks Quarry on Lot 175 FTY1871. This report addresses the environmental values and risk of potential environmental impacts.

The risk assessment has determined that the potential environmental risks resulting from the proposed expansion will be effectively regulated through the effective implementation of environmental monitoring and management practices to avoid potential environmental impacts as detailed within the Environmental Management Plan.

# Appendix A Proposed Expansion Plan




**IMPORTANT NOTE**

This plan was prepared as a concept plan only and accuracy of all aspects of the plan have not been verified.
All lots, areas and dimensions are approximate only, Subject to relevant studies, Survey, Engineering and Government approvals.
No reliance should be placed on the plan and RPS AAP Consulting Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this plan.

Boundaries derived from Dept Resources DCDB and are approx only (+/- 57m)

Aerial imagery by NearMap
Date of Capture 23 Oct 2025

Contours & Drainage paths from DNRM DEM - Speewah_2011_Loc_1K_DEM_1m

## NOTES

Level Datum: AHD
Origin of Levels: 2011 DNRM DEM
Meridian: GDA2020 MGA Z55
Contour Interval: 5.0m

## LEGEND

Vegetation management regional ecosystem mapping

- Category A or B area containing of concern regional ecosystems
- Category A or B area that is least concern regional ecosystems

0 50 100 150 200 250
metres

SCALE 1:5000 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE. (A3)

| RPS CLIENT MANAGER | | SURVEYED |
|---|---|---|
| A Kerlin | | |
| COMPILED | | CAD REF |
| AMK | | 439201-1c.DWG |
| SHEET SIZE | SHEET 1 OF SHEETS 2 | |
| A3 | | |

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# FGF DEVELOPMENTS PTY LTD

## TOPROCK QUARRY

## SALES PERMIT SITE PLAN

| SCALE | DATE | DRAWING NO. | ISSUE |
|---|---|---|---|
| 1:5000 | 28/5/2026 | 439201-1 | C |

# PROPOSED STAGED EXPANSION AREA

*5.423 ha*

**46**
*SP328230*

**175**
*FTY1871*

2011 contours

15m x 15m GRID

STAGE 1 1025m²

STAGE 2 1080m²

STAGE 3 1080m²

STAGE 4 1080m²

STAGE 5 1080m²

CH 0.0 CH 15 CH 30 CH 45 CH 60 CH 75 CH 90 CH 105 CH 120 CH 135 CH 150 CH 165 CH 180 CH 195 CH 210 CH 225 CH 240 CH 255 CH 270

CH -15.0 CH -30.0 CH -45.0 CH -60.0

SALES PERMIT AREA

## REGIONAL ECOSYSTEMS AREAS

| | STAGE 1 | | STAGE 2 | | STAGE 3 | | STAGE 4 | | STAGE 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| LOT 46 | 1985m² | 1738m² | 869m² | | | | | | | |
| LOT 176 | 121m² | 5507m² | 5931m² | 4000m² | 9433m² | 1367m² | 9240m² | 1560m² | 9440m² | 1360m² |
| TOTAL | 2106m² | 7245m² | 6800m² | 4000m² | 9433m² | 1367m² | 9240m² | 1560m² | 9440m² | 1360m² |

**IMPORTANT NOTE**

This plan was prepared as a concept plan only and accuracy of all aspects of the plan have not been verified.
All lots, areas and dimensions are approximate only, Subject to relevant studies, Survey, Engineering and Government approvals.
No reliance should be placed on the plan and RPS AAP Consulting Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this plan.

Boundaries derived from Dept Resources DCDB and are approx only (+/- 57m)

Aerial imagery by NearMap
Date of Capture 23 Oct 2025

Contours from DNRM DEM - Speewah_2011_Loc_1K_DEM_1m

## NOTES

Level Datum: AHD
Origin of Levels: 2011 DNRM DEM
Meridian: GDA2020 MGA Z55
Contour Interval: 5.0m

FGF Survey data contours
GDA 2020 / AusGeoid 2020
Date of survey: 25/02/26
Contour Interval: 1.0m

## LEGEND

Vegetation management regional ecosystem mapping

- Category A or B area containing of concern regional ecosystems
- Category A or B area that is least concern regional ecosystems

0 15 30 45 60 75
metres

SCALE 1:1500 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE. (A3)

| | |
|---|---|
| RPS CLIENT MANAGER: A Kerlin | SURVEYED: |
| COMPILED: AMK | CAD REF: 439201-1c.DWG |
| SHEET SIZE: A3 | SHEET OF SHEETS: 2 OF 2 |

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**TOPROCK QUARRY**

**PROPOSED STAGED EXPANSION AREA**

| SCALE | DATE | DRAWING NO. | ISSUE |
|---|---|---|---|
| 1:1500 | 28/5/2026 | 439201-2 | C |

# Appendix B Bore Report

# Bore Report

**From Year:**

| Registered Number | Facility Type | Facility Status | Drilled Date | Office | Shire |
|---|---|---|---|---|---|
| 157320 | Sub-Artesian Facility | Existing | 12/01/2014 | Mareeba | 4880 - MAREEBA SHIRE COUNCIL |

## Details

| | |
|---|---|
| **Description** | DRILL LOG 1028871 |
| **Parish** | 1908 - FORMARTINE |
| **Original Name** | |
| **Driller Name** | SERRA, MARK ANTHONY |
| **Drill Company** | SERRA DRILLING |
| **Const Method** | ROTARY AIR |
| **Bore Line** | |
| **D/O File No** | RN DRAWER |
| **R/O File No** | |
| **H/O File No** | |
| **Log Received Date** | 21/01/2014 |
| **Roles** | Water Supply |

| | |
|---|---|
| **Polygon** | |
| **Equipment** | |
| **RN of Bore Replaced** | |
| **Data Owner** | |

## Location

| | | | |
|---|---|---|---|
| **Latitude** | 16-51-17 | **Basin** | 1100 |
| **Longitude** | 145-35-59 | **Sub-area** | |
| **GIS Latitude** | -16.85474525 | **Lot** | 46 |
| **GIS Longitude** | 145.5996741 | **Plan** | RP851443 |
| **Easting** | 350818 | | |
| **Northing** | 8135985 | **Map Scale** | |
| **Zone** | 55 | **Map Series** | |
| **Accuracy** | GPS | **Map No** | |
| **GPS Accuracy** | 30 | **Map Name** | |
| **Checked** | Yes | **Prog Section** | |

## Casing

**4** ***records for RN*** **157320**

| Pipe | Date | Rec | Top (m) | Bottom (m) | Material Description | Mat Size (mm) | Size Desc | Outside Diameter (mm) |
|---|---|---|---|---|---|---|---|---|
| A | 12/01/2014 | 1 | 0.00 | 60.00 | Polyvinyl Chloride | 8.300 | WT - Wall Thickness | 160 |
| A | 12/01/2014 | 2 | 36.00 | 60.00 | Perforated or Slotted Casing | 3.000 | AP - Aperture Size | 160 |
| A | 12/01/2014 | 3 | 6.00 | 60.00 | Gravel Pack | 6.000 | GR - Gravel Size | 200 |
| A | 12/01/2014 | 4 | 0.00 | 6.00 | Grout | | | 200 |

## Strata Logs

**9** ***records for RN*** **157320**

# Bore Report

**From Year:**

| Rec | Top (m) | Bottom (m) | Strata Description |
|---|---|---|---|
| 1 | 0.00 | 8.00 | SHALE DECOMPOSED |
| 2 | 8.00 | 12.00 | SHALE FRESH |
| 3 | 12.00 | 19.00 | SHALE |
| 4 | 19.00 | 21.00 | SHALE FRACTURED * |
| 5 | 21.00 | 46.00 | SHALE |
| 6 | 46.00 | 49.00 | SHALE FRACTURED * |
| 7 | 49.00 | 56.00 | SHALE |
| 8 | 56.00 | 57.00 | SHALE FRACTURED * |
| 9 | 57.00 | 60.00 | SHALE |

## Stratigraphies

**0** *records for RN* **157320**

## Aquifers

**3** *records for RN* **157320**

| Rec | Top (m) | Bottom (m) | Lithology | Date | SWL (m) | Flow | Quality | Yield (L/s) | Contr | Cond | Formation Name |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 19.00 | 21.00 | SHLE - Shale | | | N | | | Y | FR | HODGKINSON FORMATION |
| 2 | 46.00 | 49.00 | SHLE - Shale | | | N | | | Y | FR | HODGKINSON FORMATION |
| 3 | 56.00 | 57.00 | SHLE - Shale | 12/01/2014 | -9.80 | N | 340 US | 9.60 | Y | FR | HODGKINSON FORMATION |

## Pump Tests Part 1

**0** *records for RN* **157320**

## Pump Tests Part 2

**0** *records for RN* **157320**

## Bore Conditions

**0** *records for RN* **157320**

## Elevations

**0** *records for RN* **157320**

## Water Analysis Part 1

**0** *records for RN* **157320**

# Bore Report

**From Year:**

## Water Analysis Part 2

**0** *records for RN* **157320**

## Water Levels

**1** *records for RN* **157320**

| Pipe | Date | Time | Measure (m) | Meas | Point | Remark | Meas | Type | Coll Auth | Coll | Method | Project | | Quality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 12/01/2014 | | -9.80 | N | Natural Surface | | NR | Not Recorded | NR | NR | Not Recorded | | 130 | Data is of unknown quality |

## Wire Line Logs

**0** *records for RN* **157320**

## Field Measurements

**0** *records for RN* **157320**

## Special Water Analysis

**0** *records for RN* **157320**

# Bore Report

**From Year:**

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# Appendix C Regional Ecosystems Search Report

Queensland Government

**Department of the Environment, Tourism, Science and Innovation**

Environmental Reports

# Regional Ecosystems

## *Biodiversity Status*

For the selected area of interest
Lot: 175 Plan: FTY1871

# Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the input coordinates.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 2020). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

# Important Note to User

Information presented in this report is based upon the Queensland Herbarium & Biodiversity Science's Regional Ecosystem framework. The Biodiversity Status has been used to depict the extent of "Endangered", "Of Concern" and "No Concern at Present" regional ecosystems in all cases, rather than the classes used for the purposes of the *Vegetation Management Act 1999* (VMA). Mapping and figures presented in this document reflect the Queensland Herbarium & Biodiversity Science's Remnant and Pre-clearing Regional Ecosystem Datasets, and not the certified mapping used for the purpose of the VMA.

For matters relevant to vegetation management under the VMA, please refer to the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development website https://www.nrmmrrd.qld.gov.au/

Please direct queries about these reports to: Queensland.Herbarium@qld.gov.au

# Disclaimer

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## Summary Information

The following table provides an overview of the AOI with respect to selected topographic and environmental themes. Refer to **Map 1** for locality information.

**Table 1: Details for area of interest:**
**Lot: 175 Plan: FTY1871, with area 88.85 ha**

| Local Government(s) | Catchment(s) | Bioregion(s) | Subregion(s) |
|---|---|---|---|
| Mareeba Shire | Barron | Wet Tropics | Macalister |

The table below summarizes the extent of remnant vegetation classed as "Endangered", "Of concern" and "No concern at present" regional ecosystems classified by Biodiversity Status within the area of interest (AOI).

**Table 2: Summary table, biodiversity status of regional ecosystems within the AOI**

| Biodiversity Status | Area (Ha) | % of AOI |
|---|---|---|
| Endangered | 0.00 | 0.00 |
| Of concern | 86.55 | 97.42 |
| No concern at present | 0.03 | 0.03 |
| Total remnant vegetation | 86.58 | 97.45 |

Refer to **Map 2** for further information.

# Regional Ecosystems

## 1. Introduction

Regional ecosystems are vegetation communities in a bioregion that are consistently associated with particular combinations of geology, landform and soil (Sattler and Williams 1999). Descriptions of Queensland's Regional ecosystems are available online from the Regional Ecosystem Description Database (REDD). Descriptions are compiled from a broad range of information sources including vegetation, land system and geology survey and mapping and detailed vegetation site data. The regional ecosystem classification and descriptions are reviewed as new information becomes available. A number of vegetation communities may form a single regional ecosystem and may be distinguished by differences in structure or sub-dominant species in the ecologically dominant layer. Vegetation communities with different dominant species in the ecologically dominant layer may be amalgamated in to a regional ecosystem if they are not mappable and predictable in the landscape at 1:100 000 scale. Vegetation communities may be mappable at a scale larger than 1:100 000. Vegetation communities within a regional ecosystem are denoted by a letter following the regional ecosystem code (e.g. a, b, c). Vegetation communities and regional ecosystems are amalgamated into a higher level classification of broad vegetation groups (BVGs).

A published methodology for survey and mapping of regional ecosystems across Queensland (Neldner et al 2023) provides further details on regional ecosystem concepts and terminology.

This report provides information on the type, status, and extent of vegetation communities, regional ecosystems and broad vegetation groups present within a user specified area of interest. Please note, for the purpose of this report, the Biodiversity Status is used. This report has not been developed for application of the *Vegetation Management Act 1999* (VMA). Additionally, information generated in this report has been derived from the Queensland Herbarium & Biodiversity Science's Regional Ecosystem Mapping, and not the regulated mapping certified for the purposes of the VMA. If your interest/matter relates to regional ecosystems and the VMA, users should refer to the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development website https://www.nrmmrrd.qld.gov.au/.

With respect to the Queensland Biodiversity Status,

"Endangered" regional ecosystems are described as those where:

- remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or 10-30% of its pre-clearing extent remains and the remnant vegetation is less than 10,000 hectares, or
- less than 10 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss*, or
- 10-30 percent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss and the remnant vegetation is less than 10,000 hectares; or
- it is a rare** regional ecosystem subject to a threatening process.***

"Of concern" regional ecosystems are described as those where:

- the degradation criteria listed above for 'Endangered' regional ecosystems are not met and,
- remnant vegetation is 10-30 per cent of its pre-clearing extent across the bioregion; or more than 20 per cent of its pre-clearing extent remains and the remnant extent is less than 10,000 hectares, or
- 10-30 percent of its pre-clearing extent remains unaffected by moderate degradation and/or biodiversity loss.****

and "No concern at present" regional ecosystems are described as those where:

- remnant vegetation is over 30 percent of its pre-clearing extent across the bioregion, and the remnant area is greater than 10,000 hectares, and
- the degradation criteria listed above for 'Endangered' or 'Of concern' regional ecosystems are not met.

**Severe degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 50 years even with the removal of threatening processes; or soil surface is severely degraded, for example, by loss of A horizon, surface expression of salinity; surface compaction, loss of organic matter or sheet erosion.*

***Rare regional ecosystem: pre-clearing extent (<1000 ha); or patch size (<100 ha and of limited total extent across its range).*

****Threatening processes are those that are reducing or will reduce the biodiversity and ecological integrity of a regional ecosystem. For example, clearing, weed invasion, fragmentation, inappropriate fire regime or grazing pressure, or infrastructure development.*

*****Moderate degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 20 years even with the removal of threatening processes; or soil surface is moderately degraded.*

## 2. Remnant Regional Ecosystems

The following table identifies the remnant regional ecosystems and vegetation communities mapped within the AOI and provides their short descriptions, Biodiversity Status, and remnant extent within the selected AOI. Please note, where heterogeneous vegetated patches (mixed patches of remnant vegetation mapped as containing multiple regional ecosystems) occur within the AOI, they have been split and listed as individual regional ecosystems (or vegetation communities where present) for the purposes of the table below. In such instances, associated area figures have been generated based upon the estimated proportion of each regional ecosystem (or vegetation community) predicted to be present within the larger mixed patch.

**Table 3: Remnant regional ecosystems, description and status within the AOI**

| Regional Ecosystem | Short Description | BD Status | Area (Ha) | % of AOI |
|---|---|---|---|---|
| 7.11.21a | Eucalyptus leptophleba woodland to open forest on metamorphic uplands of the dry rainfall zone | No concern at present | 0.03 | 0.03 |
| 7.11.33a | Eucalyptus reducta open forest to woodland on metamorphics | Of concern | 54.86 | 61.74 |
| 7.11.35a | Eucalyptus portuensis +/- Corymbia citriodora woodland to open forest on metamorphics | Of concern | 0.97 | 1.09 |
| 7.11.41a | Melaleuca viridiflora, M. monantha, Acacia flavescens and Grevillea spp. Shrubland with emergent Corymbia clarksoniana, or open woodland of Eucalyptus drepanophylla with M. monantha or Callitris intratropica, on metamorphics | Of concern | 0.01 | 0.01 |
| 7.11.51a | Corymbia clarksoniana and/or Eucalyptus drepanophylla open forest to woodland on metamorphics | Of concern | 30.72 | 34.57 |
| non-remnant | None | None | 2.27 | 2.55 |

Refer to **Map 2** for further information. **Map 3** also provides a visual estimate of the distribution of regional ecosystems present before clearing.

**Table 4** provides further information in regards to the remnant regional ecosystems present within the AOI. Specifically, the extent of remnant vegetation remaining within the bioregion, the 1:1,000,000 broad vegetation group (BVG) classification, whether the regional ecosystem is identified as a wetland, and extent of representation in Queensland's Protected Area Estate. For a description of the vegetation communities within the AOI and classified according to the 1:1,000,000 BVG, refer to **Table 6**.

**Table 4: Remnant regional ecosystems within the AOI, additional information**

| Regional Ecosystem | Remnant Extent | BVG (1 Million) | Wetland | Representation in protected estate |
|---|---|---|---|---|
| 7.11.21a | Pre-clearing 13000 ha; Remnant 2021 12000 ha | 9b | Not a Wetland | High |
| 7.11.33a | Pre-clearing 3000 ha; Remnant 2021 3000 ha | 9d | Not a Wetland | High |

| Regional Ecosystem | Remnant Extent | BVG (1 Million) | Wetland | Representation in protected estate |
|---|---|---|---|---|
| 7.11.35a | Pre-clearing 19000 ha; Remnant 2021 17000 ha | 9d | Not a Wetland | High |
| 7.11.41a | Pre-clearing 700 ha; Remnant 2021 500 ha | 21a | Not a Wetland | High |
| 7.11.51a | Pre-clearing 19000 ha; Remnant 2021 16000 ha | 9c | Not a Wetland | High |
| non-remnant | None | None | None | None |

*Representation in Protected Area Estate: High greater than 10% of pre-clearing extent is represented; Medium 4 - 10% is represented; Low less than 4% is represented, No representation.*

The distribution of mapped wetland systems within the area of interest is displayed in **Map 6**.

The following table lists known special values associated with a regional ecosystem type.

**Table 5: Remnant regional ecosystems within the AOI, special values**

| Regional Ecosystem | Special Values |
|---|---|
| 7.11.21a | None |
| 7.11.33a | None |
| 7.11.35a | 7.11.35: Potential habitat for NCA listed species: Zieria obovata. |
| 7.11.41a | None |
| 7.11.51a | 7.11.51: Potential habitat for NCA listed species: Grevillea glossadenia, Coleus gratus. |
| non-remnant | None |

## 3. Remnant Regional Ecosystems by Broad Vegetation Group

BVGs are a higher-level grouping of vegetation communities. Queensland encompasses a wide variety of landscapes across temperate, wet and dry tropics and semi-arid climatic zones. BVGs provide an overview of vegetation communities across the state or a bioregion and allow comparison with other states. There are three levels of BVGs which reflect the approximate scale at which they are designed to be used: the 1:5,000,000 (national), 1:2,000,000 (state) and 1:1,000,000 (regional) scales.

A comprehensive description of BVGs is available at: https://publications.qld.gov.au/dataset/redd/resource/

The following table provides a description of the 1:1,000,000 BVGs present and their associated extent within the AOI.

**Table 6: Broad vegetation groups (1 million) within the AOI**

| BVG (1 Million) | Description | Area (Ha) | % of AOI |
|---|---|---|---|
| None | None | 2.27 | 2.55 |
| 21a | Low woodlands and low open woodlands dominated by Melaleuca viridiflora (coarse-leaved paperbark) on depositional plains. | 0.01 | 0.01 |
| 9b | Moist to dry woodlands dominated by Eucalyptus platyphylla (poplar gum) and/or E. leptophleba (Molloy red box). Other frequent tree species include Corymbia clarksoniana (grey bloodwood), E. drepanophylla (grey ironbark) and occasionally E. chlorophylla. | 0.03 | 0.03 |
| 9c | Open forests of Corymbia clarksoniana (grey bloodwood) (or C. intermedia (pink bloodwood) or C. novoguinensis), C. tessellaris (carbeen) ± Eucalyptus tereticornis (blue gum) predominantly on coastal ranges. Other frequent tree species include Eucalyptus drepanophylla (grey ironbark), E. pellita (large-fruited red mahogany), E. brassiana (Cape York red gum) and Lophostemon suaveolens (swamp box). | 30.72 | 34.57 |
| 9d | Moist to dry open forests to woodlands dominated by Eucalyptus portuensis, Corymbia intermedia (pink bloodwood), E. drepanophylla, E. resinifera or E. reducta +/-Syncarpia glomulifera (turpentine) or E. cloeziana (Gympie messmate) on ranges. Also includes mixed forests with E. pellita or C. torelliana (cadaghi) emergents and rainforest understories. | 55.82 | 62.83 |

Refer to **Map 4** for further information. **Map 5** also provides a representation of the distribution of vegetation communities as per the 1:5,000,000 BVG believed to be present prior to European settlement.

## 4. Technical and BioCondition Benchmark Descriptions

Technical descriptions provide a detailed description of the full range in structure and floristic composition of regional ecosystems (e.g. 11.3.1) and their component vegetation communities (e.g. 11.3.1a, 11.3.1b). See: http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/

The descriptions are compiled using site survey data from the Queensland Herbarium & Biodiversity Science's QBEIS database. Distribution maps, representative images (if available) and the pre-clearing and remnant extent (hectares) of each vegetation community derived from the regional ecosystem mapping data are included. The technical descriptions should be used in conjunction with the fields from the regional ecosystem description database (REDD) for a full description of the regional ecosystem.

Technical descriptions include data on canopy height, canopy cover and native plant species composition of the predominant layer, which are attributes relevant to assessment of the remnant status of vegetation under the *Vegetation Management Act 1999*. However, as technical descriptions reflect the full range in structure and floristic composition across the climatic, natural disturbance and geographic range of the regional ecosystem, local reference sites should be used for remnant assessment where possible (Neldner et al. 2023 (PDF)* section 3.3 of: https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

The technical descriptions are subject to review and are updated as additional data becomes available.

When conducting a BioCondition assessment, these technical descriptions should be used in conjunction with BioCondition benchmarks for the specific regional ecosystem, or component vegetation community. http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/

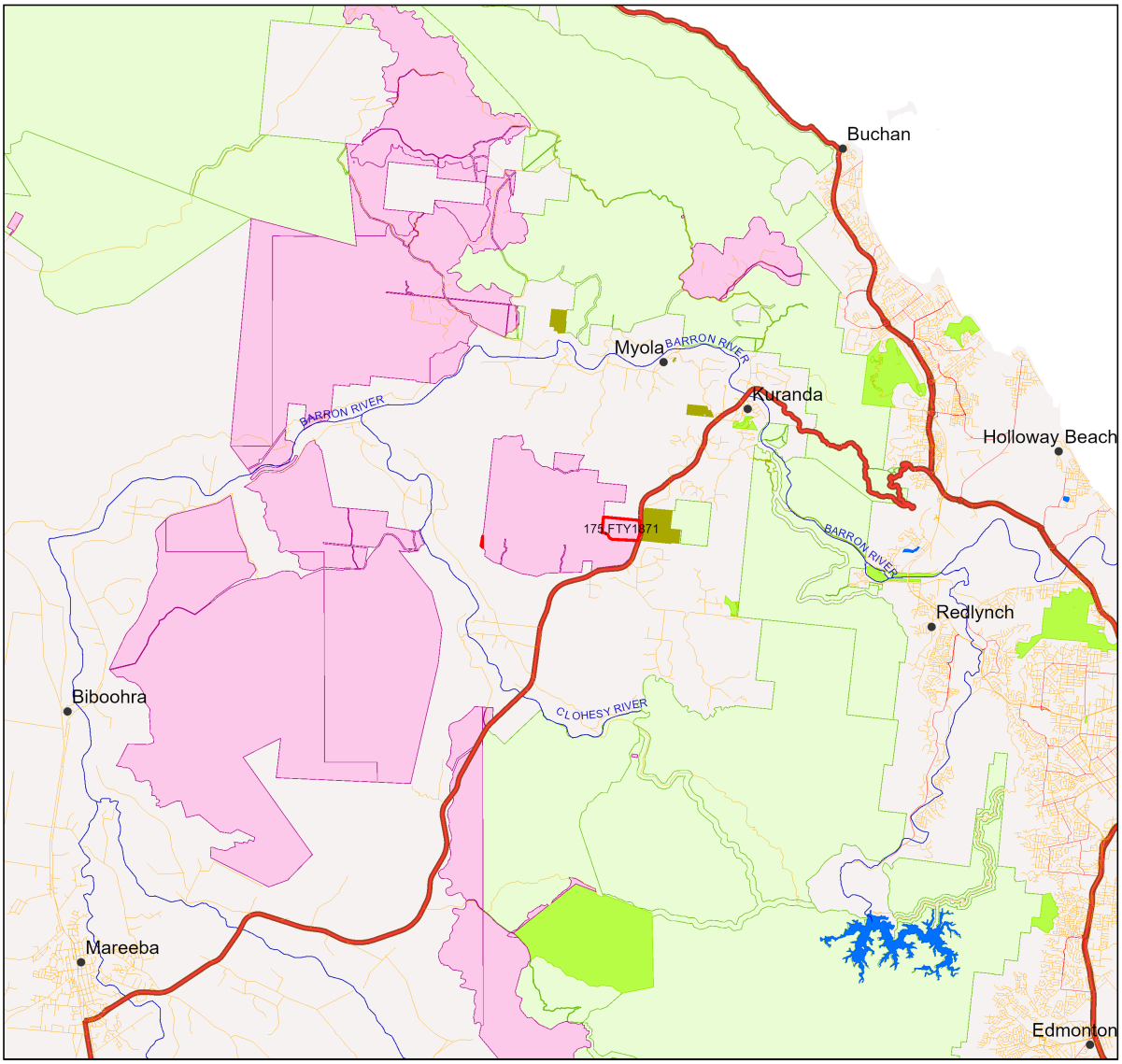
Benchmarks are based on a combination of quantitative and qualitative information and should be used as a guide only. Benchmarks are specific to one regional ecosystem vegetation community, however, the natural variability in structure and floristic composition under a range of climatic and natural disturbance regimes has been considered throughout the geographic extent of the regional ecosystem. Local reference sites should be used for this spatial and temporal (seasonal and annual) variability.

**Table 7: List of remnant regional ecosystems within the AOI for which technical and biocondition benchmark descriptions are available**

| Regional ecosystems mapped as within the AOI | Technical Descriptions | Biocondition Benchmarks |
|---|---|---|
| 7.11.21a | Not currently available | Not currently available |
| 7.11.33a | Not currently available | Not currently available |
| 7.11.35a | Not currently available | Not currently available |
| 7.11.41a | Not currently available | Not currently available |
| 7.11.51a | Not currently available | Not currently available |
| non-remnant | Not currently available | Not currently available |

# Maps

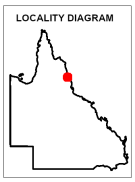
## Map 1 - Location




### Locality Map

**Legend**

- Towns
- Freeways/Highways
- Connector
- Street/Local Road
- Lakes and reservoirs
- National Park
- National Park (Scientific)
- National Park (CYPAL)
- National Park (Aboriginal Land)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Nature Refuges
- Coordinated Conservation Areas
- Major rivers/creeks
- Queensland
- Selected Lot and Plan




N

0 2100 4200 6300 8400 10500 m

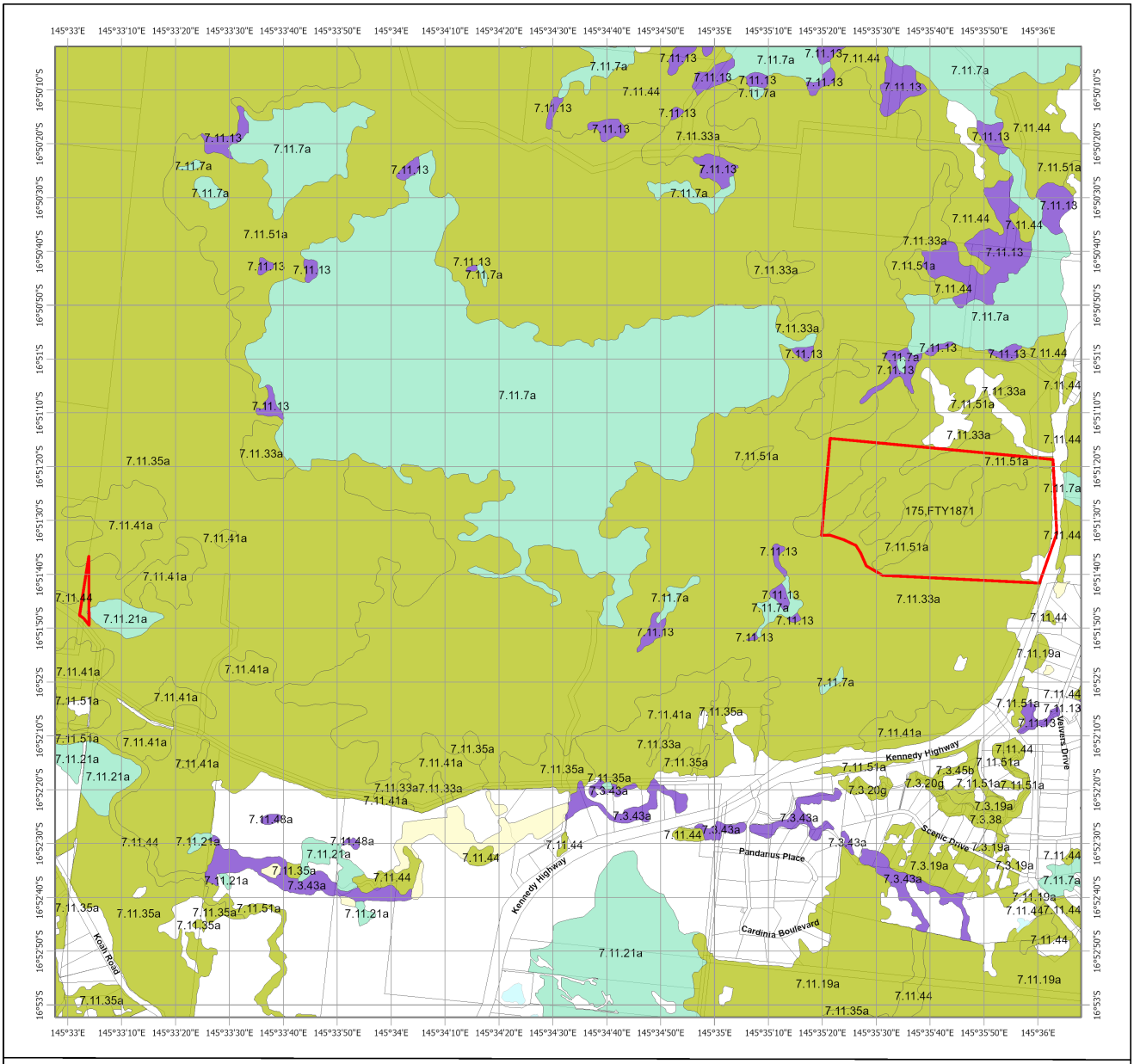
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## Map 2 - Remnant 2021 regional ecosystems

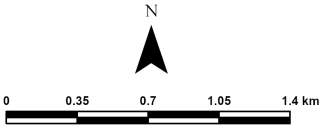



# Remnant 2021 Regional Ecosystems

## Biodiversity Status

- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Non-remnant vegetation, cultivated or built environment
- Plantation
- Water
- Cadastral Boundaries
- Selected Lot and Plan



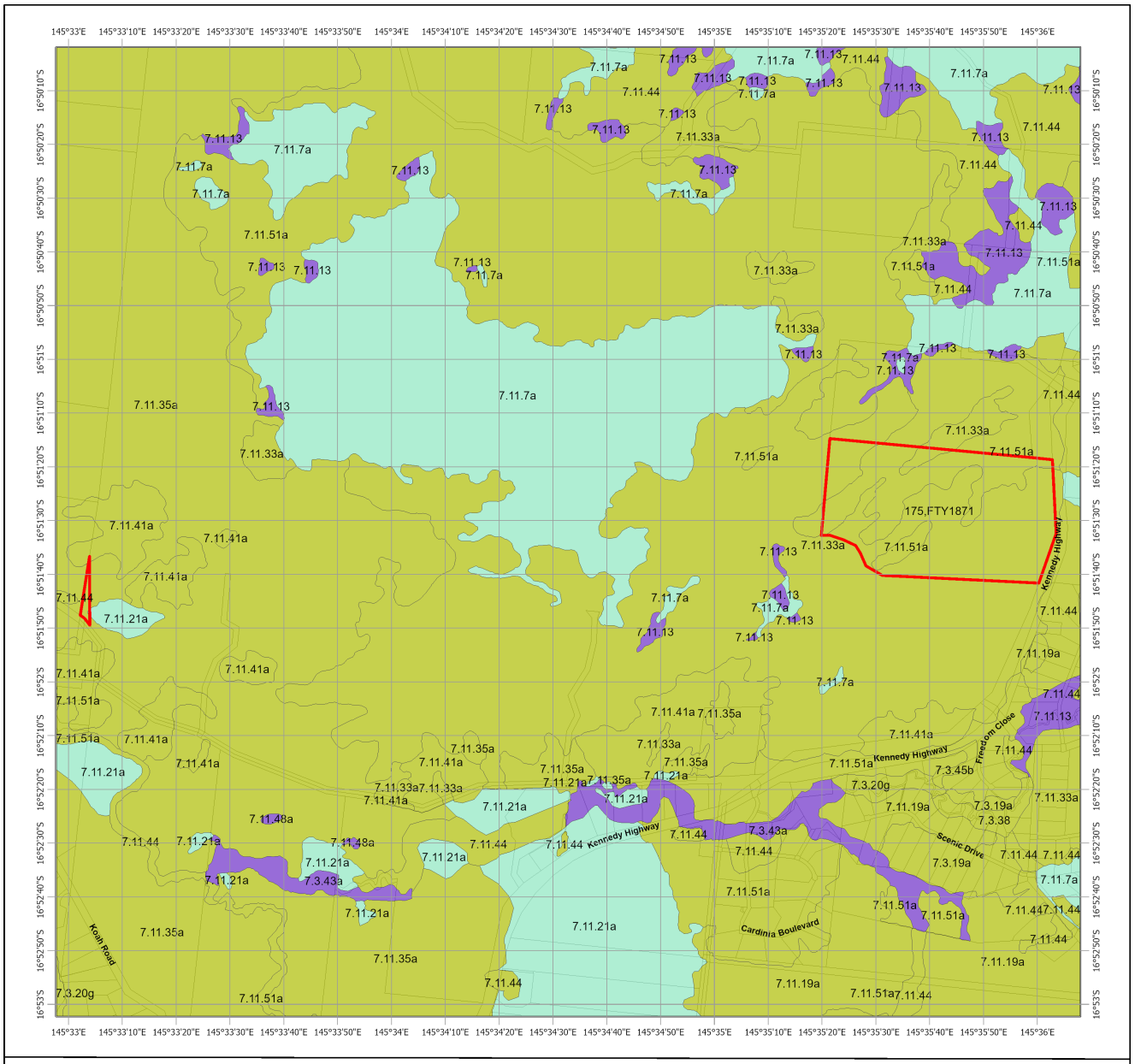




This product is projected into GDA2020

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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## Map 3 - Pre-clearing regional ecosystems




## Pre-clearing Regional Ecosystems

### Biodiversity Status

- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Water
- Cadastral Boundaries
- Selected Lot and Plan




N

0 0.35 0.7 1.05 1.4 km

This product is displayed in GDA2020

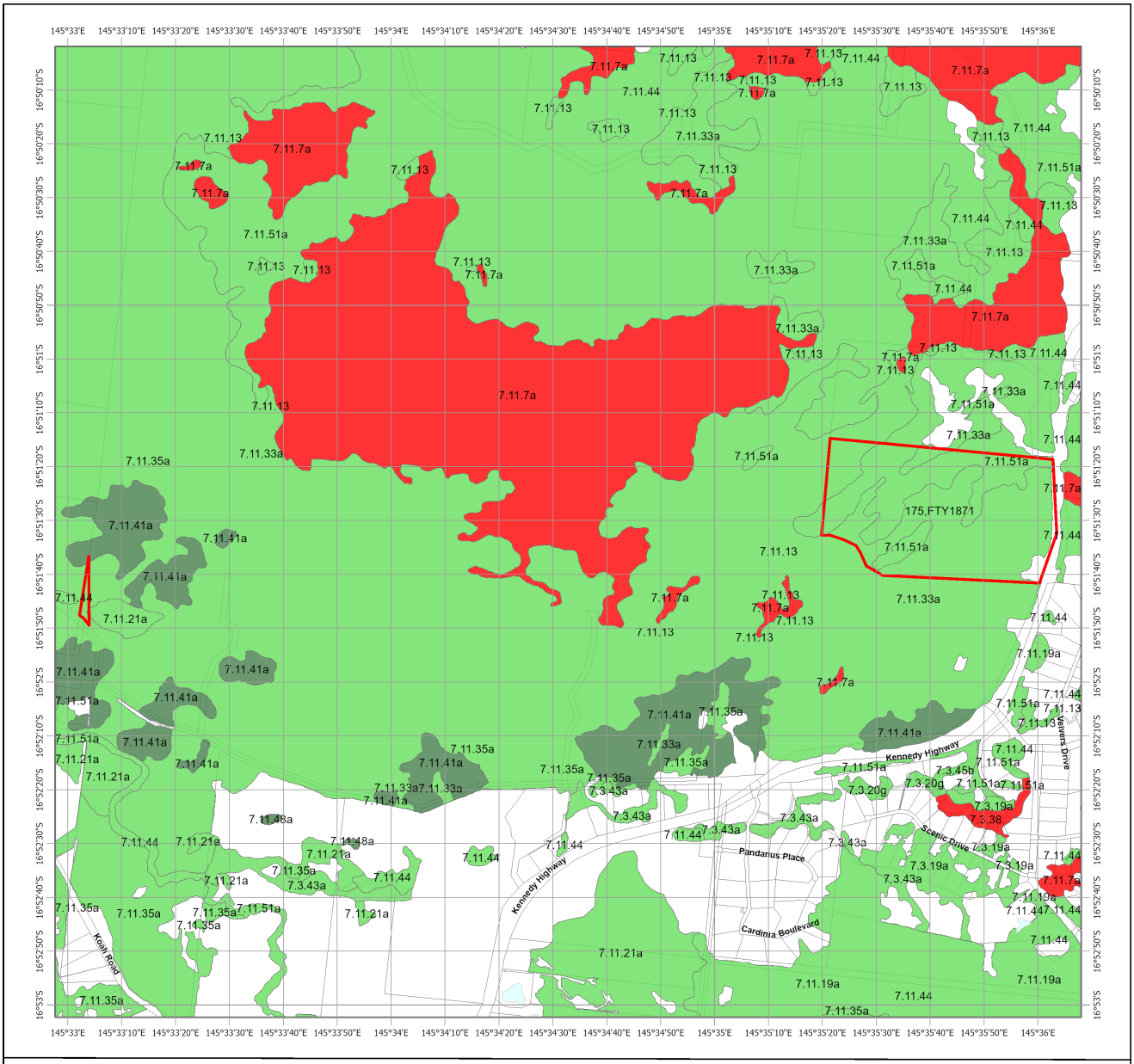
Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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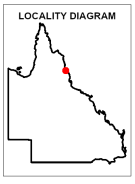
## Map 4 - Remnant 2021 regional ecosystems by BVG (5M)




## Remnant 2021 Regional Ecosystems coloured by Broad Vegetation Groups

### Broad Vegetation Groups
### BVG5M Description (BVG1M codes)

- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries
- Selected Lot and Plan




N

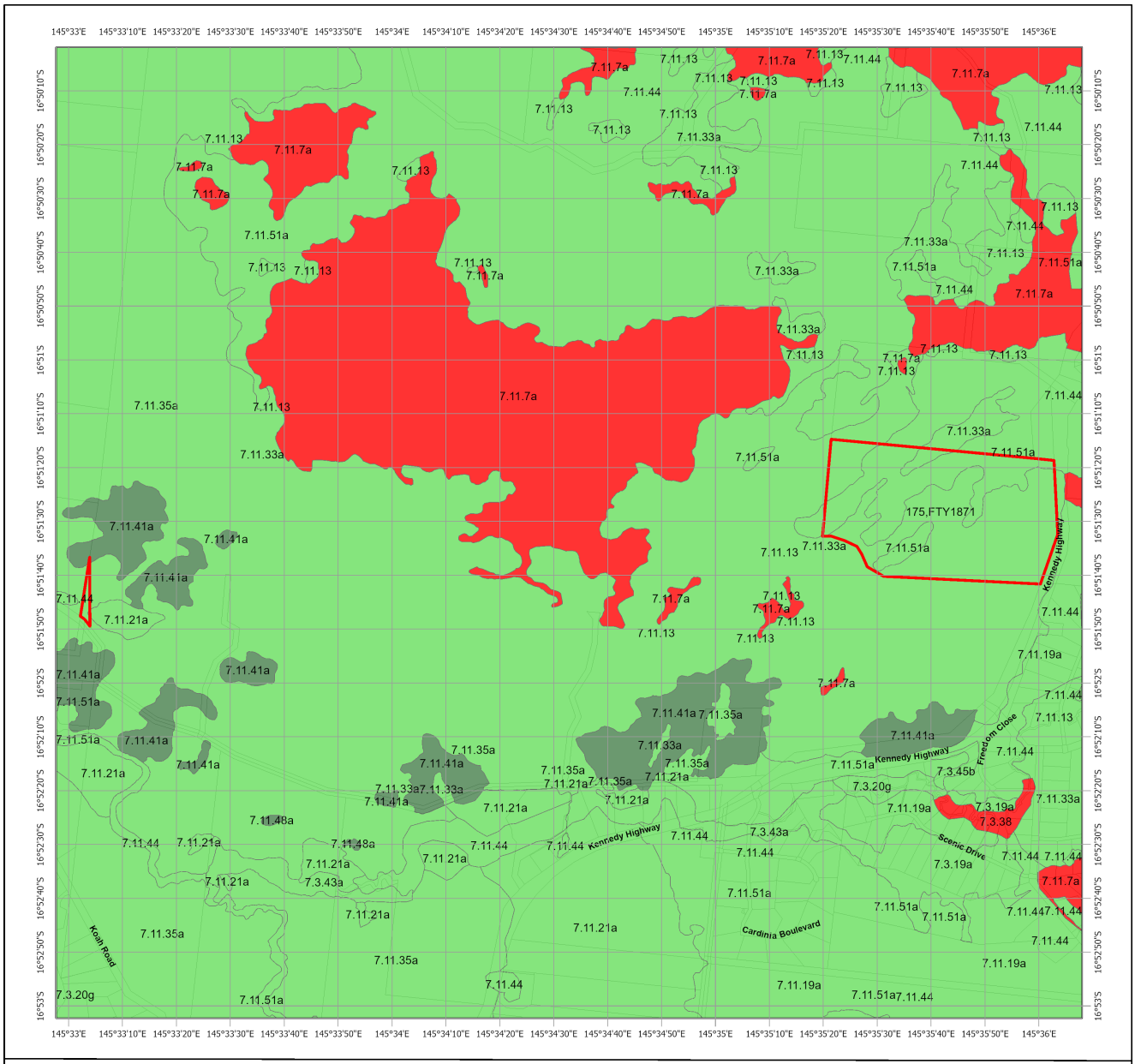
0 0.35 0.71 1.06 1.42 km

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Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled. Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.
The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.
Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy.
Non-remnant vegetation includes regrowth and disturbed native vegetation.

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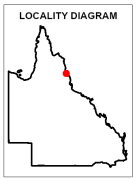
## Map 5 - Pre-clearing regional ecosystems by BVG (5M)

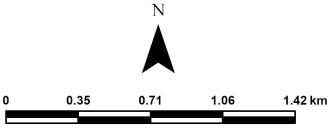



## Pre-clearing Regional Ecosystems coloured by Broad Vegetation Groups

### Broad Vegetation Groups
### BVG5M Description (BVG1M codes)

- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Water
- Cadastral Boundaries
- Selected Lot and Plan



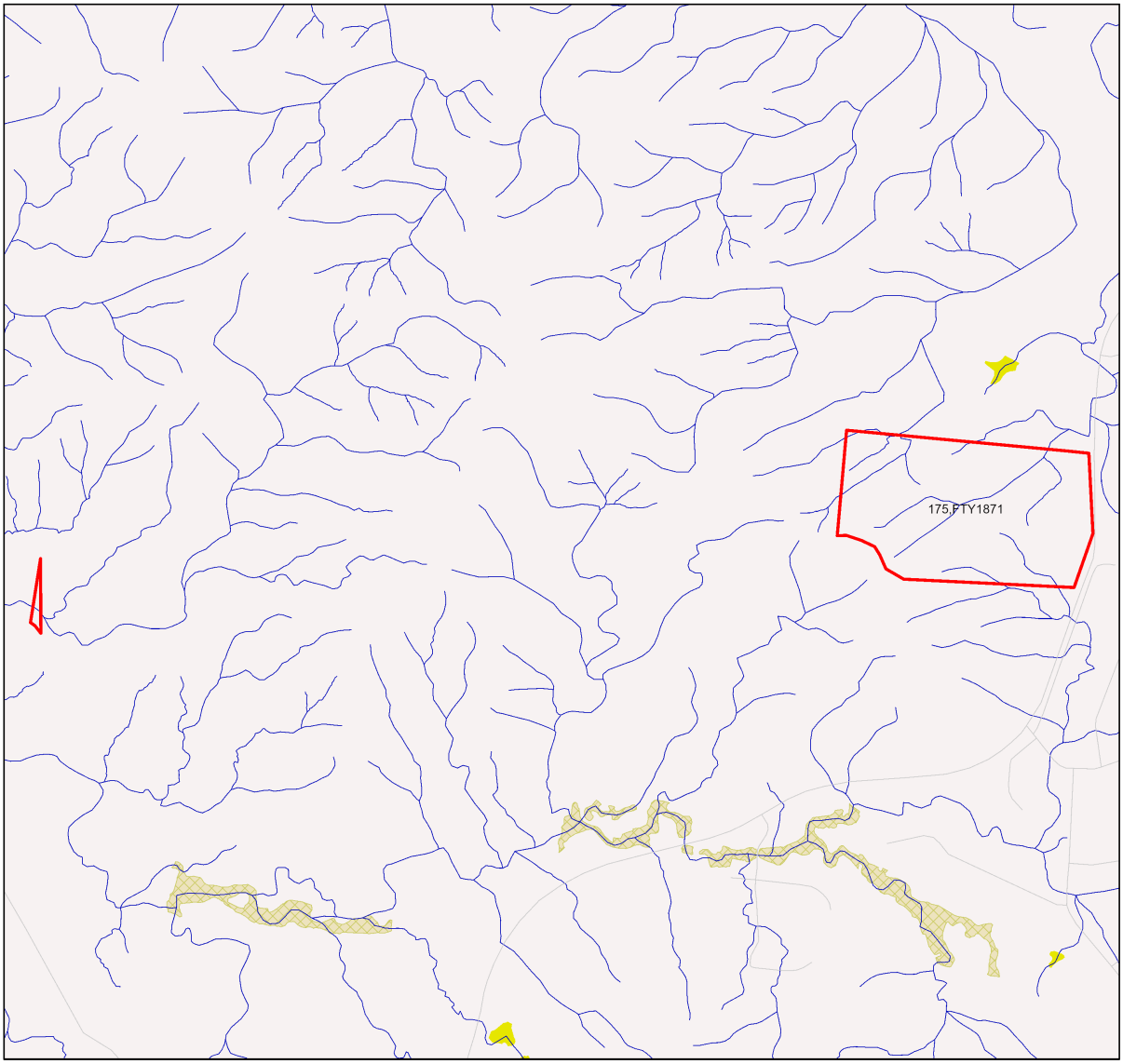




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Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.
Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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## Map 6 - Wetlands and waterways




### Wetlands and Waterways

- Towns
- Roads
- Springs
- Rivers/Creeks
- Directory of Important Wetlands
- Ramsar Sites - QLD

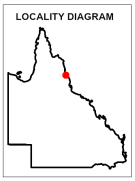
**Wetland Type**

**Hydrologically natural Wetlands**
- Lacustrine Wetlands (hydrologically natural)
- Palustrine Wetlands (hydrologically natural)
- Riverine Wetlands (hydrologically natural)
- Intertidal Wetlands (hydrologically natural)
- Subtidal Wetlands (hydrologically natural)
- Intertidal/Subtidal Wetlands (hydrologically natural)

**Hydrologically Modified and Artificial Wetlands**
- Lacustrine Wetlands (hydrologically modified or artificial)
- Palustrine Wetlands (hydrologically modified or artificial)
- Riverine Wetlands (hydrologically modified or artificial)
- Intertidal Wetlands (hydrologically modified or artificial)
- Subtidal Wetlands (hydrologically modified or artificial)
- Intertidal/Subtidal Wetlands (hydrologically modified or artificial)

**Subdominant Wetlands**
- Subdominant Wetlands (51 - 80%)

**Contains Wetlands**
- Contains Wetlands (1 - 50%)
- Queensland
- Selected Lot and Plan




N

0 320 640 960 1280 1600 m

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## Links and Other Information Sources

The Department of the Environment, Tourism, Science and Innovation's Website - http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/ provides further information on the regional ecosystem framework, including access to links to the Regional Ecosystem Database, Broad Vegetation Group Definitions, Regional Ecosystem and Land zone descriptions.

Descriptions of the broad vegetation groups of Queensland can be downloaded from: https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/broad-vegetation

The methodology for mapping regional ecosystems can be downloaded from: https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

Technical descriptions for regional ecosystems can be obtained from: http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/

Benchmarks can be obtained from: http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/

For further information associated with the remnant regional ecosystem dataset used by this report, refer to the metadata associated with the Biodiversity status of pre-clearing and Remnant Regional Ecosystems of Queensland dataset (version listed in **Appendix 1**) which is available through the Queensland Spatial Catalogue, Queensland Spatial Catalogue : Queensland Government (information.qld.gov.au)

The Queensland Globe is a mapping and data application. As an interactive online tool, Queensland Globe allows you to view and explore Queensland maps, imagery (including up-to-date satellite images) and other spatial data, including regional ecosystem mapping. To further view and explore regional ecosystems over an area of interest, access the Biota Globe (a component of the Queensland Globe). The Queensland Globe can be accessed via the following link: https://qldglobe.information.qld.gov.au/

## References

Neldner, V.J., Niehus, R.E., Wilson, B.A., McDonald, W.J.F., Ford, A.J. and Accad, A. (2023). The Vegetation of Queensland. Descriptions of Broad Vegetation Groups. Version 6.0. Queensland Herbarium, Department of Environment and Science. (https://publications.qld.gov.au/dataset/redd/resource/78209e74-c7f2-4589-90c1-c33188359086)

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Richter,D., Addicott, E.P. and Appelman, C.N. (2023) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 7.0. Updated December 2023. Queensland Herbarium, Queensland Department of Environment, Science and Innovation, Brisbane. (https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf).

Sattler, P.S. and Williams, R.D. (eds) (1999). *The Conservation Status of Queensland's Bioregional Ecosystems.* Environmental Protection Agency, Brisbane.

# Appendices

## Appendix 1 - Source Data

**The dataset listed below is available for download from:**
http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/download/

- Regional Ecosystem Description Database

**The datasets listed below are available for download from:**
Queensland Spatial Catalogue : Queensland Government (information.qld.gov.au)

- Biodiversity status of pre-clearing and 2021 remnant regional ecosystems of Queensland
- Pre-clearing Vegetation Communities and Regional Ecosystems of Queensland
- Queensland Wetland Data Version - Wetland lines
- Queensland Wetland Data Version - Wetland points
- Queensland Wetland Data Version - Wetland areas
- Pre-clearing broad vegetation groups of Queensland
- Remnant 2021 broad vegetation groups of Queensland

## Appendix 2 - Acronyms and Abbreviations

AOI - Area of Interest
GIS - Geographic Information System
RE - Regional Ecosystem
REDD - Regional Ecosystem Description Database
VMA - *Vegetation Management Act 1999*

# Appendix D MSES Search Report

Queensland Government

**Department of the Environment, Tourism, Science and Innovation**

Environmental Reports

# Matters of State Environmental Significance

For the selected area of interest

Lot: 175 Plan: FTY1871

# Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 2020). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and a field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@detsi.qld.gov.au

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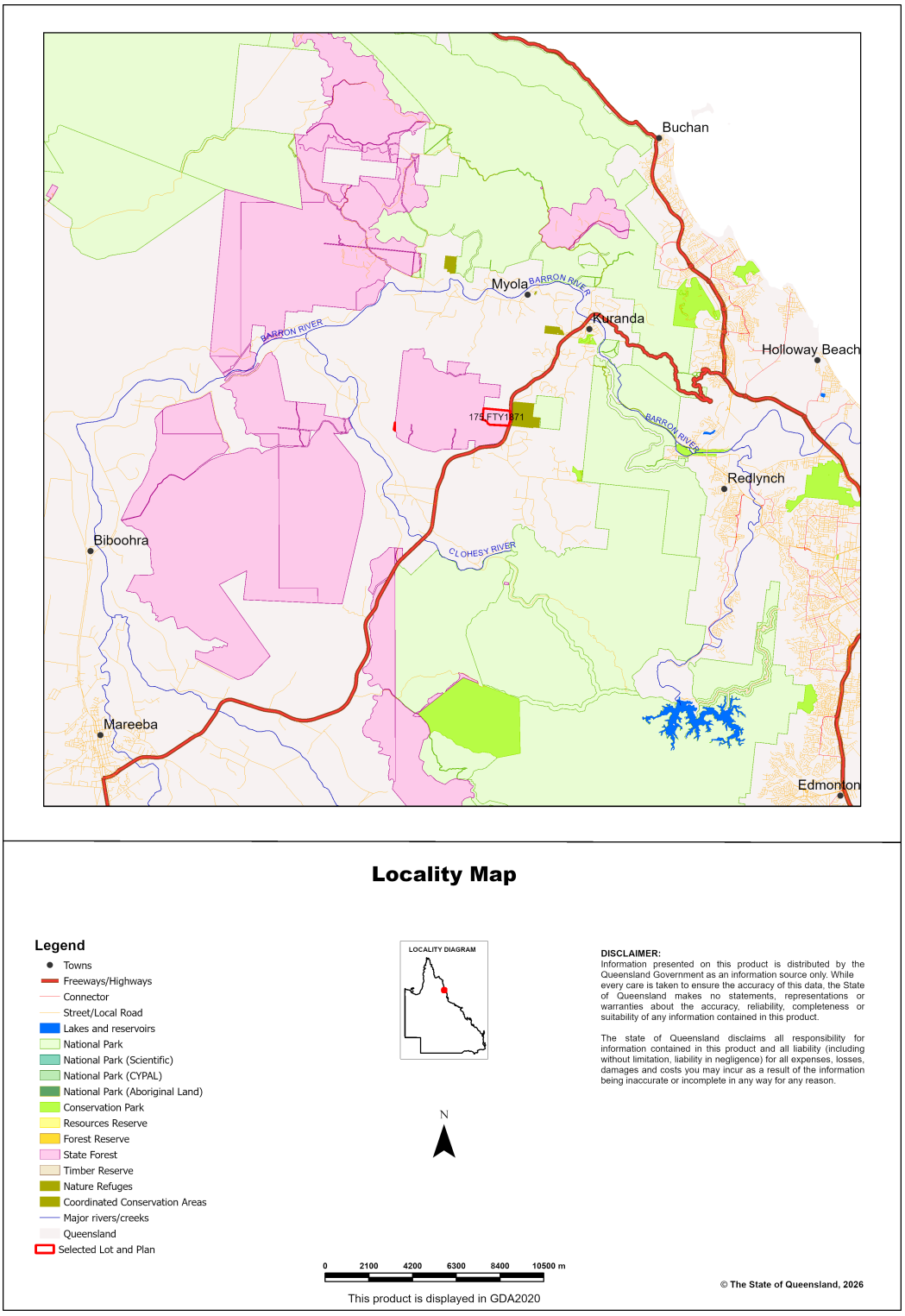

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# Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

**Table 1: Summary table, details for AOI: Lot: 175 Plan: FTY1871, with area 88.85 ha**

| Local Government(s) | Catchment(s) | Bioregion(s) | Subregion(s) |
|---|---|---|---|
| Mareeba Shire | Barron | Wet Tropics | Macalister |



# Matters of State Environmental Significance (MSES)

## MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992;*

*- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004 ;*

*- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;*

- *Threatened wildlife under the Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;

- Regulated vegetation under the *Vegetation Management Act 1999* that is:

  - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
  - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
  - Category R areas on the regulated vegetation management map;
  - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
  - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;

- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;

- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;

- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

## MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

**Table 2: Summary of MSES present within the AOI**

| | | |
|---|---|---|
| 1a Protected Areas- estates | 0 ha | 0.0% |
| 1b Protected Areas- nature refuges | 0 ha | 0.0% |
| 1c Protected Areas- special wildlife reserves | 0 ha | 0.0% |
| 2 State Marine Parks- highly protected zones | 0 ha | 0.0% |
| 3 Fish habitat areas (A and B areas) | 0 ha | 0.0% |
| 4 Strategic Environmental Areas (SEA) | 0 ha | 0.0% |
| 5 High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values | 0 ha | 0.0% |
| 6a High Ecological Value (HEV) wetlands | 0ha | 0.0% |
| 6b High Ecological Value (HEV) waterways | 2.1 km | Not applicable |
| 7a Threatened (endangered or vulnerable) wildlife | 0 ha | 0.0% |
| 7b Special least concern animals | 0 ha | 0.0% |
| 7c i Koala habitat area - core (SEQ) | 0 ha | 0.0% |
| 7c ii Koala habitat area - locally refined (SEQ) | 0 ha | 0.0% |
| 7d Sea turtle nesting areas | 0 km | Not applicable |
| 8a Regulated Vegetation - Endangered/Of concern in Category B (remnant) | 54.87 ha | 61.8% |
| 8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth) | 0 ha | 0.0% |
| 8c Regulated Vegetation - Category R (GBR riverine regrowth) | 0 ha | 0.0% |
| 8d Regulated Vegetation - Essential habitat | 29.33 ha | 33.0% |
| 8e Regulated Vegetation - intersecting a watercourse | 2.1 km | Not applicable |
| 8f Regulated Vegetation - within 100m of a Vegetation Management Wetland | 0 ha | 0.0% |
| 9a Legally secured offset areas- offset register areas | 0 ha | 0.0% |
| 9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation | 0 ha | 0.0% |

## Additional Information with Respect to MSES Values Present

## MSES - State Conservation Areas

**1a. Protected Areas - estates**

(No results)

**1b. Protected Areas - nature refuges**

(No results)

**1c. Protected Areas - special wildlife reserves**

(No results)

**2. State Marine Parks - highly protected zones**

(No results)

**3. Fish habitat areas (A and B areas)**

(No results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

## MSES - Wetlands and Waterways

**4. Strategic Environmental Areas (SEA)**

(No results)

**5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values**

(no results)

**6a. Wetlands in High Ecological Value (HEV) waters**

(no results)

**6b. Waterways in High Ecological Value (HEV) waters**

Natural waterways that occur in HEV (maintain) freshwater and estuarine areas under the Environmental Protection (water) Policy are present.

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

## MSES - Species

**7a. Threatened (endangered or vulnerable) wildlife**

Not applicable

**7b. Special least concern animals**

Not applicable

**7c i. Koala habitat area - core (SEQ)**

Not applicable

**7c ii. Koala habitat area - locally refined (SEQ)**

Not applicable

**7d. Wildlife habitat (sea turtle nesting areas)**

Not applicable

**Threatened (endangered or vulnerable) wildlife habitat suitability models**

| Species | Common name | NCA status | Presence |
|---|---|---|---|
| *Boronia keysii* | Keys boronia | V | None |
| *Calyptorhynchus lathami* | Glossy black cockatoo | V | None |
| *Casuarius casuarius johnsonii* | Sthn population cassowary | E | None |
| *Crinia tinnula* | Wallum froglet | V | None |
| *Denisonia maculata* | Ornamental snake | V | None |
| *Euastacus bindal* | Mount Elliot crayfish | CR | None |
| *Euastacus binzayedi* | | CR | None |
| *Euastacus eungella* | | E | None |
| *Euastacus hystricosus* | | E | None |
| *Euastacus jagara* | Jagara hairy crayfish | CR | None |
| *Euastacus maidae* | | CR | None |
| *Euastacus monteithorum* | | E | None |
| *Euastacus robertsi* | | E | None |
| *Taudactylus pleione* | Kroombit tinkerfrog | E | None |
| *Litoria freycineti* | Wallum rocketfrog | V | None |
| *Litoria olongburensis* | Wallum sedgefrog | V | None |
| *Macadamia integrifolia* | | V | None |
| *Melaleuca irbyana* | swamp tea-tree | E | None |
| *Macadamia ternifolia* | | V | None |
| *Macadamia tetraphylla* | bopple nut | V | None |
| *Petrogale penicillata* | brush-tailed rock-wallaby | V | None |
| *Petrogale coenensis* | Cape York rock-wallaby | E | None |
| *Petrogale purpureicollis* | purple-necked rock-wallaby | V | None |
| *Petrogale sharmani* | Sharmans rock-wallaby | V | None |
| *Petrogale xanthopus celeris* | yellow-footed rock-wallaby (Qld subspecies) | V | None |
| *Petaurus gracilis* | Mahogany Glider | E | None |
| *Petrogale persephone* | Proserpine rock-wallaby | E | None |
| *Phascolarctos cinereus* | Koala - outside SEQ* | E | None |
| *Pezoporus wallicus wallicus* | Eastern ground parrot | V | None |
| *Xeromys myoides* | Water Mouse | V | None |

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

**Threatened (endangered or vulnerable) wildlife species records**

(No results)

**Special least concern animal species records**

(No results)

**Shorebird habitat (critically endangered/endangered/vulnerable)**

Not applicable

**Shorebird habitat (special least concern)**

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)*

*Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)*

To request a species list for an area, or search for a species profile, access Wildlife Online at:

https://www.qld.gov.au/environment/plants-animals/species-list/

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals** and **Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

## MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:

https://environment.ehp.qld.gov.au/regional-ecosystems/

**8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)**

| Regional ecosystem | Vegetation management polygon | Vegetation management status |
|---|---|---|
| 7.11.33a | O-dom | rem_oc |
| 7.11.41a | O-dom | rem_oc |

**8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)**

Not applicable

**8c. Regulated Vegetation - Category R (GBR riverine regrowth)**

Not applicable

**8d. Regulated Vegetation - Essential habitat**

Values are present

**8e. Regulated Vegetation - intersecting a watercourse****

A vegetation management watercourse is mapped as present

**8f. Regulated Vegetation - within 100m of a Vegetation Management wetland**

Not applicable

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

## MSES - Offsets

**9a. Legally secured offset areas - offset register areas**

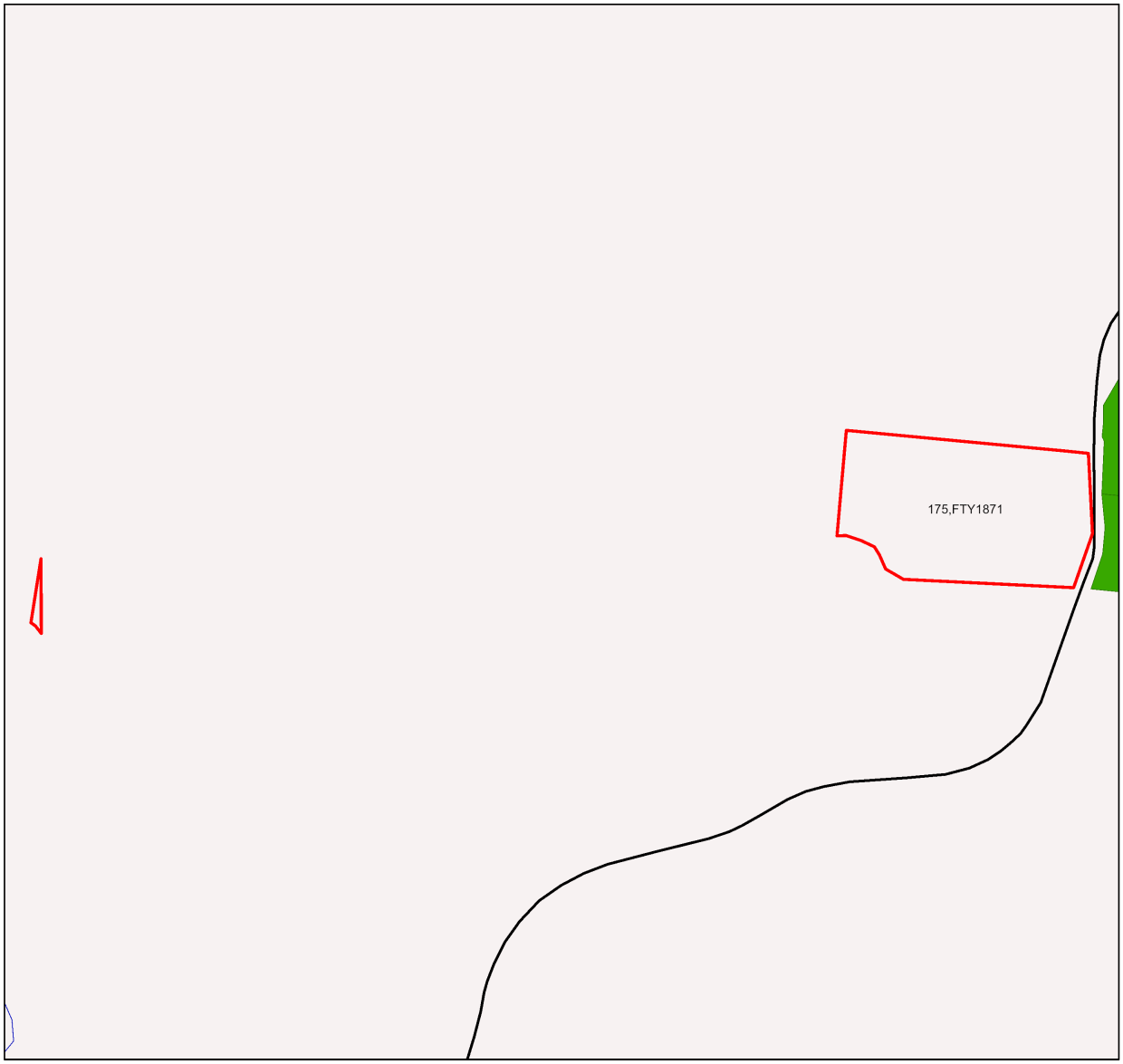
(No results)

**9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation**

(No results)

Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

## Map 1 - MSES - State Conservation Areas




### MSES - State Conservation Areas

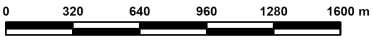
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Protected area (estates, nature refuges, special wildlife reserves)
- Declared fish habitat area (A and B areas)
- Marine park (highly protected)
- Selected Lot and Plan




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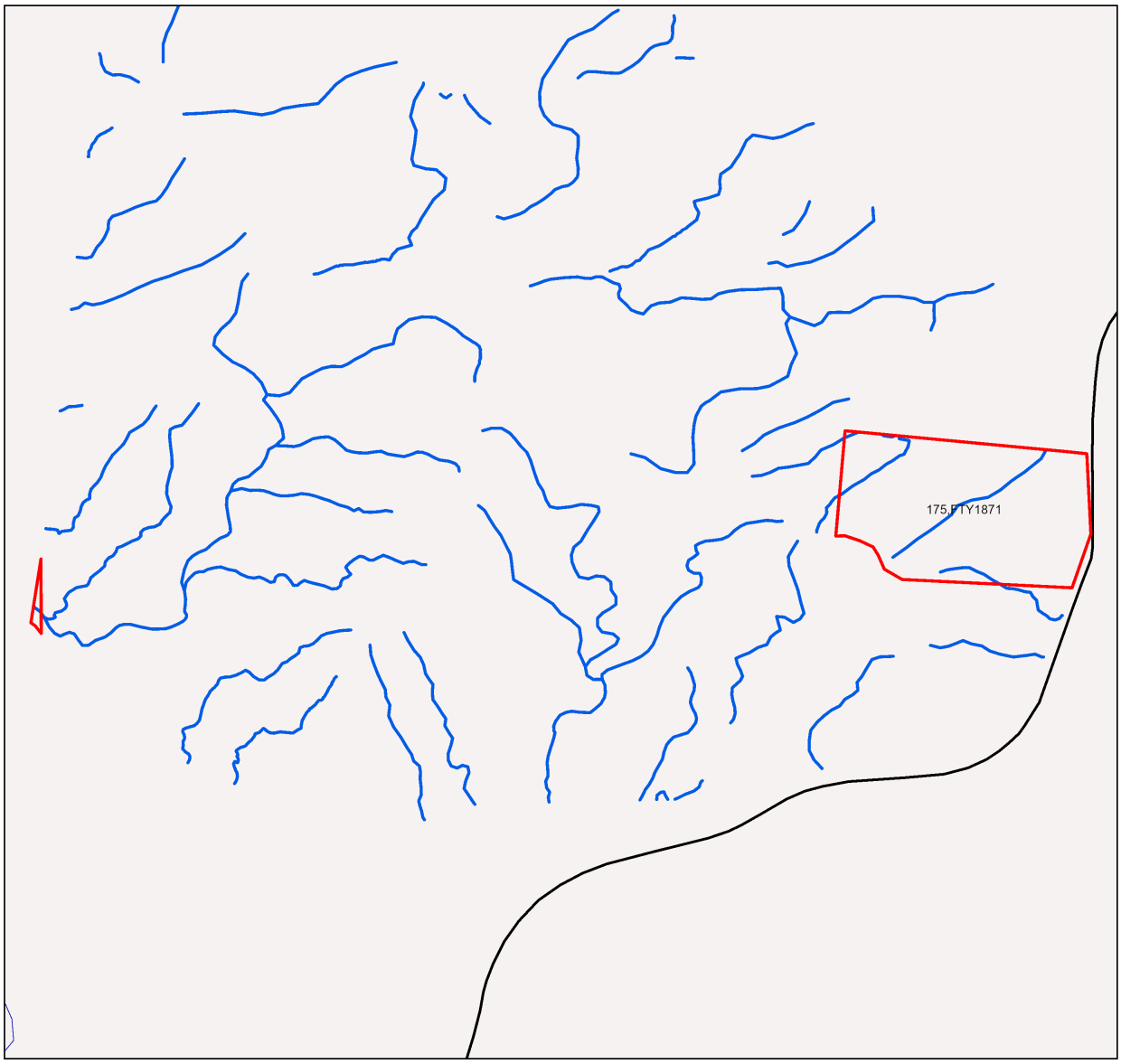



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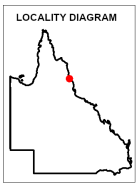
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## Map 2 - MSES - Wetlands and Waterways




## MSES - Wetlands and Waterways

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Declared high ecological value waters (watercourse)
- Strategic environmental area (designated precinct)
- Declared high ecological value waters (wetland)
- High ecological significance wetlands
- Selected Lot and Plan




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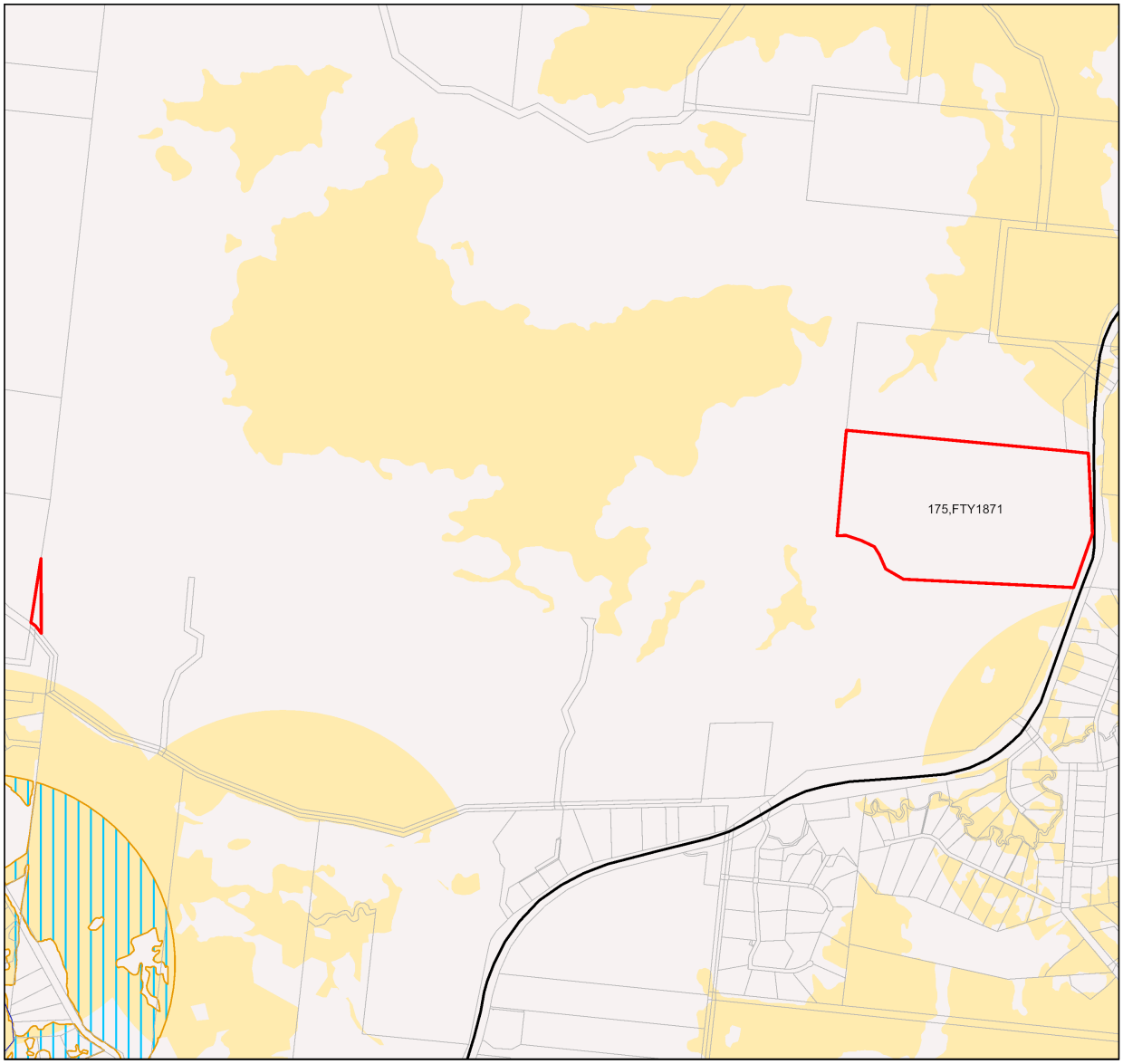
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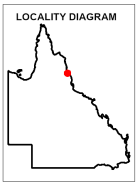
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## Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals




### MSES - Species
### Threatened (endangered or vulnerable) wildlife and special least concern animals

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (special least concern)
- Wildlife habitat (endangered or vulnerable)
- Selected Lot and Plan




N

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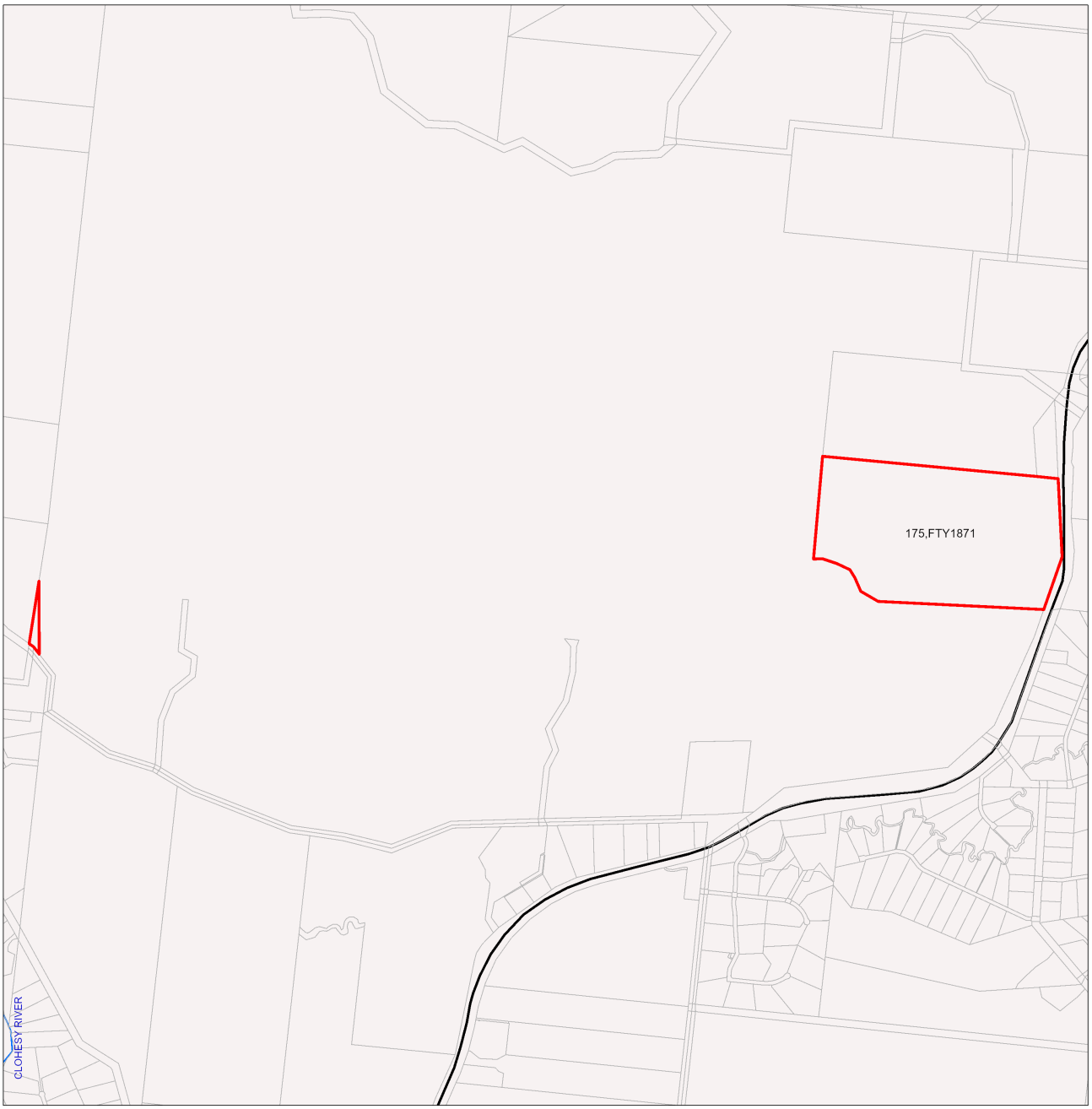
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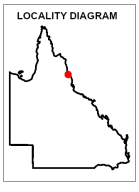
## Map 3b - MSES - Species - Koala habitat area (SEQ)




# MSES - Species
# Koala habitat area (SEQ)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Selected Lot and Plan

LOCALITY DIAGRAM



0 300 600 900 1,200 1,500 m

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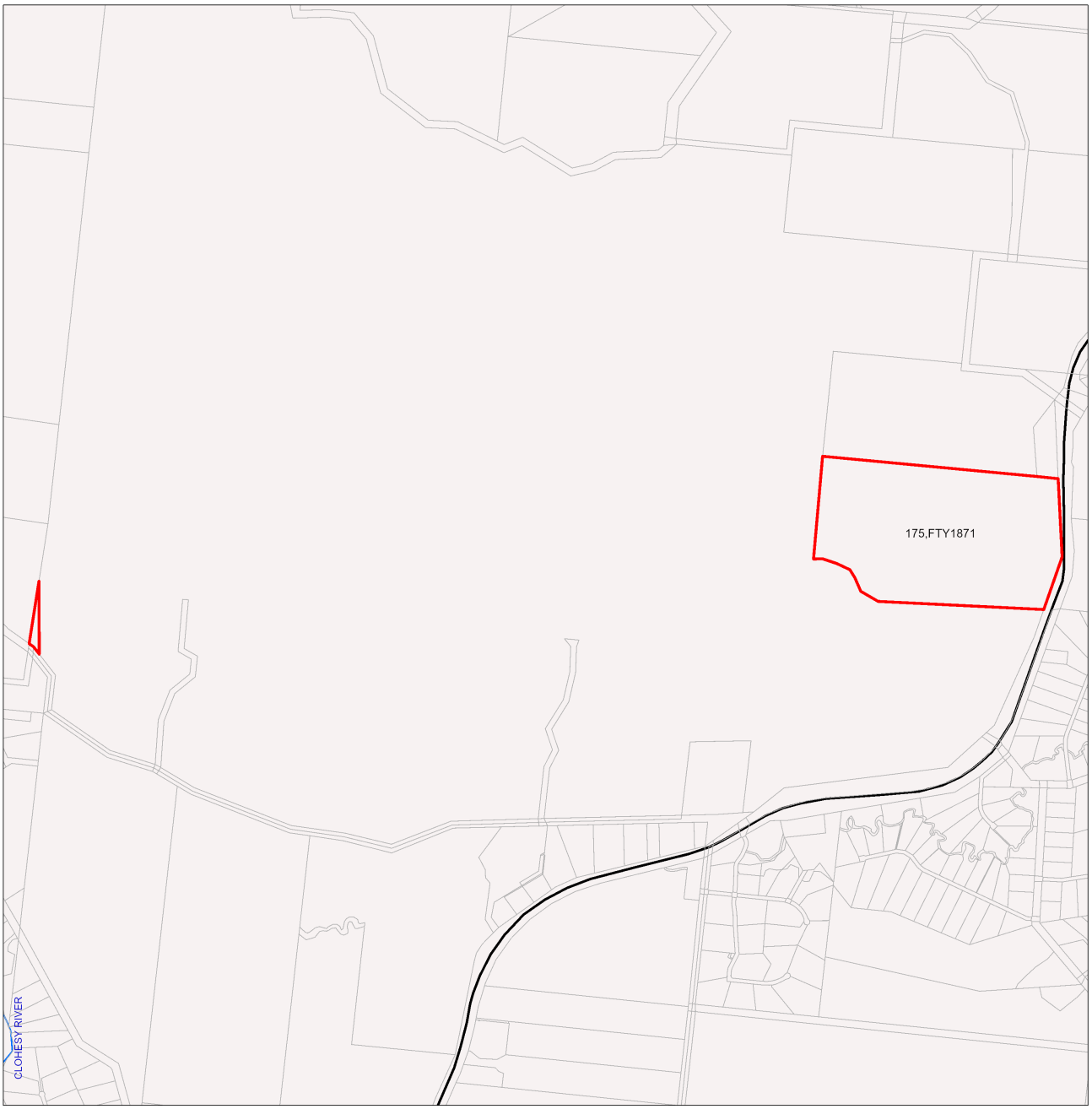
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The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping

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

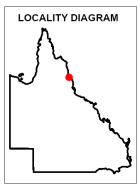
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## Map 3c - MSES - Species - Wildlife habitat (sea turtle nesting areas)




# MSES - Wildlife habitat (sea turtle nesting areas)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (sea turtle nesting areas)
- Selected Lot and Plan




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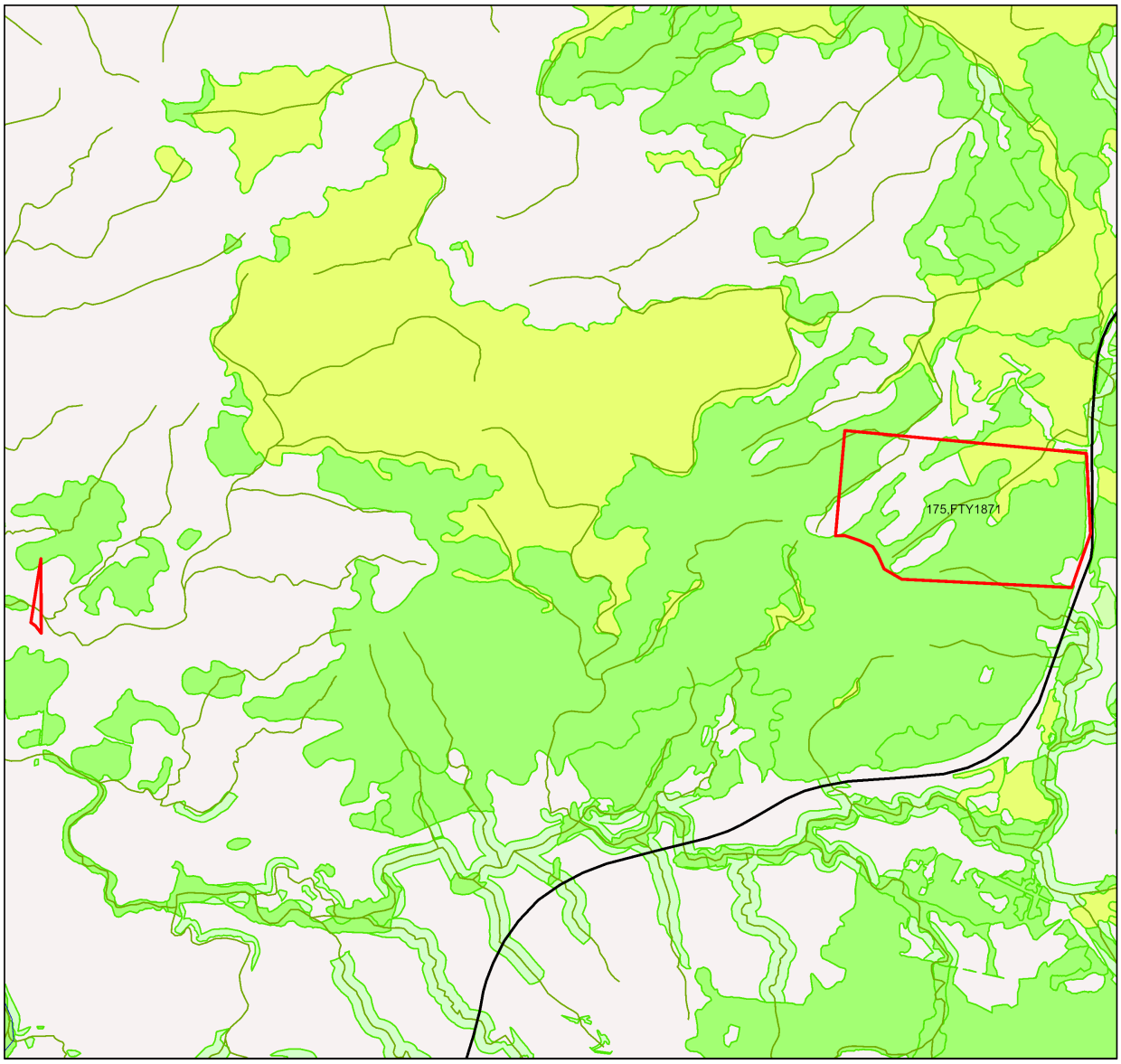
MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disoriented by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.

0 300 600 900 1,200 1,500 m

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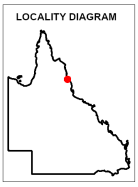
This product is displayed in GDA2020

## Map 4 - MSES - Regulated Vegetation




### MSES - Regulated Vegetation

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Regulated vegetation (intersecting a watercourse)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (category B - endangered or of concern)
- Regulated vegetation (category C - endangered or of concern)
- Regulated vegetation (category R - GBR riverine)
- Regulated vegetation (essential habitat)
- Selected Lot and Plan




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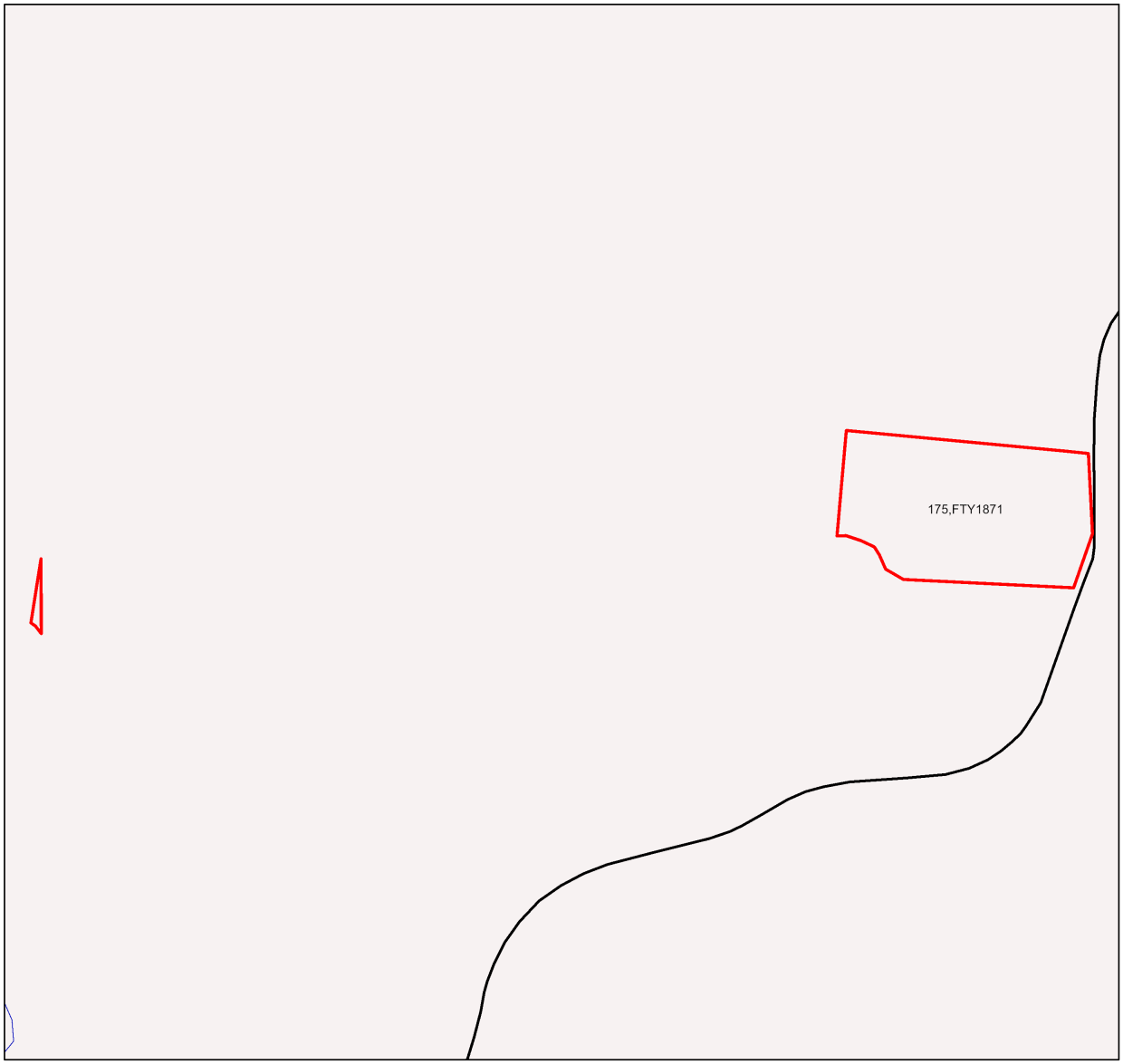
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## Map 5 - MSES - Offset Areas




### MSES - Offsets

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Legally secured offset area (offset register)
- Legally secured offset area (vegetation offsets)
- Selected Lot and Plan




N

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# Appendices

### Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). Its primary purpose is to support implementation of the SPP biodiversity policy.

MSES mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

MSES mapping does not determine whether state or local development assessment is required. For state assessment triggers refer to the Development Assessment Mapping System (DAMS). For local assessment triggers, refer to the relevant local planning scheme.

The Queensland Government's "Method for mapping - matters of state environmental significance can be downloaded from:

http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html .

**Appendix 2 - Source Data**

The datasets listed below are available on request from:

http://qldspatial.information.qld.gov.au/catalogue/custom/index.page

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

| **MSES layers** | **current QSpatial data (http://qspatial.information.qld.gov.au)** |
|---|---|
| Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves | - Protected areas of Queensland<br>- Nature Refuges - Queensland<br>- Special Wildlife Reserves- Queensland |
| Marine Park-Highly Protected Zones | Moreton Bay marine park zoning 2008 |
| Fish Habitat Areas | Queensland fish habitat areas |
| Strategic Environmental Areas-designated | Regional Planning Interests Act - Strategic Environmental Areas |
| HES wetlands | Map of Queensland Wetland Environmental Values |
| Wetlands in HEV waters | HEV waters:<br>- EPP Water intent for waters<br>Source Wetlands:<br>- Queensland Wetland Mapping (Current version 5)<br>Source Watercourses:<br>- Vegetation management watercourse and drainage feature map (1:100000 and 1:250000) |
| Wildlife habitat (threatened and special least concern) | -WildNet database species records<br>- habitat suitability models (various)<br>- SEQ koala habitat areas under the Koala Conservation Plan 2019 |
| VMA regulated regional ecosystems | Vegetation management regional ecosystem and remnant map |
| VMA Essential Habitat | Vegetation management - essential habitat map |
| VMA Wetlands | Vegetation management wetlands map |
| Legally secured offsets | Vegetation Management Act property maps of assessable vegetation.<br>For offset register data-contact DETSI |
| Regulated Vegetation Map | Vegetation management - regulated vegetation management map |

**Appendix 3 - Acronyms and Abbreviations**

| | |
|---|---|
| AOI | - Area of Interest |
| DETSI | - Department of the Environment, Tourism, Science and Innovation |
| EP Act | - Environmental Protection Act 1994 |
| EPP | - Environmental Protection Policy |
| GDA2020 | - Geocentric Datum of Australia 2020 |
| GEM | - General Environmental Matters |
| GIS | - Geographic Information System |
| MSES | - Matters of State Environmental Significance |
| NCA | - Nature Conservation Act 1992 |
| RE | - Regional Ecosystem |
| SPP | - State Planning Policy |
| VMA | - Vegetation Management Act 1999 |

# Annexure 10: Flora Survey Report

# FLORA SURVEY REPORT

## Top Rock Quarry

442128
15 June 2026
0

rpsgroup.com

## Document status

| Version | Purpose of document | Authored by | Reviewed by | Approved by | Review date |
|---|---|---|---|---|---|
| 0 | Flora Survey Report | L. Honey | M. Davis | M. Davis | 15/06/2026 |
| | | | | | |
| | | | | | |
| | | | | | |

## Approval for issue

| | | |
|---|---|---|
| Megan Davis |  | 15 June 2026 |

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# 1 INTRODUCTION

RPS AAP Consulting Pty Ltd has been engaged by Fgf Developments Pty Ltd to undertake a Protected Plant Survey for the proposed quarry expansion at Top Rock Quarries. This expansion will extend into Lot 175 FTY1871 adjacent to the current site and Environmental Authority located at the Kennedy Highway, Kuranda on Lot 46 on SP328230 hereafter referred to as "the project site". Refer to **Appendix A** for the proposed expansion area.

The purpose of this report is to provide a Flora Survey in accordance with the Flora Survey Guideline to identify Endangered, Vulnerable, and Near Threatened (EVNT) plants that are or are likely to be present in areas that have been identified as high risk for protected plants pursuant to the *Nature Conservation Act 1992*.

## 1.1 Site Details

Top Rock Quarry is located within the Mareeba Shire Council area, approximately 5 kms from the Kuranda village turnoff on the Kennedy Highway. Top Rock is a privately owned and run quarry, set up to supply construction aggregates and road base materials to the local market in and around the Cairns and Tablelands area. This report refers to the proposed staged expansion into Lot 175 FTY1871 as per **Figure 1** below, refer to **Appendix A** for the full Proposed Expansion Plans.




**Figure 1. Proposed Expansion Area (blue polygons)**

## 1.2 Suitably Qualified Person Certification

**Certification by a suitably qualified person**

Botanical surveys, including the identification of EVNT species, were undertaken in accordance with the 'Flora survey guidelines – Protected Plants' 2020(FSG).

The survey was coordinated and led by Botanist Fanie Venter, who has extensive Flora Survey experience within the Wet Tropics and meets the eligible criteria for a suitably qualified person under the FSG, refer to **Appendix B** for Fanie Venter's C.V.

This survey was coordinated and led by Fanie Venter, with assistance from Liam Honey on 01 June 2026.

I, Fanie Venter, certify that:

a. I have adhered to all statutory requirements and flora survey guideline requirements; and

b. In the area surveyed, I have not found plants that are currently listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable or near threatened in the N*ature Conservation* (Plants) *Regulation 2020* (NCPR); and

c. No other NC(P)R listed plant species were identified in the survey, and

d. The flora survey report is an accurate and full account of the flora survey

| | |
|---|---|
| **Full name of a suitably qualified person** | **Fanie Venter** |
| **Signature** |  |
| **Date signed** | 12/06/2026 |

## 1.3 Regional Context

Top Rock Quarry is located just outside Kuranda in the Wet Tropics Bioregion of Far North Queensland. Located roughly 37 km northwest of Cairns and sitting at the edge of the Atherton Tablelands. The area is an ecologically sensitive rainforest and open eucalypt transition zone with the project site primarily occupying open Eucalyptus woodland.

## 1.4 Site Context

The project site features two broad vegetation groups, as classified by Regional Ecosystem descriptions: *Corymbia clarksoniana* and/or *Eucalyptus drepanophylla* open forest to woodland on metamorphics and *Eucalyptus reducta* open forest to woodland on metamorphics. The site is relatively elevated with strong contours across the site ranging from 413m to 460m with a range of different peaks. There are lots of un-mapped drainage lines across the site with one mapped waterway outside the clearing area but within the 100 m buffer added to the clearing area.

## 1.5 Legislative Framework

The Top Rock Quarry's quarry expansion project (the project) has been identified as having a high potential for impacts to protected plants. The assessment includes a desktop review of the potential for protected plants to occur within 100 m of proposed vegetation clearing associated with the project. The project has identified and defined a clearing impact area (CIA), which includes the clearing footprint (Direct Clearing Impact Area (DCIA)) and a required 100 m buffer around it (Indirect Clearing Impact Area ICIA)), which sits within the state environmental trigger mapping for high-risk to protected plants. The Clearing Impact Areas are shown in **Figure 2**.

Section 141 of the *Nature Conservation (Plants) Regulation 2020* (NC(P)R) requires that where any part of an area proposed to be cleared is located within a mapped High-Risk Area (HRA), a flora survey must be undertaken of the Clearing Impact Area (CIA) prior to the commencement of clearing.

Section 142 of the NC(P)R further prescribes that the Flora Survey Guidelines – Protected Plants, Version 2.01 (2020) (FSG) defines the mandatory requirements for undertaking that flora survey. These requirements are not discretionary and include the three core components below.




**Figure 2. CIA (everything in blue and white polygons), DCIA (within blue polygons) and ICIA (outside blue polygons but within white polygon)**

### 1.5.1 Who may undertake the flora survey (FSG Section 4)

The flora survey must be coordinated and led by a Suitably Qualified Person (SQP). Under Section 4 of the FSG, this requires that the person must meet the following criteria:

- Has achieved ≥100 points under the Protected Plants self-assessment grading system; or
- Has been formally recognised in writing by the relevant Director or Executive Director as possessing equivalent expertise;

If requested the SQP must provide the following:

- A completed flora survey report;
- A current curriculum vitae; and
- Supporting documentation demonstrating how the self-assessment criteria have been met.

Fanie Venter's CV is included in **Appendix B** that demonstrates he is a SQP under the FSG.

### 1.5.2 Spatial extent of the flora survey (FSG Section 5)

The FSG states that the flora survey must be undertaken across the Clearing Impact Area (CIA), defined as comprising:

- The area to be cleared within the mapped High-Risk Area (HRA); and
- A 100-metre buffer surrounding that area.

And the buffer may only be reduced where:

- Approval is granted by the Chief Executive prior to the survey; and
- Conditions under Section 134 of the NC(P)R are met, including:
  - Inability to obtain landholder access despite reasonable effort;
  - Highly modified environments (e.g. sealed roads, infrastructure);
  - Physical impracticality of surveying the full buffer.

No formal approval for a reduced buffer has been granted for this project; therefore, the project applied the full 100-metre buffer to the clearing footprint to define the CIA.

### 1.5.3 Information required in the flora survey report (FSG Section 7.2):

The flora survey reporting requirements according to section 7.2 of the FSG are outlined below in **Table 1** (Reporting requirements under section 7.2 of the FSG).

**Table 1 Reporting requirements under Section 7.2 of the FSG**

| Reporting requirement | Details/section within this report |
|---|---|
| 7.2.1 Certification by a suitably qualified person | |
| On the front cover, the full name and signature (and date of signing) of the suitably qualified person and one of the following two certifications: | In the area surveyed, I found no threatened flora species, excluding Special Least Concern Flora Species listed in **Table 7**, which are exempt for clearing as long as these are not collected. |
| (1) "I certify that: | |
| a. I have adhered to all statutory requirements and the flora survey guideline requirements, and | A copy of the certification is included in **Section 1.2** of this report. |
| b. In the area surveyed, I have not found any plants that are currently listed as extinct, extinct | |

| | |
|---|---|
| in the wild, critically endangered, endangered, vulnerable or near threatened in the Nature Conservation (Plants) Regulation 2020; and<br>c. The flora survey report is an accurate and complete account of the flora survey.<br>Or<br>(2) "I certify that:<br>a. I have adhered to all statutory requirements and the flora survey guideline requirements, and<br>b. In the area surveyed, I have found plants (as detailed in this report) that are currently listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable or near threatened in the Nature Conservation (Plants) Regulation 2020; and<br>c. The flora survey report is an accurate and full account of the flora survey | |
| accompanying documentation to support that they are a suitably qualified person (refer to section 4.2.2). | Details of how Fanie Venter meets a suitably qualified person, and the CV, are included in **Appendix B**. |
| 7.2.2 Extent of the area surveyed | |
| A detailed map or plan of the area, showing the area to be cleared, the buffer zone, and the properties included and excluded from the survey area. | Detailed maps showing the area to be cleared, buffer zone (included as part of CIA) and surrounding properties are shown in **Figure 2.** |
| Justification/s for removing any area/s from the buffer zone under section 134(2), or section 5.2 of this guideline. | No areas were removed from the buffer zone. |
| A GIS shapefile showing the area to be cleared, the clearing impact area and the extent of the on-ground surveys undertaken. | GIS shapefiles showing the area to be cleared, CIA and survey tracks showing the extent of the on-ground surveys are provided in **Figure 2**. Shape files can be requested. |
| 7.2.3 Flora survey methods and findings | |
| The lists compiled during the desktop assessment of habitat types and of threatened and near-threatened plants that may occur in these habitat types. | A list of habitat types and potentially threatened or near-threatened plants (EVNT) that may occur within habitat types is included in **Section 3**. |
| The flora survey method was selected and justified, as it was sufficiently comprehensive, given the lists compiled during the desktop assessment. | The timed meander survey was selected, which was appropriate considering the lists compiled during the desktop assessment; see **Section 3** for details. |
| A detailed map or plan of the area showing the habitat types, the location of threatened plants or near threatened plants and possible threatened plants or near threatened plants found. | A detailed map of the habitat types is shown in **Figure 5**. No threatened plants were found. |

| | |
|---|---|
| A copy of the WildNet data entry form submitted to WildNet@science.dsitia.qld.gov.au, completed per the WildNet Data Entry Form Guidelines, including all identified threatened or near threatened plants. | Not applicable |
| Details from threatened plants or near-threatened plants population/plot surveys for each threatened plant or near-threatened plant, and possible threatened plant or near-threatened plant found. | No threatened plants or near-threatened plants were observed during the survey. |
| A description of all possible threatened or near-threatened plants found, including their supporting habitat. | No threatened plants or near-threatened plants were observed during the survey. |
| Justification of the timing of the flora survey and details of any limitations associated with the timing of the survey. | Justification of the timing and limitations is covered in **Section 2**. |
| Justification for any alternative plot size used. | Not applicable. |
| 7.2.4 Other | |
| The date or dates on which any clearing is proposed to occur. | Clearing is anticipated to commence in 2026 and finish in mid 2027. |

# 2 METHODOLOGY

## 2.1 Desktop Assessment

Section 6.2.1 of the FSG requires that the SQP undertake a desktop assessment to:

- Identify habitat types within the CIA; and
- Compile a list of threatened and near-threatened plants (EVNT) that may occur within those habitat types.

A desktop assessment of relevant government databases was completed for potential Protected Plants (EVNT) within the CIA, plus a 5km buffer of the surrounding area. The desktop assessment includes the following:

- Wildenet species lists generated with a 1 km buffer of the two legal Lots and Plan numbers in which the project site sits to identify any threatened or near threatened plants as defined under the *Nature Conservation (Plants) Regulation 2020* (NC Regulation) (**Appendix C**).
- Aerial Photograph Interpretation (API) to determine the broad categorisation of vegetation within and surrounding the site and to review the extent of historical clearing and land use, and any other significant environmental features such as watercourses and wetlands (Qld Globe 2026);
- High-risk flora trigger map areas for protected plants under the *Nature Conservation Act 1992* (NC Act) **Appendix D**.
- Regional Ecosystem Mapping (**Appendix E**).
- Matters of State Environmental Significance (MSES) – environmental reports (**Appendix F**).
- Protected Matters search tool for Matters of National Environmental Significance (MNES). This database applies a range of bio-models to predict the presence MNES species and migratory species with other matters protected by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) within a given radius of the site (a search parameter was prescribed limiting the search area to a 5km buffer around the proposed expansion area (**Appendix G**).

### 2.1.1 EVNT Species

All species identified through the WildNet database search were checked against the geographical site record form.

- Atlas of Living Australia (ALA) (CSIRO 2026)
- iNaturalist online photos and records

## 2.2 Site Survey

Section 6.2.2 of the Flora Survey Guidelines – Protected Plants provides a structured criterion to determine the appropriate field survey design based on habitat size, complexity, and the likelihood of occurrence to maximise the probability of detecting Endangered, Vulnerable, or Near-Threatened (EVNT) plants within the CIA. The survey method and effort were determined based on criteria that ensured sufficient coverage of all habitat types within the CIA and on detection probability for EVNT plants identified in the desktop assessment.

### 2.2.1 Kuranda Weather Observation 1st June 2026

The following table provides daily weather observations for the Kuranda area (recorded at nearby Cairns Aero) for the two weeks leading up to the field survey on 1st June 2026.

**Table 2. Kuranda Weather Observations: 18-31 May 2026**

| Date | Day | Max Temp (°C) | Min Temp (°C) | Rain (mm) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 18 May | Tue | 28.6 | 21.8 | 6.6 |
| 19 May | Tue | 28.1 | 20.0 | 0.2 |
| 20 May | Wed | 27.8 | 21.4 | 0.0 |
| 21 May | Thu | 26.5 | 16.5 | 0.0 |
| 22 May | Fri | 27.0 | 15.8 | 0.0 |
| 23 May | Sat | 27.2 | 17.8 | 0.0 |
| 24 May | Sun | 27.3 | 16.0 | 0.0 |
| 25 May | Mon | 28.3 | 18.7 | 0.0 |
| 26 May | Tue | 24.9 | 19.4 | 0.0 |
| 27 May | Wed | 28.4 | 18.0 | 0.0 |
| 28 May | Thu | 29.2 | 18.4 | 0.0 |
| 29 May | Fri | 26.9 | 16.8 | 0.0 |
| 30 May | Sat | 25.8 | 15.2 | 0.0 |
| 31 May | Sun | 27.6 | 16.9 | 0.0 |

During this period, daytime temperatures were consistently high, ranging from 24.9 °C to 29.2 °C. Night temperatures fluctuated, ranging from 15.2°C to 21.8°C. This period was notably dry, with only a small amount of rain for two days followed by no recorded rain for the twelve days leading up to the site survey.

### 2.2.2 Calculating the CIA

The clearing footprint spatially intersects the Protected Plants Trigger Map, indicating a high risk of impact on protected plants. The CIA has been calculated for the entire clearing footprint. Section 5 of the FSG requires the flora survey to be undertaken across a defined CIA. The CIA is defined by:

- The area to be cleared – the Direct Clearing Impact Area (DCIA) – within the mapped High-Risk Area (HRA);
- A 100-metre buffer surrounding that area – the Indirect Clearing Impact Area (ICIA)

The CIA was calculated by applying a 100-metre buffer to the project clearing footprint, which intersects the mapped HRA and is consistent with FSG Section 5, refer to **Figure 2**.

Breakdown of the CIA:

- Direct Clearing Impact Area (DCIA) = 54,291 $m^2$ (5.43 ha)
- Indirect Clearing Impact Area (ICIA) = 135,109 $m^2$ (13.511 ha)
- DCIA + ICIA = CIA
- Clearing Impact Area (CIA) = 189,400 $m^2$ (18.941 ha)

### 2.2.3 Survey method Justification for Timed meander survey (Section 6.2.2)

The desktop assessment identified two vegetation groups within the CIA. Due to practicality efficiency and effectiveness the SQ determined that a timed meander survey design was appropriate and in accordance with Section 6.2.2 of the FSG, which requires the following:

- all habitat types within the CIA must be surveyed; and
- survey effort must be sufficient to detect EVNT plant species if present; and
- effort must be distributed proportionally to habitat extent and suitability.

This method allows for a flexible search path through potential habitats and has been a standard field assessment in high-risk areas to identify EVNT species. It is particularly effective for traversing habitat types at random to maximise species encounter rates.

The survey effort requirements are:

- < 2 ha: At least one 30-minute meander.
- 2 to 10 ha: Two 30-minute meanders.
- 10 to 100 ha: Four 30-minute meanders.
- 100 ha: Six 30-minute meanders.

The survey in each vegetation group continues until no new EVNT plant species are recorded for a period of 30 minutes, or the entire area is covered.

### 2.2.4 Vegetation stratification and meander distribution

Under Section 6.2.2, a timed meander survey must be undertaken such that all habitat types present within the CIA are actively searched as follows:

- Each mapped and verified Regional Ecosystem (RE) within the CIA must be physically traversed on the ground.
- Survey effort must not be restricted to dominant vegetation types—minority or fragmented REs must also be included, particularly where they represent higher suitability habitat for EVNT species.
- The survey must extend across both:
- the clearing footprint (10 m corridor)
- the entire 100 m buffer, as required under Section 5 (extent of survey area).

### 2.2.5 Population Survey of Known EVNT species

In accordance with Section 6.2.6, a population survey is mandatory where an EVNT plant species is identified during the flora survey.

There are no records of EVNT flora species within the CIA. Desktop analysis identified one (1) record of the listed flora species Daintree gardenia (*Randia audasii*) approximately 1 km from the project site, the species is listed as Near Threatened under the NCA; no records for the other four listed EVNT species were identified, and suitable habitat has not been mapped within the CIA for EVNT listed species.

Previous Flora Surveys carried out by RPS on 16 August 2023 identified one (1) individual of *Randia audasii* within proximity to the project site. It was in a mapped perennial waterway which provided suitable habitat for the species. Its location did not fall within the CIA.

### 2.2.6 Survey Timing and Detectability

Section 6.2.1 of the FSG requires that surveys be conducted at a time when EVNT plant species are most detectable. The survey was undertaken on 01 June 2026 which is the start of when this species is known to flower. The SQP has extensive experience with this species and can also detect the species competently when not in flower as was previously identified in 2023.

### 2.2.7 Survey Limitations

Potential limitations of the survey were limited to steep inaccessible cliff edges and gullies

These limitations did not significantly affect survey coverage, as evidenced by continuous GPS track logs, refer to **Figure 5**.

# 3 RESULTS

## 3.1 Desktop Assessment

The desktop assessment identified a suite of EVNT species with potential to occur within the CIA. These are presented in **Table 4** which integrates species ecology, known records, and habitat availability.

## 3.2 MNES Results

The PMST report (**Appendix G**) identified MNES potentially occurring within the project site (**Table 4**). The report identified 2 TECs, 21 threatened flora species likely to occur or that may occur within the project site or a 5 km buffer of the project site.

**Table 3. MNES values recorded in the PMST search**

| Mapping | Mapped on-site | Description |
|---|---|---|
| Wetlands of international importance | No | NA |
| World heritage properties | 1 | • Wet Tropics of Queensland |
| National heritage places | 2 | • Wet Tropics World Heritage Area (Indigenous Values)<br>• Wet Tropics of Queensland |
| Great Barrier Reef Marine Park | No | N/A |
| Commonwealth marine area | No | N/A |
| TECs | 2 | • Broad leaf tea-tree (*Melaleuca viridiflora*) woodlands in high rainfall coastal north Queensland<br>• Lowland tropical rainforest of the Wet Tropics |
| Threatened species | Yes | 21 EVNT plant species potentially occurring within the project site. |

*PMST results for fauna and aquatic species have been excluded

The PMST online search for MNES EVNT flora species potentially occurring within the locality identified twenty-one such species that could occur within the project site or within a 5 km buffer of the project site. Each of these species was also searched in the WildNet database (post-1980) using a 1 km buffer of the two legal Lots and Plans over which the CIA sits and the Atlas of Living Australia database. The PMST database searches are provided in **Appendix G**.

The twenty-one flora species were cross-referenced against the WildNet and Atlas of Living Australia (ALA) databases and geographic maps. Three (3) flora species were identified as being present within a 5 km buffer of the project site, the Ant plant (*Myrmecodia beccarii*), Iron malletwood (*Rhodamnia sessiliflora*) and Velvet jewel orchid (*Zeuxine polygonoides*) with an additional one (1) record of the listed flora species *Randia audasii* approximately 1 km from the project site, this species is listed as Near Threatened under the NCA. No records for the listed EVNT species were identified, and suitable habitat has not been mapped within the CIA for these species. Conservation-significant species were assessed for the likelihood of occurrence based on the known ecological requirements of each species, WildNet and ALA records within the 5 km search extent, and habitat values of the survey site **Table 4**.

**Table 4. EVNT plant species identified in the MNES search**

| Species | Common Name | NC Act Status | EPBC Status | Habitat Preference | Record (within 5 km) | Likelihood of Occurrence | Justification |
|---|---|---|---|---|---|---|---|
| *Alloxylon flammeum* | Red silky oak | Vulnerable | Vulnerable | A plant species of the Wet Tropics bioregion, *Alloxylon flammeum* is found on the Atherton Tablelands in Far North Queensland at altitudes of 700 to 820 m (2,300 to 2,700 ft) above sea level. | No | Low | Found at higher altitudes and not observed during flora survey |
| *Archontophoenix myolensis* | Myola palm | Endangered | Endangered | *Archontophoenix myolensis* is known to occur only in the Myola area, near Kuranda on the Atherton Tableland in north-eastern Queensland. It occurs in riverine rainforest at 350-400 metres in altitude on metamorphic rock. | No (approx. 6km away) | Low | Not observed during flora survey. Limited suitable habitat within project footprint |
| *Canarium acutifolium* | | Vulnerable | Vulnerable | In Australia, *C. acutifolium* var. *acutifolium* grows naturally below about 100 m (330 ft) altitude in the scarce remaining lowland rainforests of the Wet Tropics region | No | Low | Not observed during flora survey. Project site sits out of the species range at approximately 440m. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | of north-eastern Queensland. | | | |
| *Carronia pedicellata* | Endangered | Endangered | *Carronia pedicellata* exclusively inhabits well-developed lowland rainforests, typically scrambling across the forest floor or climbing low understoreys in altitudes from near sea level to 350 meters | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Coleus gratus* listed as *Plectranthus gratus* | Vulnerable | Vulnerable | *Coleus gratus* is an Australian native species endemic to North East Queensland. Listed as Vulnerable, it primarily inhabits shallow soils in exposed, rocky areas and mountain rock pavements, typically in open eucalyptus forests or along the edges of dry rainforests | No | Low | Not observed during flora survey |
| *Dendrobium mirbelianum* Dark-stemmed antler orchid | Endangered | Endangered | Disjunctly distributed, but often locally common; found growing on trees in mangroves and humid coastal swamps in sunny situations, occasionally on rocks. | No | Low | Suitable habitat not present. Not observed in |

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|---|---|---|---|---|---|---|---|
| *Diplazium cordifolium* | | Vulnerable | Vulnerable | Terrestrial fern that grows in small, highly localized colonies in low-altitude, complex mesophyll vine forests. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Diplazium pallidum* | | Endangered | Endangered | *Diplazium pallidum* is a terrestrial fern that grows in lowland rainforests, particularly favoring shaded hillslopes near streams. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Leichhardtia araujacea* | | Critically Endangered | Critically Endangered | *Leichhardtia araujacea* is a critically endangered vine endemic to northeast Queensland, Australia. Its habitat is restricted to highly specific gallery forests and coastal vine forests associated with permanent water, typically found growing in deep shade along watercourses, springs, or aquifers | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Myrmecodia beccarii* | Ant plant | Vulnerable | Vulnerable | *Myrmecodia beccarii* is an epiphytic plant endemic to the tropical wetlands and mangrove forests of Far North Queensland, Australia. | Yes | May | Preferred habitat and micro habitat not present. Not observed during flora survey. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Phaius australis* | Lesser swamp-orchid | Endangered | Endangered | *Phaius tankervilleae* var. *australis* is found in near-coastal swampy forest between Cooktown in Queensland and Lake Cathie in New South Wales. It sometimes forms large colonies especially in Melaleuca quinquenervia swamps and in wet forests. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Phaius pictus* | | Vulnerable | Vulnerable | *Phaius pictus* (commonly known as the painted or forest swamp orchid) inhabits sheltered, highly humid rainforests in Queensland, Australia, and New Guinea. It thrives at elevations from sea level to 600 meters in well-drained, humus-rich soil, typically growing near streams, localised seepage areas, or among boulders and forest litter. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Phlegmariurus filiformis* | Rat's tail tassel-fern | Not listed | Endangered | Rat's Tail Tassel Fern is native to high-altitude, wet tropical rainforests, and cloud forests. It is primarily a pendulous epiphyte | No | Low | Not observed during flora survey. Suitable habitat not present. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | that grows naturally in the canopy or subcanopy, clinging to large trees, tree ferns, and mossy substrates near creeks and watercourses. | | | |
| *Phlegmariurus lockyeri* | Lockyer's tassel-fern | Vulnerable | Vulnerable | *Phlegmariurus lockyeri* (Lockyer's Tassel-Fern) is an evergreen lycophyte endemic to the wet tropics of North East Queensland, Australia. It is found exclusively in montane rainforests at high altitudes, usually above 800 metres. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Phlegmariurus squarrosus* | Rock tassel-fern | Critically Endangered | Critically Endangered | A subcanopy epiphyte and lithophyte, usually near watercourses in brightly lit areas of humid rainforest at low to mid-montane altitudes. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Phlegmariurus tetrastichoides* | Square tassel fern | Vulnerable | Vulnerable | *Phlegmariurus tetrastichoides* mostly grows high in the canopy of trees in complex vine forest and rainforest, over granite, basalt and other metamorphics to an altitude of 1100m | No | Low | Not observed during flora survey. Suitable habitat not present. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | above sea level. It occurs in habitat along creeks and on slopes and has not been recorded from the coastal flats. | | | |
| *Polyphlebium endlicherianum* | Middle filmy fern | Not listed | Endangered | The Middle Filmy Fern grows on damp rocks and tree trunks, in tropical rainforest, often near streams or beside waterfalls. Sites are moist and shaded. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Prostanthera clotteniana* | | Endangered | Critically Endangered | *Prostanthera clotteniana* grows in dry woodland on steep, rocky slopes in the Ravenshoe–Atherton area of north-east Queensland where it is only known from seven sites. It was thought to be extinct until rediscovered in 1999. | No | Low | Not observed during flora survey. Suitable habitat not present. |
| *Rhodamnia sessiliflora* | Iron malletwood | Endangered | Endangered | *Rhodamnia sessiliflora* is restricted to coastal and subcoastal parts of northeastern Queensland, extending from about Rossville south to the Paluma Range National Park. It grows in well developed rainforest | Yes | May | Not observed during flora survey. Limited preferred habitat present. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | and monsoon forest on various soils, at altitudes from near sea level to about 1,000 m | | | |
| *Vappodes lithocola* | Dwalf butterfly orchid | Not listed | Endangered | Occurs on coastal ranges and mountains growing on rocks, boulders and cliff faces on ridges and slopes. The plants are often exposed to full sun and can withstand long periods of hot dry conditions during which they completely defoliate. | Possibly<br><br>(Habitat likely to occur) | May | Not observed during flora survey. |
| *Zeuxine polygonoides* | Velvet jewel orchid | Vulnerable | Vulnerable | In Australia, the Velvet Jewel Orchid grows in moist shady sites in rainforests (mesophyll vine forests and simple notophyll vine forests) in leaf litter on the ground or on large boulders adjacent to streams. Altitudinal range is 450–820 m above sea level (Dockrill 1992; Jones 1988; Metcalfe et al. 2008). | Yes | Low | Not observed during flora survey. Suitable habitat not present. |

The Velvet Jewel Orchid is found mostly from moist, cloudy or very wet rainfall zones on metamorphic substrates, granite or rhyolite (Metcalfe et al. 2008). The species can be found in humus on flat topped rocks in association with *Anoectochilus yatesiae*, *Goodyera viridiflora* and Liparis simmondsii (Harris 2001 pers. comm.). The Velvet Jewel Orchid is found in the following Regional Ecosystems:

7.11.1a: mesophyll vine forest in very high rainfall lowlands and foothills on metamorphics

7.12.16a: simple notophyll vine forest (often with Bull Kauri (*Agathis microstachya*)) in cloudy wet to moist uplands on granite and rhyolite.

The likelihood of occurrence assigned to each species reflects a multi-criteria assessment incorporating:

- Verified occurrence records within a 5 km buffer (WildNet and ALA)
- Presence of suitable habitat within mapped and field-validated REs
- Known biogeographic constraints

Following a likelihood of occurrence assessment, it was determined that no flora species listed under the EPBC Act were likely to occur.

The MNES search identified the following threatened ecological communities:

- Broad leaf tea-tree (*Melaleuca viridiflora*) woodlands in high rainfall coastal north Queensland
- Lowland tropical rainforest of the Wet Tropics

**Broad leaf tea-tree (*Melaleuca viridiflora*) woodlands**

The broad leaf tea-tree woodlands ecological community is found in tropical north Queensland in the Wet Tropics and Central Mackay Coast bioregions. It occurs mainly within 20km of the coast and on floodplains in areas that receive high rainfall. Known occurrences are mostly found between the localities of Mossman to the north and Yeppoon to the south with gaps in the range where the Brigalow Belt North bioregion meet the coast.

To be classified as a broad leaf tea-tree woodlands ecological community the vegetation patch needs to meet particular criteria:

- the canopy is clearly dominated (i.e. more than 50%) by *Melaleuca viridiflora* (broad leaf tea-tree)
- there are ≥10 native perennial species present in the shrub and ground layer (excluding juvenile canopy trees)
- the ground layer is predominantly native species (≥60% of total ground layer vegetation cover)

Based on key diagnostic protection criteria and distribution for this TEC, it was not observed to be present within the project footprint or CIA and it is unlikely to occur within the CIA and would not qualify for protection under the EPBC Act thresholds.

**Lowland tropical rainforest of the Wet Tropics**

The Lowland Tropical Rainforest of the Wet Tropics is characterized by its structural complexity and high species diversity. This rainforest features tall evergreen trees, predominantly large-leaved species, and a rich understorey of vines, lianas, and epiphytes. It is home to a variety of plant families, particularly Myrtaceae and Lauraceae, and includes unique species such as the Feather Palm and Fan Palm.

The ecological community can be identified by the following features:

- Lowland Tropical Rainforest is restricted to the Wet Tropics Bioregion (Interim Biogeographic Regionalisation of Australia, IBRA V7, DoE 2012), with approximate limits around Ingham in the south and north of Cape Tribulation in the north.
- It occurs principally on fertile soils, which may be derived from alluvium, basalt, metamorphic and granite substrates (more likely on colluvial material in the latter two scenarios).
- The climate over most of the extent can be described as seasonal, with rainfall expected throughout the year. The ecological community typically occurs in areas with high annual rainfall (>1300 mm to > 3500 mm per annum).
- The ecological community is typically confined between sea-level and 80-100m above sea level (asl) in most occurrences, with the core former distribution being predominantly between 0 – 40m asl. However, it can also be found up to approximately 300-350m asl where substrate and other conditions support the ecological community, for example on fertile basaltic lava flows in the East Palmerston and Mena Creek areas west of Innisfail.

- Trees of Lowland Tropical Rainforest are typically tall (at least 25 m), with well-developed buttresses, evergreen (rarely semi-deciduous) and with mesophyll leaves (surface area 20 - 182 cm2) being the most common leaf or leaflet size. Epiphytes of all sizes are found on tree trunks and branches. Vines are typically common. A well-developed sub-canopy tree layer is usually present as well as a sparse shrub/sapling layer, indicating a seedling bank. Ground herbs and ferns are common to uncommon, but grasses are rare. Palms are common in damp soils, and otherwise scattered through the forest.
- The palm-dominated rainforests are distinctive structural sub-types of the ecological community, with a conspicuous and significant proportion of the upper strata (canopy layer) comprising either Archontophoenix alexandrae (Feather Palm, Alexander Palm) and/or *Licuala ramsayi* var. *ramsayi* (Fan Palm).
- Typically, there is an absence or relatively low abundance of species from the genera Eucalyptus, Corymbia, Melaleuca and Casuarina.
- The community is subject to relatively frequent (and often high intensity) tropical cyclonic events, although some areas may be topographically protected. It is common that parts of the community are naturally in a highly-disturbed state. Cyclone impacted parts of this ecological community are characterised by an uneven canopy densely draped with vines.

Based on key diagnostic protection criteria and distribution for this TEC, it was not observed to be present within the project footprint or CIA and it is unlikely to occur within the CIA and would not qualify for protection under the EPBC Act thresholds.

## 3.3 MSES Results

The project site is mapped as containing MSES-regulated remnant vegetation (as shown in **Table 7**). The MSES results have identified regulated vegetation across the majority of the CIA, which includes Category B [Remnant: Of Concern Vegetation]. The MSES report (**Appendix F**) identified areas of MSES-regulated vegetation mapped within 2 km of the two legal Lots and Plan of the CIA, also refer to **Figure 3**.

**Table 5. MSES Mapped Regulated Vegetation Cover**

| Mapping | Mapped on-site | Description |
|---|---|---|
| Regulated vegetation (RE) | **Yes** | Site is mapped as containing Category X (non-remnant), Category A or B (Remnant: Endangered/Of Concern Vegetation). The vegetation includes:<br>7.11.33: *Eucalyptus reducta* open forest to woodland. Metamorphics. Not a Wetland. (BVG1M: 9d). |
| DES Protected Plants Flora Survey Trigger Map | **Yes** | A protected plants high risk area is mapped within the project site **Figure 2** |
| Regulated Vegetation within 100m of Vegetation Management Wetland (VMA 1999) | **No** | NA |
| Regulated Vegetation Category R (GBR Riverine Regrowth) | **No** | NA |
| Regulated Vegetation (defined watercourse) | **Yes** | There is a non-perennial stream order 1 water course that runs through the CIA which flows into the Barron Drainage Basin |
| Regulated Vegetation (essential habitat) | **Yes** | There is mapped Regulated Vegetation (essential habitat) within the CIA (within both the DCIA and ICIA) |

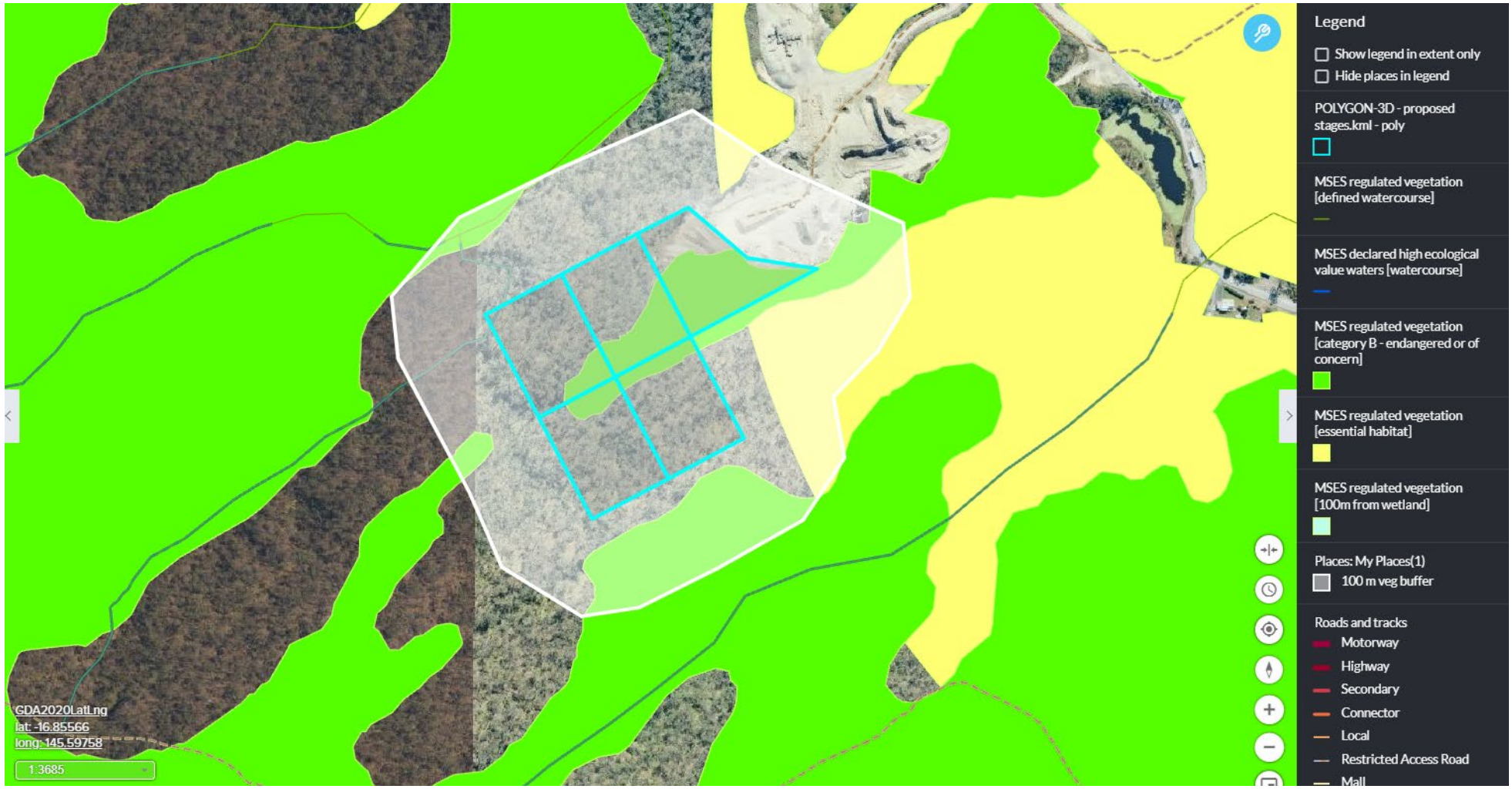



**Figure 3. MSES Mapped Regulated Vegetation Mapping**

### 3.3.1 Vegetation Management Regional Ecosystem Classification

The Regional Ecosystems of this project site are mapped as primarily Category A or B that is of Least Concern and Category A or B that is Of Concern regional ecosystems (refer to **Figure 4**). **Table 8** provides a detailed description of the Regional Ecosystem's mapped as present within the project site.

**Table 6. Description of Regional Ecosystems within the Clearing Impact Area**

| RE Code | Status (VM Act) | Biodiversity Status | Full Description | Present within the project site | Mapped within the Protected Plant Trigger Mapping |
|---|---|---|---|---|---|
| 7.11.33a | Of Concern | Of Concern | *Eucalyptus reducta* open forest to woodland. Metamorphics. Not a Wetland. (BVG1M: 9d). | Yes | Yes |
| 7.11.51a | Least Concern | Of Concern | *Corymbia clarksoniana*, *Eucalyptus tereticornis*, *E. drepanophylla* woodland, low woodland to open forest with *Allocasuarina torulosa*, *Allocasuarina littoralis*, *Lophostemon suaveolens, Acacia cincinnata, A. flavescens, Banksia aquilonia, Xanthorrhoea johnsonii*. Metamorphics. | Yes | Yes |

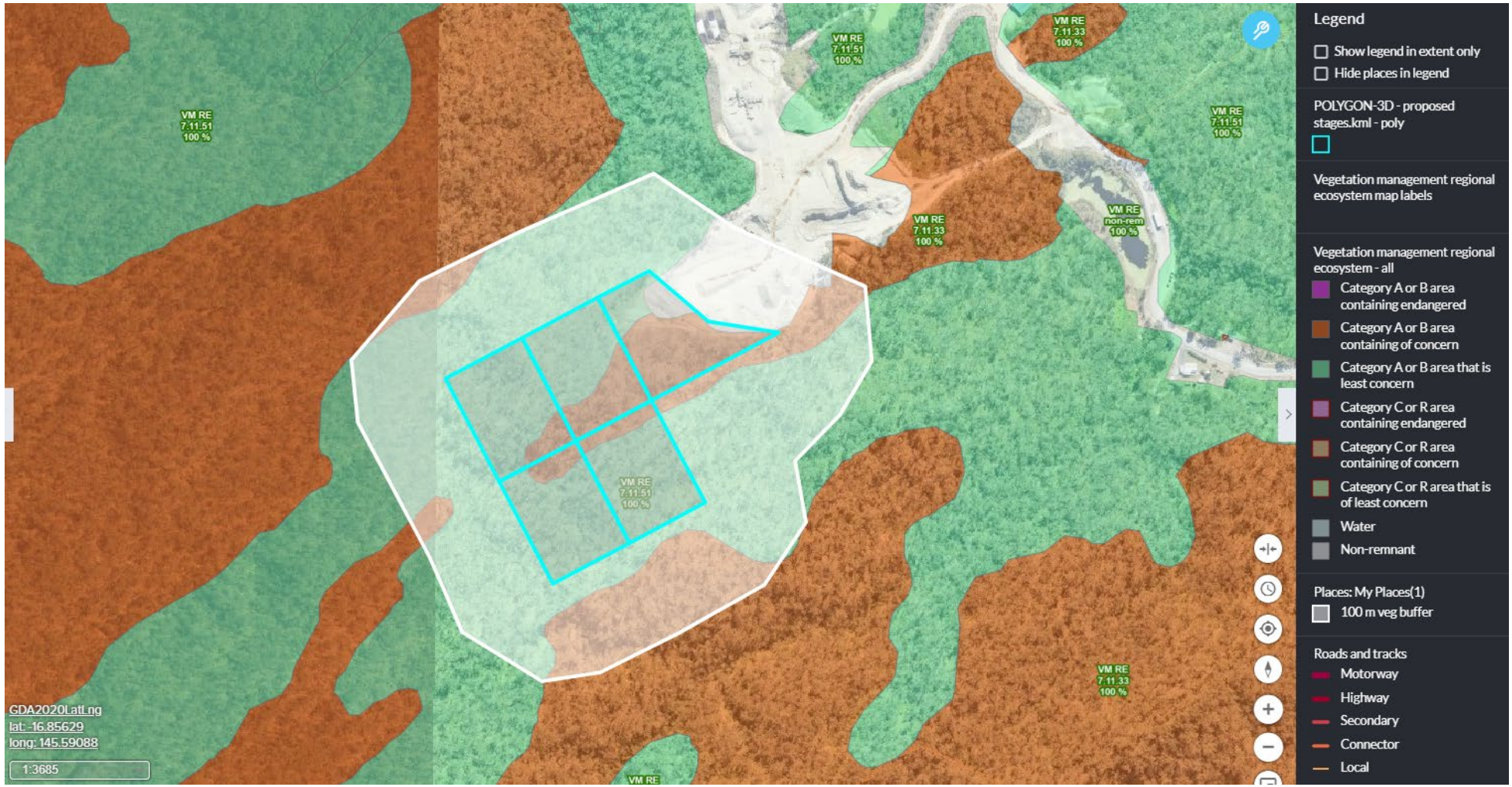



**Figure 4. Vegetation Management Regional Ecosystem Classification within the Clearing Impact Area**

### 3.3.2 Site Survey Assessment EVNT Species Search

In accordance with Section 6.2.2 the timed meander of the CIA was used to assess the presence of EVNT flora species.

- A starting point was chosen by the SQP
- Due to the terrain tight meanders were chosen in a north to south direction for most of the site and covered both mapped habitat types. The Category X section of the CIA was not surveyed due it being an active quarry.
- As the CIA was approximately 19 ha (5ha in R.E 7.11.33, 13.4ha in R.E 7.11.51 and 1.3 ha in Category X cleared land) two meanders were required in R.E 7.11.33 and four in R.E 7.11.51). Due to the layout of these habitat types meanders were timed in each habitat type but continuous meanders were carried out across the site and totalled over 19 meanders to ensure total coverage of the site was accomplished as chosen by the SQP. Some areas of the site had deep ravines and were not accessible but were surveyed with binoculars if required. The survey took approximately 6 hours to complete. Refer to **Figure 5** for the timed meanders across the CIA.

### 3.3.3 Additional flora species observed during the flora survey

During the flora survey there were additional protected flora species observed. These species were all listed as Special Least Concern under the NC Act and which are exempt for clearing as long as these are not collected and were comprised of mostly orchids and a grass tree species. These species have been listed below in **Table 7**.

**Table 7. Special Least Concern Flora Species (NC Act) observed within the CIA**

| Scientific name | Common name | Latitude | Longitude | # Plants |
|---|---|---|---|---|
| *Cymbidium madidum* | Native Cynbidium | -16.854996 | 145.594025 | 1 |
| *Cymbidium madidum* | Native Cynbidium | -16.855322 | 145.593644 | 5 |
| *Cymbidium madidum* | Native Cynbidium | -16.855433 | 145.593761 | 1 |
| *Cymbidium madidum* | Native Cynbidium | -16.854858 | 145.592995 | 3 |
| *Dendrobium canaliculatum* | Antelope Orchid | -16.854903 | 145.594805 | 1 |
| *Dendrobium canaliculatum* | Antelope Orchid | -16.856547 | 145.595252 | 1 |
| *Dendrobium canaliculatum* | Antelope Orchid | -16.853785 | 145.593467 | 4 |
| *Dendrobium canaliculatum* | Antelope Orchid | -16.853359 | 145.593468 | 1 |
| *Dendrobium canaliculatum* | Antelope Orchid | -16.853916 | 145.592523 | 1 |
| *Dendrobium canaliculatum* | Antelope Orchid | -16.855034 | 145.593175 | 1 |
| *Dendrobium discolor* | Golden Orchid | -16.856127 | 145.593604 | 1 |
| *Dendrobium teretifolium* | Pencil Orchid | -16.854512 | 145.591481 | 1 |
| *Dendrobium teretifolium* | Pencil Orchid | -16.853582 | 145.594484 | 6 |
| *Dendrobium teretifolium* | Pencil Orchid | -16.85341 | 145.594628 | 1 |
| *Dendrobium teretifolium* | Pencil Orchid | -16.853178 | 145.594016 | 3 |
| *Dienia ophrydis* | Common Snout Orchid | -16.856763 | 145.594895 | 7 |
| *Dienia ophrydis* | Common Snout Orchid | -16.854996 | 145.593277 | 1 |
| *Dienia ophrydis* | Common Snout Orchid | -16.855117 | 145.593132 | 1 |
| *Oberonia complanata* | Southern Green Fairy Orchid | -16.85341 | 145.594628 | 23 |
| *Xanthorrhoea johnsonii* | Northern Grass Tree | -16.8565 | 145.595277 | 3 |

| | | | | |
|---|---|---|---|---|
| *Xanthorrhoea johnsonii* | Northern Grass Tree | -16.855374 | 145.593669 | 52 |
| *Xanthorrhoea johnsonii* | Northern Grass Tree | -16.855427 | 145.59349 | 78 |

### 3.3.4 Hollowing bearing trees within the CIA

The CIA consisted of high quality relatively undisturbed native vegetation. Many of the trees had substantial hollows which take many decades to form. These provide habitat for an array of native fauna. Some of the hollows observed have been mapped below, there were many other trees which may have contained hollows but the hollows were relatively well concealed and could not be confirmed to be significant, refer to **Figure 6**.




**Figure 5. Tracklogs at Top Rock Quarry across Protected Plant mapped habitat 01 June 2026**




**Figure 6. Hollow bearing tree locations**

# 4 MITIGATION MEASURES AND RECOMMENDATIONS

Due to no EVNT flora species observed during the Flora Survey an exempt clearing notification for (protected plants) will need to be completed and submitted with this Flora Survey Report. As there were other protected plants and high-quality habitat for native fauna species present within the project site including a substantial set of hollows in trees, the following recommendations should be adhered to.

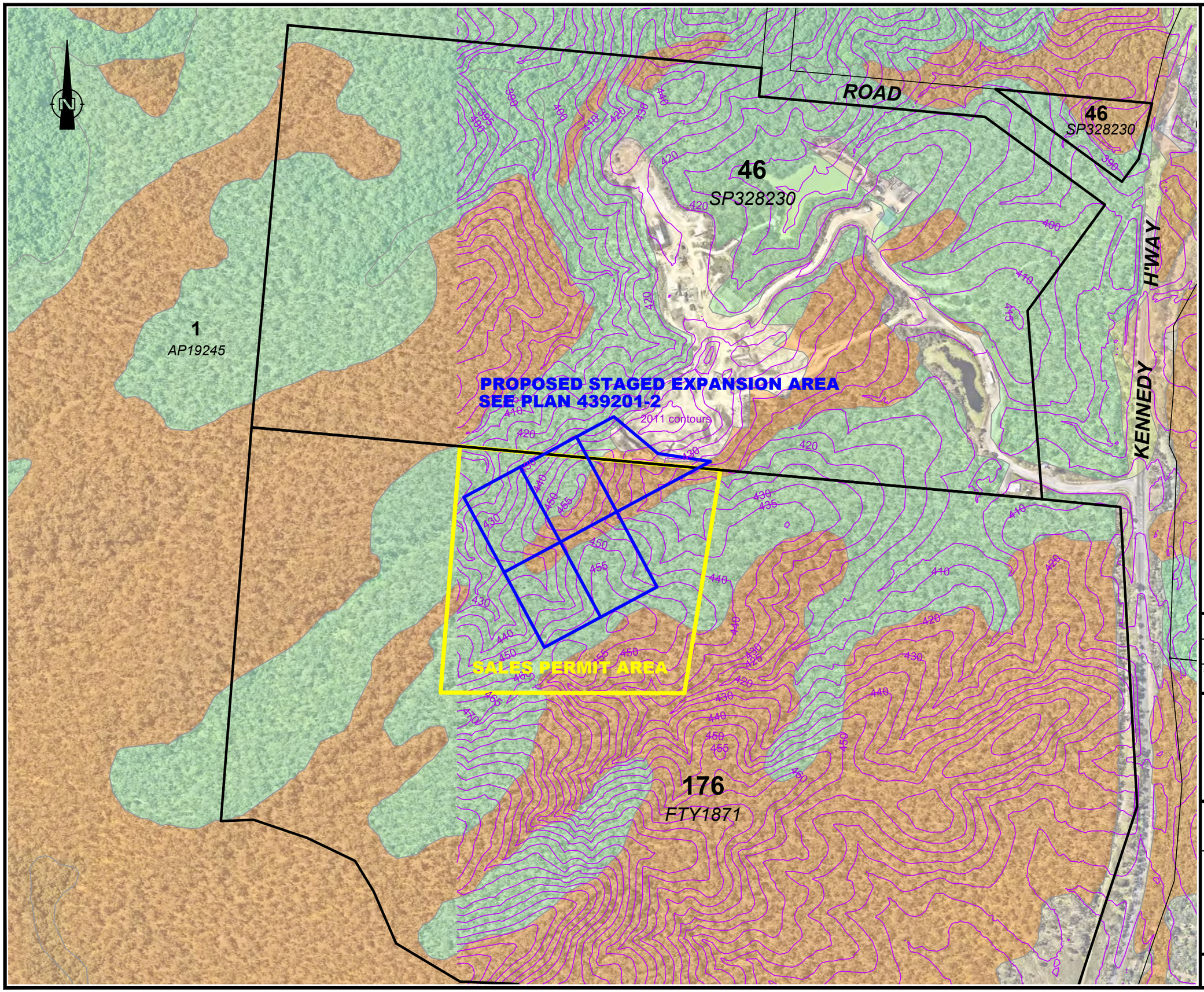
- Prior to any clearing activities, a pre-clearance survey must be completed to ensure that there are no breeding sites for fauna present and any orchids that are able to be removed and relocated onto surrounding vegetation should be relocated prior to any vegetation clearing.
- A Species Management Program should be implemented prior to clearing to allow interfering with potential breeding sites of native fauna.
- A Spotter Catcher should be engaged during clearing activities to ensure no native fauna are killed or injured during clearing process.
- An Erosion and Sediment Control Management Plan should be in place and followed during clearing activities with clearing activities avoided during periods of heavy rain.
- All staff and contractors working on the project will be inducted:
  - procedures for stopping work if protected flora or fauna are discovered during work,
  - role, responsibilities and notification .

# 5 CONCLUSIONS

RPS AAP Consulting Pty Ltd was engaged by Fgf Developments Pty Ltd to undertake a Protected Plant Survey for the proposed quarry expansion at Top Rock Quarries. The Flora Survey which was conducted on 01 June 2026 found no EVNT listed flora species present within the CIA. Due to this an exempt clearing notification for (protected plants) will need to be completed and submitted with this Flora Survey Report.

There was a selection of other protected flora species observed during the survey which have been listed in **Table 7**. The intact nature of the remnant vegetation within the CIA provides significant habitat features for a range of native fauna and flora species, with many of the trees providing substantial hollows. This can provide habitat for native owls, possums, gliders, parrots and a range of other groups of animals. Mitigation measures in **Section 4** should be adhered to prior to any vegetation clearing.

# Appendix A Proposed Expansion Area




**IMPORTANT NOTE**

This plan was prepared as a concept plan only and accuracy of all aspects of the plan have not been verified.
All lots, areas and dimensions are approximate only, Subject to relevant studies, Survey, Engineering and Government approvals.
No reliance should be placed on the plan and RPS AAP Consulting Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this plan.

Boundaries derived from Dept Resources DCDB and are approx only (+/- 57m)

Aerial imagery by NearMap
Date of Capture 23 Oct 2025

Contours & Drainage paths from DNRM DEM - Speewah_2011_Loc_1K_DEM_1m

## NOTES

Level Datum: AHD
Origin of Levels: 2011 DNRM DEM
Meridian: GDA2020 MGA Z55
Contour Interval: 5.0m

## LEGEND

Vegetation management regional ecosystem mapping

- Category A or B area containing of concern regional ecosystems
- Category A or B area that is least concern regional ecosystems

0 50 100 150 200 250
metres

SCALE 1:5000 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE. (A3)

| RPS CLIENT MANAGER | | SURVEYED |
|---|---|---|
| A Kerlin | | |
| COMPILED | | CAD REF |
| AMK | | 439201-1B.DWG |
| SHEET SIZE | SHEET 1 OF SHEETS 2 | |
| A3 | | |

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# FGF DEVELOPMENTS PTY LTD

## TOPROCK QUARRY

## SALES PERMIT SITE PLAN

| SCALE | DATE | DRAWING NO. | ISSUE |
|---|---|---|---|
| 1:5000 | 30/4/2026 | 439201-1 | B |

# PROPOSED STAGED EXPANSION AREA

*5.423 ha*

**46**
*SP328230*

**176**
*FTY1871*

2011 contours

15m x 15m GRID

STAGE 1
1025m²

STAGE 2
1080m²

STAGE 3
1080m²

STAGE 4
1080m²

STAGE 5
1080m²

CH 0.0 CH 15 CH 30 CH 45 CH 60 CH 75 CH 90 CH 105 CH 120 CH 135 CH 150 CH 165 CH 180 CH 195 CH 210 CH 225 CH 240 CH 255 CH 270

CH -15.0 CH -30.0 CH -45.0 CH -60.0

SALES PERMIT AREA

## REGIONAL ECOSYSTEMS AREAS

| | STAGE 1 | | STAGE 2 | | STAGE 3 | | STAGE 4 | | STAGE 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| LOT 46 | 1985m² | 1738m² | 869m² | | | | | | | |
| LOT 176 | 121m² | 5507m² | 5931m² | 4000m² | 9433m² | 1367m² | 9240m² | 1560m² | 9440m² | 1360m² |
| TOTAL | 2106m² | 7245m² | 6800m² | 4000m² | 9433m² | 1367m² | 9240m² | 1560m² | 9440m² | 1360m² |

**IMPORTANT NOTE**

This plan was prepared as a concept plan only and accuracy of all aspects of the plan have not been verified.
All lots, areas and dimensions are approximate only, Subject to relevant studies, Survey, Engineering and Government approvals.
No reliance should be placed on the plan and RPS AAP Consulting Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this plan.

Boundaries derived from Dept Resources DCDB and are approx only (+/- 57m)

Aerial imagery by NearMap
Date of Capture 23 Oct 2025

Contours from DNRM DEM - Speewah_2011_Loc_1K_DEM_1m

## NOTES

Level Datum: AHD
Origin of Levels: 2011 DNRM DEM
Meridian: GDA2020 MGA Z55
Contour Interval: 5.0m

FGF Survey data contours
GDA 2020 / AusGeoid 2020
Date of survey: 25/02/26
Contour Interval: 1.0m

## LEGEND

Vegetation management regional ecosystem mapping

- Category A or B area containing of concern regional ecosystems
- Category A or B area that is least concern regional ecosystems

0 15 30 45 60 75
metres

SCALE 1:1500 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE. (A3)

| | |
|---|---|
| RPS CLIENT MANAGER: A Kerlin | SURVEYED: |
| COMPILED: AMK | CAD REF: 439201-1B.DWG |
| SHEET SIZE: A3 | SHEET OF SHEETS: 2 OF 2 |

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## FGF DEVELOPMENTS PTY LTD

## TOPROCK QUARRY

## PROPOSED STAGED EXPANSION AREA

| SCALE | DATE | DRAWING NO. | ISSUE |
|---|---|---|---|
| 1:1500 | 30/4/2026 | 439201-2 | B |

# Appendix B Fanie Venter - Curriculum Vitae

Curriculum Vitae



# Dr Fanie Venter

## Principal Botanist

### Role at RPS

Principal Botanist / Ecologist

### Location

Cairns, QLD, Australia

### Qualifications

Master of Science, University of Natal, South Africa

Doctor of Philosophy, Victorian University of Wellington, New Zealand

## Why Fanie for this role

Fanie has spent more than 30 years researching, teaching and consulting in the field of dendrology, ecology and plant taxonomy. During this period, he has discovered over 200 new plant species and described 34 species new to science.

Fanie has conducted surveys in all countries in the southern half of Africa, Israel, New Zealand, New Caledonia, Papua New Guinea, Bali, Mongolia, Australia and Lord Howe Island in biomes ranging from alpine herb fields, afromontane forest, rainforest (especially Papua New Guinea, Australian Wet Tropics), monsoon forest (Cape York, Torres Strait Islands), various types of Savannahs (especially in Africa and Cape York Peninsula – Laura, Weipa, Archer River, Wenlock River, Jardine River and Bamaga), and grasslands to deserts (South Africa, Namibia, Israel).

Fanie has completed more than 230 major ecological surveys for governments, mining companies, environmental managers, landscape architects and developers and for various universities.

## Specialist Services - Ecology

- Agroforestry planning and design
- Biodiversity surveys and monitoring
- Ecological sensitive area survey – defining, survey & description
- EIA - survey, descriptions of each impact and remediation measures
- Ecological sensitive habitat surveys
- Pre-clearance surveys
- Land Use Zoning – human & environment interactions
- Habitat Mapping – for priority species
- Rehabilitation planning for disturbed sites in various vegetation types
- Vegetation Survey – small and large-scale format
- Weed Survey and Management Plans

## Specialist Services - Botany

- Ethnobotany – medicinal, edible and toxic plants
- Surveys of IUCN plant species
- Surveys on Range Restricted plant species
- Biodiversity surveys – all vegetation types
- Interpretive Trail Design – design and layout in all vegetation types
- Scientific Editing and refereeing – Reports and articles for accredited journals
- Scientific illustrations-detailed line drawings.

## Relevant projects

- Design and the management plan for the Rehabilitation Nursery at Cape Flattery Silica Mine (Heath Forest and Heath)
- Rehabilitation of mined areas, Cape Flattery Silica Mine (Heath Forest and Heath)
- Vegetation survey in the Limpopo, Mpumalanga, Gauteng and North West Provinces of South Africa also in Namibia, Zimbabwe and Zambia (Savannah, Wooded Grassland, Woodland, Afromontane Forest)
- Survey of Red Data species, all Provinces in South Africa (All Biomes)
- Ecological impact of development on vegetation in the Limpopo, Mpumalanga, Gauteng and North West Provinces of South Africa (Savannah Grassland, Woodland, Afromontane Forest)
- Survey of ecological sensitive areas, all Provinces in South Africa and Namibia (All Biomes)
- Tree survey, Pietersburg Council, Limpopo Province of South Africa
- Survey of primary and secondary diets of angulates in northern South Africa
- Transect surveys on vegetation with biological and geomorphological relationships (Forest, Woodland and Savannah)
- Ecological management plans for Game Ranches in the Limpopo and North Western Provinces of South Africa (Woodland, Savannah and Grassland)
- Rehabilitation and ecological restoration of mined areas in the Limpopo and North Western Provinces of South Africa (Platinum, Gold, Silver and Iron Mines)
- Cycad Interpretive Trail design with accompanying Trail Booklet (Savannah) and Skybury Coffee Centre Timber Trail with accompanying booklet, Mareeba
- Design and panel information for the Skybury Information Kiosk, Mareeba
- Riparian Vegetation Restoration Management Plan and Weed Management plan, Bronte Road Subdivision, Motueka, New Zealand (Riparian Forest and Wooded Grassland)
- Vegetation Survey, Wakapuaka, Nelson, New Zealand (Scrub and salt marshes)
- Ethnobotanical (Bush Tucker and Medicinal Plant) Survey of the Cape York Southern Dune Lands (Heath Forest and Heath)
- Ecological Assessment Report for a 56 Ha housing developments at Lake Tinaroo (Rainforest and Grassland)
- Native Flora survey for developments at Port Douglas and Craiglie (Rainforest and Mangroves)
- Weed survey and Management Plans for housing and Resort developments in the Greater Cairns area (Savannah & Rain Forest)
- Ecological survey of the Zelter River, Northern Mongolia (Taiga)
- Ecological survey of Chandgana Tal Steppe, Moron, Mongolia (Steppe)
- Vegetation Survey of the surface water to ground water interface zone - Mount Carbine, Queensland
- Bathymetric Survey and associated data processing – Malanda, Queensland
- Tree management and protection plans in the Greater Cairns Area, Queensland
- Monitoring of ecological restoration success – Rio Tinto in Cape York, Queensland (Savanna and Monsoon Forest)
- Vegetation survey of the Purari River System in Papua New Guinea (Rain Forest)
- Biodiversity Survey of the Hindenburg Wall area, Western Province, Papua New Guinea (Rain Forest & Cloud Forest)
- Flora Survey of the Central area, Manus Island, Papua New Guinea (Rain Forest)
- Vegetation Assessment, Baiyer River, Western Highlands Province, Papua New Guinea (Rainforest and Grassland).
- Biodiversity survey of Mussau Island (Rainforest and Evergreen Scrub)
- Biodiversity survey of the northern Mt. Bosavi area, Papua New Guinea (Rainforest)
- Biodiversity survey of the area between the Crater Mountain WMA and the coast, Gulf Province, Papua New Guinea (Rainforest & Wetlands)
- Vegetation monitoring project, Hides Ridge and Lake Kutubu areas, Southern Highlands, Papua New Guinea (Rainforest)
- Medicinal and edible plants of the islands of Papua New Guinea and the Torres Strait Islands (Rainforest & Monsoonal forest)
- Survey of Red Data Flora and verification of vegetation types at Shoalwater Bay Military Training Area, Yeppoon, Queensland, Australia (Woodland, Monsoonal Forest & Wetlands)

- Vegetation survey Nauro/Brown River, Central Province, Papua New Guinea
- Vegetation survey of the Pomio area, East New Britain, Papua New Guinea
- Pre-clearance survey at Purari, Gulf Province, Papua New Guinea for Total Energies PNG of a 90+ km long pipeline and road clearance area as well as helicopter pads and construction areas
- Agroforestry and reforestation design of 980 ha, Bali, Indonesia (Rainforest & Monsoonal forest)
- EVNT Flora and Ecological Sensitive Area surveys northern Cape York Peninsula (Monsoonal Forest and Savanna)
- EVNT Flora and Ecological Sensitive Area Survey, Cairns and Port Douglas Areas (Rainforest, Sclerophyll Forest and Savanna)
- Marine Plant Survey - Cairns (Aquatic Macrophytes)
- Ground truthing of different Regional Ecosystems and EVNT Flora survey, Northern Queensland (Rainforest & Sclerophyll Forest)
- CRC Tree Database update and tree plotting and arboriculture species assessment, Cairns
- Field based training of university students and NGO members in New Zealand, Africa and Asia–Pacific Region in biodiversity assessment, ecological techniques and mine rehabilitation
- Scientific illustrations of 71 - A4 plates
- Compilation of Tree Identification Study Manual and PowerPoint presentation for Trees of Australasia – 18 families and 34 genera, based on diagnostic morphological characters.

## Research

- Revision of the genus Dracaena (Asparagaceae) for southern Africa, completed
- Ecology and taxonomy of the genus Ledebouria (Asparagaceae) for Africa, ongoing
- Ecology and taxonomy of the genera Dracophyllum and Richea (Ericaceae) worldwide. Published as a monograph (Australian Systematic Botany 34: 1-205)
- Ecology and taxonomy of the Austral members of the genus Nepenthes
- (Nepenthaceae) with Gary Wilson, James Cook University, ongoing
- Ecology and taxonomy of the genus Crinum (Amaryllidaceae) in Australasia - with Dr. D.J. Lehmiller, ongoing
- Ethnobotany of the Western Pacific, ongoing
- Flora of Papua New Guinea with Kapiro Damas, senior botanist – Lae Herbarium, ongoing
- Orchid Flora of Papua New Guinea – together with researchers of Kew Botanical Gardens, ongoing
- Plant Systematics and ecology adviser to the Lae Herbarium, PNG-FRI, Papua New Guinea
- Agroforestry concepts and design in the near East and the Western Pacific, ongoing
- Researching and writing up of the family Ericaceae for the eFlora of Australia, also producing a Lucid Interactive Identification Key for the Australasian species.

## Lecturing & Study Supervision

- Visiting lecturer in plant taxonomy and ecology – Tshwane University of Technology, Pretoria, South Africa
- Plant taxonomy courses or professional people
- Tree identification courses on the tree flora of Australasia
- Supervisor for PhD and M.Sc. students in ethnobotany, plant systematics and ecology.

# Appendix C Wildenet Species Lists

# WildNet Records
## Conservation Significant Species List

For the selected area of interest Lot: 175 Plan: FTY1871
Current as at 03/06/2026 WildNetCSSpeciesList

## Summary Information

The following table provides an overview of the area of interest: Lot: 175 Plan: FTY1871

**Table 1. Area of interest details**

| Size (ha) | |
|---|---|
| 88.85 | |
| **Local Government(s)** | |
| Mareeba Shire | |
| **Catchment(s)** | |
| Barron | |
| **Bioregion(s)** | **Subregion(s)** |
| Wet Tropics | Macalister |

**Protected Area(s)** The following estates and/or reserves are located in the area of interest:

Formartine State Forest

**World Heritage Area(s)**

No World Heritage Areas are located within the area of interest.

**Ramsar Area(s)**

No Ramsar Areas are located within the area of interest.

## Introduction

This WildNet report is derived from a spatial layer that is generated from the WildNet database, managed by the Department of the Environment, Tourism, Science and Innovation. The layer, which is generated weekly, contains a subset of WildNet wildlife records that are not classed as erroneous or duplicate, that have a location precision equal to or less than 10000 metres and do not have a count of zero. It does not include aspatial data such as some baseline species lists created for some protected areas.

The WildNet dataset is constantly being enhanced and the taxonomic and status information revised. If a conservation significant species is not listed in this report, it does not mean it doesn't occur there and listed species may also no longer inhabit the area. It is recommended that you also access other internal and external data sources for species information in your area of interest.

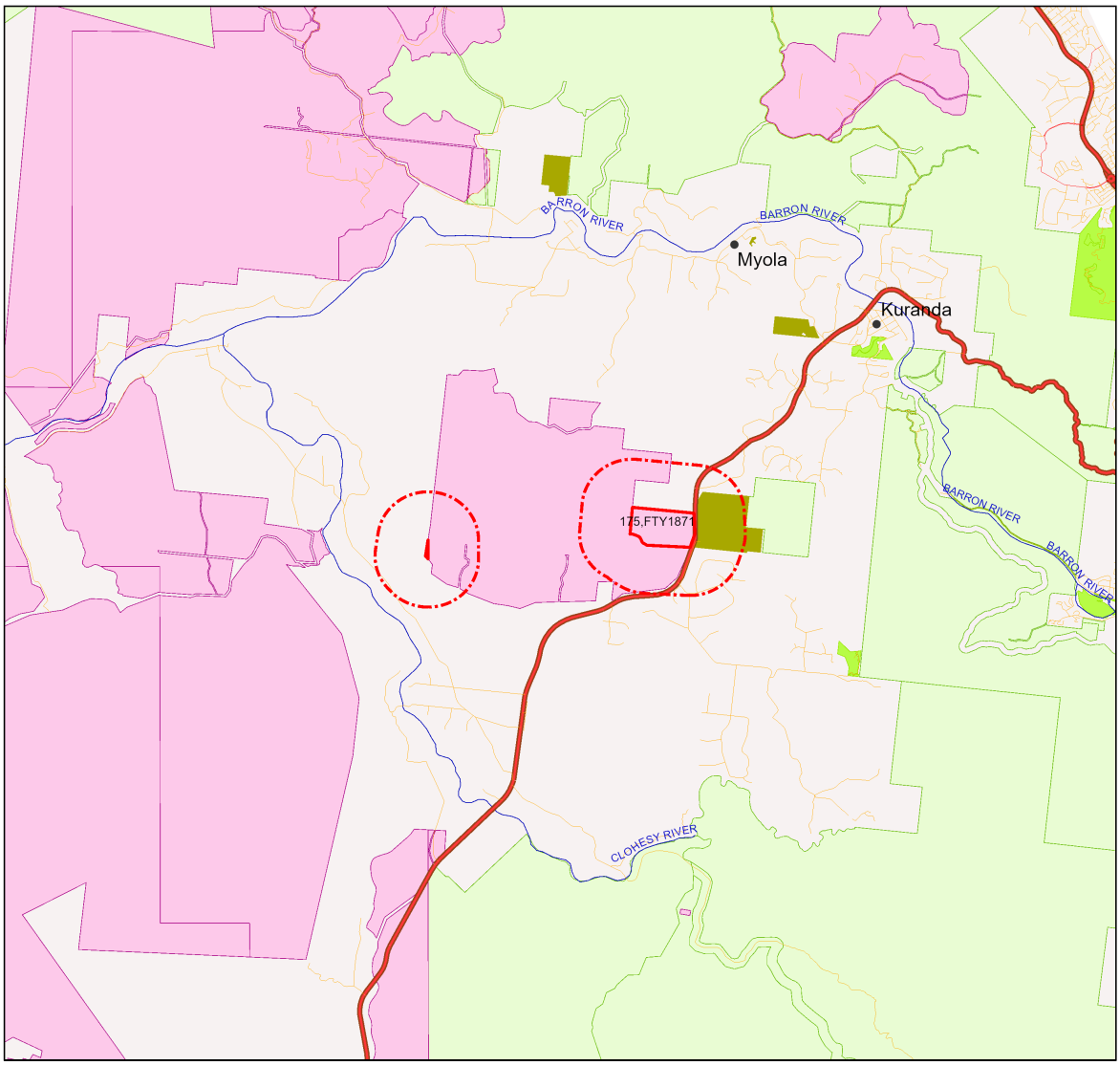
The WildNet Application may provide additional information on species occurence within your area of interest.

Conservation significant species are species listed:

- as threatened or near threatened under the *Nature Conservation Act 1992*;
- as threatened under the *Environment Protection and Biodiversity Conservation Act 1999* or
- migratory species protected under the following international agreements:
    - Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
    - China-Australia Migratory Bird Agreement
    - Japan-Australia Migratory Bird Agreement
    - Republic of Korea-Australia Migratory Bird Agreement

Table 2 lists the species recorded within the area of interest and its one kilometre buffer.

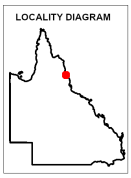
## Map 1. Locality Map




# Locality Map

**Legend**

- Towns
- Freeways/Highways
- Connector
- Street/Local Road
- Lakes and reservoirs
- National Park
- National Park (Scientific)
- National Park (CYPAL)
- National Park (Aboriginal Land)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Nature Refuges
- Coordinated Conservation Areas
- Major rivers/creeks
- Queensland
- Selected Lot and Plan
- 1 kilometre buffer




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**Table 2. Conservation significant species recorded within the area of interest and its one kilometre buffer**

| Taxon Id | Kingdom | Class | Family | Scientific Name | Common Name | NCA | EPBC | Specimens | Records | Last record |
|---|---|---|---|---|---|---|---|---|---|---|
| 13866 | Plantae | Equisetopsida | Campanulaceae | *Lobelia quadrangularis* | | SL | | 2 | 2 | 28/11/2003 |
| 15806 | Plantae | Equisetopsida | Dryopteridaceae | *Arachniodes aristata* | prickly shield fern | SL | | 1 | 1 | 17/06/2025 |
| 34790 | Plantae | Equisetopsida | Juncaginaceae | *Cycnogeton procerus* | | SL | | 1 | 1 | 30/07/2013 |
| 14248 | Plantae | Equisetopsida | Rubiaceae | *Randia audasii* | | NT | | 1 | 1 | 20/01/2022 |

**Taxon Id:** Unique identifier of the taxon from the WildNet database.
**NCA:** Queensland conservation status of the taxon under the *Nature Conservation Act 1992* (Least Concern (C), Critically Endangered (CR), Endangered (E), Extinct (EX), Near Threatened (NT), Extinct in the Wild (PE), Special Least Concern (SL), and Vulnerable (V)).
**EPBC:** Australian conservation status of the taxon under the *Environment Protection and Biodiversity Conservation Act 1999* (Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Vulnerable (V), and Extinct in the Wild (XW)).
**Specimens:** The number of specimen-backed records of the taxon.
**Records:** The total number of records of the taxon.
**Last record:** Date of most recent record of the taxon.

## Links and Support

Other sites that deliver species information from the WildNet database include:

- WildNet Application - public interface to find species information and species lists generated from the WildNet database.
- Biomaps - view biodiversity information, including WildNet records approved for publication, and generate reports
- Queensland Globe - view spatial information, including WildNet records approved for publication
- Qld WildNet Data API - access WildNet species information approved for publication such as notes, images and records etc.
- Wetland*Maps* - view species records, survey locations etc. approved for publication
- Wetland*Summary* - view wildlife statistics, species lists for a range of area types, and access WildNet species profiles
- WildNet wildlife records - published - Queensland - spatial layer of WildNet records approved for publication generated weekly
- Generalised distribution and densities of Queensland wildlife - Queensland species distributions and densities generalised to a 10 km grid resolution
- Conservation status of Queensland wildlife - access current lists of priority species for Queensland including nomenclature and status information
- Queensland Confidential Species - the list of species flagged as confidential in the WildNet database.

Please direct queries about this report to the WildNet Team WildNet@detsi.qld.gov.au.

Other useful sites for accessing Queensland biodiversity data include:

- Useful wildlife resources
- Queensland Government Data
- Atlas of Living Australia (ALA)
- Online Zoological Collections of Australian Museums (OZCAM)
- Australasian Virtual Herbarium (AVH)
- Protected Matters Search Tool

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# WildNet Records
Species List

For the selected area of interest 88.85 Lot: 175 Plan: FTY1871
Current as at 03/06/2026 WildNetSpeciesList

## Summary Information
The following table provides an overview of the area of interest: Lot: 175 Plan: FTY1871

**Table 1. Area of interest details**

| Size (ha) | |
|---|---|
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| Mareeba Shire | |
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| Barron | |
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The WildNet Application may provide additional information on species occurence within your area of interest.

## Species data

Contextual location information is presented in Map 1.

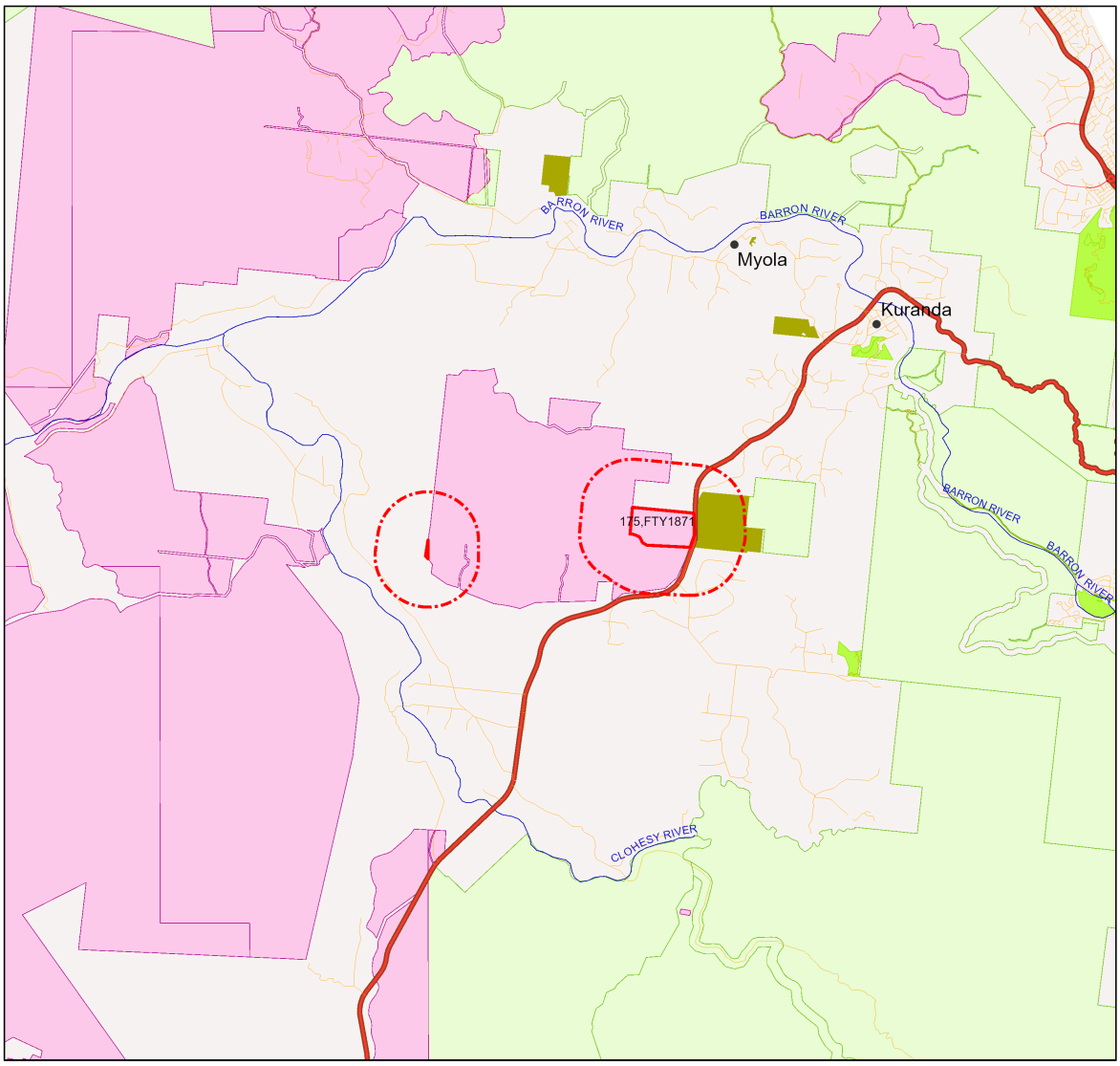
Table 2 lists the animals recorded within the area of interest and its one kilometre buffer.

Table 3 lists the plants recorded within the area of interest and its one kilometre buffer.

Table 4 lists the fungi recorded within the area of interest and its one kilometre buffer.

Table 5 lists the other species recorded within the area of interest and its one kilometre buffer.

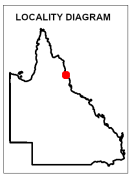
## Map 1. Locality Map




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**Legend**

- Towns
- Freeways/Highways
- Connector
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- Forest Reserve
- State Forest
- Timber Reserve
- Nature Refuges
- Coordinated Conservation Areas
- Major rivers/creeks
- Queensland
- Selected Lot and Plan
- 1 kilometre buffer




N

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**Table 2. Animals recorded within the area of interest and its one kilometre buffer**

| Taxon Id | Class | Family | Scientific Name | Common Name | NCA | EPBC | Specimens | Records | Last record |
|---|---|---|---|---|---|---|---|---|---|
| 716 | Amphibia | Bufonidae | *Rhinella marina* | cane toad | | | 0 | 1 | 31/12/1979 |
| 625 | Amphibia | Hylidae | *Litoria bicolor* | northern sedgefrog | C | | 1 | 1 | 29/01/2021 |
| 627 | Amphibia | Hylidae | *Litoria caerulea* | common green treefrog | C | | 8 | 8 | 14/01/2023 |
| 608 | Amphibia | Hylidae | *Litoria fallax* | eastern sedgefrog | C | | 13 | 13 | 6/04/2019 |
| 611 | Amphibia | Hylidae | *Litoria gracilenta* | graceful treefrog | C | | 5 | 5 | 28/01/2019 |
| 612 | Amphibia | Hylidae | *Litoria inermis* | bumpy rocketfrog | C | | 1 | 1 | 29/01/2021 |
| 613 | Amphibia | Hylidae | *Litoria infrafrenata* | white lipped treefrog | C | | 19 | 19 | 14/01/2023 |
| 599 | Amphibia | Hylidae | *Litoria rothii* | eastern laughing treefrog | C | | 10 | 10 | 14/01/2023 |
| 592 | Amphibia | Hylidae | *Litoria xanthomera* | orange thighed treefrog | C | | 2 | 2 | 13/01/2023 |
| 677 | Amphibia | Limnodynastidae | *Limnodynastes convexiusculus* | marbled frog | C | | 1 | 1 | 29/01/2021 |
| 681 | Amphibia | Limnodynastidae | *Limnodynastes peronii* | striped marshfrog | C | | 20 | 20 | 12/01/2023 |
| 695 | Amphibia | Myobatrachidae | *Crinia deserticola* | chirping froglet | C | | 1 | 1 | 29/01/2021 |
| 30937 | Amphibia | Myobatrachidae | *Mixophyes coggeri* | mottled barred frog | C | | 10 | 10 | 4/07/2023 |
| 658 | Amphibia | Myobatrachidae | *Uperoleia altissima* | tableland gungan | C | | 1 | 1 | 29/01/2021 |
| 638 | Amphibia | Myobatrachidae | *Uperoleia mimula* | mimicking gungan | C | | 1 | 1 | 29/01/2021 |
| 581 | Amphibia | Ranidae | *Papurana daemeli* | Australian woodfrog | C | | 1 | 1 | 12/03/2022 |
| 1742 | Aves | Accipitridae | *Accipiter cirrocephalus* | collared sparrowhawk | C | | 0 | 6 | 29/07/1986 |
| 1729 | Aves | Accipitridae | *Accipiter fasciatus* | brown goshawk | C | | 0 | 17 | 30/07/1986 |
| 1730 | Aves | Accipitridae | *Accipiter novaehollandiae* | grey goshawk | C | | 0 | 6 | 1/08/1986 |
| 1723 | Aves | Accipitridae | *Circus assimilis* | spotted harrier | C | | 0 | 1 | 27/05/1986 |
| 1710 | Aves | Accipitridae | *Hieraaetus morphnoides* | little eagle | C | | 0 | 1 | 28/06/1986 |
| 1758 | Aves | Alcedinidae | *Tanysiptera sylvia* | buff-breasted paradise-kingfisher | C | | 0 | 1 | 25/11/2007 |
| 1760 | Aves | Alcedinidae | *Todiramphus macleayii* | forest kingfisher | C | | 0 | 1 | 25/11/2007 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1191 | Aves | Cacatuidae | *Cacatua galerita* | sulphur-crested cockatoo | C | | 0 | 2 | 25/11/2007 |
| 1196 | Aves | Cacatuidae | *Calyptorhynchus banksii* | red-tailed black-cockatoo | C | | 0 | 1 | 29/11/1998 |
| 1636 | Aves | Campephagidae | *Coracina novaehollandiae* | black-faced cuckoo-shrike | C | | 0 | 1 | 25/11/2007 |
| 1639 | Aves | Campephagidae | *Edolisoma tenuirostre* | common cicadabird | C | | 0 | 1 | 25/11/2007 |
| 18323 | Aves | Columbidae | *Geopelia placida* | peaceful dove | C | | 0 | 2 | 25/11/2007 |
| 1773 | Aves | Columbidae | *Ptilinopus superbus* | superb fruit-dove | C | | 0 | 1 | 25/11/2007 |
| 1779 | Aves | Coraciidae | *Eurystomus orientalis* | dollarbird | C | | 0 | 1 | 11/11/2000 |
| 1740 | Aves | Cuculidae | *Scythrops novaehollandiae* | channel-billed cuckoo | C | | 0 | 1 | 25/11/2007 |
| 1611 | Aves | Dicaeidae | *Dicaeum hirundinaceum* | mistletoebird | C | | 0 | 1 | 25/11/2007 |
| 1601 | Aves | Dicruridae | *Dicrurus bracteatus* | spangled drongo | C | | 0 | 1 | 25/11/2007 |
| 1716 | Aves | Falconidae | *Falco berigora* | brown falcon | C | | 0 | 3 | 3/07/1986 |
| 18155 | Aves | Maluridae | *Malurus amabilis* | lovely fairy-wren | C | | 0 | 1 | 25/11/2007 |
| 1696 | Aves | Megapodiidae | *Megapodius reinwardt* | orange-footed scrubfowl | C | | 0 | 1 | 25/11/2007 |
| 1507 | Aves | Meliphagidae | *Melithreptus albogularis* | white-throated honeyeater | C | | 0 | 1 | 11/11/2000 |
| 1597 | Aves | Monarchidae | *Symposiachrus trivirgatus* | spectacled monarch | C | | 0 | 1 | 25/11/2007 |
| 1444 | Aves | Oriolidae | *Sphecotheres vieilloti* | Australasian figbird | C | | 0 | 1 | 11/11/2000 |
| 1446 | Aves | Orthonychidae | *Orthonyx spaldingii* | chowchilla | C | | 0 | 1 | 25/11/2007 |
| 1450 | Aves | Pachycephalidae | *Colluricincla megarhyncha* | little shrike-thrush | C | | 0 | 1 | 25/11/2007 |
| 1437 | Aves | Pachycephalidae | *Pachycephala rufiventris* | rufous whistler | C | | 0 | 1 | 25/11/2007 |
| 1340 | Aves | Petroicidae | *Microeca flavigaster* | lemon-bellied flycatcher | C | | 0 | 1 | 25/11/2007 |
| 1125 | Aves | Psittaculidae | *Trichoglossus moluccanus* | rainbow lorikeet | C | | 0 | 1 | 25/11/2007 |
| 1576 | Aves | Rhipiduridae | *Rhipidura leucophrys* | willie wagtail | C | | 0 | 1 | 11/11/2000 |
| 1314 | Aves | Sturnidae | *Acridotheres tristis* | common myna | | | 0 | 1 | 11/11/2000 |
| 1276 | Aves | Zosteropidae | *Zosterops lateralis* | silvereye | C | | 0 | 1 | 25/11/2007 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20 | Insecta | Hesperiidae | *Chaetocneme porphyropis* | purple dusk-flat | | | 0 | 1 | 10/10/1984 |
| 736 | Mammalia | Muridae | *Uromys caudimaculatus* | giant white-tailed rat | C | | 0 | 1 | 19/02/2023 |
| 859 | Mammalia | Phalangeridae | *Trichosurus vulpecula* | common brushtail possum | C | | 0 | 1 | 25/05/2000 |

**Table 3. Plants recorded within the area of interest and its one kilometre buffer**

| Taxon Id | Class | Family | Scientific Name | Common Name | NCA | EPBC | Specimens | Records | Last record |
|---|---|---|---|---|---|---|---|---|---|
| 9207 | Equisetopsida | Acanthaceae | *Hypoestes phyllostachya* | | | | 1 | 1 | 28/11/2003 |
| 41731 | Equisetopsida | Boraginaceae | *Ehretia dissita* | | C | | 1 | 1 | 4/11/2021 |
| 13866 | Equisetopsida | Campanulaceae | *Lobelia quadrangularis* | | SL | | 2 | 2 | 28/11/2003 |
| 14661 | Equisetopsida | Cyperaceae | *Cyperus cyperoides* | | C | | 1 | 1 | 24/06/2025 |
| 39859 | Equisetopsida | Dichapetalaceae | *Dichapetalum australianum* | | C | | 1 | 1 | 28/03/2025 |
| 17471 | Equisetopsida | Dichapetalaceae | *Dichapetalum papuanum* | | C | | 2 | 2 | 17/06/2025 |
| 15806 | Equisetopsida | Dryopteridaceae | *Arachniodes aristata* | prickly shield fern | SL | | 1 | 1 | 17/06/2025 |
| 17563 | Equisetopsida | Euphorbiaceae | *Croton triacros* | | C | | 1 | 1 | 19/05/2023 |
| 11012 | Equisetopsida | Goodeniaceae | *Goodenia pilosa* | | C | | 1 | 1 | 28/11/2003 |
| 34790 | Equisetopsida | Juncaginaceae | *Cycnogeton procerus* | | SL | | 1 | 1 | 30/07/2013 |
| 34529 | Equisetopsida | Lamiaceae | *Mesosphaerum pectinatum* | | | | 1 | 1 | 12/10/2021 |
| 17306 | Equisetopsida | Lauraceae | *Endiandra hypotephra* | blue walnut | C | | 1 | 1 | 17/06/2025 |
| 42644 | Equisetopsida | Leguminosae | *Grona heterocarpos var. heterocarpos* | | C | | 1 | 1 | 2/08/2005 |
| 15093 | Equisetopsida | Leguminosae | *Pycnospora lutescens* | pycnospora | C | | 1 | 1 | 28/11/2003 |
| 15073 | Equisetopsida | Leguminosae | *Senna pendula var. glabrata* | Easter cassia | | | 1 | 1 | 7/12/2018 |
| 17364 | Equisetopsida | Meliaceae | *Dysoxylum oppositifolium* | | C | | 1 | 1 | 8/01/2026 |
| 42282 | Equisetopsida | Myrtaceae | *Blakella torelliana* | | C | | 3 | 3 | 9/04/2024 |
| 6445 | Equisetopsida | Myrtaceae | *Corymbia intermedia* | pink bloodwood | C | | 1 | 1 | 13/06/2020 |
| 8953 | Equisetopsida | Myrtaceae | *Eucalyptus reducta* | | C | | 1 | 1 | 13/06/2020 |
| 16794 | Equisetopsida | Oleaceae | *Ligustrum australianum* | | C | | 1 | 1 | 30/07/2021 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 17094 | Equisetopsida | Phyllanthaceae | *Glochidion harveyanum var. harveyanum* | | C | | 1 | 1 | 9/01/2024 |
| 11134 | Equisetopsida | Poaceae | *Arundinella setosa* | | C | | 1 | 1 | 7/02/2020 |
| 10794 | Equisetopsida | Poaceae | *Sporobolus jacquemontii* | | | | 1 | 1 | 4/11/2020 |
| 14973 | Equisetopsida | Poaceae | *Themeda quadrivalvis* | grader grass | | | 0 | 2 | 19/05/2016 |
| 12546 | Equisetopsida | Podocarpaceae | *Prumnopitys amara* | | C | | 1 | 1 | 12/03/2015 |
| 16391 | Equisetopsida | Polygalaceae | *Polygala longifolia* | | C | | 1 | 1 | 12/06/2012 |
| 14248 | Equisetopsida | Rubiaceae | *Randia audasii* | | NT | | 1 | 1 | 20/01/2022 |
| 15871 | Equisetopsida | Rutaceae | *Acronychia laevis* | glossy acronychia | C | | 1 | 1 | 28/11/2003 |
| 26467 | Equisetopsida | Rutaceae | *Melicope xanthoxyloides* | | C | | 1 | 1 | 16/12/2022 |
| 16187 | Equisetopsida | Selaginellaceae | *Selaginella longipinna* | | C | | 1 | 1 | 3/11/2019 |
| 36113 | Equisetopsida | Thymelaeaceae | *Pimelea cornucopiae* | | C | | 1 | 1 | 20/02/2017 |

**Table 4. Fungi recorded within the area of interest and its one kilometre buffer**

No species found within the area of interest and its one kilometre buffer.

**Table 5. Other species recorded within the area of interest and its one kilometre buffer**

No species found within the area of interest and its one kilometre buffer.

**Species table headings and codes**
**Taxon Id:** Unique identifier of the taxon from the WildNet database.
**NCA:** Queensland conservation status of the taxon under the *Nature Conservation Act 1992* (Least Concern (C), Critically Endangered (CR), Endangered (E), Extinct (EX), Near Threatened (NT), Extinct in the Wild (PE), Special Least Concern (SL), and Vulnerable (V)).
**EPBC:** Australian conservation status of the taxon under the *Environment Protection and Biodiversity Conservation Act 1999* (Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Vulnerable (V), and Extinct in the Wild (XW)).
**Specimens:** The number of specimen-backed records of the taxon.
**Records:** The total number of records of the taxon.
**Last record:** Date of most recent record of the taxon.

## Links and Support

Other sites that deliver species information from the WildNet database include:

- WildNet Application - public interface to find species information and species lists generated from the WildNet database.
- Biomaps - view biodiversity information, including WildNet records approved for publication, and generate reports
- Queensland Globe - view spatial information, including WildNet records approved for publication
- Qld WildNet Data API - access WildNet species information approved for publication such as notes, images and records etc.
- Wetland*Maps* - view species records, survey locations etc. approved for publication
- Wetland*Summary* - view wildlife statistics, species lists for a range of area types, and access WildNet species profiles
- WildNet wildlife records - published - Queensland - spatial layer of WildNet records approved for publication generated weekly
- Generalised distribution and densities of Queensland wildlife - Queensland species distributions and densities generalised to a 10 km grid resolution
- Conservation status of Queensland wildlife - access current lists of priority species for Queensland including nomenclature and status information
- Queensland Confidential Species - the list of species flagged as confidential in the WildNet database.

Please direct queries about this report to the WildNet Team WildNet@detsi.qld.gov.au.

Other useful sites for accessing Queensland biodiversity data include:

- Useful wildlife resources
- Queensland Government Data
- Atlas of Living Australia (ALA)
- Online Zoological Collections of Australian Museums (OZCAM)
- Australasian Virtual Herbarium (AVH)
- Protected Matters Search Tool

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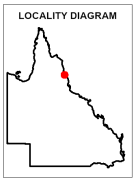


# Appendix D High-risk flora trigger map




# Protected Plants Flora Survey Trigger Map

- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets
- Coordinates




N

0 480 960 1,440 1,920 2,400 m

This product is displayed in:
GDA2020

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of the Environment, Tourism, Science and Innovation at palm@detsi.qld.gov.au

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Queensland Government

# Protected plants flora survey trigger map

The protected plants flora survey trigger map identifies 'high risk areas' where endangered, vulnerable or near threatened plants are known to exist or are likely to exist. Under the *Nature Conservation Act 1992* (the Act) it is an offence to clear protected plants that are 'in the wild' unless you are authorised or the clearing is exempt, for more information see section 89 of the Act.

Please see the Department of the Environment, Tourism, Science and Innovation webpage on the clearing of protected plants for information on what exemptions may apply in your circumstances, whether you may need to undertake a flora survey, and whether you may need a protected plants clearing permit.

**Updates to the data informing the flora survey trigger map**
The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

**Species information**
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the Queensland Spatial Catalogue, the Department of the Environment, Tourism, Science and Innovation does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of the Environment, Tourism, Science and Innovation webpage on the clearing of protected plants for more information.

# Appendix E Regional Ecosystem Mapping

Queensland Government

**Department of the Environment, Tourism, Science and Innovation**

Environmental Reports

# Regional Ecosystems

## *Biodiversity Status*

For the selected area of interest
Lot: 46 Plan: SP328230

# Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the input coordinates.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 2020). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

# Important Note to User

Information presented in this report is based upon the Queensland Herbarium & Biodiversity Science's Regional Ecosystem framework. The Biodiversity Status has been used to depict the extent of "Endangered", "Of Concern" and "No Concern at Present" regional ecosystems in all cases, rather than the classes used for the purposes of the *Vegetation Management Act 1999* (VMA). Mapping and figures presented in this document reflect the Queensland Herbarium & Biodiversity Science's Remnant and Pre-clearing Regional Ecosystem Datasets, and not the certified mapping used for the purpose of the VMA.

For matters relevant to vegetation management under the VMA, please refer to the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development website https://www.nrmmrrd.qld.gov.au/

Please direct queries about these reports to: Queensland.Herbarium@qld.gov.au

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## Summary Information

The following table provides an overview of the AOI with respect to selected topographic and environmental themes. Refer to **Map 1** for locality information.

**Table 1: Details for area of interest:**
**Lot: 46 Plan: SP328230, with area 62.34 ha**

| Local Government(s) | Catchment(s) | Bioregion(s) | Subregion(s) |
|---|---|---|---|
| Mareeba Shire | Barron | Wet Tropics | Macalister |

The table below summarizes the extent of remnant vegetation classed as "Endangered", "Of concern" and "No concern at present" regional ecosystems classified by Biodiversity Status within the area of interest (AOI).

**Table 2: Summary table, biodiversity status of regional ecosystems within the AOI**

| Biodiversity Status | Area (Ha) | % of AOI |
|---|---|---|
| Endangered | 3.15 | 5.05 |
| Of concern | 48.37 | 77.59 |
| No concern at present | 0.79 | 1.26 |
| Total remnant vegetation | 52.30 | 83.90 |

Refer to **Map 2** for further information.

# Regional Ecosystems

## 1. Introduction

Regional ecosystems are vegetation communities in a bioregion that are consistently associated with particular combinations of geology, landform and soil (Sattler and Williams 1999). Descriptions of Queensland's Regional ecosystems are available online from the Regional Ecosystem Description Database (REDD). Descriptions are compiled from a broad range of information sources including vegetation, land system and geology survey and mapping and detailed vegetation site data. The regional ecosystem classification and descriptions are reviewed as new information becomes available. A number of vegetation communities may form a single regional ecosystem and may be distinguished by differences in structure or sub-dominant species in the ecologically dominant layer. Vegetation communities with different dominant species in the ecologically dominant layer may be amalgamated in to a regional ecosystem if they are not mappable and predictable in the landscape at 1:100 000 scale. Vegetation communities may be mappable at a scale larger than 1:100 000. Vegetation communities within a regional ecosystem are denoted by a letter following the regional ecosystem code (e.g. a, b, c). Vegetation communities and regional ecosystems are amalgamated into a higher level classification of broad vegetation groups (BVGs).

A published methodology for survey and mapping of regional ecosystems across Queensland (Neldner et al 2023) provides further details on regional ecosystem concepts and terminology.

This report provides information on the type, status, and extent of vegetation communities, regional ecosystems and broad vegetation groups present within a user specified area of interest. Please note, for the purpose of this report, the Biodiversity Status is used. This report has not been developed for application of the *Vegetation Management Act 1999* (VMA). Additionally, information generated in this report has been derived from the Queensland Herbarium & Biodiversity Science's Regional Ecosystem Mapping, and not the regulated mapping certified for the purposes of the VMA. If your interest/matter relates to regional ecosystems and the VMA, users should refer to the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development website https://www.nrmmrrd.qld.gov.au/.

With respect to the Queensland Biodiversity Status,

"Endangered" regional ecosystems are described as those where:

- remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or 10-30% of its pre-clearing extent remains and the remnant vegetation is less than 10,000 hectares, or
- less than 10 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss*, or
- 10-30 percent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss and the remnant vegetation is less than 10,000 hectares; or
- it is a rare** regional ecosystem subject to a threatening process.***

"Of concern" regional ecosystems are described as those where:

- the degradation criteria listed above for 'Endangered' regional ecosystems are not met and,
- remnant vegetation is 10-30 per cent of its pre-clearing extent across the bioregion; or more than 20 per cent of its pre-clearing extent remains and the remnant extent is less than 10,000 hectares, or
- 10-30 percent of its pre-clearing extent remains unaffected by moderate degradation and/or biodiversity loss.****

and "No concern at present" regional ecosystems are described as those where:

- remnant vegetation is over 30 percent of its pre-clearing extent across the bioregion, and the remnant area is greater than 10,000 hectares, and
- the degradation criteria listed above for 'Endangered' or 'Of concern' regional ecosystems are not met.

**Severe degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 50 years even with the removal of threatening processes; or soil surface is severely degraded, for example, by loss of A horizon, surface expression of salinity; surface compaction, loss of organic matter or sheet erosion.*

***Rare regional ecosystem: pre-clearing extent (<1000 ha); or patch size (<100 ha and of limited total extent across its range).*

****Threatening processes are those that are reducing or will reduce the biodiversity and ecological integrity of a regional ecosystem. For example, clearing, weed invasion, fragmentation, inappropriate fire regime or grazing pressure, or infrastructure development.*

*****Moderate degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 20 years even with the removal of threatening processes; or soil surface is moderately degraded.*

## 2. Remnant Regional Ecosystems

The following table identifies the remnant regional ecosystems and vegetation communities mapped within the AOI and provides their short descriptions, Biodiversity Status, and remnant extent within the selected AOI. Please note, where heterogeneous vegetated patches (mixed patches of remnant vegetation mapped as containing multiple regional ecosystems) occur within the AOI, they have been split and listed as individual regional ecosystems (or vegetation communities where present) for the purposes of the table below. In such instances, associated area figures have been generated based upon the estimated proportion of each regional ecosystem (or vegetation community) predicted to be present within the larger mixed patch.

**Table 3: Remnant regional ecosystems, description and status within the AOI**

| Regional Ecosystem | Short Description | BD Status | Area (Ha) | % of AOI |
|---|---|---|---|---|
| 7.11.13 | Corymbia torelliana open forest, usually with a vine forest element, on metamorphics | Endangered | 3.15 | 5.05 |
| 7.11.33a | Eucalyptus reducta open forest to woodland on metamorphics | Of concern | 14.06 | 22.56 |
| 7.11.44 | Eucalyptus tereticornis open forest to woodland on coastal metamorphic foothills | Of concern | 0.66 | 1.06 |
| 7.11.51a | Corymbia clarksoniana and/or Eucalyptus drepanophylla open forest to woodland on metamorphics | Of concern | 33.65 | 53.97 |
| 7.11.7a | Complex notophyll vine forest with Agathis robusta emergents on foothills and uplands on metamorphics | No concern at present | 0.79 | 1.26 |
| non-remnant | None | None | 10.04 | 16.10 |

Refer to **Map 2** for further information. **Map 3** also provides a visual estimate of the distribution of regional ecosystems present before clearing.

**Table 4** provides further information in regards to the remnant regional ecosystems present within the AOI. Specifically, the extent of remnant vegetation remaining within the bioregion, the 1:1,000,000 broad vegetation group (BVG) classification, whether the regional ecosystem is identified as a wetland, and extent of representation in Queensland's Protected Area Estate. For a description of the vegetation communities within the AOI and classified according to the 1:1,000,000 BVG, refer to **Table 6**.

**Table 4: Remnant regional ecosystems within the AOI, additional information**

| Regional Ecosystem | Remnant Extent | BVG (1 Million) | Wetland | Representation in protected estate |
|---|---|---|---|---|
| 7.11.13 | Pre-clearing 3000 ha; Remnant 2021 3000 ha | 9d | Not a Wetland | High |
| 7.11.33a | Pre-clearing 3000 ha; Remnant 2021 3000 ha | 9d | Not a Wetland | High |

| Regional Ecosystem | Remnant Extent | BVG (1 Million) | Wetland | Representation in protected estate |
|---|---|---|---|---|
| 7.11.44 | Pre-clearing 10000 ha; Remnant 2021 9000 ha | 9c | Not a Wetland | High |
| 7.11.51a | Pre-clearing 19000 ha; Remnant 2021 16000 ha | 9c | Not a Wetland | High |
| 7.11.7a | Pre-clearing 28000 ha; Remnant 2021 26000 ha | 5c | Not a Wetland | High |
| non-remnant | None | None | None | None |

*Representation in Protected Area Estate: High greater than 10% of pre-clearing extent is represented; Medium 4 - 10% is represented; Low less than 4% is represented, No representation.*

The distribution of mapped wetland systems within the area of interest is displayed in **Map 6**.

The following table lists known special values associated with a regional ecosystem type.

**Table 5: Remnant regional ecosystems within the AOI, special values**

| Regional Ecosystem | Special Values |
|---|---|
| 7.11.13 | 7.11.13: Potential habitat for NCA listed species: Randia audasii, Sphaerantia chartacea. |
| 7.11.33a | None |
| 7.11.44 | 7.11.44: Potential habitat for NCA listed species: Randia audasii. |
| 7.11.51a | 7.11.51: Potential habitat for NCA listed species: Grevillea glossadenia, Coleus gratus. |
| 7.11.7a | 7.11.7: Potential habitat for NCA listed species: Acalypha lyonsii, Alloxylon flammeum, Alpinia hylandii, Bryobium dischorense, Mischocarpus albescens, Phyllanthera grayi, Coleus gratus, Senegalia albizioides, Sphaerantia discolor, Toechima pterocarpum, Wetria australiensis. |
| non-remnant | None |

## 3. Remnant Regional Ecosystems by Broad Vegetation Group

BVGs are a higher-level grouping of vegetation communities. Queensland encompasses a wide variety of landscapes across temperate, wet and dry tropics and semi-arid climatic zones. BVGs provide an overview of vegetation communities across the state or a bioregion and allow comparison with other states. There are three levels of BVGs which reflect the approximate scale at which they are designed to be used: the 1:5,000,000 (national), 1:2,000,000 (state) and 1:1,000,000 (regional) scales.

A comprehensive description of BVGs is available at: https://publications.qld.gov.au/dataset/redd/resource/

The following table provides a description of the 1:1,000,000 BVGs present and their associated extent within the AOI.

**Table 6: Broad vegetation groups (1 million) within the AOI**

| BVG (1 Million) | Description | Area (Ha) | % of AOI |
|---|---|---|---|
| None | None | 10.04 | 16.10 |
| 5c | Simple to complex notophyll vine forests, often with Agathis spp. on ranges and uplands of the Wet Tropics bioregion. | 0.79 | 1.26 |
| 9c | Open forests of Corymbia clarksoniana (grey bloodwood) (or C. intermedia (pink bloodwood) or C. novoguinensis), C. tessellaris (carbeen) ± Eucalyptus tereticornis (blue gum) predominantly on coastal ranges. Other frequent tree species include Eucalyptus drepanophylla (grey ironbark), E. pellita (large-fruited red mahogany), E. brassiana (Cape York red gum) and Lophostemon suaveolens (swamp box). | 34.31 | 55.03 |
| 9d | Moist to dry open forests to woodlands dominated by Eucalyptus portuensis, Corymbia intermedia (pink bloodwood), E. drepanophylla, E. resinifera or E. reducta +/-Syncarpia glomulifera (turpentine) or E. cloeziana (Gympie messmate) on ranges. Also includes mixed forests with E. pellita or C. torelliana (cadaghi) emergents and rainforest understories. | 17.21 | 27.60 |

Refer to **Map 4** for further information. **Map 5** also provides a representation of the distribution of vegetation communities as per the 1:5,000,000 BVG believed to be present prior to European settlement.

## 4. Technical and BioCondition Benchmark Descriptions

Technical descriptions provide a detailed description of the full range in structure and floristic composition of regional ecosystems (e.g. 11.3.1) and their component vegetation communities (e.g. 11.3.1a, 11.3.1b). See: http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/

The descriptions are compiled using site survey data from the Queensland Herbarium & Biodiversity Science's QBEIS database. Distribution maps, representative images (if available) and the pre-clearing and remnant extent (hectares) of each vegetation community derived from the regional ecosystem mapping data are included. The technical descriptions should be used in conjunction with the fields from the regional ecosystem description database (REDD) for a full description of the regional ecosystem.

Technical descriptions include data on canopy height, canopy cover and native plant species composition of the predominant layer, which are attributes relevant to assessment of the remnant status of vegetation under the *Vegetation Management Act 1999*. However, as technical descriptions reflect the full range in structure and floristic composition across the climatic, natural disturbance and geographic range of the regional ecosystem, local reference sites should be used for remnant assessment where possible (Neldner et al. 2023 (PDF)* section 3.3 of: https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

The technical descriptions are subject to review and are updated as additional data becomes available.

When conducting a BioCondition assessment, these technical descriptions should be used in conjunction with BioCondition benchmarks for the specific regional ecosystem, or component vegetation community. http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/

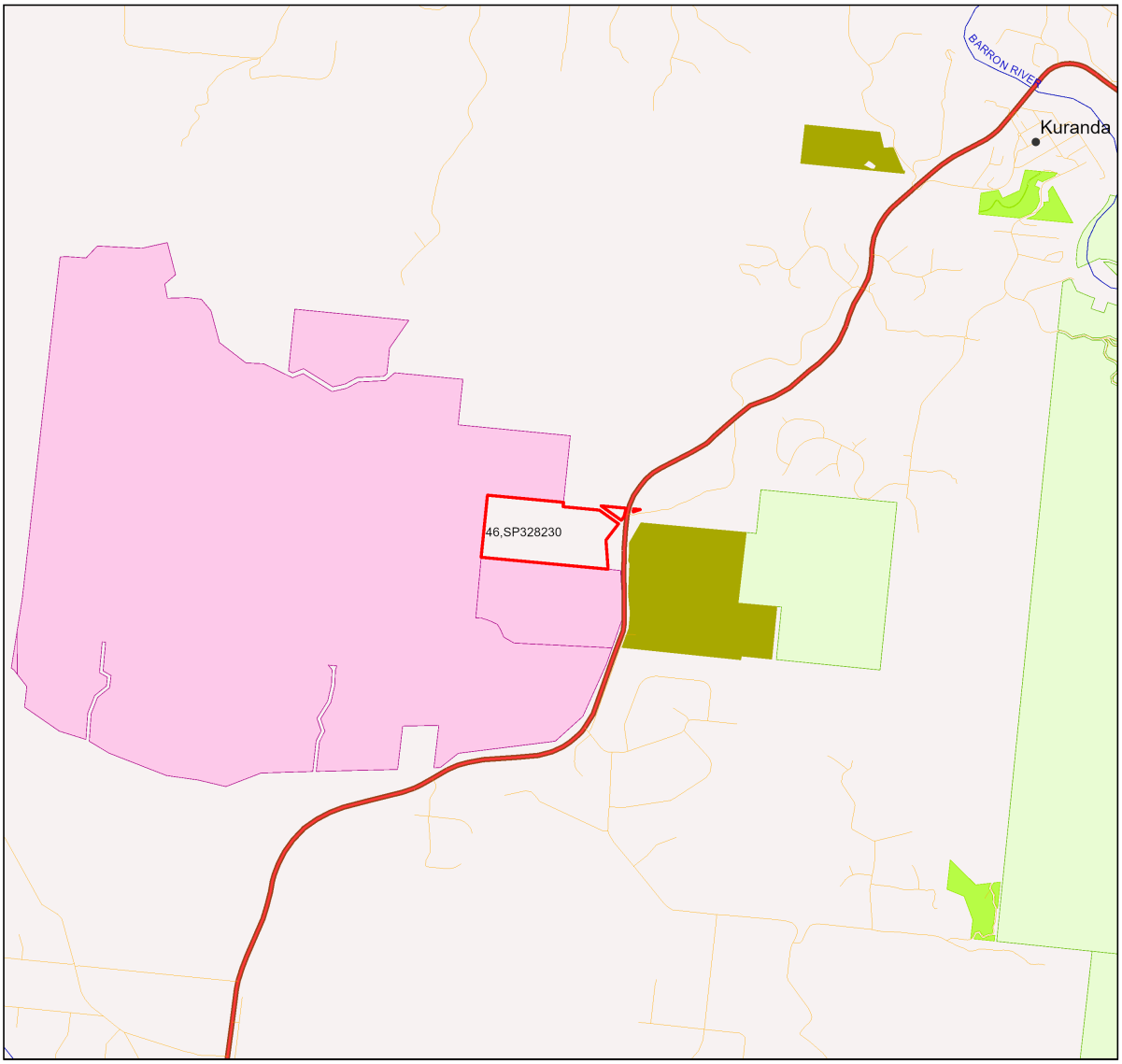
Benchmarks are based on a combination of quantitative and qualitative information and should be used as a guide only. Benchmarks are specific to one regional ecosystem vegetation community, however, the natural variability in structure and floristic composition under a range of climatic and natural disturbance regimes has been considered throughout the geographic extent of the regional ecosystem. Local reference sites should be used for this spatial and temporal (seasonal and annual) variability.

**Table 7: List of remnant regional ecosystems within the AOI for which technical and biocondition benchmark descriptions are available**

| Regional ecosystems mapped as within the AOI | Technical Descriptions | Biocondition Benchmarks |
|---|---|---|
| 7.11.13 | Not currently available | Not currently available |
| 7.11.33a | Not currently available | Not currently available |
| 7.11.44 | Not currently available | Not currently available |
| 7.11.51a | Not currently available | Not currently available |
| 7.11.7a | Not currently available | Not currently available |
| non-remnant | Not currently available | Not currently available |

# Maps

## Map 1 - Location

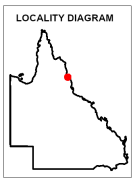



### Locality Map

**Legend**

- Towns
- Freeways/Highways
- Connector
- Street/Local Road
- Lakes and reservoirs
- National Park
- National Park (Scientific)
- National Park (CYPAL)
- National Park (Aboriginal Land)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Nature Refuges
- Coordinated Conservation Areas
- Major rivers/creeks
- Queensland
- Selected Lot and Plan

LOCALITY DIAGRAM



N

0 550 1100 1650 2200 2750 m

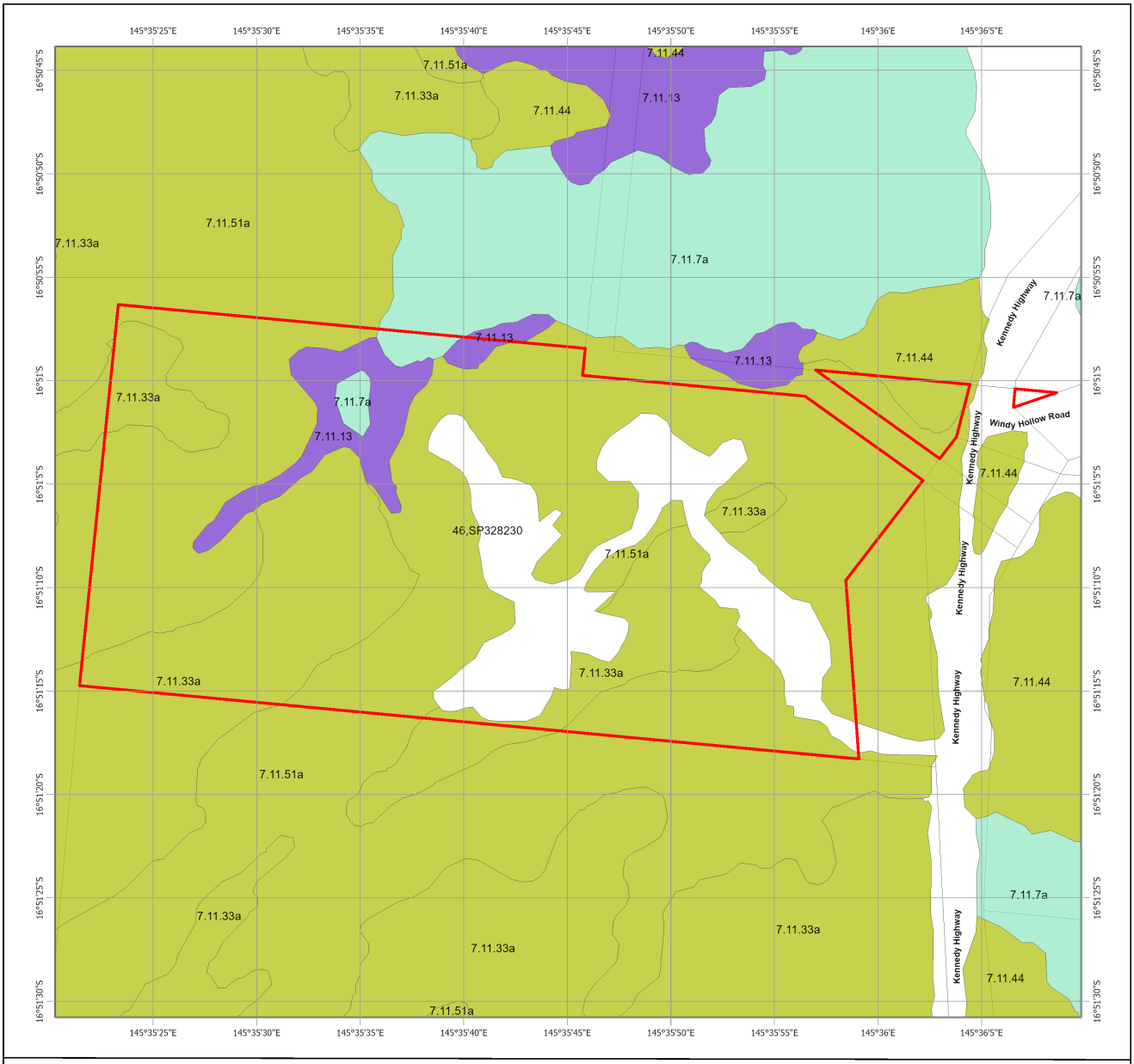
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## Map 2 - Remnant 2021 regional ecosystems




## Remnant 2021 Regional Ecosystems

### Biodiversity Status

- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Non-remnant vegetation, cultivated or built environment
- Plantation
- Water
- Cadastral Boundaries
- Selected Lot and Plan

LOCALITY DIAGRAM

N

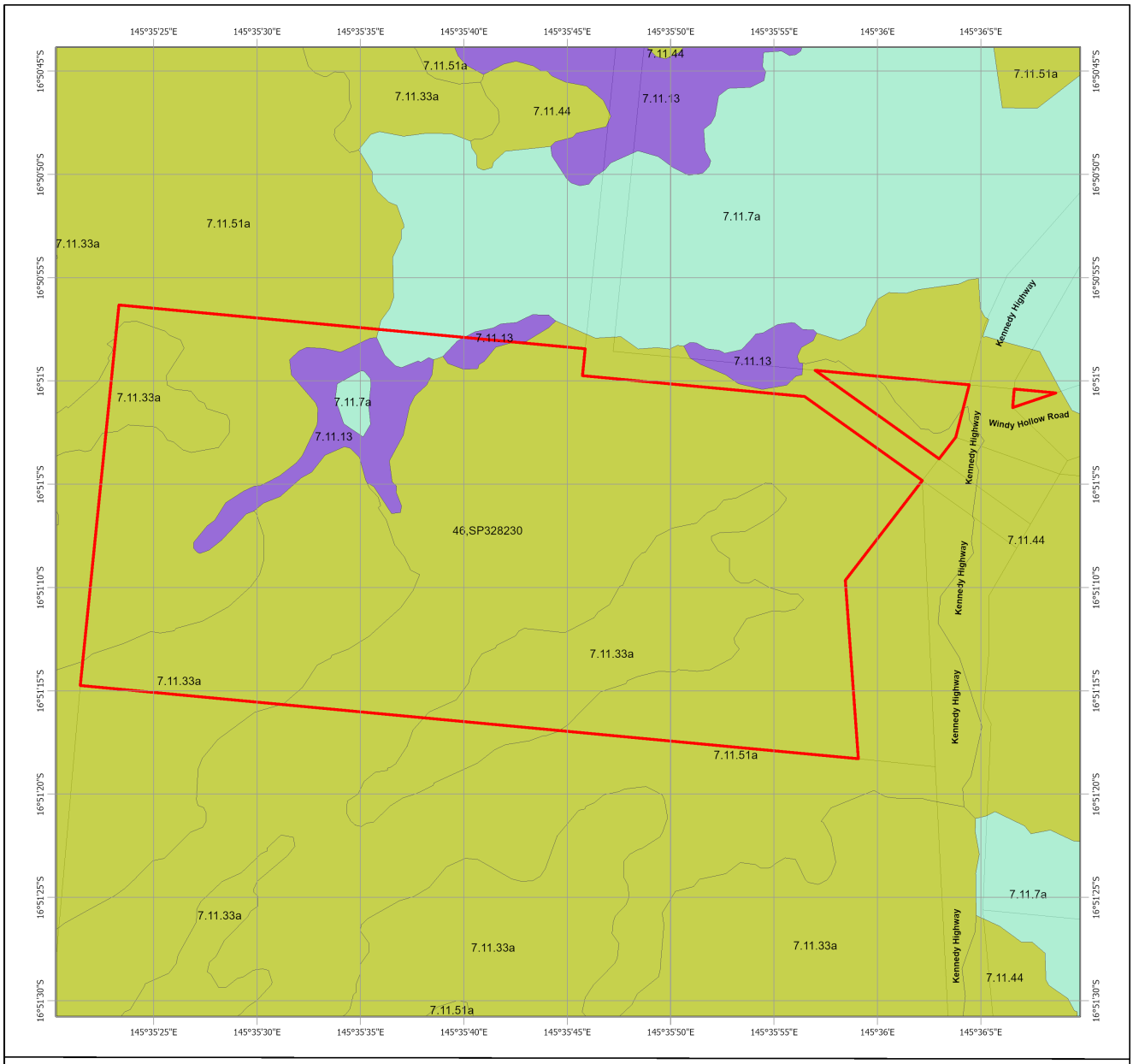
0 0.09 0.18 0.27 0.36 km

This product is projected into GDA2020

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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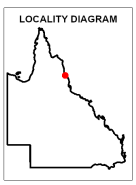
## Map 3 - Pre-clearing regional ecosystems




## Pre-clearing Regional Ecosystems

### Biodiversity Status

- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Water
- Cadastral Boundaries
- Selected Lot and Plan




N

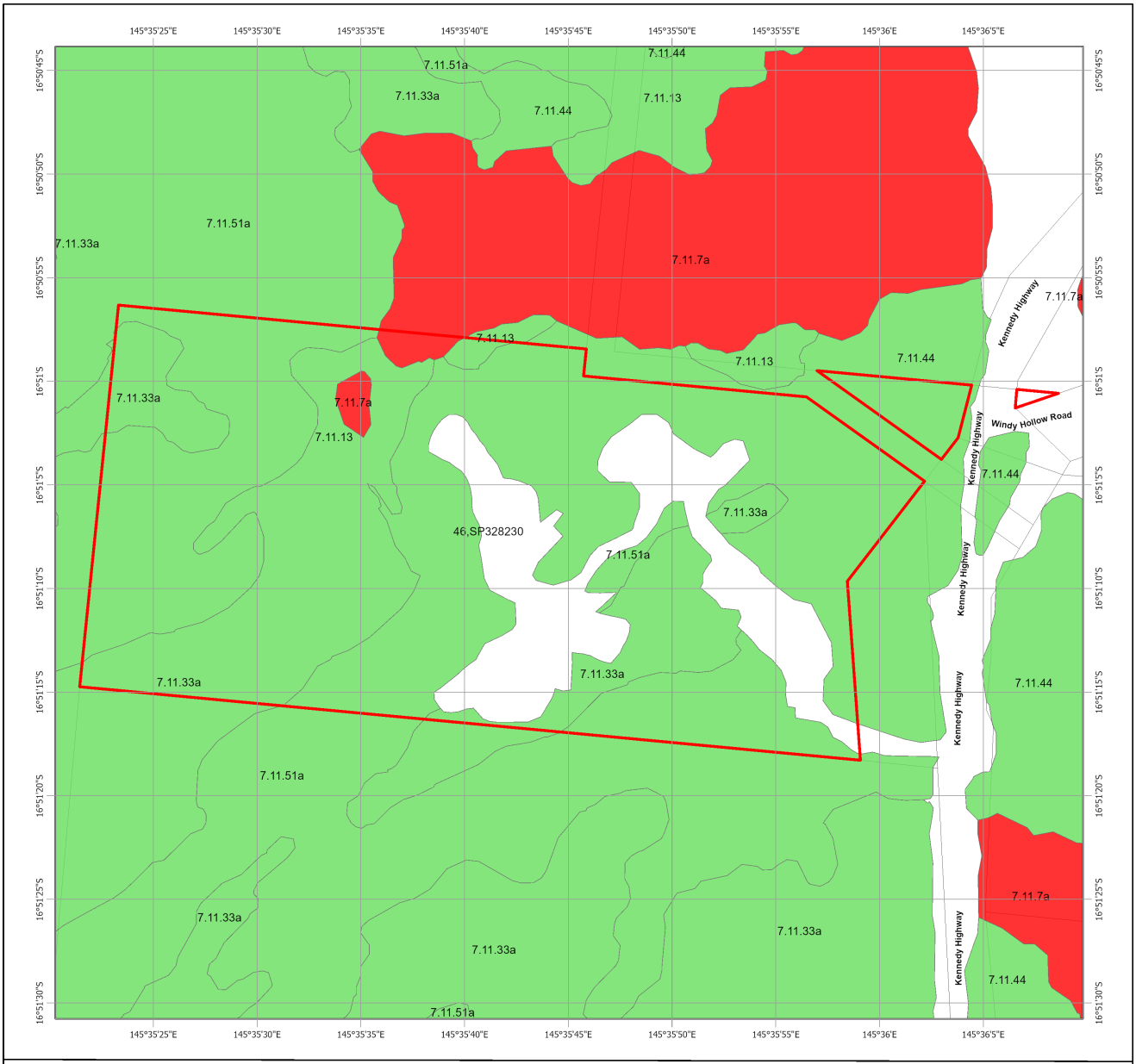
0 0.09 0.18 0.27 0.37 km

This product is displayed in GDA2020

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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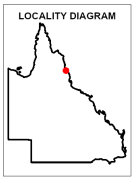
## Map 4 - Remnant 2021 regional ecosystems by BVG (5M)




### Remnant 2021 Regional Ecosystems coloured by Broad Vegetation Groups

**Broad Vegetation Groups**
**BVG5M Description (BVG1M codes)**

- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries
- Selected Lot and Plan




N

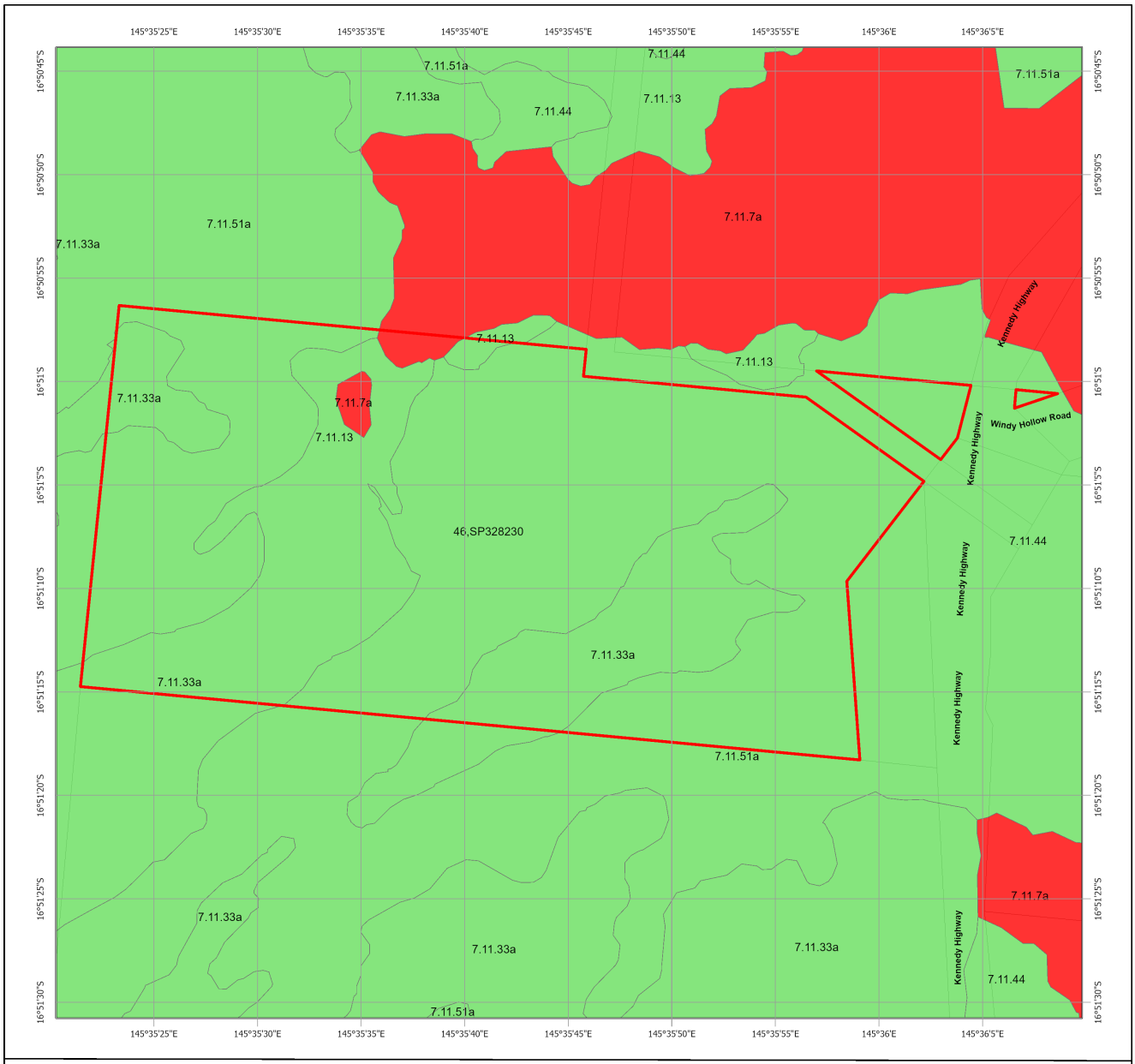
0 0.09 0.18 0.27 0.36 km

This product is displayed in GDA2020

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled. Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.
The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.
Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy.
Non-remnant vegetation includes regrowth and disturbed native vegetation.

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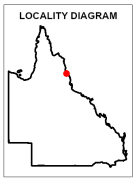
## Map 5 - Pre-clearing regional ecosystems by BVG (5M)




### Pre-clearing Regional Ecosystems coloured by Broad Vegetation Groups

**Broad Vegetation Groups**
**BVG5M Description (BVG1M codes)**

- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
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- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Water
- Cadastral Boundaries
- Selected Lot and Plan




N

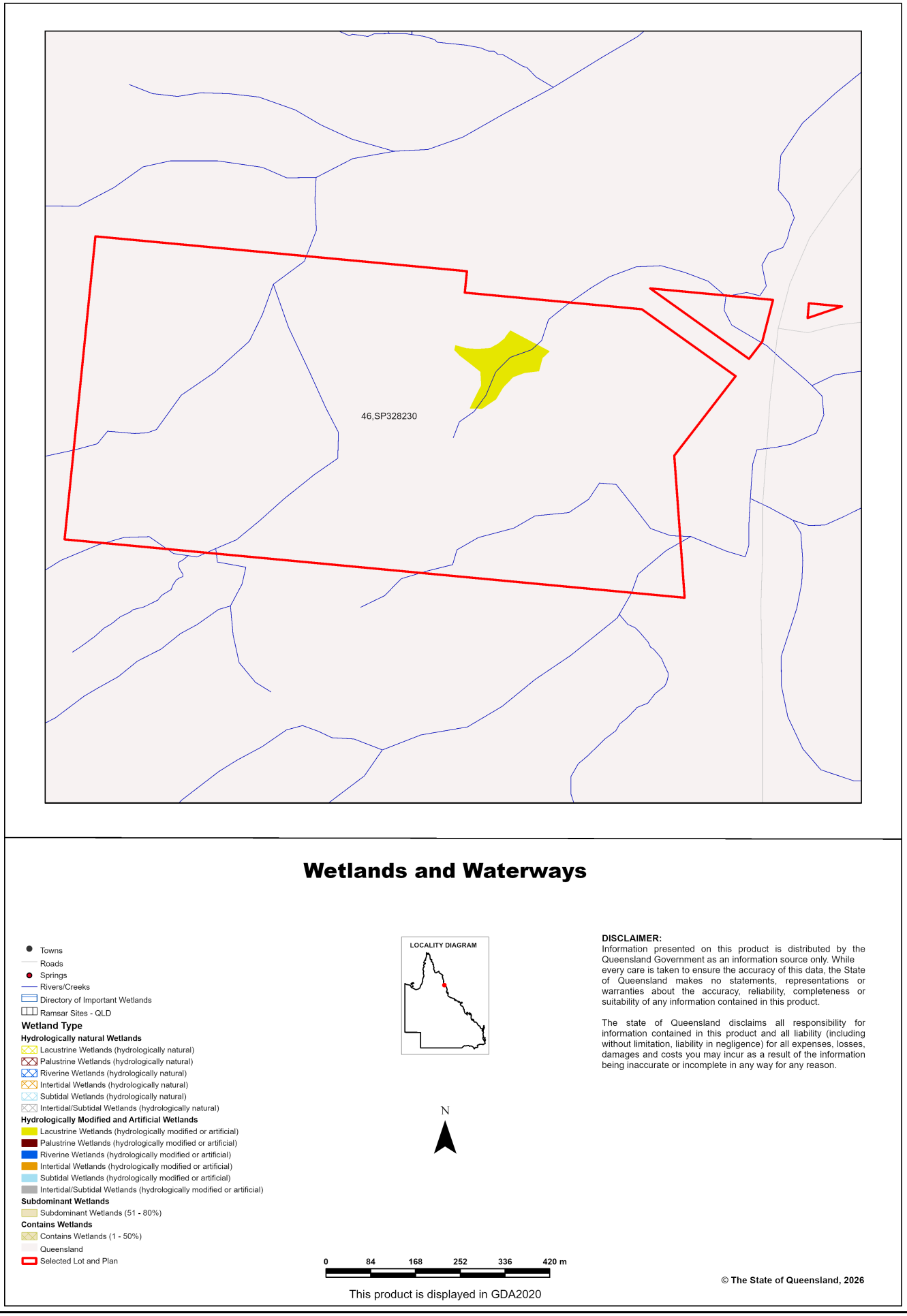
0 0.09 0.18 0.28 0.37 km

This product is displayed in GDA2020

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.
Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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## Map 6 - Wetlands and waterways



## Links and Other Information Sources

The Department of the Environment, Tourism, Science and Innovation's Website - http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/ provides further information on the regional ecosystem framework, including access to links to the Regional Ecosystem Database, Broad Vegetation Group Definitions, Regional Ecosystem and Land zone descriptions.

Descriptions of the broad vegetation groups of Queensland can be downloaded from: https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/broad-vegetation

The methodology for mapping regional ecosystems can be downloaded from: https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

Technical descriptions for regional ecosystems can be obtained from: http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/

Benchmarks can be obtained from: http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/

For further information associated with the remnant regional ecosystem dataset used by this report, refer to the metadata associated with the Biodiversity status of pre-clearing and Remnant Regional Ecosystems of Queensland dataset (version listed in **Appendix 1**) which is available through the Queensland Spatial Catalogue, Queensland Spatial Catalogue : Queensland Government (information.qld.gov.au)

The Queensland Globe is a mapping and data application. As an interactive online tool, Queensland Globe allows you to view and explore Queensland maps, imagery (including up-to-date satellite images) and other spatial data, including regional ecosystem mapping. To further view and explore regional ecosystems over an area of interest, access the Biota Globe (a component of the Queensland Globe). The Queensland Globe can be accessed via the following link: https://qldglobe.information.qld.gov.au/

## References

Neldner, V.J., Niehus, R.E., Wilson, B.A., McDonald, W.J.F., Ford, A.J. and Accad, A. (2023). The Vegetation of Queensland. Descriptions of Broad Vegetation Groups. Version 6.0. Queensland Herbarium, Department of Environment and Science. (https://publications.qld.gov.au/dataset/redd/resource/78209e74-c7f2-4589-90c1-c33188359086)

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Richter,D., Addicott, E.P. and Appelman, C.N. (2023) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 7.0. Updated December 2023. Queensland Herbarium, Queensland Department of Environment, Science and Innovation, Brisbane. (https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf).

Sattler, P.S. and Williams, R.D. (eds) (1999). *The Conservation Status of Queensland's Bioregional Ecosystems.* Environmental Protection Agency, Brisbane.

# Appendices

## Appendix 1 - Source Data

**The dataset listed below is available for download from:**
http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/download/

- Regional Ecosystem Description Database

**The datasets listed below are available for download from:**
Queensland Spatial Catalogue : Queensland Government (information.qld.gov.au)

- Biodiversity status of pre-clearing and 2021 remnant regional ecosystems of Queensland
- Pre-clearing Vegetation Communities and Regional Ecosystems of Queensland
- Queensland Wetland Data Version - Wetland lines
- Queensland Wetland Data Version - Wetland points
- Queensland Wetland Data Version - Wetland areas
- Pre-clearing broad vegetation groups of Queensland
- Remnant 2021 broad vegetation groups of Queensland

## Appendix 2 - Acronyms and Abbreviations

AOI - Area of Interest
GIS - Geographic Information System
RE - Regional Ecosystem
REDD - Regional Ecosystem Description Database
VMA - *Vegetation Management Act 1999*

Queensland Government

**Department of the Environment, Tourism, Science and Innovation**

Environmental Reports

# Regional Ecosystems

## *Biodiversity Status*

For the selected area of interest
Lot: 175 Plan: FTY1871

# Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the input coordinates.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 2020). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

# Important Note to User

Information presented in this report is based upon the Queensland Herbarium & Biodiversity Science's Regional Ecosystem framework. The Biodiversity Status has been used to depict the extent of "Endangered", "Of Concern" and "No Concern at Present" regional ecosystems in all cases, rather than the classes used for the purposes of the *Vegetation Management Act 1999* (VMA). Mapping and figures presented in this document reflect the Queensland Herbarium & Biodiversity Science's Remnant and Pre-clearing Regional Ecosystem Datasets, and not the certified mapping used for the purpose of the VMA.

For matters relevant to vegetation management under the VMA, please refer to the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development website https://www.nrmmrrd.qld.gov.au/

Please direct queries about these reports to: Queensland.Herbarium@qld.gov.au

# Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.

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## Summary Information

The following table provides an overview of the AOI with respect to selected topographic and environmental themes. Refer to **Map 1** for locality information.

**Table 1: Details for area of interest:**
**Lot: 175 Plan: FTY1871, with area 88.85 ha**

| Local Government(s) | Catchment(s) | Bioregion(s) | Subregion(s) |
|---|---|---|---|
| Mareeba Shire | Barron | Wet Tropics | Macalister |

The table below summarizes the extent of remnant vegetation classed as "Endangered", "Of concern" and "No concern at present" regional ecosystems classified by Biodiversity Status within the area of interest (AOI).

**Table 2: Summary table, biodiversity status of regional ecosystems within the AOI**

| Biodiversity Status | Area (Ha) | % of AOI |
|---|---|---|
| Endangered | 0.00 | 0.00 |
| Of concern | 86.55 | 97.42 |
| No concern at present | 0.03 | 0.03 |
| Total remnant vegetation | 86.58 | 97.45 |

Refer to **Map 2** for further information.

# Regional Ecosystems

## 1. Introduction

Regional ecosystems are vegetation communities in a bioregion that are consistently associated with particular combinations of geology, landform and soil (Sattler and Williams 1999). Descriptions of Queensland's Regional ecosystems are available online from the Regional Ecosystem Description Database (REDD). Descriptions are compiled from a broad range of information sources including vegetation, land system and geology survey and mapping and detailed vegetation site data. The regional ecosystem classification and descriptions are reviewed as new information becomes available. A number of vegetation communities may form a single regional ecosystem and may be distinguished by differences in structure or sub-dominant species in the ecologically dominant layer. Vegetation communities with different dominant species in the ecologically dominant layer may be amalgamated in to a regional ecosystem if they are not mappable and predictable in the landscape at 1:100 000 scale. Vegetation communities may be mappable at a scale larger than 1:100 000. Vegetation communities within a regional ecosystem are denoted by a letter following the regional ecosystem code (e.g. a, b, c). Vegetation communities and regional ecosystems are amalgamated into a higher level classification of broad vegetation groups (BVGs).

A published methodology for survey and mapping of regional ecosystems across Queensland (Neldner et al 2023) provides further details on regional ecosystem concepts and terminology.

This report provides information on the type, status, and extent of vegetation communities, regional ecosystems and broad vegetation groups present within a user specified area of interest. Please note, for the purpose of this report, the Biodiversity Status is used. This report has not been developed for application of the *Vegetation Management Act 1999* (VMA). Additionally, information generated in this report has been derived from the Queensland Herbarium & Biodiversity Science's Regional Ecosystem Mapping, and not the regulated mapping certified for the purposes of the VMA. If your interest/matter relates to regional ecosystems and the VMA, users should refer to the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development website https://www.nrmmrrd.qld.gov.au/.

With respect to the Queensland Biodiversity Status,

"Endangered" regional ecosystems are described as those where:

- remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or 10-30% of its pre-clearing extent remains and the remnant vegetation is less than 10,000 hectares, or
- less than 10 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss*, or
- 10-30 percent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss and the remnant vegetation is less than 10,000 hectares; or
- it is a rare** regional ecosystem subject to a threatening process.***

"Of concern" regional ecosystems are described as those where:

- the degradation criteria listed above for 'Endangered' regional ecosystems are not met and,
- remnant vegetation is 10-30 per cent of its pre-clearing extent across the bioregion; or more than 20 per cent of its pre-clearing extent remains and the remnant extent is less than 10,000 hectares, or
- 10-30 percent of its pre-clearing extent remains unaffected by moderate degradation and/or biodiversity loss.****

and "No concern at present" regional ecosystems are described as those where:

- remnant vegetation is over 30 percent of its pre-clearing extent across the bioregion, and the remnant area is greater than 10,000 hectares, and
- the degradation criteria listed above for 'Endangered' or 'Of concern' regional ecosystems are not met.

**Severe degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 50 years even with the removal of threatening processes; or soil surface is severely degraded, for example, by loss of A horizon, surface expression of salinity; surface compaction, loss of organic matter or sheet erosion.*

***Rare regional ecosystem: pre-clearing extent (<1000 ha); or patch size (<100 ha and of limited total extent across its range).*

****Threatening processes are those that are reducing or will reduce the biodiversity and ecological integrity of a regional ecosystem. For example, clearing, weed invasion, fragmentation, inappropriate fire regime or grazing pressure, or infrastructure development.*

*****Moderate degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 20 years even with the removal of threatening processes; or soil surface is moderately degraded.*

## 2. Remnant Regional Ecosystems

The following table identifies the remnant regional ecosystems and vegetation communities mapped within the AOI and provides their short descriptions, Biodiversity Status, and remnant extent within the selected AOI. Please note, where heterogeneous vegetated patches (mixed patches of remnant vegetation mapped as containing multiple regional ecosystems) occur within the AOI, they have been split and listed as individual regional ecosystems (or vegetation communities where present) for the purposes of the table below. In such instances, associated area figures have been generated based upon the estimated proportion of each regional ecosystem (or vegetation community) predicted to be present within the larger mixed patch.

**Table 3: Remnant regional ecosystems, description and status within the AOI**

| Regional Ecosystem | Short Description | BD Status | Area (Ha) | % of AOI |
|---|---|---|---|---|
| 7.11.21a | Eucalyptus leptophleba woodland to open forest on metamorphic uplands of the dry rainfall zone | No concern at present | 0.03 | 0.03 |
| 7.11.33a | Eucalyptus reducta open forest to woodland on metamorphics | Of concern | 54.86 | 61.74 |
| 7.11.35a | Eucalyptus portuensis +/- Corymbia citriodora woodland to open forest on metamorphics | Of concern | 0.97 | 1.09 |
| 7.11.41a | Melaleuca viridiflora, M. monantha, Acacia flavescens and Grevillea spp. Shrubland with emergent Corymbia clarksoniana, or open woodland of Eucalyptus drepanophylla with M. monantha or Callitris intratropica, on metamorphics | Of concern | 0.01 | 0.01 |
| 7.11.51a | Corymbia clarksoniana and/or Eucalyptus drepanophylla open forest to woodland on metamorphics | Of concern | 30.72 | 34.57 |
| non-remnant | None | None | 2.27 | 2.55 |

Refer to **Map 2** for further information. **Map 3** also provides a visual estimate of the distribution of regional ecosystems present before clearing.

**Table 4** provides further information in regards to the remnant regional ecosystems present within the AOI. Specifically, the extent of remnant vegetation remaining within the bioregion, the 1:1,000,000 broad vegetation group (BVG) classification, whether the regional ecosystem is identified as a wetland, and extent of representation in Queensland's Protected Area Estate. For a description of the vegetation communities within the AOI and classified according to the 1:1,000,000 BVG, refer to **Table 6**.

**Table 4: Remnant regional ecosystems within the AOI, additional information**

| Regional Ecosystem | Remnant Extent | BVG (1 Million) | Wetland | Representation in protected estate |
|---|---|---|---|---|
| 7.11.21a | Pre-clearing 13000 ha; Remnant 2021 12000 ha | 9b | Not a Wetland | High |
| 7.11.33a | Pre-clearing 3000 ha; Remnant 2021 3000 ha | 9d | Not a Wetland | High |

| Regional Ecosystem | Remnant Extent | BVG (1 Million) | Wetland | Representation in protected estate |
|---|---|---|---|---|
| 7.11.35a | Pre-clearing 19000 ha; Remnant 2021 17000 ha | 9d | Not a Wetland | High |
| 7.11.41a | Pre-clearing 700 ha; Remnant 2021 500 ha | 21a | Not a Wetland | High |
| 7.11.51a | Pre-clearing 19000 ha; Remnant 2021 16000 ha | 9c | Not a Wetland | High |
| non-remnant | None | None | None | None |

*Representation in Protected Area Estate: High greater than 10% of pre-clearing extent is represented; Medium 4 - 10% is represented; Low less than 4% is represented, No representation.*

The distribution of mapped wetland systems within the area of interest is displayed in **Map 6**.

The following table lists known special values associated with a regional ecosystem type.

**Table 5: Remnant regional ecosystems within the AOI, special values**

| Regional Ecosystem | Special Values |
|---|---|
| 7.11.21a | None |
| 7.11.33a | None |
| 7.11.35a | 7.11.35: Potential habitat for NCA listed species: Zieria obovata. |
| 7.11.41a | None |
| 7.11.51a | 7.11.51: Potential habitat for NCA listed species: Grevillea glossadenia, Coleus gratus. |
| non-remnant | None |

## 3. Remnant Regional Ecosystems by Broad Vegetation Group

BVGs are a higher-level grouping of vegetation communities. Queensland encompasses a wide variety of landscapes across temperate, wet and dry tropics and semi-arid climatic zones. BVGs provide an overview of vegetation communities across the state or a bioregion and allow comparison with other states. There are three levels of BVGs which reflect the approximate scale at which they are designed to be used: the 1:5,000,000 (national), 1:2,000,000 (state) and 1:1,000,000 (regional) scales.

A comprehensive description of BVGs is available at: https://publications.qld.gov.au/dataset/redd/resource/

The following table provides a description of the 1:1,000,000 BVGs present and their associated extent within the AOI.

**Table 6: Broad vegetation groups (1 million) within the AOI**

| BVG (1 Million) | Description | Area (Ha) | % of AOI |
|---|---|---|---|
| None | None | 2.27 | 2.55 |
| 21a | Low woodlands and low open woodlands dominated by Melaleuca viridiflora (coarse-leaved paperbark) on depositional plains. | 0.01 | 0.01 |
| 9b | Moist to dry woodlands dominated by Eucalyptus platyphylla (poplar gum) and/or E. leptophleba (Molloy red box). Other frequent tree species include Corymbia clarksoniana (grey bloodwood), E. drepanophylla (grey ironbark) and occasionally E. chlorophylla. | 0.03 | 0.03 |
| 9c | Open forests of Corymbia clarksoniana (grey bloodwood) (or C. intermedia (pink bloodwood) or C. novoguinensis), C. tessellaris (carbeen) ± Eucalyptus tereticornis (blue gum) predominantly on coastal ranges. Other frequent tree species include Eucalyptus drepanophylla (grey ironbark), E. pellita (large-fruited red mahogany), E. brassiana (Cape York red gum) and Lophostemon suaveolens (swamp box). | 30.72 | 34.57 |
| 9d | Moist to dry open forests to woodlands dominated by Eucalyptus portuensis, Corymbia intermedia (pink bloodwood), E. drepanophylla, E. resinifera or E. reducta +/-Syncarpia glomulifera (turpentine) or E. cloeziana (Gympie messmate) on ranges. Also includes mixed forests with E. pellita or C. torelliana (cadaghi) emergents and rainforest understories. | 55.82 | 62.83 |

Refer to **Map 4** for further information. **Map 5** also provides a representation of the distribution of vegetation communities as per the 1:5,000,000 BVG believed to be present prior to European settlement.

## 4. Technical and BioCondition Benchmark Descriptions

Technical descriptions provide a detailed description of the full range in structure and floristic composition of regional ecosystems (e.g. 11.3.1) and their component vegetation communities (e.g. 11.3.1a, 11.3.1b). See: http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/

The descriptions are compiled using site survey data from the Queensland Herbarium & Biodiversity Science's QBEIS database. Distribution maps, representative images (if available) and the pre-clearing and remnant extent (hectares) of each vegetation community derived from the regional ecosystem mapping data are included. The technical descriptions should be used in conjunction with the fields from the regional ecosystem description database (REDD) for a full description of the regional ecosystem.

Technical descriptions include data on canopy height, canopy cover and native plant species composition of the predominant layer, which are attributes relevant to assessment of the remnant status of vegetation under the *Vegetation Management Act 1999*. However, as technical descriptions reflect the full range in structure and floristic composition across the climatic, natural disturbance and geographic range of the regional ecosystem, local reference sites should be used for remnant assessment where possible (Neldner et al. 2023 (PDF)* section 3.3 of: https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

The technical descriptions are subject to review and are updated as additional data becomes available.

When conducting a BioCondition assessment, these technical descriptions should be used in conjunction with BioCondition benchmarks for the specific regional ecosystem, or component vegetation community. http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/

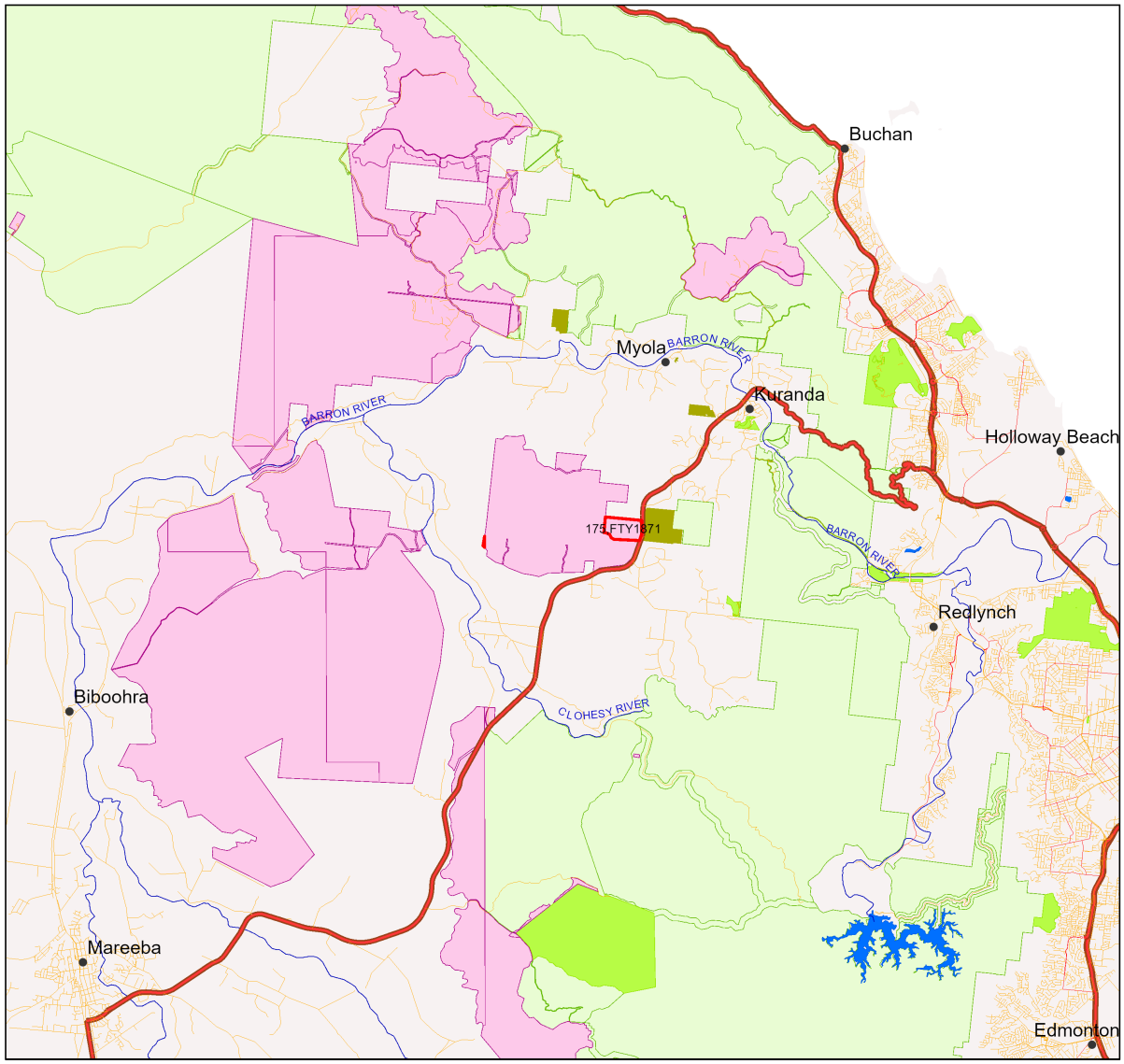
Benchmarks are based on a combination of quantitative and qualitative information and should be used as a guide only. Benchmarks are specific to one regional ecosystem vegetation community, however, the natural variability in structure and floristic composition under a range of climatic and natural disturbance regimes has been considered throughout the geographic extent of the regional ecosystem. Local reference sites should be used for this spatial and temporal (seasonal and annual) variability.

**Table 7: List of remnant regional ecosystems within the AOI for which technical and biocondition benchmark descriptions are available**

| Regional ecosystems mapped as within the AOI | Technical Descriptions | Biocondition Benchmarks |
|---|---|---|
| 7.11.21a | Not currently available | Not currently available |
| 7.11.33a | Not currently available | Not currently available |
| 7.11.35a | Not currently available | Not currently available |
| 7.11.41a | Not currently available | Not currently available |
| 7.11.51a | Not currently available | Not currently available |
| non-remnant | Not currently available | Not currently available |

# Maps

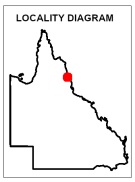
## Map 1 - Location




### Locality Map

**Legend**

- Towns
- Freeways/Highways
- Connector
- Street/Local Road
- Lakes and reservoirs
- National Park
- National Park (Scientific)
- National Park (CYPAL)
- National Park (Aboriginal Land)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Nature Refuges
- Coordinated Conservation Areas
- Major rivers/creeks
- Queensland
- Selected Lot and Plan




N

0 2100 4200 6300 8400 10500 m

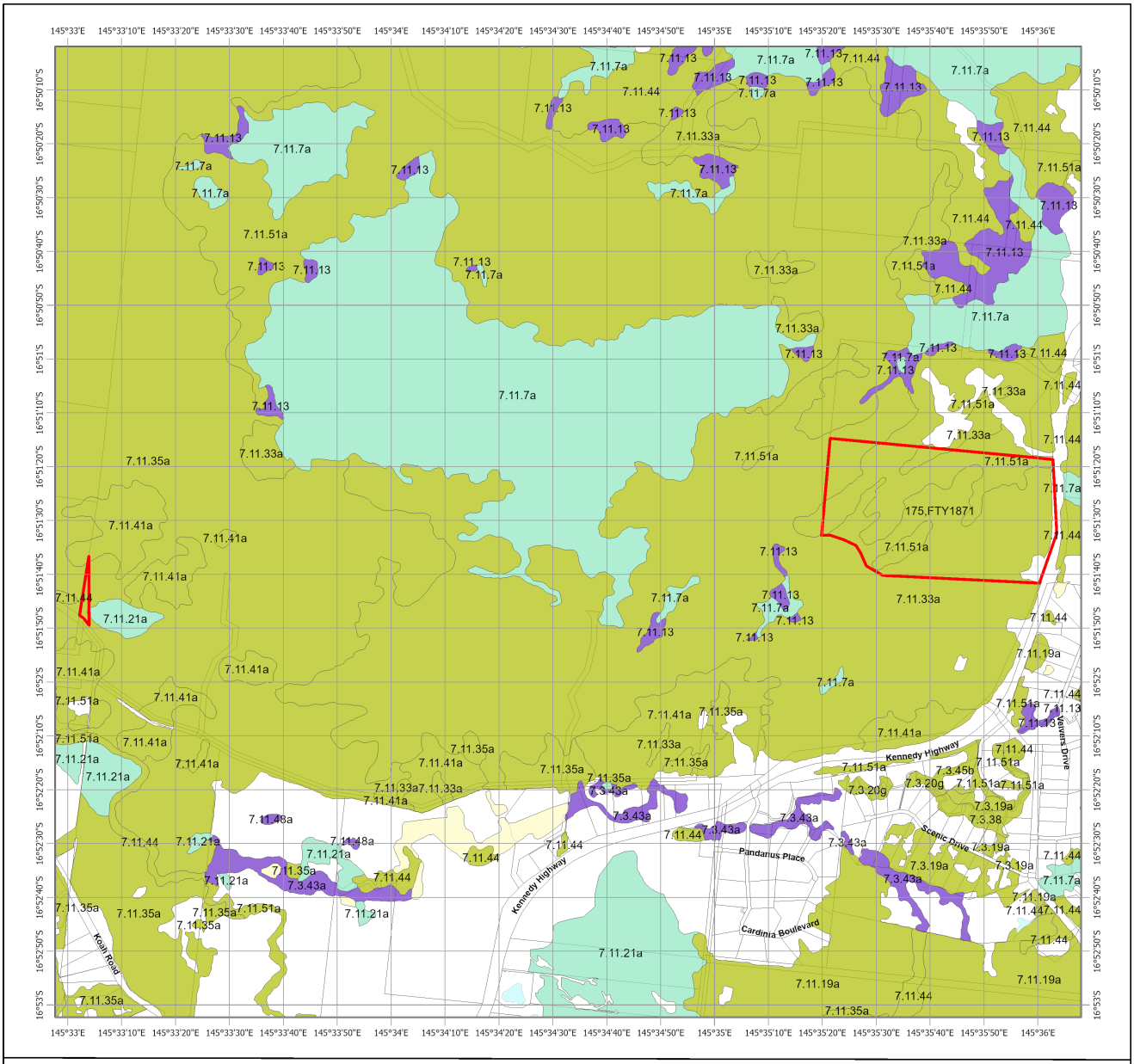
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## Map 2 - Remnant 2021 regional ecosystems

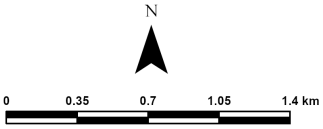



# Remnant 2021 Regional Ecosystems

## Biodiversity Status

- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Non-remnant vegetation, cultivated or built environment
- Plantation
- Water
- Cadastral Boundaries
- Selected Lot and Plan



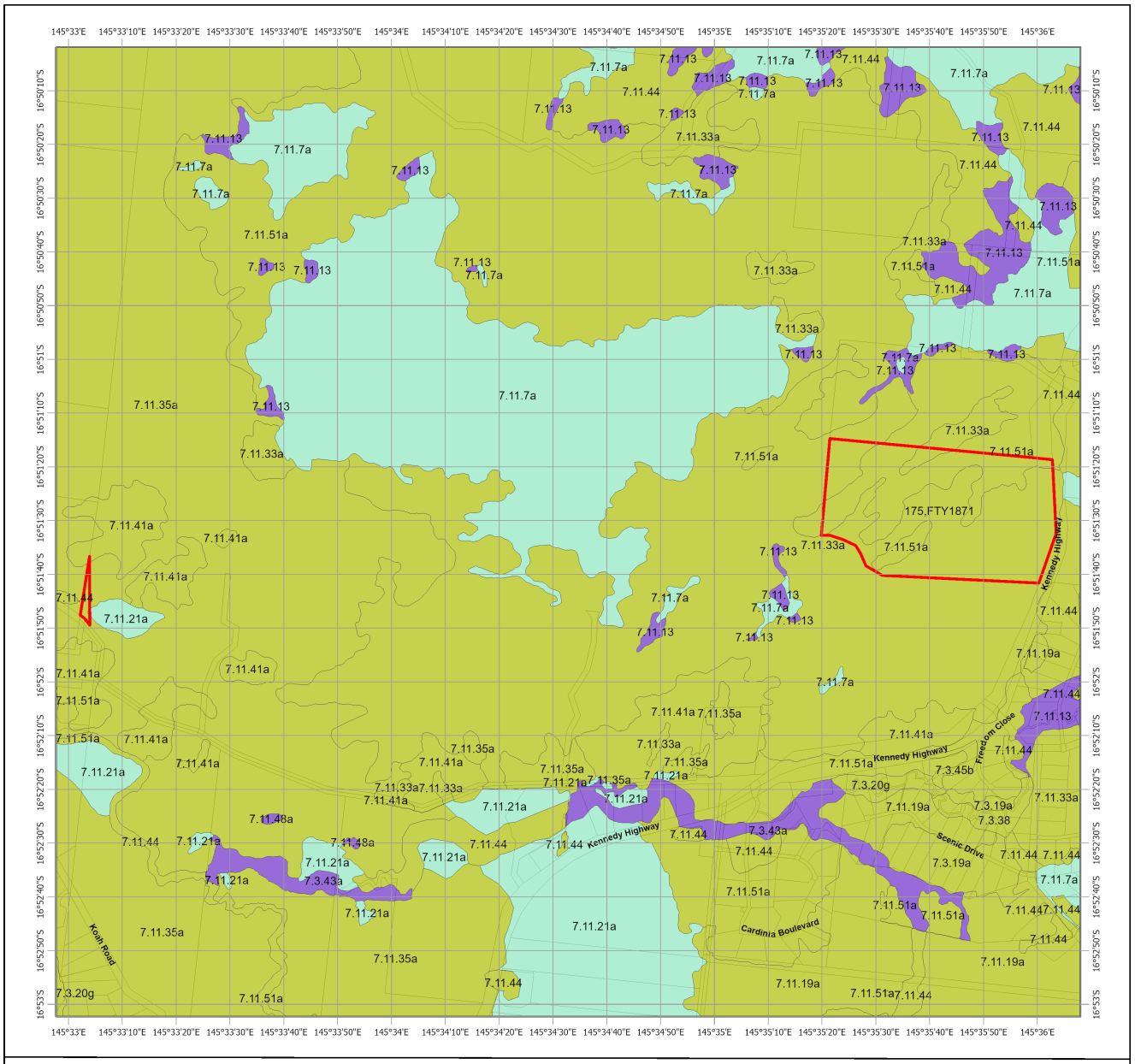




This product is projected into GDA2020

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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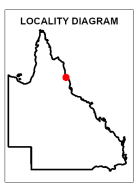
## Map 3 - Pre-clearing regional ecosystems




## Pre-clearing Regional Ecosystems

### Biodiversity Status

- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Water
- Cadastral Boundaries
- Selected Lot and Plan




N

0 0.35 0.7 1.05 1.4 km

This product is displayed in GDA2020

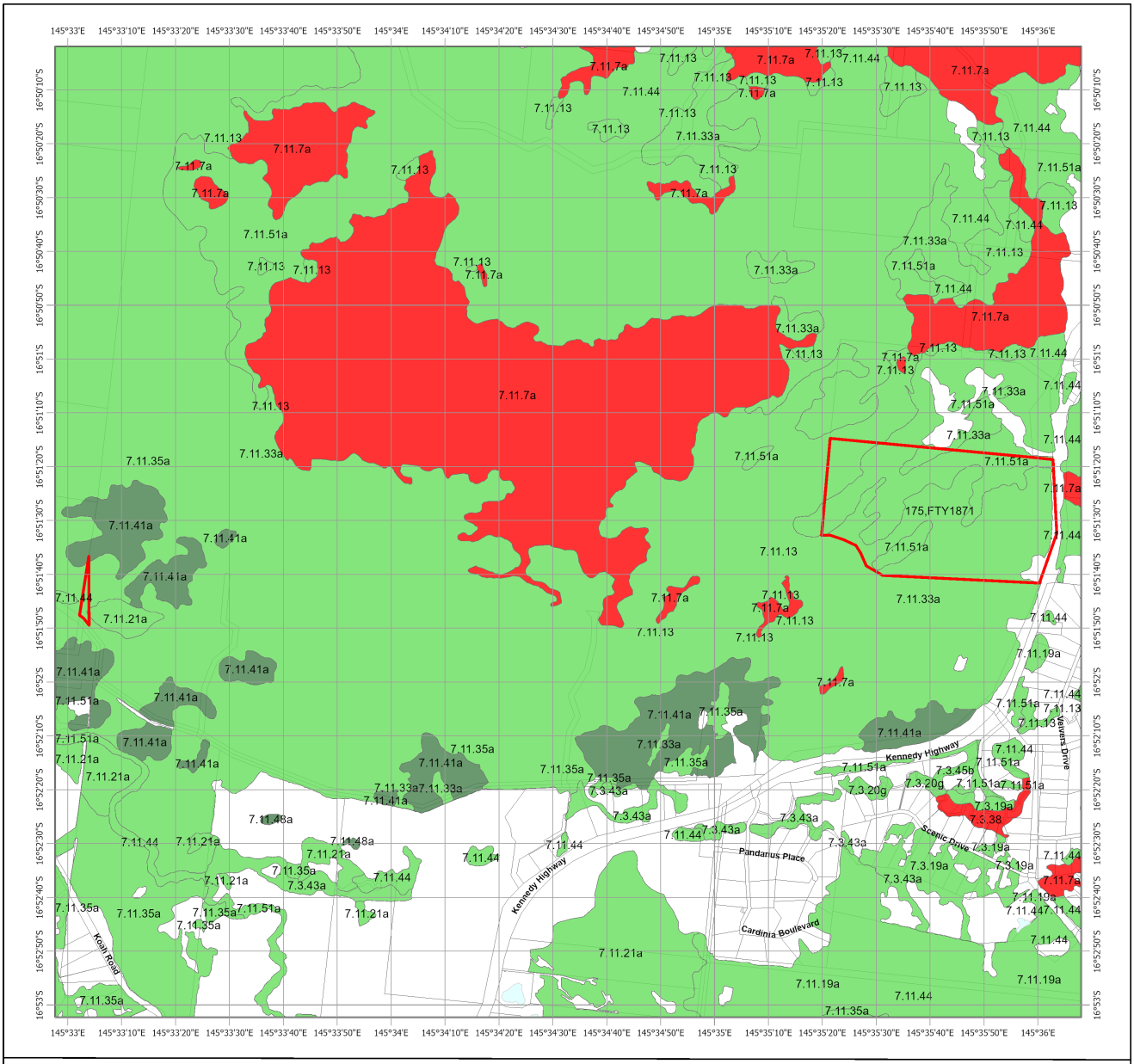
Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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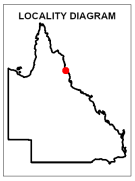
## Map 4 - Remnant 2021 regional ecosystems by BVG (5M)




## Remnant 2021 Regional Ecosystems coloured by Broad Vegetation Groups

### Broad Vegetation Groups
### BVG5M Description (BVG1M codes)

- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries
- Selected Lot and Plan




N

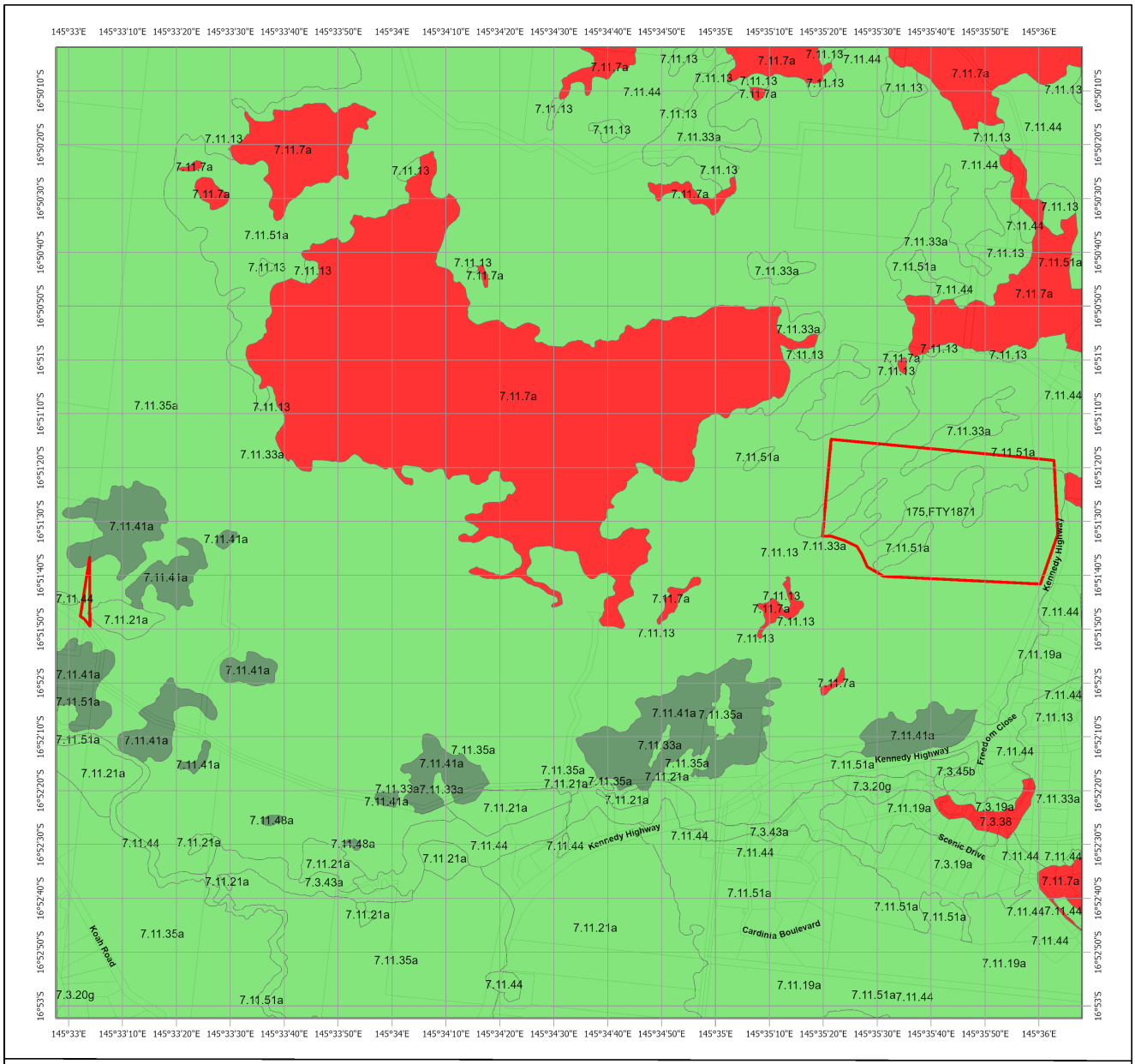
0 0.35 0.71 1.06 1.42 km

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Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled. Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.
The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.
Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy.
Non-remnant vegetation includes regrowth and disturbed native vegetation.

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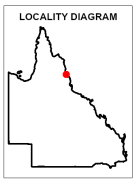
## Map 5 - Pre-clearing regional ecosystems by BVG (5M)

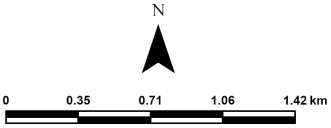



## Pre-clearing Regional Ecosystems coloured by Broad Vegetation Groups

### Broad Vegetation Groups
### BVG5M Description (BVG1M codes)

- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
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- 7. Callitris woodland - open forests (20a)
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- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Water
- Cadastral Boundaries
- Selected Lot and Plan



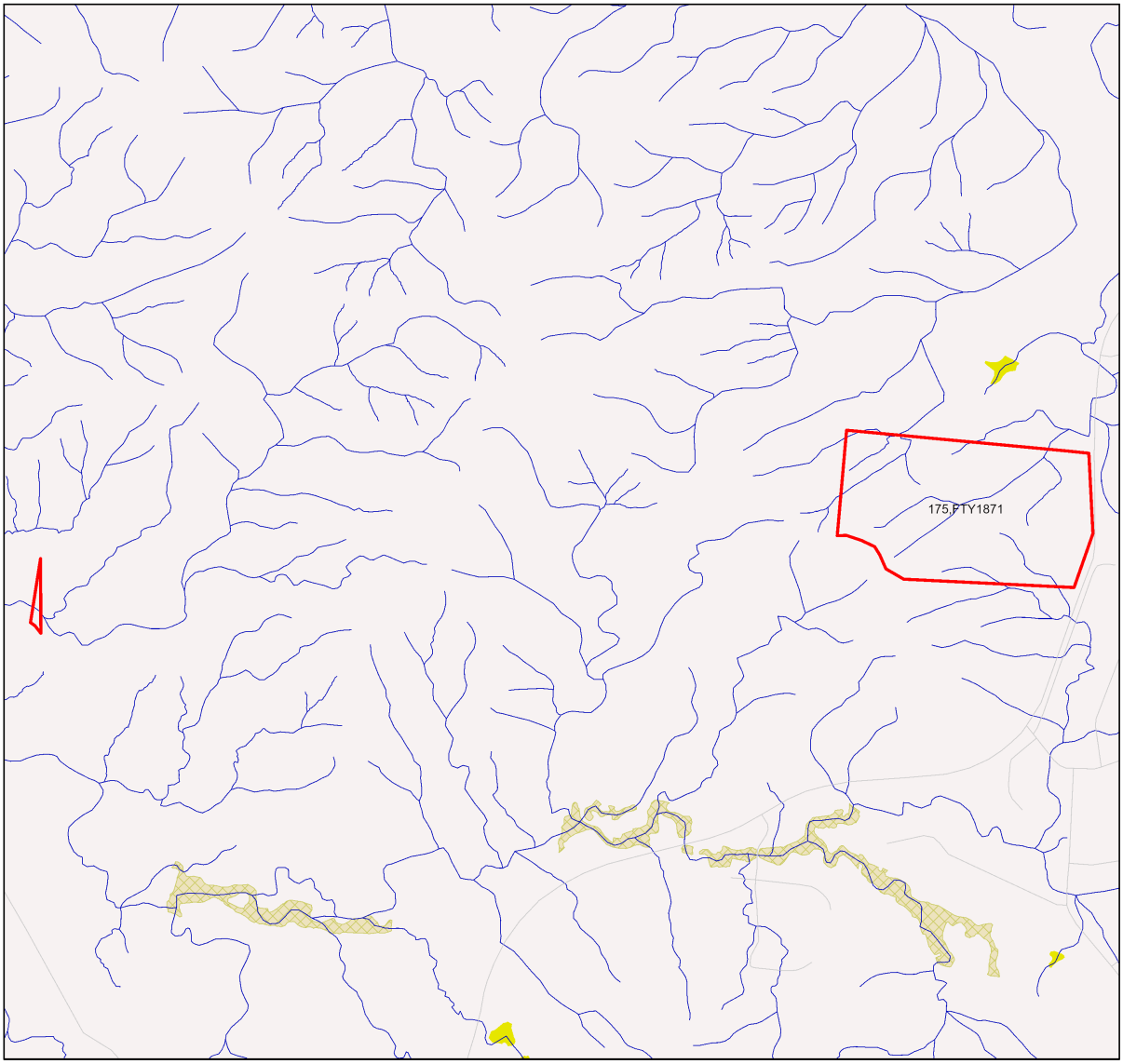




This product is displayed in GDA2020

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.
Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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## Map 6 - Wetlands and waterways




### Wetlands and Waterways

- Towns
- Roads
- Springs
- Rivers/Creeks
- Directory of Important Wetlands
- Ramsar Sites - QLD

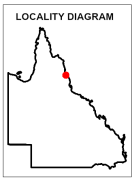
**Wetland Type**

**Hydrologically natural Wetlands**
- Lacustrine Wetlands (hydrologically natural)
- Palustrine Wetlands (hydrologically natural)
- Riverine Wetlands (hydrologically natural)
- Intertidal Wetlands (hydrologically natural)
- Subtidal Wetlands (hydrologically natural)
- Intertidal/Subtidal Wetlands (hydrologically natural)

**Hydrologically Modified and Artificial Wetlands**
- Lacustrine Wetlands (hydrologically modified or artificial)
- Palustrine Wetlands (hydrologically modified or artificial)
- Riverine Wetlands (hydrologically modified or artificial)
- Intertidal Wetlands (hydrologically modified or artificial)
- Subtidal Wetlands (hydrologically modified or artificial)
- Intertidal/Subtidal Wetlands (hydrologically modified or artificial)

**Subdominant Wetlands**
- Subdominant Wetlands (51 - 80%)

**Contains Wetlands**
- Contains Wetlands (1 - 50%)
- Queensland
- Selected Lot and Plan




N

0 320 640 960 1280 1600 m

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## Links and Other Information Sources

The Department of the Environment, Tourism, Science and Innovation's Website - http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/ provides further information on the regional ecosystem framework, including access to links to the Regional Ecosystem Database, Broad Vegetation Group Definitions, Regional Ecosystem and Land zone descriptions.

Descriptions of the broad vegetation groups of Queensland can be downloaded from: https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/broad-vegetation

The methodology for mapping regional ecosystems can be downloaded from: https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf

Technical descriptions for regional ecosystems can be obtained from: http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/

Benchmarks can be obtained from: http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/

For further information associated with the remnant regional ecosystem dataset used by this report, refer to the metadata associated with the Biodiversity status of pre-clearing and Remnant Regional Ecosystems of Queensland dataset (version listed in **Appendix 1**) which is available through the Queensland Spatial Catalogue, Queensland Spatial Catalogue : Queensland Government (information.qld.gov.au)

The Queensland Globe is a mapping and data application. As an interactive online tool, Queensland Globe allows you to view and explore Queensland maps, imagery (including up-to-date satellite images) and other spatial data, including regional ecosystem mapping. To further view and explore regional ecosystems over an area of interest, access the Biota Globe (a component of the Queensland Globe). The Queensland Globe can be accessed via the following link: https://qldglobe.information.qld.gov.au/

## References

Neldner, V.J., Niehus, R.E., Wilson, B.A., McDonald, W.J.F., Ford, A.J. and Accad, A. (2023). The Vegetation of Queensland. Descriptions of Broad Vegetation Groups. Version 6.0. Queensland Herbarium, Department of Environment and Science. (https://publications.qld.gov.au/dataset/redd/resource/78209e74-c7f2-4589-90c1-c33188359086)

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Richter,D., Addicott, E.P. and Appelman, C.N. (2023) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 7.0. Updated December 2023. Queensland Herbarium, Queensland Department of Environment, Science and Innovation, Brisbane. (https://www.qld.gov.au/__data/assets/pdf_file/0033/459186/methodology-mapping-surveying-v7.pdf).

Sattler, P.S. and Williams, R.D. (eds) (1999). *The Conservation Status of Queensland's Bioregional Ecosystems.* Environmental Protection Agency, Brisbane.

# Appendices

## Appendix 1 - Source Data

**The dataset listed below is available for download from:**
http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/download/

- Regional Ecosystem Description Database

**The datasets listed below are available for download from:**
Queensland Spatial Catalogue : Queensland Government (information.qld.gov.au)

- Biodiversity status of pre-clearing and 2021 remnant regional ecosystems of Queensland
- Pre-clearing Vegetation Communities and Regional Ecosystems of Queensland
- Queensland Wetland Data Version - Wetland lines
- Queensland Wetland Data Version - Wetland points
- Queensland Wetland Data Version - Wetland areas
- Pre-clearing broad vegetation groups of Queensland
- Remnant 2021 broad vegetation groups of Queensland

## Appendix 2 - Acronyms and Abbreviations

AOI - Area of Interest
GIS - Geographic Information System
RE - Regional Ecosystem
REDD - Regional Ecosystem Description Database
VMA - *Vegetation Management Act 1999*

# Appendix F Matters of State Environmental Significance

Queensland Government

**Department of the Environment, Tourism, Science and Innovation**

Environmental Reports

# Matters of State Environmental Significance

For the selected area of interest

Lot: 175 Plan: FTY1871

# Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 2020). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and a field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@detsi.qld.gov.au

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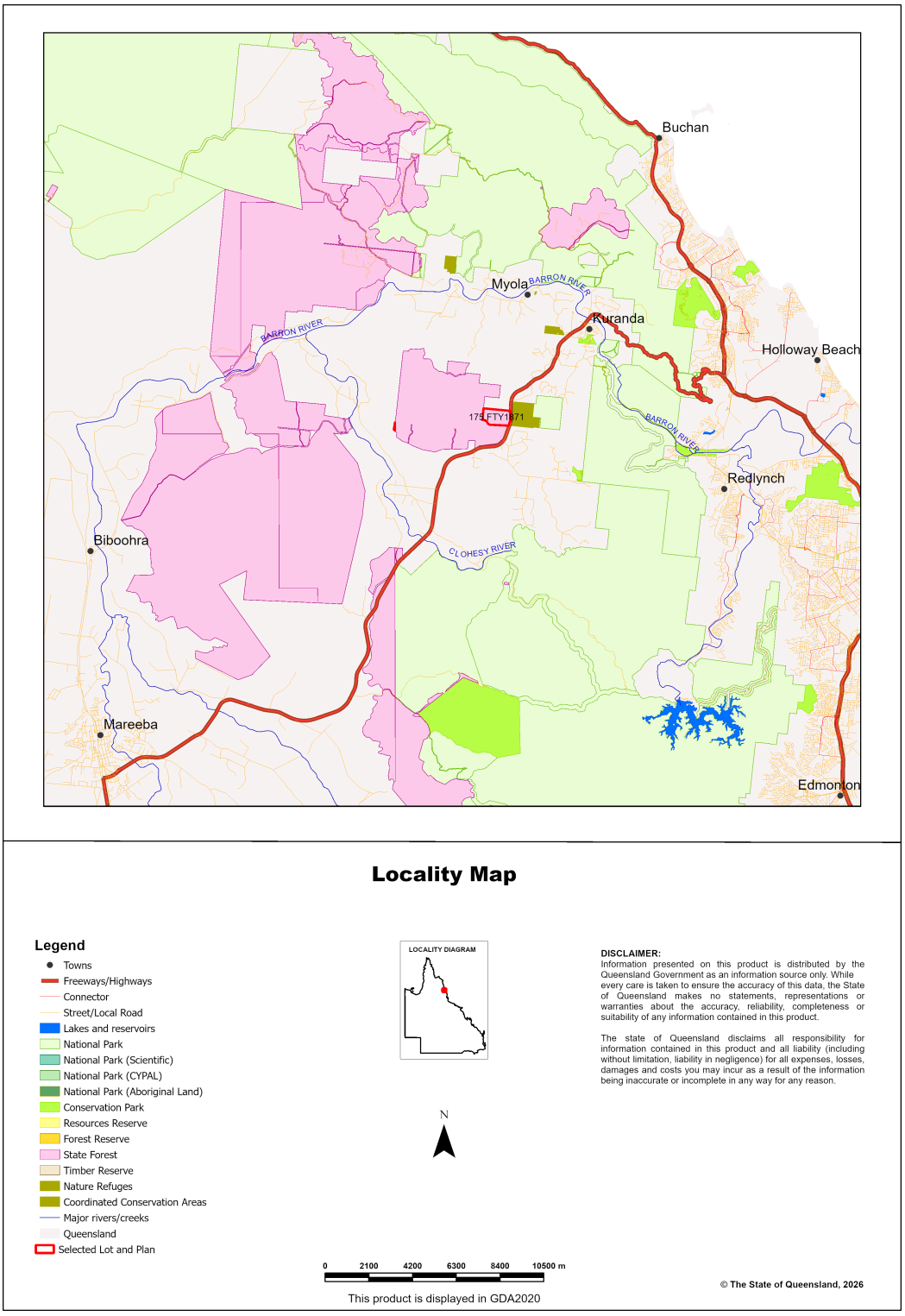

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# Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

**Table 1: Summary table, details for AOI: Lot: 175 Plan: FTY1871, with area 88.85 ha**

| Local Government(s) | Catchment(s) | Bioregion(s) | Subregion(s) |
|---|---|---|---|
| Mareeba Shire | Barron | Wet Tropics | Macalister |



# Matters of State Environmental Significance (MSES)

## MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992;*

*- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004 ;*

*- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;*

- *Threatened wildlife under the Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;

- Regulated vegetation under the *Vegetation Management Act 1999* that is:

  - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
  - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
  - Category R areas on the regulated vegetation management map;
  - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
  - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;

- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;

- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;

- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

## MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

**Table 2: Summary of MSES present within the AOI**

| | | |
|---|---|---|
| 1a Protected Areas- estates | 0 ha | 0.0% |
| 1b Protected Areas- nature refuges | 0 ha | 0.0% |
| 1c Protected Areas- special wildlife reserves | 0 ha | 0.0% |
| 2 State Marine Parks- highly protected zones | 0 ha | 0.0% |
| 3 Fish habitat areas (A and B areas) | 0 ha | 0.0% |
| 4 Strategic Environmental Areas (SEA) | 0 ha | 0.0% |
| 5 High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values | 0 ha | 0.0% |
| 6a High Ecological Value (HEV) wetlands | 0ha | 0.0% |
| 6b High Ecological Value (HEV) waterways | 2.1 km | Not applicable |
| 7a Threatened (endangered or vulnerable) wildlife | 0 ha | 0.0% |
| 7b Special least concern animals | 0 ha | 0.0% |
| 7c i Koala habitat area - core (SEQ) | 0 ha | 0.0% |
| 7c ii Koala habitat area - locally refined (SEQ) | 0 ha | 0.0% |
| 7d Sea turtle nesting areas | 0 km | Not applicable |
| 8a Regulated Vegetation - Endangered/Of concern in Category B (remnant) | 54.87 ha | 61.8% |
| 8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth) | 0 ha | 0.0% |
| 8c Regulated Vegetation - Category R (GBR riverine regrowth) | 0 ha | 0.0% |
| 8d Regulated Vegetation - Essential habitat | 29.33 ha | 33.0% |
| 8e Regulated Vegetation - intersecting a watercourse | 2.1 km | Not applicable |
| 8f Regulated Vegetation - within 100m of a Vegetation Management Wetland | 0 ha | 0.0% |
| 9a Legally secured offset areas- offset register areas | 0 ha | 0.0% |
| 9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation | 0 ha | 0.0% |

## Additional Information with Respect to MSES Values Present

## MSES - State Conservation Areas

**1a. Protected Areas - estates**

(No results)

**1b. Protected Areas - nature refuges**

(No results)

**1c. Protected Areas - special wildlife reserves**

(No results)

**2. State Marine Parks - highly protected zones**

(No results)

**3. Fish habitat areas (A and B areas)**

(No results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

## MSES - Wetlands and Waterways

**4. Strategic Environmental Areas (SEA)**

(No results)

**5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values**

(no results)

**6a. Wetlands in High Ecological Value (HEV) waters**

(no results)

**6b. Waterways in High Ecological Value (HEV) waters**

Natural waterways that occur in HEV (maintain) freshwater and estuarine areas under the Environmental Protection (water) Policy are present.

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

## MSES - Species

**7a. Threatened (endangered or vulnerable) wildlife**

Not applicable

**7b. Special least concern animals**

Not applicable

**7c i. Koala habitat area - core (SEQ)**

Not applicable

**7c ii. Koala habitat area - locally refined (SEQ)**

Not applicable

**7d. Wildlife habitat (sea turtle nesting areas)**

Not applicable

**Threatened (endangered or vulnerable) wildlife habitat suitability models**

| Species | Common name | NCA status | Presence |
|---|---|---|---|
| *Boronia keysii* | Keys boronia | V | None |
| *Calyptorhynchus lathami* | Glossy black cockatoo | V | None |
| *Casuarius casuarius johnsonii* | Sthn population cassowary | E | None |
| *Crinia tinnula* | Wallum froglet | V | None |
| *Denisonia maculata* | Ornamental snake | V | None |
| *Euastacus bindal* | Mount Elliot crayfish | CR | None |
| *Euastacus binzayedi* | | CR | None |
| *Euastacus eungella* | | E | None |
| *Euastacus hystricosus* | | E | None |
| *Euastacus jagara* | Jagara hairy crayfish | CR | None |
| *Euastacus maidae* | | CR | None |
| *Euastacus monteithorum* | | E | None |
| *Euastacus robertsi* | | E | None |
| *Taudactylus pleione* | Kroombit tinkerfrog | E | None |
| *Litoria freycineti* | Wallum rocketfrog | V | None |
| *Litoria olongburensis* | Wallum sedgefrog | V | None |
| *Macadamia integrifolia* | | V | None |
| *Melaleuca irbyana* | swamp tea-tree | E | None |
| *Macadamia ternifolia* | | V | None |
| *Macadamia tetraphylla* | bopple nut | V | None |
| *Petrogale penicillata* | brush-tailed rock-wallaby | V | None |
| *Petrogale coenensis* | Cape York rock-wallaby | E | None |
| *Petrogale purpureicollis* | purple-necked rock-wallaby | V | None |
| *Petrogale sharmani* | Sharmans rock-wallaby | V | None |
| *Petrogale xanthopus celeris* | yellow-footed rock-wallaby (Qld subspecies) | V | None |
| *Petaurus gracilis* | Mahogany Glider | E | None |
| *Petrogale persephone* | Proserpine rock-wallaby | E | None |
| *Phascolarctos cinereus* | Koala - outside SEQ* | E | None |
| *Pezoporus wallicus wallicus* | Eastern ground parrot | V | None |
| *Xeromys myoides* | Water Mouse | V | None |

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

**Threatened (endangered or vulnerable) wildlife species records**

(No results)

**Special least concern animal species records**

(No results)

**Shorebird habitat (critically endangered/endangered/vulnerable)**

Not applicable

**Shorebird habitat (special least concern)**

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)*

*Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)*

To request a species list for an area, or search for a species profile, access Wildlife Online at:

https://www.qld.gov.au/environment/plants-animals/species-list/

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals** and **Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

## MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:

https://environment.ehp.qld.gov.au/regional-ecosystems/

**8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)**

| Regional ecosystem | Vegetation management polygon | Vegetation management status |
|---|---|---|
| 7.11.33a | O-dom | rem_oc |
| 7.11.41a | O-dom | rem_oc |

**8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)**

Not applicable

**8c. Regulated Vegetation - Category R (GBR riverine regrowth)**

Not applicable

**8d. Regulated Vegetation - Essential habitat**

Values are present

**8e. Regulated Vegetation - intersecting a watercourse****

A vegetation management watercourse is mapped as present

**8f. Regulated Vegetation - within 100m of a Vegetation Management wetland**

Not applicable

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

## MSES - Offsets

**9a. Legally secured offset areas - offset register areas**

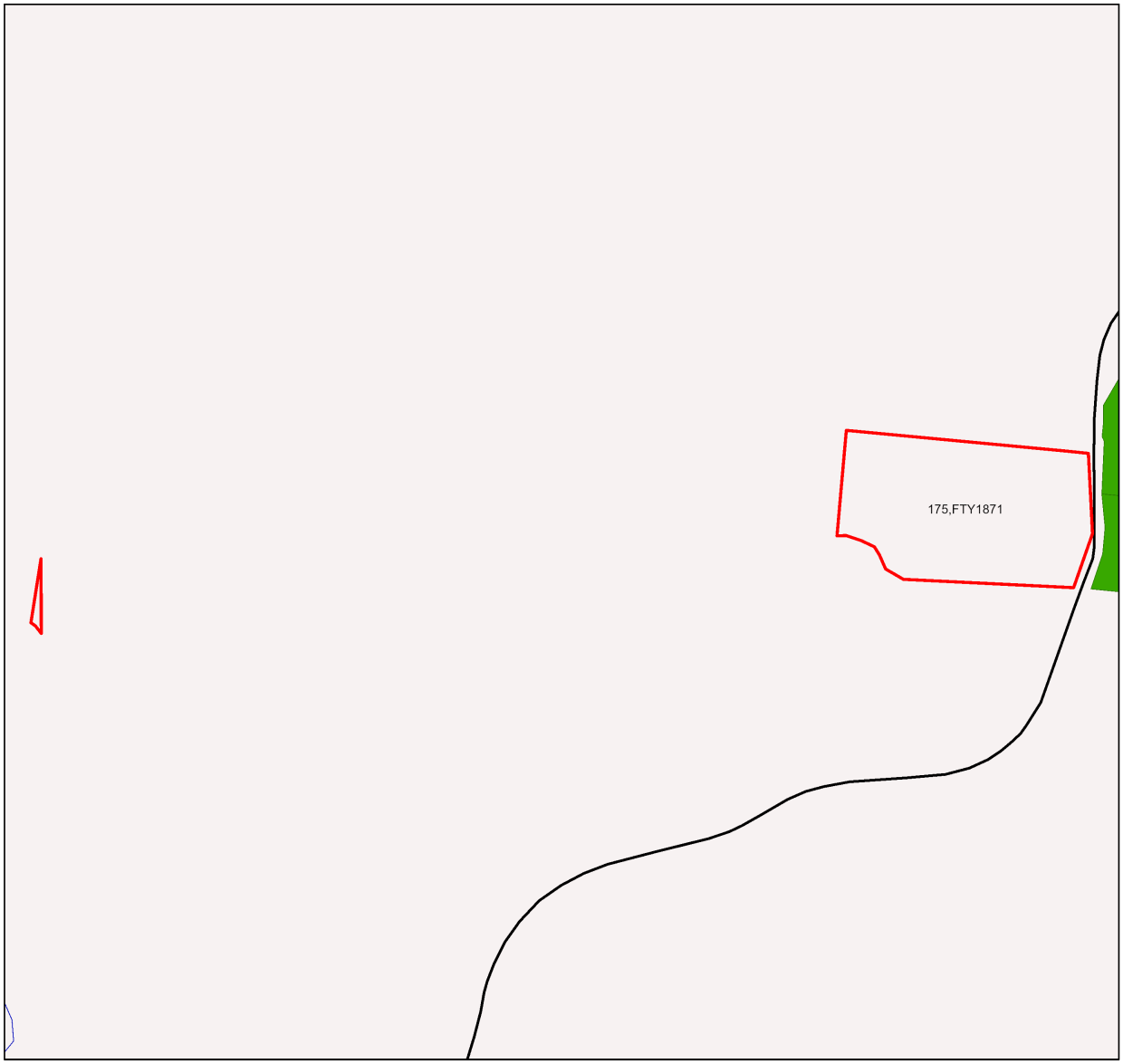
(No results)

**9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation**

(No results)

Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

## Map 1 - MSES - State Conservation Areas




### MSES - State Conservation Areas

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Protected area (estates, nature refuges, special wildlife reserves)
- Declared fish habitat area (A and B areas)
- Marine park (highly protected)
- Selected Lot and Plan




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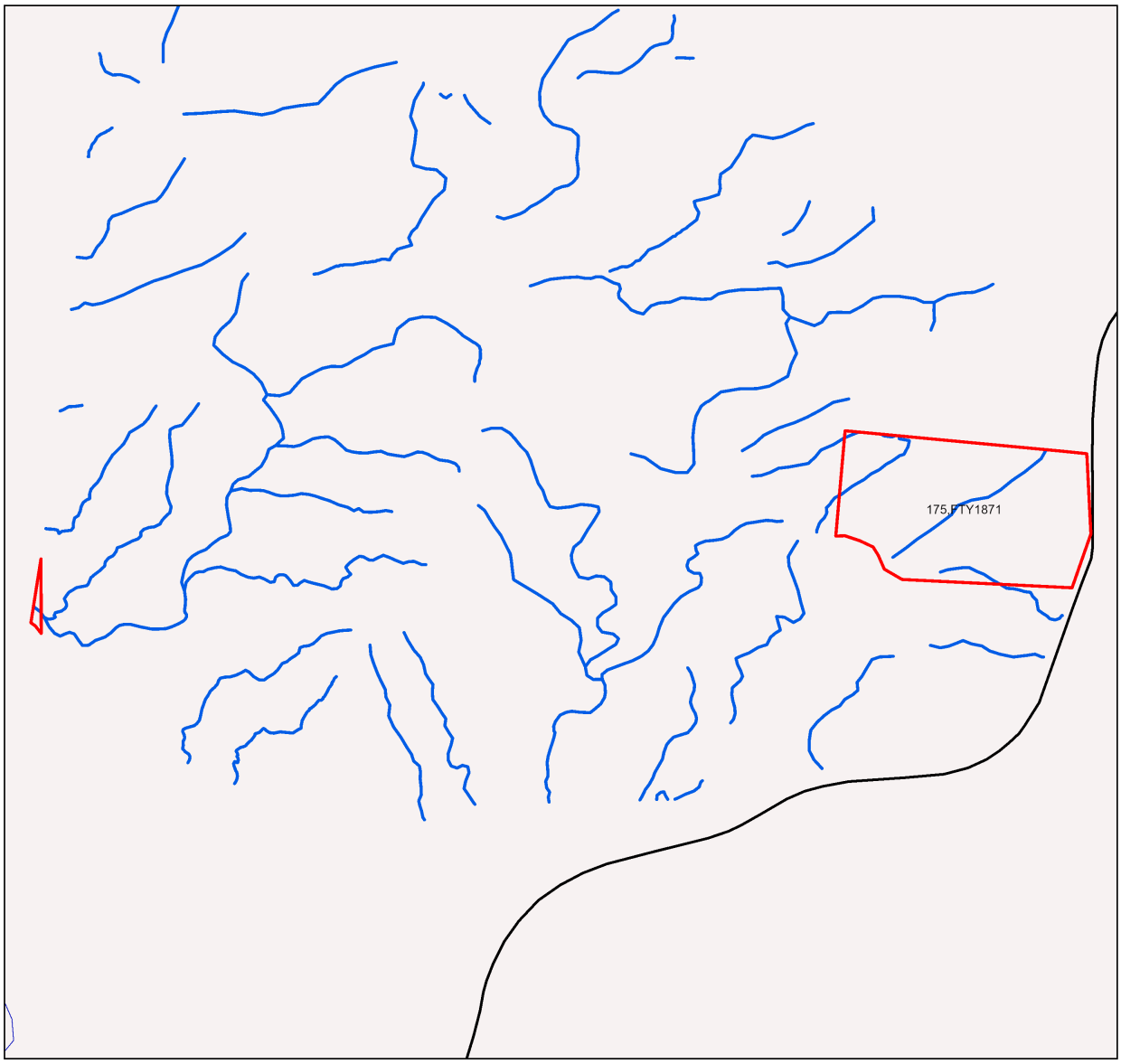
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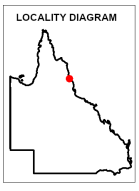
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## Map 2 - MSES - Wetlands and Waterways




### MSES - Wetlands and Waterways

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Declared high ecological value waters (watercourse)
- Strategic environmental area (designated precinct)
- Declared high ecological value waters (wetland)
- High ecological significance wetlands
- Selected Lot and Plan




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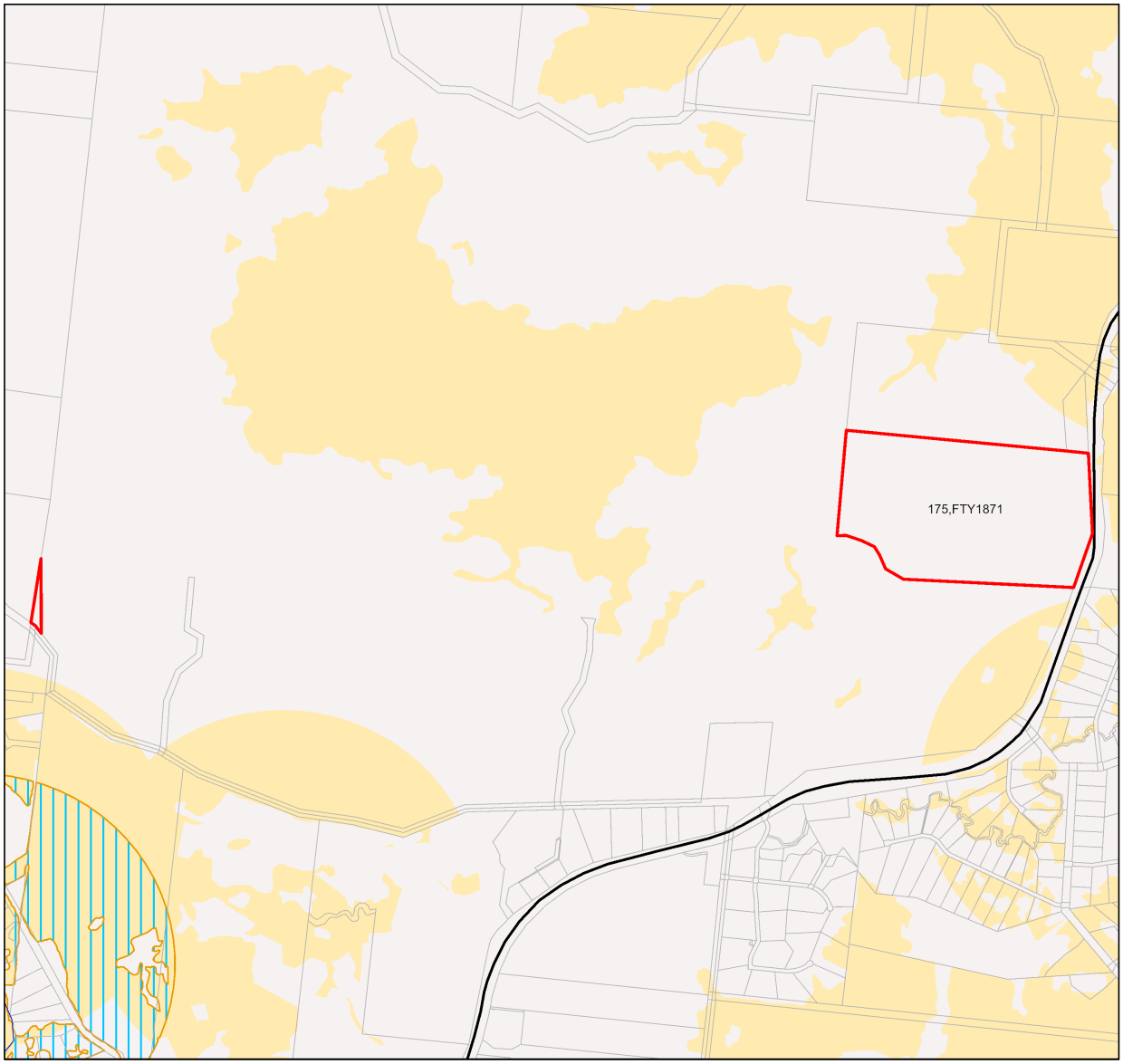
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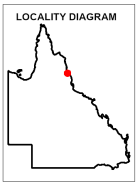
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## Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals




### MSES - Species
### Threatened (endangered or vulnerable) wildlife and special least concern animals

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (special least concern)
- Wildlife habitat (endangered or vulnerable)
- Selected Lot and Plan




N

0 320 640 960 1280 1600 m

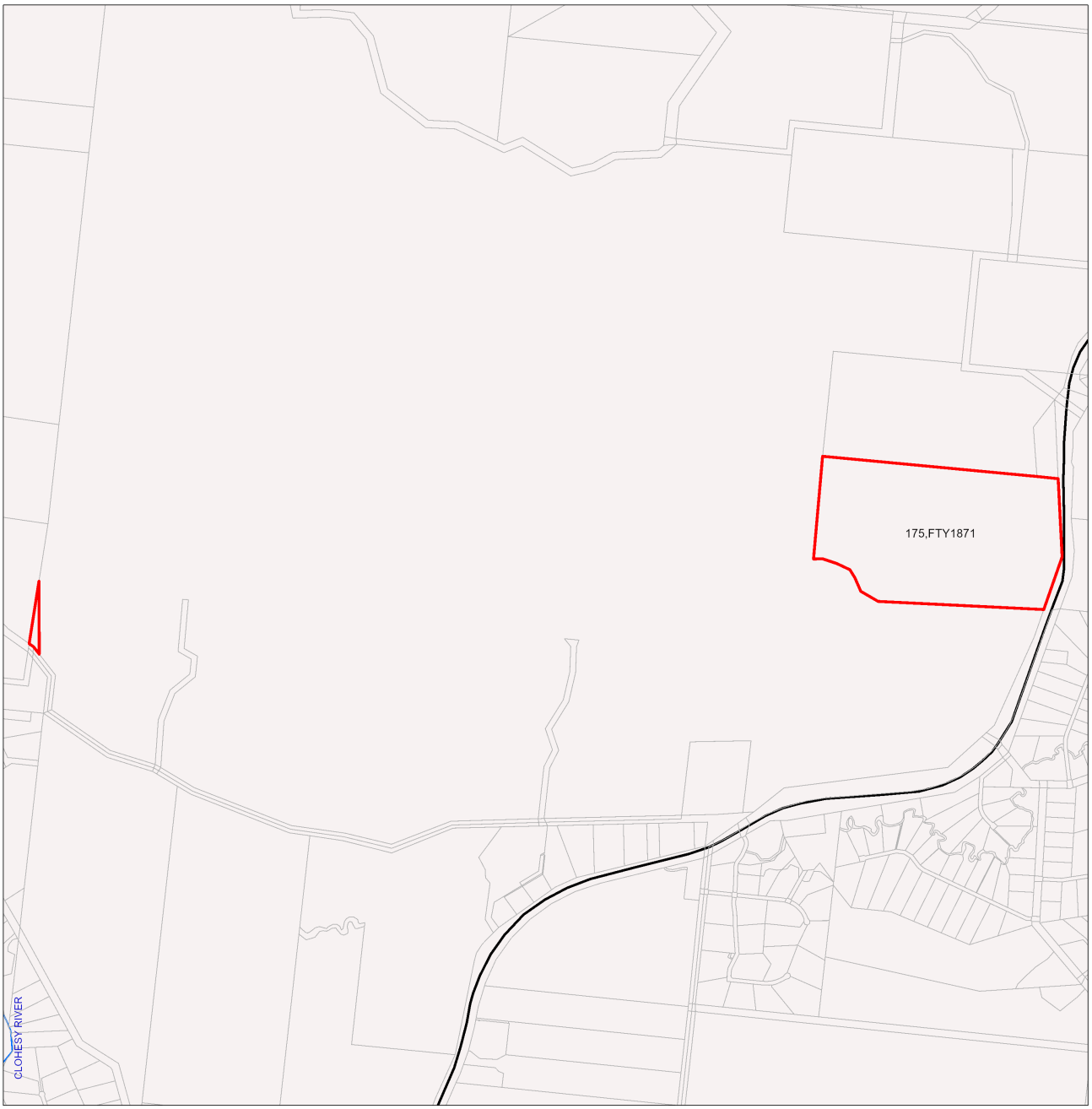
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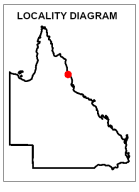
## Map 3b - MSES - Species - Koala habitat area (SEQ)




# MSES - Species
# Koala habitat area (SEQ)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Selected Lot and Plan

LOCALITY DIAGRAM



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The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping

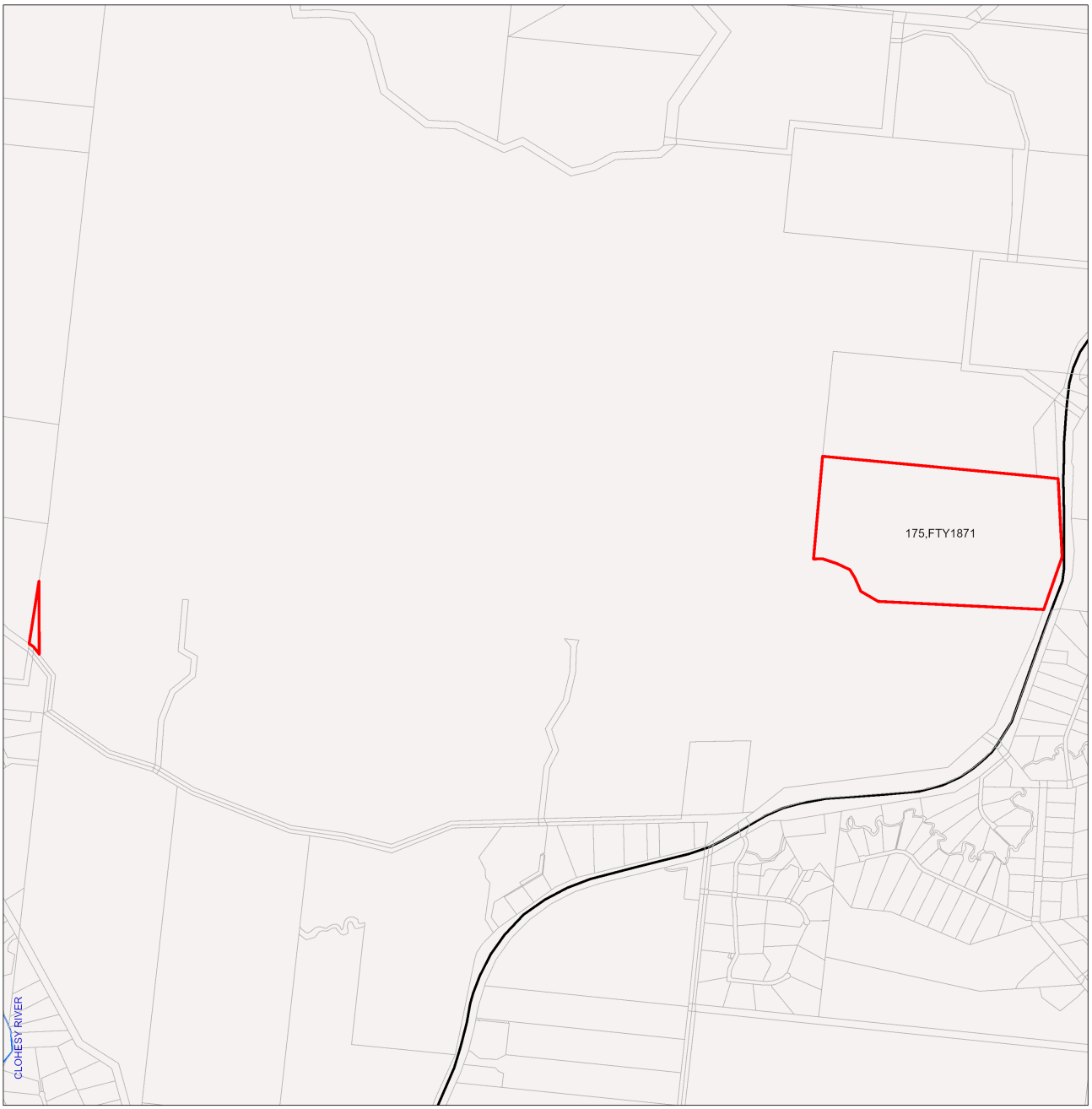
The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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0 300 600 900 1,200 1,500 m

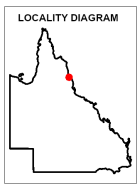
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## Map 3c - MSES - Species - Wildlife habitat (sea turtle nesting areas)




# MSES - Wildlife habitat (sea turtle nesting areas)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (sea turtle nesting areas)
- Selected Lot and Plan




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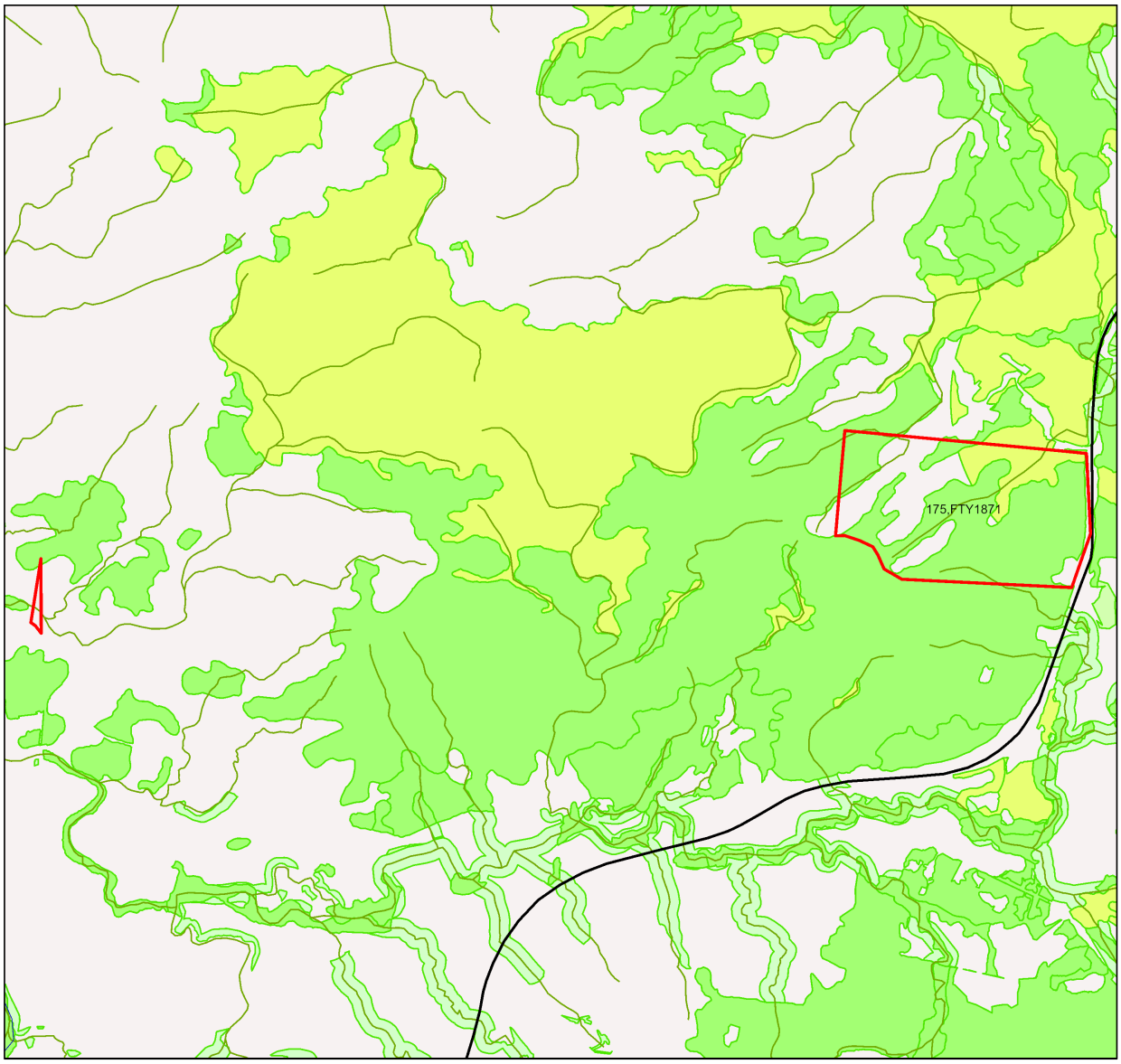
MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disoriented by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.

0 300 600 900 1,200 1,500 m

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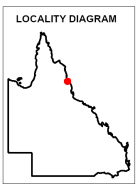
## Map 4 - MSES - Regulated Vegetation




### MSES - Regulated Vegetation

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Regulated vegetation (intersecting a watercourse)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (category B - endangered or of concern)
- Regulated vegetation (category C - endangered or of concern)
- Regulated vegetation (category R - GBR riverine)
- Regulated vegetation (essential habitat)
- Selected Lot and Plan

LOCALITY DIAGRAM



N

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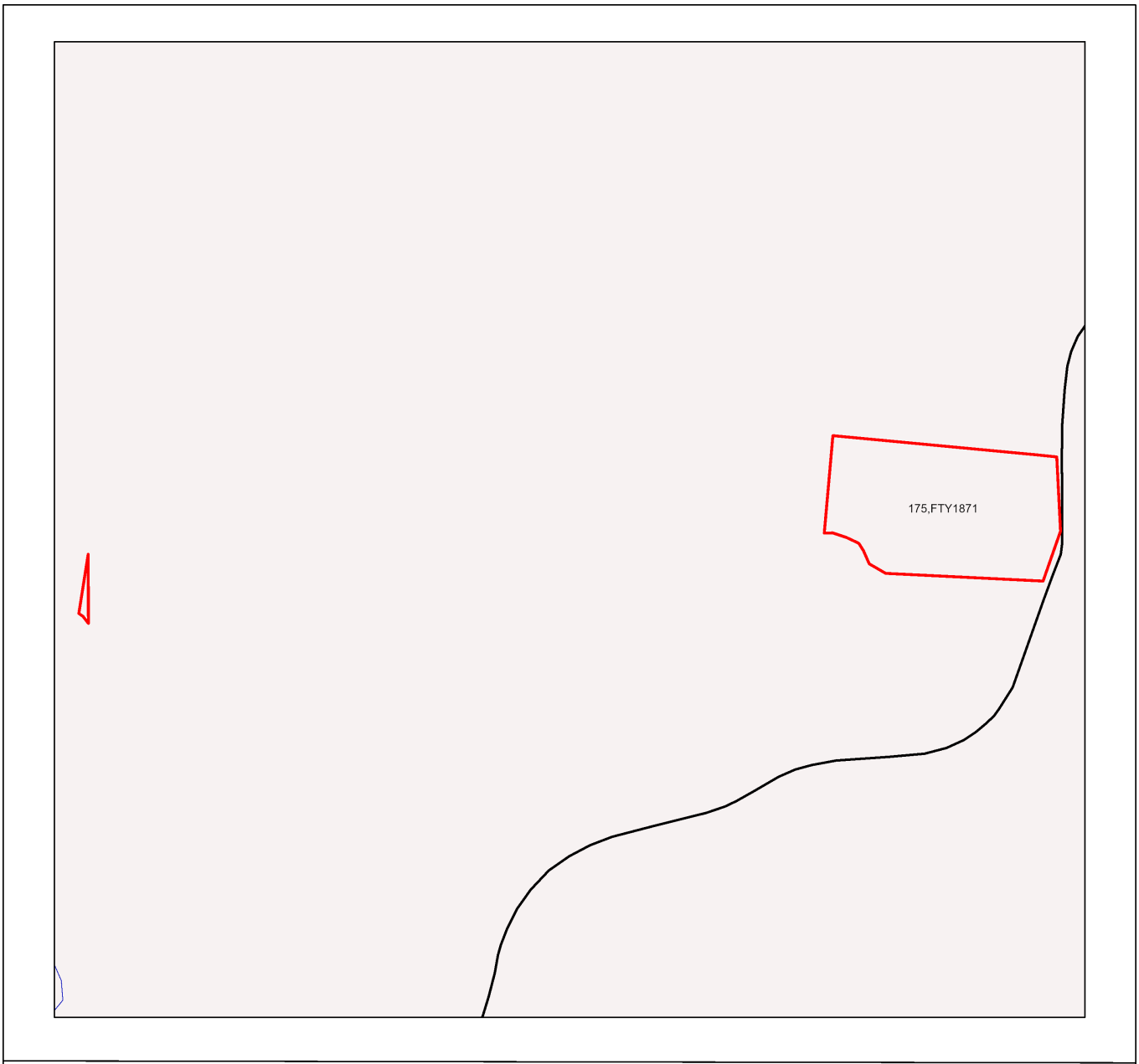
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## Map 5 - MSES - Offset Areas




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# Appendices

### Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). Its primary purpose is to support implementation of the SPP biodiversity policy.

MSES mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

MSES mapping does not determine whether state or local development assessment is required. For state assessment triggers refer to the Development Assessment Mapping System (DAMS). For local assessment triggers, refer to the relevant local planning scheme.

The Queensland Government's "Method for mapping - matters of state environmental significance can be downloaded from:

http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html .

**Appendix 2 - Source Data**

The datasets listed below are available on request from:

http://qldspatial.information.qld.gov.au/catalogue/custom/index.page

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

| **MSES layers** | **current QSpatial data (http://qspatial.information.qld.gov.au)** |
|---|---|
| Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves | - Protected areas of Queensland<br>- Nature Refuges - Queensland<br>- Special Wildlife Reserves- Queensland |
| Marine Park-Highly Protected Zones | Moreton Bay marine park zoning 2008 |
| Fish Habitat Areas | Queensland fish habitat areas |
| Strategic Environmental Areas-designated | Regional Planning Interests Act - Strategic Environmental Areas |
| HES wetlands | Map of Queensland Wetland Environmental Values |
| Wetlands in HEV waters | HEV waters:<br>- EPP Water intent for waters<br>Source Wetlands:<br>- Queensland Wetland Mapping (Current version 5)<br>Source Watercourses:<br>- Vegetation management watercourse and drainage feature map (1:100000 and 1:250000) |
| Wildlife habitat (threatened and special least concern) | -WildNet database species records<br>- habitat suitability models (various)<br>- SEQ koala habitat areas under the Koala Conservation Plan 2019 |
| VMA regulated regional ecosystems | Vegetation management regional ecosystem and remnant map |
| VMA Essential Habitat | Vegetation management - essential habitat map |
| VMA Wetlands | Vegetation management wetlands map |
| Legally secured offsets | Vegetation Management Act property maps of assessable vegetation.<br>For offset register data-contact DETSI |
| Regulated Vegetation Map | Vegetation management - regulated vegetation management map |

**Appendix 3 - Acronyms and Abbreviations**

| | |
|---|---|
| AOI | - Area of Interest |
| DETSI | - Department of the Environment, Tourism, Science and Innovation |
| EP Act | - Environmental Protection Act 1994 |
| EPP | - Environmental Protection Policy |
| GDA2020 | - Geocentric Datum of Australia 2020 |
| GEM | - General Environmental Matters |
| GIS | - Geographic Information System |
| MSES | - Matters of State Environmental Significance |
| NCA | - Nature Conservation Act 1992 |
| RE | - Regional Ecosystem |
| SPP | - State Planning Policy |
| VMA | - Vegetation Management Act 1999 |

Queensland Government

**Department of the Environment, Tourism, Science and Innovation**

Environmental Reports

# Matters of State Environmental Significance

For the selected area of interest

Lot: 46 Plan: SP328230

# Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 2020). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and a field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@detsi.qld.gov.au

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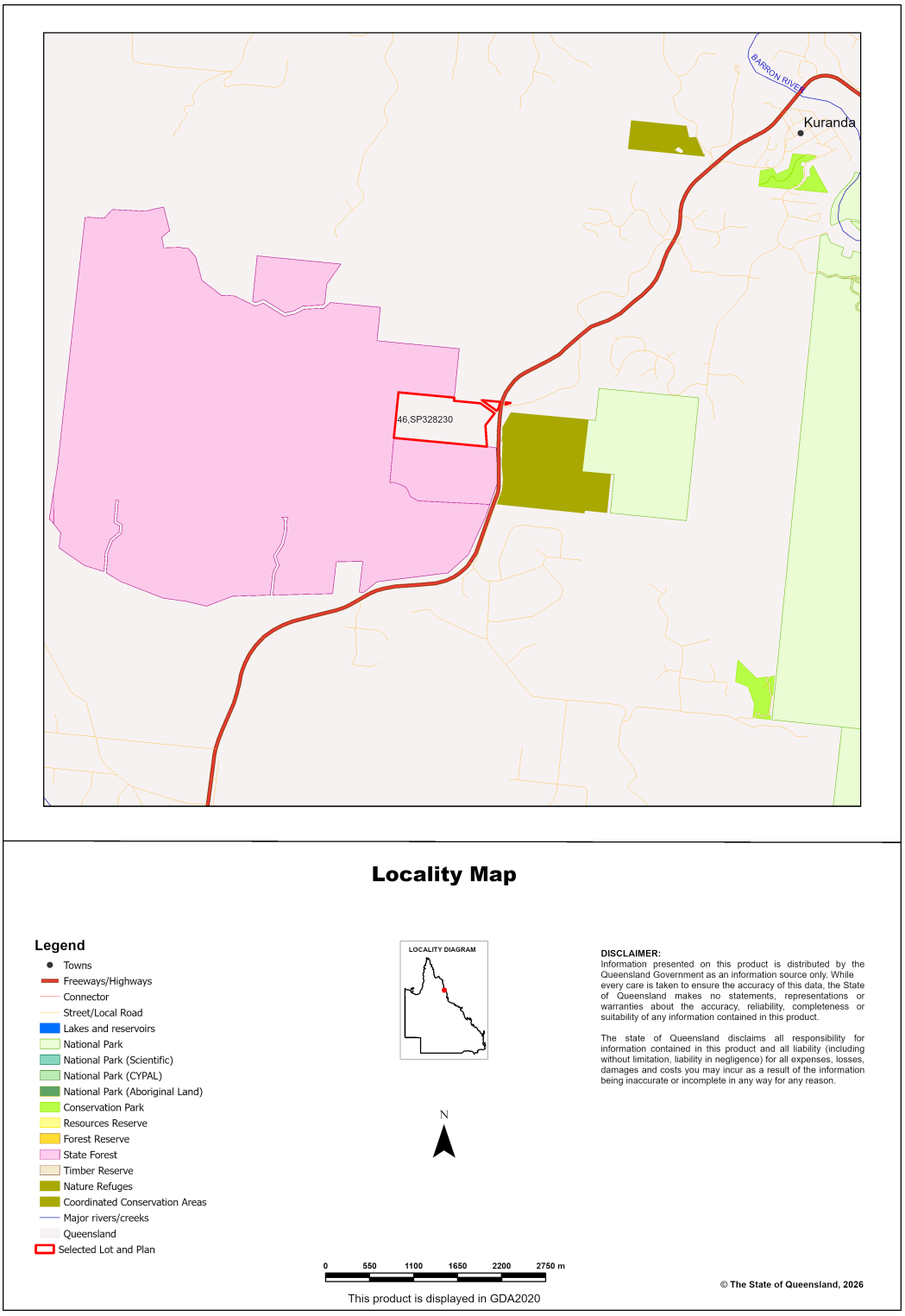

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# Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

**Table 1: Summary table, details for AOI: Lot: 46 Plan: SP328230, with area 62.34 ha**

| Local Government(s) | Catchment(s) | Bioregion(s) | Subregion(s) |
|---|---|---|---|
| Mareeba Shire | Barron | Wet Tropics | Macalister |



# Matters of State Environmental Significance (MSES)

## MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992;*

*- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004 ;*

*- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;*

- *Threatened wildlife under the Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;

- Regulated vegetation under the *Vegetation Management Act 1999* that is:

  - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
  - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
  - Category R areas on the regulated vegetation management map;
  - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
  - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;

- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;

- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;

- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

## MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

**Table 2: Summary of MSES present within the AOI**

| | | |
|---|---|---|
| 1a Protected Areas- estates | 0 ha | 0.0% |
| 1b Protected Areas- nature refuges | 0 ha | 0.0% |
| 1c Protected Areas- special wildlife reserves | 0 ha | 0.0% |
| 2 State Marine Parks- highly protected zones | 0 ha | 0.0% |
| 3 Fish habitat areas (A and B areas) | 0 ha | 0.0% |
| 4 Strategic Environmental Areas (SEA) | 0 ha | 0.0% |
| 5 High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values | 0 ha | 0.0% |
| 6a High Ecological Value (HEV) wetlands | 0ha | 0.0% |
| 6b High Ecological Value (HEV) waterways | 0 km | Not applicable |
| 7a Threatened (endangered or vulnerable) wildlife | 12.32 ha | 19.8% |
| 7b Special least concern animals | 0 ha | 0.0% |
| 7c i Koala habitat area - core (SEQ) | 0 ha | 0.0% |
| 7c ii Koala habitat area - locally refined (SEQ) | 0 ha | 0.0% |
| 7d Sea turtle nesting areas | 0 km | Not applicable |
| 8a Regulated Vegetation - Endangered/Of concern in Category B (remnant) | 15.41 ha | 24.7% |
| 8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth) | 0.08 ha | 0.1% |
| 8c Regulated Vegetation - Category R (GBR riverine regrowth) | 0 ha | 0.0% |
| 8d Regulated Vegetation - Essential habitat | 28.3 ha | 45.4% |
| 8e Regulated Vegetation - intersecting a watercourse | 1.6 km | Not applicable |
| 8f Regulated Vegetation - within 100m of a Vegetation Management Wetland | 0 ha | 0.0% |
| 9a Legally secured offset areas- offset register areas | 0 ha | 0.0% |
| 9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation | 0 ha | 0.0% |

## Additional Information with Respect to MSES Values Present

## MSES - State Conservation Areas

**1a. Protected Areas - estates**

(No results)

**1b. Protected Areas - nature refuges**

(No results)

**1c. Protected Areas - special wildlife reserves**

(No results)

**2. State Marine Parks - highly protected zones**

(No results)

**3. Fish habitat areas (A and B areas)**

(No results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

## MSES - Wetlands and Waterways

**4. Strategic Environmental Areas (SEA)**

(No results)

**5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values**

(no results)

**6a. Wetlands in High Ecological Value (HEV) waters**

(no results)

**6b. Waterways in High Ecological Value (HEV) waters**

(no results)

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

## MSES - Species

**7a. Threatened (endangered or vulnerable) wildlife**

Values are present

**7b. Special least concern animals**

Not applicable

**7c i. Koala habitat area - core (SEQ)**

Not applicable

**7c ii. Koala habitat area - locally refined (SEQ)**

Not applicable

**7d. Wildlife habitat (sea turtle nesting areas)**

Not applicable

**Threatened (endangered or vulnerable) wildlife habitat suitability models**

| Species | Common name | NCA status | Presence |
|---|---|---|---|
| *Boronia keysii* | Keys boronia | V | None |
| *Calyptorhynchus lathami* | Glossy black cockatoo | V | None |
| *Casuarius casuarius johnsonii* | Sthn population cassowary | E | Core |
| *Crinia tinnula* | Wallum froglet | V | None |
| *Denisonia maculata* | Ornamental snake | V | None |
| *Euastacus bindal* | Mount Elliot crayfish | CR | None |
| *Euastacus binzayedi* | | CR | None |
| *Euastacus eungella* | | E | None |
| *Euastacus hystricosus* | | E | None |
| *Euastacus jagara* | Jagara hairy crayfish | CR | None |
| *Euastacus maidae* | | CR | None |
| *Euastacus monteithorum* | | E | None |
| *Euastacus robertsi* | | E | None |
| *Taudactylus pleione* | Kroombit tinkerfrog | E | None |
| *Litoria freycineti* | Wallum rocketfrog | V | None |
| *Litoria olongburensis* | Wallum sedgefrog | V | None |
| *Macadamia integrifolia* | | V | None |
| *Melaleuca irbyana* | swamp tea-tree | E | None |
| *Macadamia ternifolia* | | V | None |
| *Macadamia tetraphylla* | bopple nut | V | None |
| *Petrogale penicillata* | brush-tailed rock-wallaby | V | None |
| *Petrogale coenensis* | Cape York rock-wallaby | E | None |
| *Petrogale purpureicollis* | purple-necked rock-wallaby | V | None |
| *Petrogale sharmani* | Sharmans rock-wallaby | V | None |
| *Petrogale xanthopus celeris* | yellow-footed rock-wallaby (Qld subspecies) | V | None |
| *Petaurus gracilis* | Mahogany Glider | E | None |
| *Petrogale persephone* | Proserpine rock-wallaby | E | None |
| *Phascolarctos cinereus* | Koala - outside SEQ* | E | None |
| *Pezoporus wallicus wallicus* | Eastern ground parrot | V | None |
| *Xeromys myoides* | Water Mouse | V | None |

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

**Threatened (endangered or vulnerable) wildlife species records**

| Scientific name | Common name | NCA status | EPBC status | Migratory status |
|---|---|---|---|---|
| *Litoria serrata* | tapping green eyed frog | V | None | None |

**Special least concern animal species records**

(No results)

**Shorebird habitat (critically endangered/endangered/vulnerable)**

Not applicable

**Shorebird habitat (special least concern)**

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)*

*Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)*

To request a species list for an area, or search for a species profile, access Wildlife Online at:

https://www.qld.gov.au/environment/plants-animals/species-list/

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals** and **Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

## MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:

https://environment.ehp.qld.gov.au/regional-ecosystems/

**8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)**

| Regional ecosystem | Vegetation management polygon | Vegetation management status |
|---|---|---|
| 7.11.13 | O-dom | rem_oc |
| 7.11.33a | O-dom | rem_oc |
| 7.11.44 | O-dom | rem_oc |

**8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)**

| Regional ecosystem | Vegetation management polygon | Vegetation management status |
|---|---|---|
| 7.11.13 | O-dom | hvr_oc |
| 7.11.44 | O-dom | hvr_oc |

**8c. Regulated Vegetation - Category R (GBR riverine regrowth)**
Not applicable

**8d. Regulated Vegetation - Essential habitat**

Values are present

**8e. Regulated Vegetation - intersecting a watercourse****

A vegetation management watercourse is mapped as present

**8f. Regulated Vegetation - within 100m of a Vegetation Management wetland**
Not applicable

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

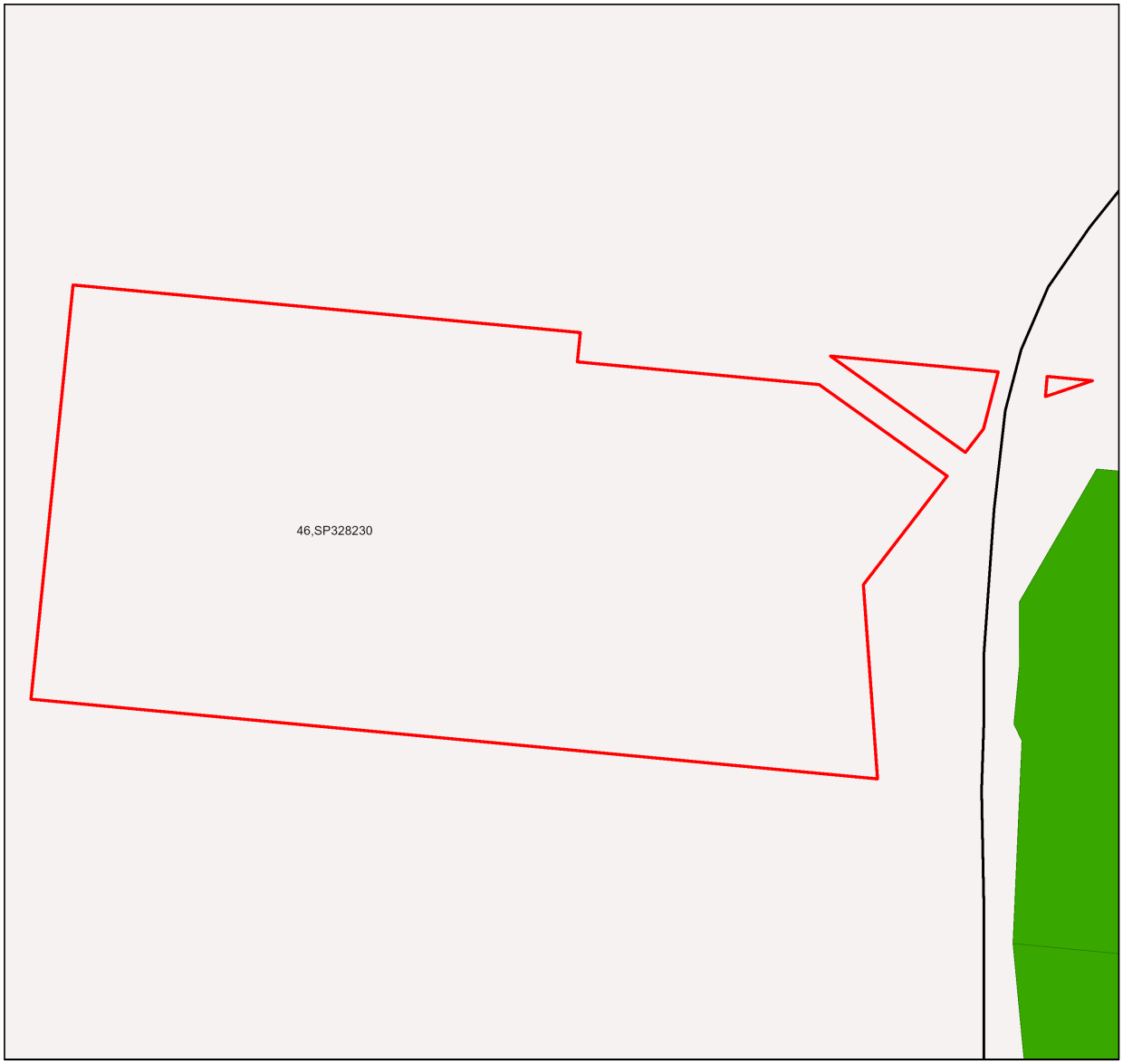
## MSES - Offsets

**9a. Legally secured offset areas - offset register areas**
(No results)

**9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation**
(No results)

Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

## Map 1 - MSES - State Conservation Areas




### MSES - State Conservation Areas

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Protected area (estates, nature refuges, special wildlife reserves)
- Declared fish habitat area (A and B areas)
- Marine park (highly protected)
- Selected Lot and Plan

LOCALITY DIAGRAM



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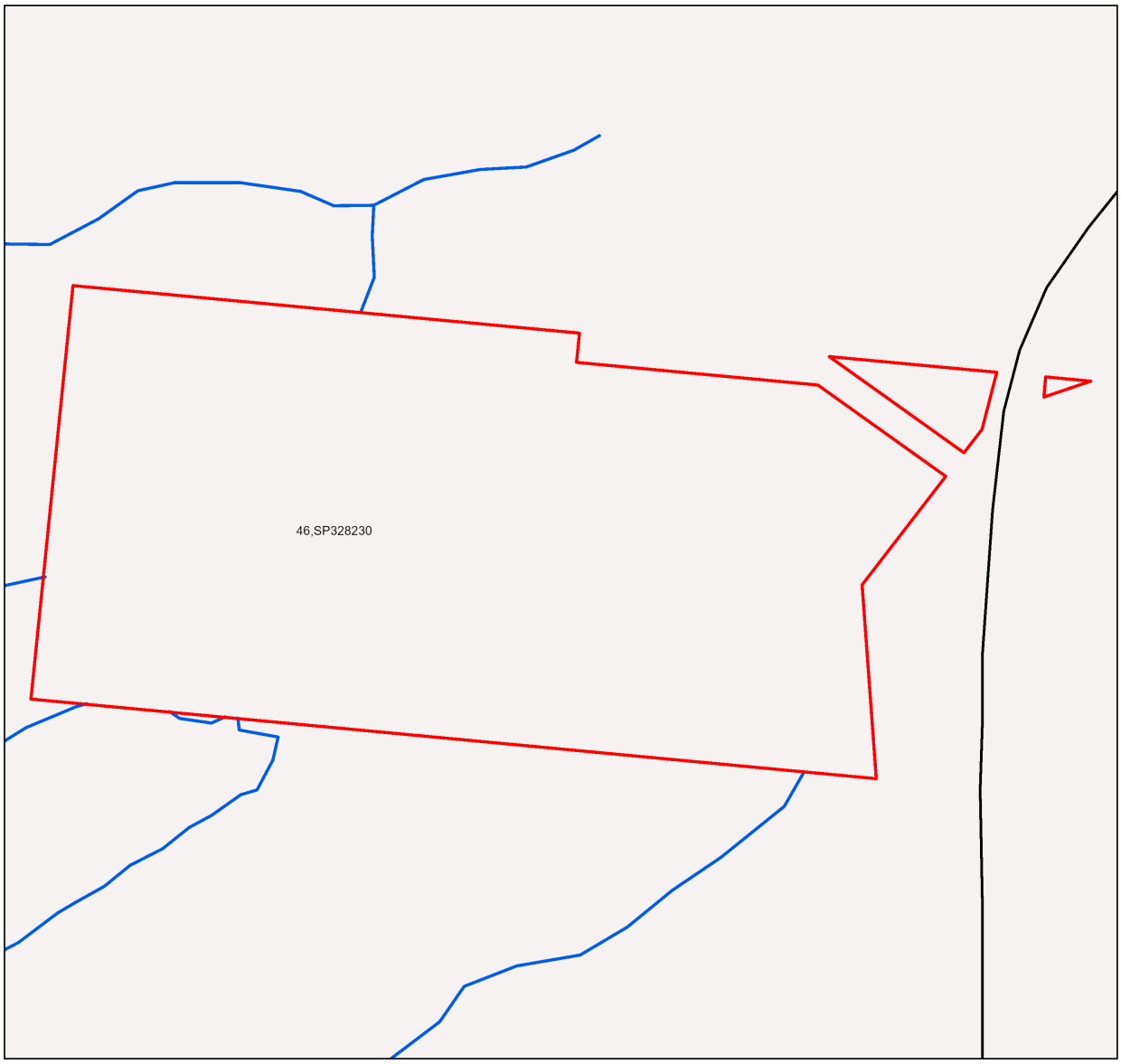
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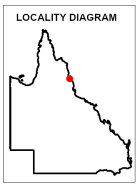
## Map 2 - MSES - Wetlands and Waterways




### MSES - Wetlands and Waterways

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Declared high ecological value waters (watercourse)
- Strategic environmental area (designated precinct)
- Declared high ecological value waters (wetland)
- High ecological significance wetlands
- Selected Lot and Plan

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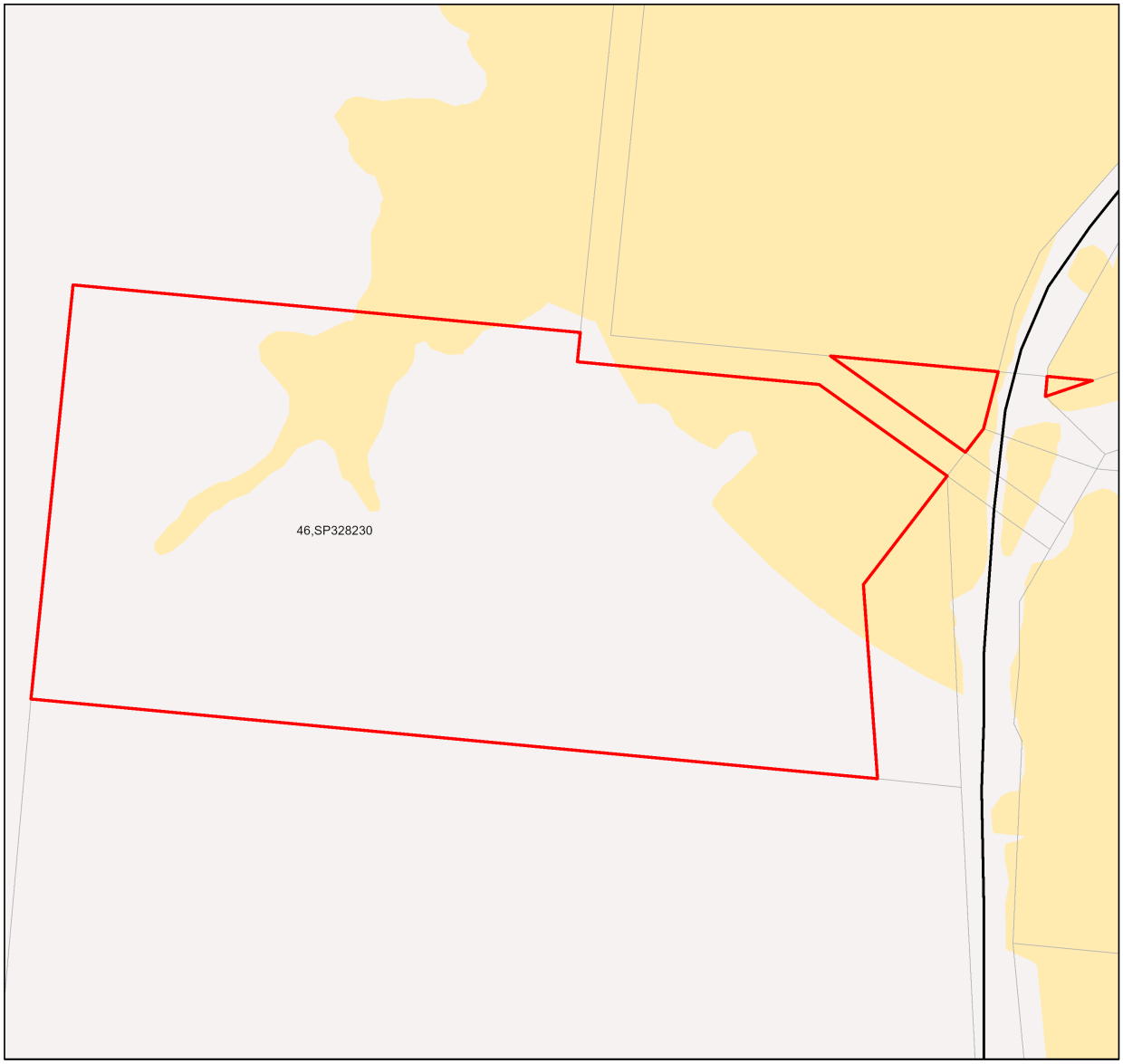
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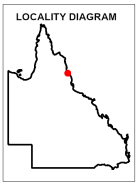
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## Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals




### MSES - Species
### Threatened (endangered or vulnerable) wildlife and special least concern animals

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (special least concern)
- Wildlife habitat (endangered or vulnerable)
- Selected Lot and Plan




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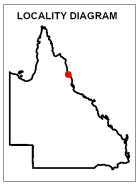
## Map 3b - MSES - Species - Koala habitat area (SEQ)




# MSES - Species
# Koala habitat area (SEQ)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)
- Selected Lot and Plan

LOCALITY DIAGRAM



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The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping

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

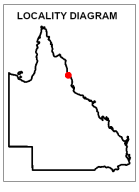
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## Map 3c - MSES - Species - Wildlife habitat (sea turtle nesting areas)




# MSES - Wildlife habitat (sea turtle nesting areas)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (sea turtle nesting areas)
- Selected Lot and Plan




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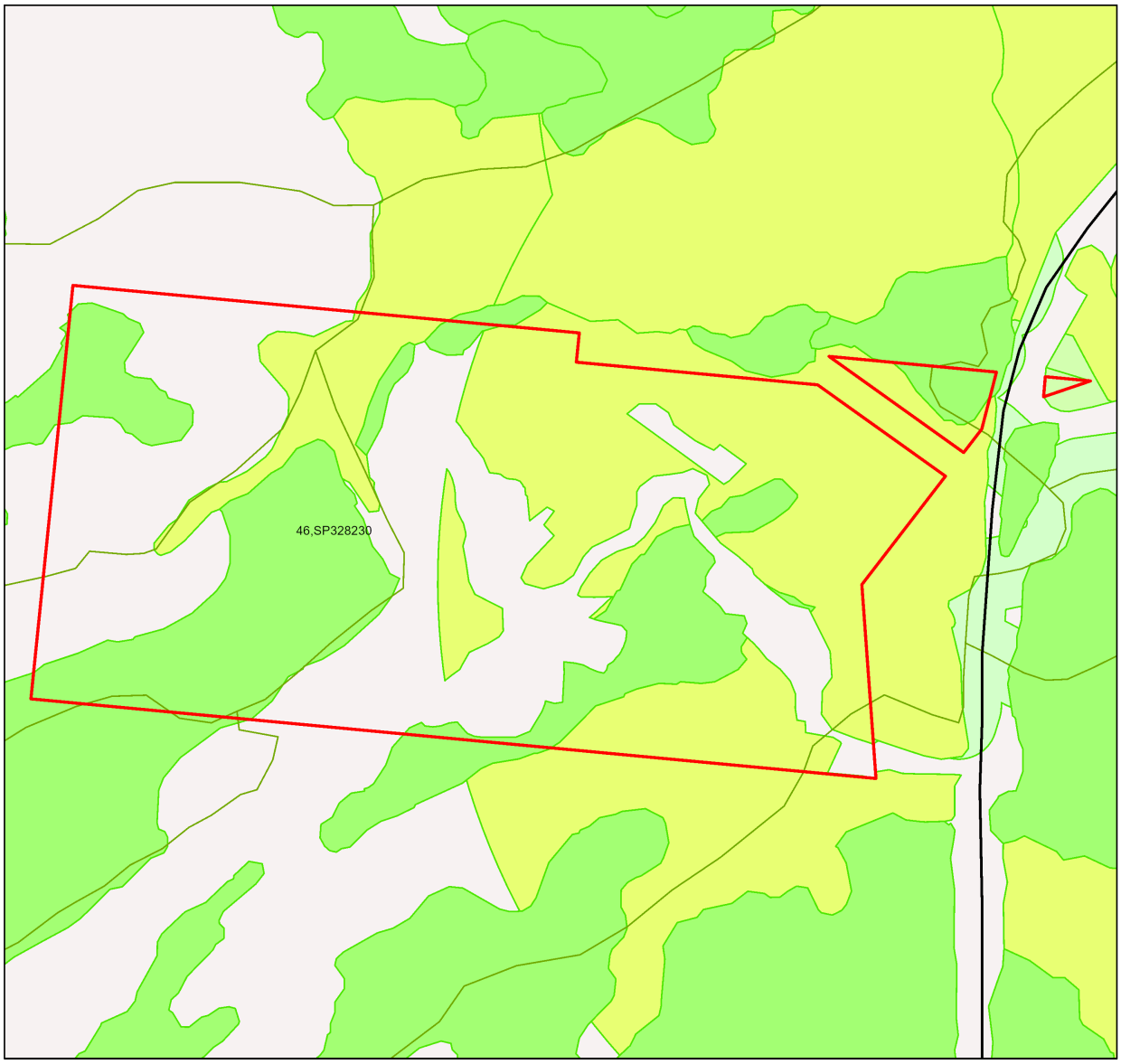
MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disoriented by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.

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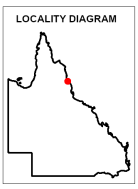
## Map 4 - MSES - Regulated Vegetation




### MSES - Regulated Vegetation

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Regulated vegetation (intersecting a watercourse)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (category B - endangered or of concern)
- Regulated vegetation (category C - endangered or of concern)
- Regulated vegetation (category R - GBR riverine)
- Regulated vegetation (essential habitat)
- Selected Lot and Plan

LOCALITY DIAGRAM



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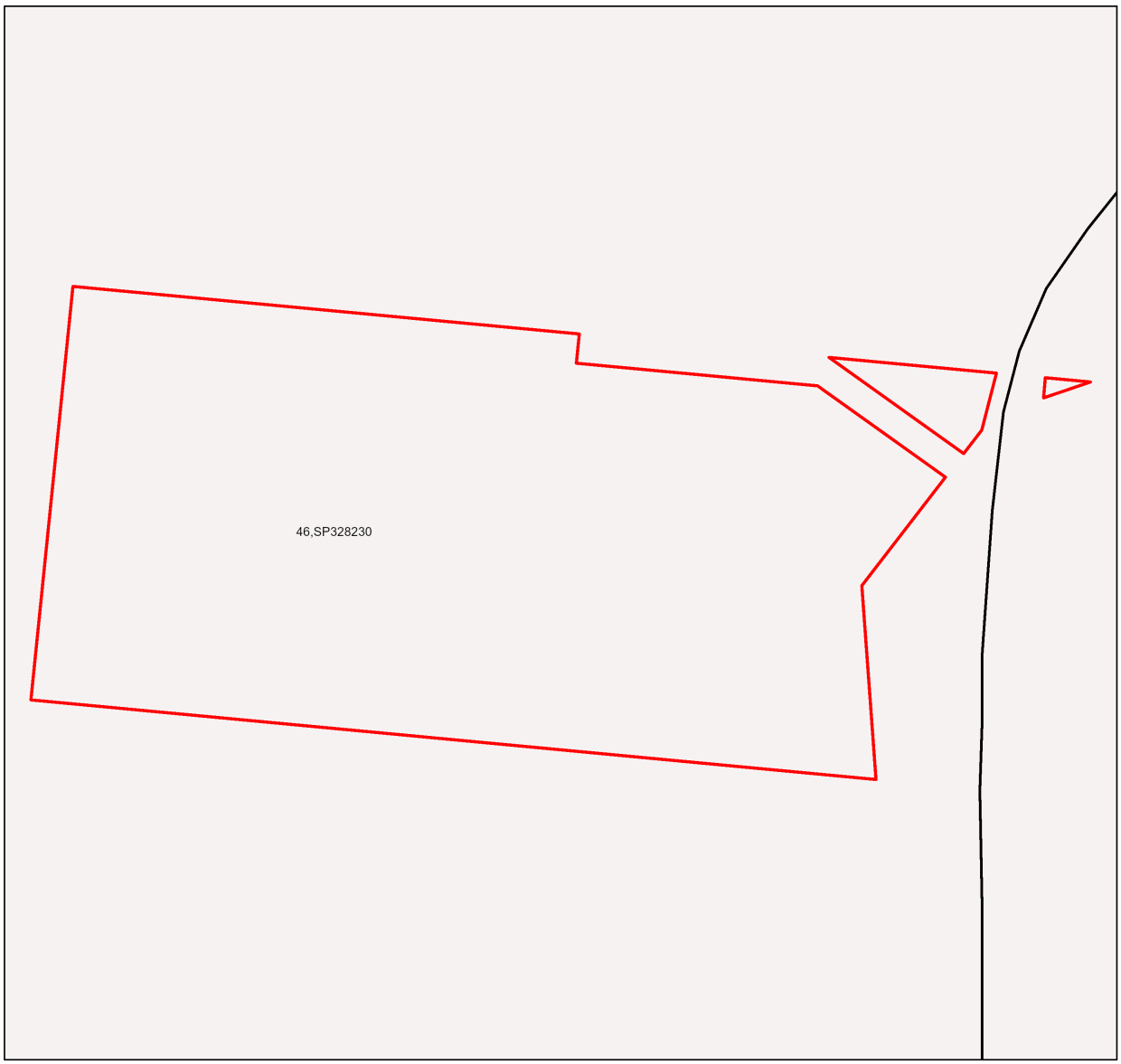
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## Map 5 - MSES - Offset Areas




### MSES - Offsets

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Legally secured offset area (offset register)
- Legally secured offset area (vegetation offsets)
- Selected Lot and Plan

LOCALITY DIAGRAM



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# Appendices

### Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). Its primary purpose is to support implementation of the SPP biodiversity policy.

MSES mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

MSES mapping does not determine whether state or local development assessment is required. For state assessment triggers refer to the Development Assessment Mapping System (DAMS). For local assessment triggers, refer to the relevant local planning scheme.

The Queensland Government's "Method for mapping - matters of state environmental significance can be downloaded from:

http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html .

**Appendix 2 - Source Data**

The datasets listed below are available on request from:

http://qldspatial.information.qld.gov.au/catalogue/custom/index.page

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

| **MSES layers** | **current QSpatial data (http://qspatial.information.qld.gov.au)** |
|---|---|
| Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves | - Protected areas of Queensland<br>- Nature Refuges - Queensland<br>- Special Wildlife Reserves- Queensland |
| Marine Park-Highly Protected Zones | Moreton Bay marine park zoning 2008 |
| Fish Habitat Areas | Queensland fish habitat areas |
| Strategic Environmental Areas-designated | Regional Planning Interests Act - Strategic Environmental Areas |
| HES wetlands | Map of Queensland Wetland Environmental Values |
| Wetlands in HEV waters | HEV waters:<br>- EPP Water intent for waters<br>Source Wetlands:<br>- Queensland Wetland Mapping (Current version 5)<br>Source Watercourses:<br>- Vegetation management watercourse and drainage feature map (1:100000 and 1:250000) |
| Wildlife habitat (threatened and special least concern) | -WildNet database species records<br>- habitat suitability models (various)<br>- SEQ koala habitat areas under the Koala Conservation Plan 2019 |
| VMA regulated regional ecosystems | Vegetation management regional ecosystem and remnant map |
| VMA Essential Habitat | Vegetation management - essential habitat map |
| VMA Wetlands | Vegetation management wetlands map |
| Legally secured offsets | Vegetation Management Act property maps of assessable vegetation.<br>For offset register data-contact DETSI |
| Regulated Vegetation Map | Vegetation management - regulated vegetation management map |

**Appendix 3 - Acronyms and Abbreviations**

| | |
|---|---|
| AOI | - Area of Interest |
| DETSI | - Department of the Environment, Tourism, Science and Innovation |
| EP Act | - Environmental Protection Act 1994 |
| EPP | - Environmental Protection Policy |
| GDA2020 | - Geocentric Datum of Australia 2020 |
| GEM | - General Environmental Matters |
| GIS | - Geographic Information System |
| MSES | - Matters of State Environmental Significance |
| NCA | - Nature Conservation Act 1992 |
| RE | - Regional Ecosystem |
| SPP | - State Planning Policy |
| VMA | - Vegetation Management Act 1999 |

# Appendix G Protected Matters Search

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 03-Jun-2026

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

| | |
|---|---|
| World Heritage Properties: | 1 |
| National Heritage Places: | 2 |
| Wetlands of International Importance (Ramsar | None |
| Great Barrier Reef Marine Park: | None |
| Commonwealth Marine Area: | None |
| Listed Threatened Ecological Communities: | 2 |
| Listed Threatened Species: | 53 |
| Listed Migratory Species: | 17 |

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

| | |
|---|---|
| Commonwealth Lands: | None |
| Commonwealth Heritage Places: | None |
| Listed Marine Species: | 25 |
| Whales and Other Cetaceans: | None |
| Critical Habitats: | None |
| Commonwealth Reserves Terrestrial: | None |
| Australian Marine Parks: | None |
| Habitat Critical to the Survival of Marine Turtles: | None |

## Extra Information

This part of the report provides information that may also be relevant to the area you have

| | |
|---|---|
| State and Territory Reserves: | 7 |
| Regional Forest Agreements: | None |
| Nationally Important Wetlands: | None |
| EPBC Act Referrals: | 11 |
| Key Ecological Features (Marine): | None |
| Biologically Important Areas: | None |
| Bioregional Assessments: | None |
| Geological and Bioregional Assessments: | None |

# Details

## Matters of National Environmental Significance

### World Heritage Properties [ Resource Information ]

| Name | State | Legal Status | Buffer Status |
|---|---|---|---|
| Wet Tropics of Queensland | QLD | Declared property | In buffer area only |

### National Heritage Places [ Resource Information ]

| Name | State | Legal Status | Buffer Status |
|---|---|---|---|
| Indigenous | | | |
| Wet Tropics World Heritage Area (Indigenous Values) | QLD | Within listed place | In buffer area only |
| Natural | | | |
| Wet Tropics of Queensland | QLD | Listed place | In buffer area only |

### Listed Threatened Ecological Communities [ Resource Information ]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

| Community Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Broad leaf tea-tree (Melaleuca viridiflora) woodlands in high rainfall coastal north Queensland | Endangered | Community may occur within area | In buffer area only |
| Lowland tropical rainforest of the Wet Tropics | Endangered | Community likely to occur within area | In buffer area only |

### Listed Threatened Species [ Resource Information ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| BIRD | | | |
| Calidris acuminata | | | |
| Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Calidris canutus | | | |
| Red Knot, Knot [855] | Vulnerable | Species or species habitat may occur within area | In buffer area only |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Calidris ferruginea<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Casuarius casuarius listed as Casuarius casuarius johnsonii<br>Southern Cassowary [1096] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Charadrius leschenaultii<br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable | Species or species habitat may occur within area | In buffer area only |
| Erythrotriorchis radiatus<br>Red Goshawk [942] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Falco hypoleucos<br>Grey Falcon [929] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Gallinago hardwickii<br>Latham's Snipe, Japanese Snipe [863] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Hirundapus caudacutus<br>White-throated Needletail [682] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Numenius madagascariensis<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Rostratula australis<br>Australian Painted Snipe [77037] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Tringa nebularia<br>Common Greenshank, Greenshank [832] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Tyto novaehollandiae kimberli<br>Masked Owl (northern) [26048] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| FISH | | | |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Melanotaenia eachamensis<br>Lake Eacham Rainbowfish [26185] | Endangered | Species or species habitat may occur within area | In buffer area only |
| Stiphodon semoni<br>Opal Cling Goby [83909] | Critically Endangered | Species or species habitat may occur within area | In buffer area only |
| FROG | | | |
| Litoria dayi<br>Australian Lace-lid, Lace-eyed Tree Frog, Day's Big-eyed Treefrog [86707] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Litoria myola<br>Kuranda Tree Frog [82063] | Critically Endangered | Species or species habitat likely to occur within area | In buffer area only |
| Litoria nyakalensis<br>Mountain Mist Frog, Nyakala Frog [1820] | Critically Endangered | Species or species habitat likely to occur within area | In feature area |
| MAMMAL | | | |
| Bettongia tropica<br>Northern Bettong [214] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Dasyurus hallucatus<br>Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Dasyurus maculatus gracilis<br>Spotted-tailed Quoll (North Queensland), Yarri [64475] | Endangered | Species or species habitat may occur within area | In feature area |
| Hemibelideus lemuroides<br>Lemuroid Ringtail Possum [274] | Endangered | Species or species habitat may occur within area | In buffer area only |
| Hipposideros semoni<br>Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Macroderma gigas<br>Ghost Bat [174] | Vulnerable | Species or species habitat likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Mesembriomys gouldii rattoides | | | |
| Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Petauroides minor | | | |
| Greater Glider (northern), Greater Glider (north-eastern Queensland) [92008] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) | | | |
| Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Pteropus conspicillatus | | | |
| Spectacled Flying-fox [185] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Rhinolophus robertsi | | | |
| Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat, Lesser Large-eared Horseshoe Bat [87639] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Saccolaimus saccolaimus nudicluniatus | | | |
| Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| PLANT | | | |
| Alloxylon flammeum | | | |
| Red Silky Oak, Queensland Waratah, Tree Waratah [56400] | Vulnerable | Species or species habitat likely to occur within area | In buffer area only |
| Archontophoenix myolensis | | | |
| Myola Palm, Myola Archontophoenix [64500] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Canarium acutifolium | | | |
| [23956] | Vulnerable | Species or species habitat likely to occur within area | In buffer area only |
| Carronia pedicellata | | | |
| [24178] | Endangered | Species or species habitat may occur within area | In buffer area only |
| Coleus gratus listed as Plectranthus gratus | | | |
| [91401] | Vulnerable | Species or species habitat may occur within area | In buffer area only |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Dendrobium mirbelianum<br>Dark-stemmed Antler Orchid, Mangrove Orchid [14310] | Endangered | Species or species habitat may occur within area | In buffer area only |
| Diplazium cordifolium<br>[15585] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Diplazium pallidum<br>[12764] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Leichhardtia araujacea<br>[91900] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Myrmecodia beccarii<br>Ant Plant [11852] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Phaius australis<br>Lesser Swamp-orchid [5872] | Endangered | Species or species habitat may occur within area | In buffer area only |
| Phaius pictus<br>[22564] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Phlegmariurus filiformis<br>Rat's Tail Tassel-fern [86551] | Endangered | Species or species habitat may occur within area | In feature area |
| Phlegmariurus lockyeri<br>[86552] | Vulnerable | Species or species habitat may occur within area | In buffer area only |
| Phlegmariurus squarrosus<br>Rock Tassel-fern, Water Tassel-fern [86556] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Phlegmariurus tetrastichoides<br>Square Tassel Fern [86555] | Vulnerable | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Polyphlebium endlicherianum<br>Middle Filmy Fern [87494] | Endangered | Species or species habitat likely to occur within area | In buffer area only |
| Prostanthera clotteniana<br>[76165] | Critically Endangered | Species or species habitat may occur within area | In buffer area only |
| Rhodamnia sessiliflora<br>Iron Malletwood [18516] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Vappodes lithocola<br>Dwarf Butterfly Orchid, Cooktown Orchid [78893] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Zeuxine polygonoides<br>Velvet Jewel Orchid [46794] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| REPTILE | | | |
| Varanus mertensi<br>Mertens' Water Monitor [1568] | Endangered | Species or species habitat may occur within area | In feature area |
| SHARK | | | |
| Pristis pristis<br>Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Endangered | Species or species habitat may occur within area | In buffer area only |

## Listed Migratory Species [ Resource Information ]

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Migratory Marine Birds | | | |
| Apus pacificus<br>Fork-tailed Swift [678] | | Species or species habitat likely to occur within area | In feature area |
| Migratory Marine Species | | | |
| Crocodylus porosus<br>Salt-water Crocodile, Estuarine Crocodile [1774] | | Species or species habitat likely to occur within area | In buffer area only |
| Pristis pristis<br>Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Endangered | Species or species habitat may occur within area | In buffer area only |
| Migratory Terrestrial Species | | | |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Cuculus optatus](#)<br>Oriental Cuckoo, Horsfield's Cuckoo [86651] | | Species or species habitat may occur within area | In feature area |
| [Hirundapus caudacutus](#)<br>White-throated Needletail [682] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| [Hirundo rustica](#)<br>Barn Swallow [662] | | Species or species habitat likely to occur within area | In feature area |
| [Motacilla flava](#)<br>Yellow Wagtail [644] | | Species or species habitat likely to occur within area | In feature area |
| **Migratory Wetlands Species** | | | |
| [Actitis hypoleucos](#)<br>Common Sandpiper [59309] | | Species or species habitat may occur within area | In feature area |
| [Calidris acuminata](#)<br>Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Calidris canutus](#)<br>Red Knot, Knot [855] | Vulnerable | Species or species habitat may occur within area | In buffer area only |
| [Calidris ferruginea](#)<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| [Calidris melanotos](#)<br>Pectoral Sandpiper [858] | | Species or species habitat may occur within area | In feature area |
| [Charadrius leschenaultii](#)<br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable | Species or species habitat may occur within area | In buffer area only |
| [Gallinago hardwickii](#)<br>Latham's Snipe, Japanese Snipe [863] | Vulnerable | Species or species habitat likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Numenius madagascariensis | | | |
| Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Pandion haliaetus | | | |
| Osprey [952] | | Species or species habitat likely to occur within area | In feature area |
| Tringa nebularia | | | |
| Common Greenshank, Greenshank [832] | Endangered | Species or species habitat likely to occur within area | In feature area |

## Other Matters Protected by the EPBC Act

| Listed Marine Species | | | [ Resource Information ] |
|---|---|---|---|
| Scientific Name | Threatened Category | Presence Text | Buffer Status |
| Bird | | | |
| Actitis hypoleucos | | | |
| Common Sandpiper [59309] | | Species or species habitat may occur within area | In feature area |
| Anseranas semipalmata | | | |
| Magpie Goose [978] | | Species or species habitat may occur within area overfly marine area | In feature area |
| Apus pacificus | | | |
| Fork-tailed Swift [678] | | Species or species habitat likely to occur within area overfly marine area | In feature area |
| Bubulcus ibis as Ardea ibis | | | |
| Cattle Egret [66521] | | Species or species habitat may occur within area overfly marine area | In feature area |
| Calidris acuminata | | | |
| Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Calidris canutus | | | |
| Red Knot, Knot [855] | Vulnerable | Species or species habitat may occur within area overfly marine area | In buffer area only |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Calidris ferruginea<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area overfly marine area | In feature area |
| Calidris melanotos<br>Pectoral Sandpiper [858] | | Species or species habitat may occur within area overfly marine area | In feature area |
| Chalcites osculans as Chrysococcyx osculans<br>Black-eared Cuckoo [83425] | | Species or species habitat likely to occur within area overfly marine area | In feature area |
| Charadrius leschenaultii<br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable | Species or species habitat may occur within area | In buffer area only |
| Gallinago hardwickii<br>Latham's Snipe, Japanese Snipe [863] | Vulnerable | Species or species habitat likely to occur within area overfly marine area | In feature area |
| Haliaeetus leucogaster<br>White-bellied Sea-Eagle [943] | | Species or species habitat likely to occur within area | In feature area |
| Hirundapus caudacutus<br>White-throated Needletail [682] | Vulnerable | Species or species habitat likely to occur within area overfly marine area | In feature area |
| Hirundo rustica<br>Barn Swallow [662] | | Species or species habitat likely to occur within area overfly marine area | In feature area |
| Merops ornatus<br>Rainbow Bee-eater [670] | | Species or species habitat may occur within area overfly marine area | In feature area |
| Monarcha melanopsis<br>Black-faced Monarch [609] | | Species or species habitat likely to occur within area overfly marine area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Motacilla flava](#)<br>Yellow Wagtail [644] | | Species or species habitat likely to occur within area overfly marine area | In feature area |
| [Myiagra cyanoleuca](#)<br>Satin Flycatcher [612] | | Species or species habitat likely to occur within area overfly marine area | In feature area |
| [Numenius madagascariensis](#)<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| [Pandion haliaetus](#)<br>Osprey [952] | | Species or species habitat likely to occur within area | In feature area |
| [Rhipidura rufifrons](#)<br>Rufous Fantail [592] | | Species or species habitat likely to occur within area overfly marine area | In feature area |
| [Rostratula australis as Rostratula benghalensis (sensu lato)](#)<br>Australian Painted Snipe [77037] | Endangered | Species or species habitat likely to occur within area overfly marine area | In feature area |
| [Symposiachrus trivirgatus as Monarcha trivirgatus](#)<br>Spectacled Monarch [83946] | | Species or species habitat likely to occur within area overfly marine area | In feature area |
| [Tringa nebularia](#)<br>Common Greenshank, Greenshank [832] | Endangered | Species or species habitat likely to occur within area overfly marine area | In feature area |
| **Reptile** | | | |
| [Crocodylus porosus](#)<br>Salt-water Crocodile, Estuarine Crocodile [1774] | | Species or species habitat likely to occur within area | In buffer area only |

## Extra Information

| State and Territory Reserves | | | [ Resource Information ] |
|---|---|---|---|
| Protected Area Name | Reserve Type | State | Buffer Status |
| Barron Gorge | National Park | QLD | In buffer area only |
| Cassowary Corridor | Nature Refuge | QLD | In buffer area only |
| Cassowary Forest | Nature Refuge | QLD | In buffer area only |
| Dinden | National Park | QLD | In buffer area only |
| Jumrum Creek | Conservation Park | QLD | In buffer area only |
| Speewah | Conservation Park | QLD | In buffer area only |
| The Dods Place | Nature Refuge | QLD | In buffer area only |

| EPBC Act Referrals | | | | [ Resource Information ] |
|---|---|---|---|---|
| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
| | | | | |
| Jumrum Rainforest Estate | 2011/5939 | | Post-Approval | In buffer area only |
| KUR-World Integrated Eco-resort, Kuranda, Qld | 2016/7710 | | Completed | In buffer area only |
| Controlled action | | | | |
| Residential Subdivision | 2009/4916 | Controlled Action | Post-Approval | In buffer area only |
| Residential Subdivision Kuranda Heights Road | 2010/5559 | Controlled Action | Post-Approval | In buffer area only |
| Rural Residential Subdivision, Lot 1, RP728479, Douglas Track | 2007/3416 | Controlled Action | Post-Approval | In buffer area only |
| Rural Residential Subdivision and Services | 2008/4394 | Controlled Action | Post-Approval | In buffer area only |
| Russett Park Alternative Access Road | 2003/1043 | Controlled Action | Completed | In buffer area only |
| Not controlled action | | | | |
| Kuranda Range Road Safety Works | 2008/4642 | Not Controlled Action | Completed | In buffer area only |
| Not controlled action (particular manner) | | | | |
| Yellow Crazy Ant Eradication Wet Tropics World Heritage Area, Nth QLD | 2014/7271 | Not Controlled Action (Particular Manner) | Post-Approval | In buffer area only |
| Referral decision | | | | |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Referral decision | | | | |
| Develop Land For a Rural Residential Subdivision | 2008/4255 | Referral Decision | Completed | In buffer area only |
| Eradication of Yellow Crazy Ant Infestations, Wet Tropics World Heritage Area, Far North Qld | 2014/7172 | Referral Decision | Completed | In buffer area only |

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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# Annexure 11: Current Operations Management Documents

Location

Lot 46 Kennedy Highway
Kuranda, QLD 4881
Phone: 0427 576 989
ABN: 67 102 951 039




TopRock Quarry Plan of Operations

| | | |
|---|---|---|
| Document Status | Controlled ☒ | Uncontrolled ☐ |
| Revision | 1 | |

Developed & Authorised for Release By:

| | | | |
|---|---|---|---|
| Name | Murray F Moule | Position | Site Senior Executive |
| Signature | | Issue Date | 05/04/2019 |

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# 1 Plan Control

The latest version of this Plan will be available in hardcopy in the Site Office/Weighbridge for all Quarry personnel. Distribution of the Plan of Operation (PoO) will be to those detailed on the distribution listing on below.

Controlled Copy Distribution List

| Name | Position | Company | No. of Copies |
|---|---|---|---|
| Murray Moule | Site Senior Executive | fgf Developments | 1 |
| | | | |

Document Modification History

| Revision | Sections Revised | Revision Description | Prepared by | Date | Authorised by | Date |
|---|---|---|---|---|---|---|
| 1 | All | Initial draft | Hamish Jenkins | 20/11/2018 | | 05/04/2019 |
| | | | | | | |

# 2 Introduction

## Operator Details

TopRock Quarry is owned and operated by fgf. fgf is a locally owned and run enterprise with interests in civil construction, development, drainage and pipe laying, quarrying, bitumen sealing among others. fgf is a significant operator in Far North Queensland.

| Position | Name | Contact Number | Email |
|---|---|---|---|
| Quarry Manager/SSE | Murray F Moule | 0418 772 125 | murray@fgf.com.au |
| fgf Operations Manager | Brendan Rogina | 0427 576 980 | brendan@fgf.com.au |
| Site Supervisor | Peter Beck | 0427 576 989 | |
| | | | |

## Organisational Structure and Responsibilities

Internal and external resources relevant to TopRock Quarry are outlined in Figure 1.

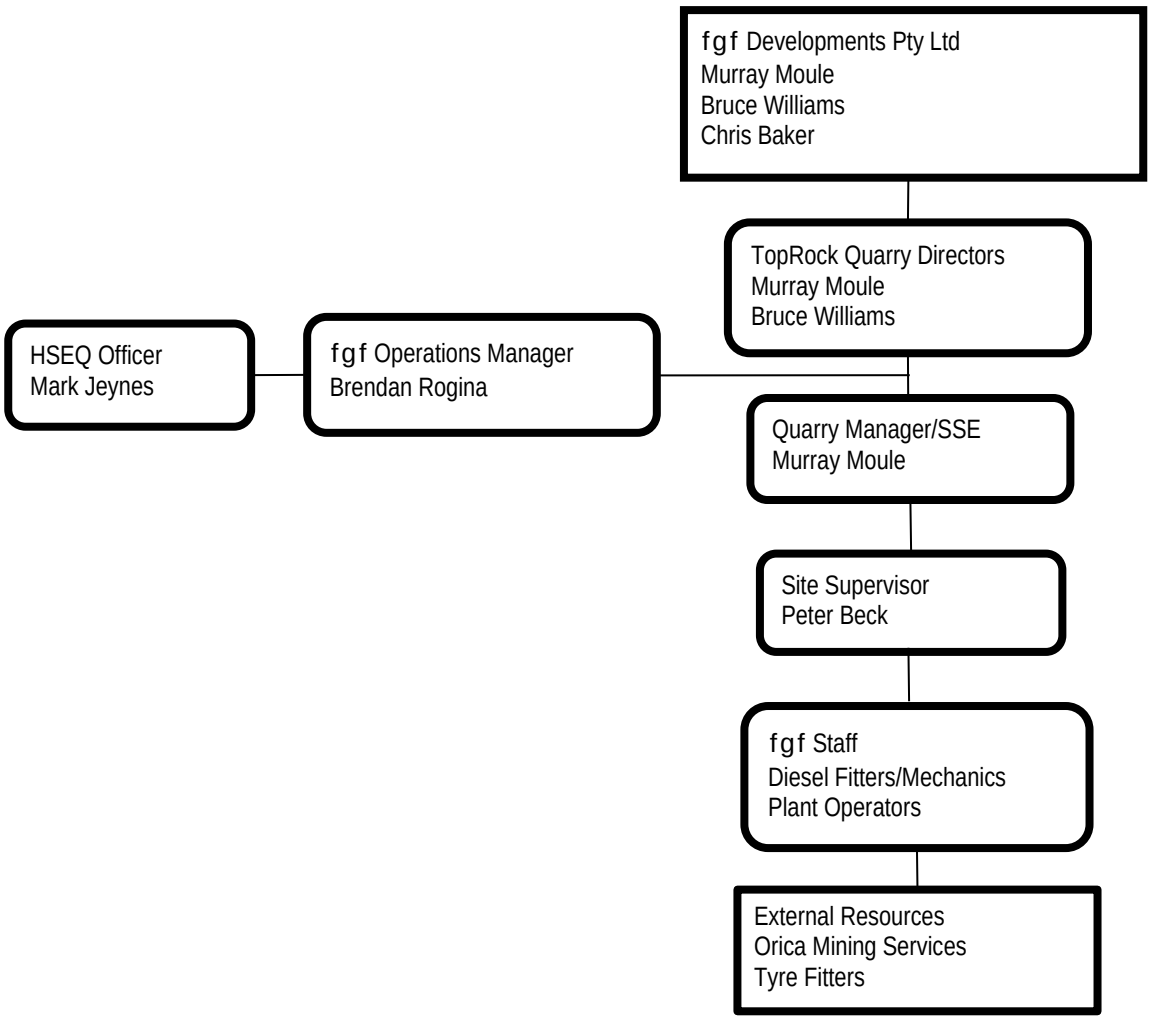



Figure 1: Organisational Structure fgf TopRock Quarry

## Title Details

TopRock Quarry is located at Lot 46 Kennedy Highway, between Kuranda and Speewah, West of Cairns, Far North Queensland. Refer to Figure 2.
The Lot and Plan number are Lot 46 Plan RP851443
The Freehold title is held by Jacqshar Pty Ltd
TopRock Quarry is operated by fgf Developments Pty Ltd.

## Project Description

TopRock Quarry is a privately owned and run quarry, set up to supply construction aggregates and roadbase materials to the local market in and around the Cairns and Tablelands area.

## Location

TopRock is located within the Mareeba Shire Council area, approximately 5 kms from the Kuranda village turnoff on the Kennedy Highway. Refer to Figure 2.

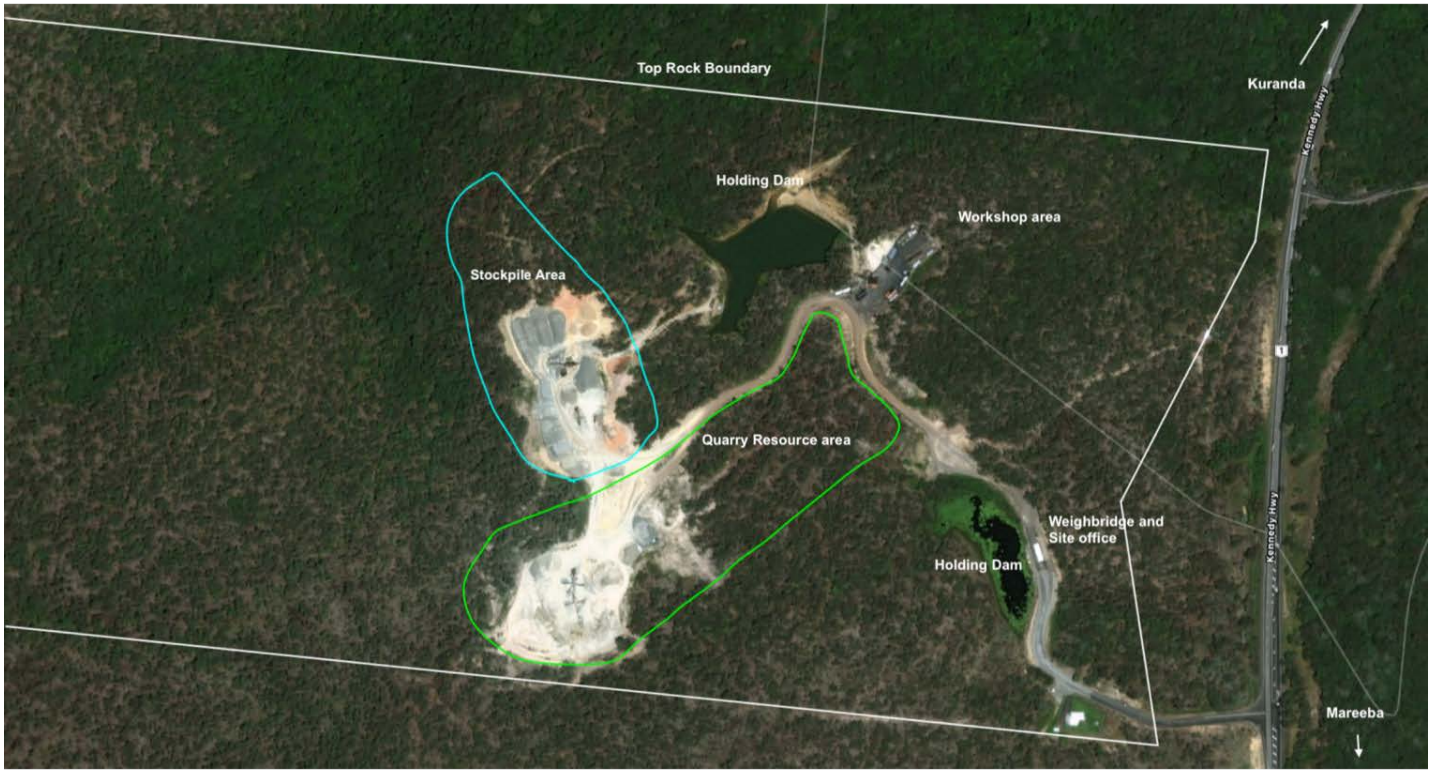



Figure 2: TopRock Quarry Site Plan (2017)

# 3 Site Conditions

## Physical Environment

### Climate

TopRock Quarry is located inside the wet tropics region of Far North Queensland. The climate consists of two seasons, a wet, high rainfall, humid summer with the majority of the rainfall occurring between December and March. The remainder of the year is generally considered the dry season. TopRock is located between Kuranda and Mareeba. Kuranda has an average rainfall of 2188mm and Mareeba 915mm. Top Rock receives somewhere between these values.

Air temperatures are relatively high and consistent from year to year. During the coolest time of the year (June to July), the temperature for Cairns Aero weather Station has a mean minimum of 17.1ºC and a mean maximum of 25.8ºC. In the hottest part of the year (October to November), mean monthly minimum temperatures are 23.8ºC and mean maximum is 31.5ºC. The lowest recorded overnight temperatures are below 6.5ºC and the highest is 40.5ºC. Refer to Figure 3.

**CAIRNS AERO**

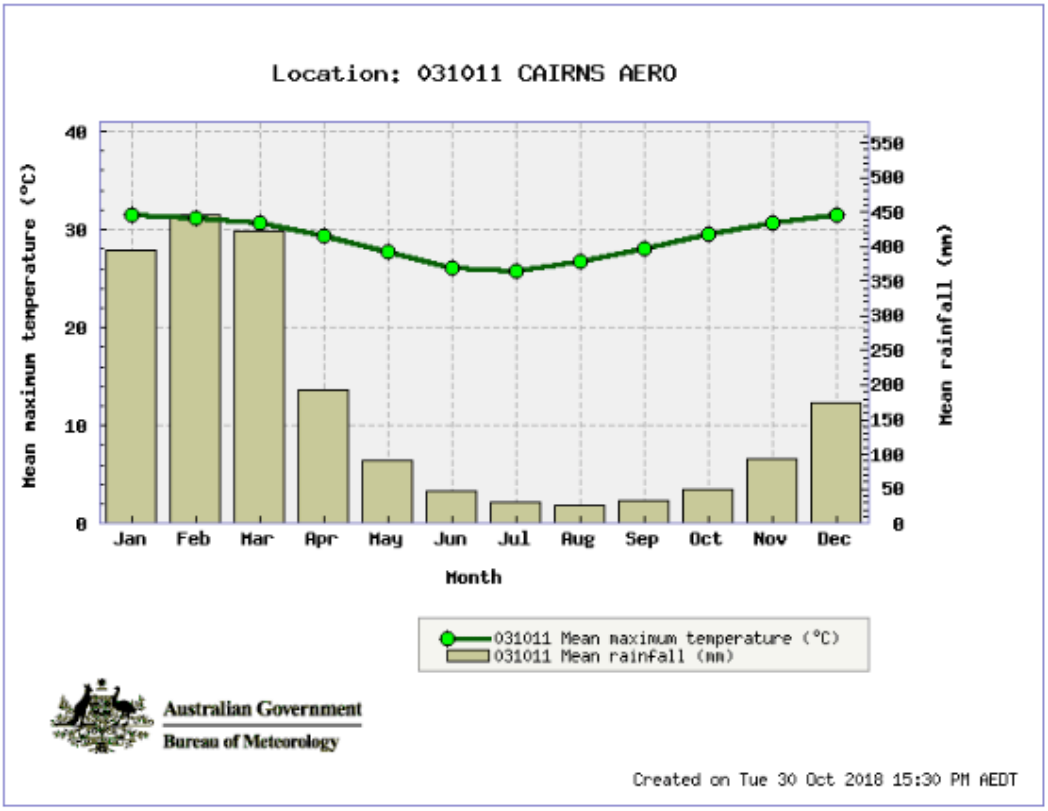
**Mean maximum temperature (°C)**

**Site details**

**Site name:** CAIRNS AERO | **Site number:** 031011 | **Commenced:** 1941
**Latitude:** 16.87 °S | **Longitude:** 145.75 °E | **Elevation:** 2 m | **Operational status:** Still Open

Yearly data | 30 year statistics | Comparison site | First statistic | **Second statistic** — **Note:** Only one option can be redrawn at a time

Temperature | Mean maximum temperature (°C) | Redraw




| Statistics | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual | Years |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean maximum temperature (°C) for years 1942 to 2018 | 31.5 | 31.2 | 30.6 | 29.3 | 27.7 | 26.1 | 25.8 | 26.7 | 28.1 | 29.6 | 30.7 | 31.5 | 29.1 | 76 |
| **Statistics** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** | **Annual** | **Years** |
| Mean rainfall (mm) for years 1942 to 2018 | 393.8 | 446.0 | 421.6 | 193.1 | 90.9 | 47.2 | 30.4 | 26.1 | 33.2 | 48.4 | 92.9 | 174.8 | 1996.5 | 76 |

*12.3* = Not quality controlled

Figure 3: Weather Statistics for Cairns Aero

## Land Systems

### Top soil, Topography and Vegetation

On the TopRock site, topsoil is meagre to non-existent. The ground cover is non-existent to sparse and consists mainly of a few hardy grasses, a successional cohort of surrounding trees as very sparse shrubs and a few herbs. Dominant native grasses include *Themeda triandra* and *Paspalidium distans* while shrubs include a successional cohort of *Allocasuarina torulosa, Eucalyptus acmenoides* and *Acacia flavescens.*

The topography is steep hills with non-permanent seasonal streams. The streams in the area all form part of the Barron River catchment that drains towards the east in the Coral Sea just north of Cairns.

The site is bordering the Formartine state forest where the vegetation is dominated by eucalypts.

TopRock Quarry "dissects two regional ecosystems and an area of non-remnant vegetation.

1. *Eucalyptus (reducta) acmenoides* open forest to woodland on metamorphics.
2. *Corymbia clarksoniana* and/or *Eucalyptus (drepanophylla) crebra* open forest to woodland on metamorphics

(from "Threatened Flora Survey Report for TopRock Quarry" produced by Ecorex for Planning Plus Pty Ltd and its clients dated 19 September 2018).

## Socio Economic Environment

### Current Land Use

Previous to quarrying, the site was open forest to woodlands and had been lightly grazed by stock and historically logged. The site is now devoted to quarrying, crushing, screening and machinery maintenance. No other activities are permitted at the site.

### Identified Stakeholders

The local community is limited, as there are no residential neighbours. The closest dwelling is approximatley 1km from the quarry front gate, in Speewah. The wider local community consists of Kuranda and Speewah communities, a population of approximately 6000 people.

Quarry workers are sourced from local communities and further away. They are employed based on their suitable experience and skill sets.

Regulators of the quarry include, Department of Natural Resources Mines and Energy, Department of Environment and Energy, Mareeba Shire Council and Department of Main Roads.

### Workforce Description and Demography

The work force is made up of three key personnel

1. Site Senior Executive (SSE) or Quarry Manager,
2. fgf Operations Manager,
3. Site Supervisor.

Other staff include machinery operators, maintenance fitters, surveyors and consultants on an as needs basis.

### Community Affairs

All "Community Affairs" are managed by the fgf Cairns office, in conjunction with quarry personnel.

# 4 Legal Requirements

All personnel and contractors working at TopRock quarry must comply with the requirements of all relevant federal, state and local legislation as well as any other specifications or guidelines applicable to the works undertaken as outlined in *SP 18 Legal and Other Requirements.*

### Statutory Requirements

As with all quarrying and mining in Queensland TopRock is required to adhere to the Mining and Quarrying Safety and Health Act 1999 and the Mining and Quarrying Safety and Health Regulation 2017.

TopRock has a certificate of registration #ENRE00847608 issued under the Environmental Protection Act 1994. This certificate issued 27 January 2010 approves TopRock for the following registered activities:

i) ERA16 Extractive and screening activities Threshold 2(b) extracting between 5000t to 100,000t per year of material, and

ii) ERA16 Extractive and screening activities Threshold 3(a) screening 5000t to 100,000t per year of material

It also lists the conditions of development approval in Schedules A through I (Activity, Air, Water, Noise, Waste, Land, Community, Definitions, Maps and Plans.)

### Heritage and Archaeological Aspects

Any work carried out must comply with fgf's internal *Environmental Instruction ENVI 03 – Cultural Heritage.*

# 5 Operational Activities

## Mining Activities

### Mine Design

A mine design will develop as the quarry progresses. The principles that the quarry will adhere to when designing can be found in the "Guidelines and considerations for open pit designers" by Julian Poniewierski, senior mining consultant.

The design of the high wall adjacent to the Southern boundary is the most critical aspect of design for TopRock quarry. The design parameters to be observed for this wall include, maintaining a distance of 15m to the boundary and not exceeding an overall wall angle of 45º. This is to ensure that in the event of a wall failure the mine boundary shall not be exceeded. All final walls are to be presplit prior to blasting and scaled for loose rock after excavation. All berms will have light vehicle access maintained as a minimum, to enable wall stability monitoring. 10m benches and 10m berms shall be constructed with a final wall angle not exceeding 80º. This is the preferred methodology to maintain an overall wall angle of less than 45º.

### Mining Reserves and Geology

TopRock quarry is situated within the Hodgkinson Formation. The Hodgkinson Formation is mainly pale to dark or greenish grey, fine to medium-grained, medium to thick-bedded, quartz-intermediate arenite - wacke, rhythmically interbedded with siltstone and mudstone; minor conglomerate and conglomeratic arenite. Sparsely fossiliferous. (Geoscience Australia Year?)

The site is approximately 5km North East of the nearest outcrop of the unnamed plutonic units of the Mount Formantine Granite.

The reserves for quarry product are open in all directions and are only constrained by vegetation clearing permits, property boundaries and mine design. It is envisaged several years of continual operation of the current site as a quarry are sustainable within these parameters.

### Rock Types

A resource definition drilling program was undertaken in May 2018 to determine the extent of the weathering profile and any interbedded silt stone (argillite). The objective of this program was to provide the quarry operator confidence to strategically plan for the quarry. A total of 12 holes were drilled over the active and perceived medium term quarry site.

The holes were drilled with a rotary air blast drill hole rig to a depth of 14.5m. The drilling contractor was Doussa Drilling. Drill holes were sieved, logged and the chips were photographed for each meter. Results are included in Appendix 1 of the Quarry Assessment Report 2018. It is proposed that additional drilling shall be conducted as the quarry progresses to identify future planning opportunities.

The May 2018 drilling program identified that the weathering profile ranged from 0m to 12m. Significant fresh rock reserves are available from surface. The interbedded Argillite was noted to be insignificant in the majority of the holes, but was evident in a small area. This area will be selectively mined to prevent any contamination of the Greywacke with the less durable Argillite.

The site consists of volcanic sediments that have undergone metamorphism and deformation due to crustal shortening on a regional scale. The predominant rock at the quarry site is a metagreywacke with some units of meta mud and siltstone, argillite, with minimal quartz veining through the units.

### Geological Features

The quarry site sits on top of a prominent ridge. The lithology of the ridge is metagreywacke with some variation in the amount of silica throughout. The unit is primarily massive with some small sheer zones. Sheer zones are predominantly in interbedded argillite. The ridge strikes in a North East direction. Refer to Figure 4.

Evidence of quartz veining occurs throughout the quarry site. It is generally present along planes of weakness such as sheered zones and joint faces. The veining is minor and relatively insignificant to the products produced.

### Rock Structures

The meta greywacke is predominantly massive with some evidence of small scale crustal shortening throughout. A local light foliation striking 245º and dipping between 75º and 90º S is evident on the prominent ridge where the majority of the quarried material is envisaged to come from. The foliation is more pronounced in the silt and mud stones and these materials will be selectively mined and used for select fill products.

A conjugate sets of joint planes are evident in the hard blasted rock.

### Rock Weathering

The quarry has been operating for a number of years and has exposed the full weathering profile of the site.

The weathering profile is between 0-12m. The deeper weathered zones are in the meta mud and silt stones. The massive metagreywacke is less weathered and fresh from surface in many locations.

# 6 Quarry Development and Processing Activities

### Quarry Development Overview

TopRock quarry was a greenfield site in 2009.

The planning and development of TopRock quarry has been working towards a sequence of mining enabling multiple active mining faces and thus increasing the availability of multiple quarry products on a consistent basis. To date, the product list available from the quarry ranges from crushed fill, road base, drainages aggregates, asphalt aggregates, concrete aggregates, crusher dust, gabion rock and oversize rock.

The mining sequence plan is a continually evolving practice. The Site Senior Executive and the site supervisor control this process.

TopRock quarry has installed a certified weighbridge, workshop facility, offices and a first aid treatment area. Muster areas, traffic flows and radio communication channels are sign posted to ensure safety. Visitor car parking areas are clearly designated.

TopRock quarry owns and operates its own plant and equipment including excavators, loaders, graders, water truck, crushing and screening equipment. TopRock quarry is affiliated with fgf Developments and has access to other necessary plant and equipment as required.

The volume mined is calculated annually with a reconciliation between tonnages across the weighbridge and an excavated surveyed volume and stockpile balance. This is carried out by an fgf surveyor.




Figure 4: View of quarry operation area (2018)

### Overburden Stripping Methods

Overburden is free dug and removed as clean fill, aided by a Caterpillar D6 bulldozer. Upon the completion of dozing, ripping and free digging, the material is drilled and blasted into 10m benches and removed with excavators and loaders.

### Extraction Methods

The primary method of extraction is drill and blast. External contractors are engaged to conduct both the drilling and blasting. The quarry operates on 10m high benches with excavator and loaders used to reclaim the blasted material.

### Scalping, Crushing and Screening

Material that is too large to be fed into the crushing plant is stockpiled and sold as oversize rock.
Material selection fed into the crushers is undertaken by trained personnel at the quarry. Primary crushing is achieved through a mobile track mounted Pegson Jaw Crusher and power screen XA400. Secondary crushing is performed by a Finetec 1080 QH330 Sandvik cone crusher. Any tertiary crushing and fragment shaping is conducted using a Piolt Crushtec twister track VS350 vertical spinning impactor. Refer to Figures 5, 6 and 7.



Figure 5: Pegson jaw crusher



Figure 6: Finetec 1080 QH330 Sandvik cone crusher




Figure 7: Piolt Crushtec twister track VS350 vertical spinning impactor.

To produce different size fraction material, multiple screening plants are utilised as shown in Figure 8.





Figure 8: Screening plants

## Imported materials

Imported products may be used at the quarry.

*Cement*

Cement is sourced from Cement Australia (third party IS09001 certified) in 1 tonne bags, for addition to some materials in accordance with customer specifications and/or requirements.

Cement materials are stored to ensure their suitability and/or purchased for specific jobs. The tropical humidity reduces the shelf life for cement thus TopRock quarry prefers to purchase cement on a job by job basis.

The Precision screen pugmill (refer to Figure 9) is used to add and combine cement to pavement material. A hopper that has capacity to hold a 1 tonne bag is located on one side of the vibrating feeder. Cement is fed through a variable speed auger directly into the pugmill feed conveyor. The concentration of cement added is governed by customer requirements and measured by testing and the consumption rate of the added cement.

Water can be added to achieve an optimal moisture content (OMC) through the pugmill. Water is sourced from local onsite holding dams.




Figure 9: Pugmill

Precoated aggregates are produced through a stand-alone pre-coating plant. Bitumen is stored in a 30,000ltr tank that is fully bunded. Pre-coated material is then stored under tarpaulin as shown in Figure 10.



Figure 10: Pre-coat plant

Other quarried materials imported to blend with TopRock quarry products are seldom used but if needed for specific requirements they are stockpiled and sign posted separately.

### Stockpile Details and Size

A purpose built area has been constructed for material stockpiles (Refer to Figure 11). Each stockpile area shall not exceed 5000t and will be clearly signposted in accordance with the fgf Integrated Site Management Plan (ISMP).

TopRock quarry products are stockpiled and identified via:

- Material type
- Lot number
- Quality status

The quality status of quarry products is identified as either:

1) Green – Tested and approved
2) Red – Not tested, testing in progress

Where lotting is not required, materials are identified by their product name. The fgf HSEQ Officer maintains a pavement compliance spreadsheet and records data from test records.
Quarry products are sampled and tested on behalf of fgf by a NATA certified provider, namely Construction Services (NATA certification #1986). A product test certificate shall be made available to customers who purchase product required to meet specifications.




Figure 11: Stockpile Areas TopRock Quarry 2018

# 7 Environmental Management

## Environmental Management Structure

fgf maintains a fully integrated corporate Quality, Safety and Environmental Management System (IMS). The IMS is third party certified to the following nominated international and Australian Standards:

- ISO 9001 Quality Management Systems
- ISO 14001 Environmental Management Systems
- AS/NZS 4801 Safety Management Systems

fgf maintains a site specific Integrated Site Management Plan- TopRock Quarry (ISMP) outlining the systems and processes relevant to TopRock quarry.

One of TopRock quarry's goals is "to respect and protect the environment we work in". To achieve this goal, TopRock quarry has developed environmental controls for the works undertaken. Refer to Appendix C*: Environmental Instructions (ENVI)* of the ISMP. The ENVI outline how TopRock quarry manages relevant environmental aspects applicable to its activities at the site.

## Policy

An integrated Safety, Environmental and Quality policy (IMS PO-001) is located on the wall of the site office.

## Training and Education

All inductions and training for TopRock quarry shall be handled in accordance with *SP 09 Induction, Training & Competence* procedure.

## Emergency Preparedness and Response

An Emergency Response Plan covering safety and environmental incidents has been developed in accordance with *SP 13 Emergency Preparedness and Response* procedure. As per legislative requirements, all emergency response plans must be tested via drills or other means as deemed appropriate by the Quarry Manager. Additionally, the Quarry Manager must ensure that all team members, subcontractors and site visitors are trained in site-specific emergency response protocol upon site induction.

## Identification of Environmental Risk

A TopRock quarry environmental risk register has been developed and is presented in *Appendix B-SPF 17.1 Site Environmental Risk Assessment* of the ISMP. The register is relevant to key aspects of the company's operations and activities.

TopRock quarry identifies hazards and manages risk in accordance with *SP 17 Risk Management* procedure. The hazards and risks related to the site have been assessed and are identified in *Appendix B-Site Safety Risk Register* of the ISMP along with recommended measures to control each risk. The Site Senior Executive and Site Supervisor are responsible for ensuring these hazards and risks are communicated to all staff, appropriate resources are allocated and training is provided to ensure required control measures are implemented. This includes ensuring that adequate procedures, resources and plant and equipment are provided.

## Environmental Management Plan

TopRock quarry has adopted a process line model to facilitate continuous improvement of its business activities. The products, activities and services undertaken by personnel working for or on behalf of TopRock quarry identified as having the potential for environmental impact have been summarised below:

Environmental Process Line Model

| | | |
|---|---|---|
| E | Earthworks / Extraction | *(incl. clearing, excavation and blasting)* |
| C | Crushing / Processing | *(incl. stockpiling and blending)* |
| T | Transport | *(incl. internal and external)* |

In addition, TopRock quarry's environmental aspects have been identified and cross referenced to the company's activities below:

Environmental Aspects Associated with TopRock Quarry Operations

| Aspects | E | C | T |
|---|---|---|---|
| Air Quality | x | x | x |
| Cultural Heritage | x | | |
| Soil Erosion and Stability | x | x | x |
| Flora and Fauna | x | x | |
| Hazardous Substances | x | x | x |
| Noise and Vibration | x | x | |
| Waste Generation | x | x | x |
| Water Quality | x | x | |

Refer to *Appendix C-Environmental Instructions (ENVI)* in the ISMP. ENVI's outline how TopRock quarry will manage the environmental aspects applicable to its activities at the project.

### Risk Assessment

TopRock quarry's environmental risk assessment is documented in *Appendix B-SPF 17.1 Site Environmental Risk Assessment* of the ISMP. This has been conducted for aspects identified as applicable to the company's operations and activities.
Please Note: Risks determined to be extreme or high are considered to be significant environmental impacts. Where practicable, all implemented control measures should reduce the residual risk to a moderate or low level.

### Environmental Controls

Environmental Instructions (ENVI) have been developed for each environmental aspect applicable to TopRock quarry's activities identified under the process line model as follows:

- Air Quality
- Cultural Heritage
- Soil Erosion and Stability
- Flora and Fauna
- Hazardous Substances
- Noise and Vibration
- Waste Generation
- Water Quality

Where additional environmental aspects are identified specific to a contract, site location or activities under taken; the Site Senior Executive is responsible for ensuring that the aspect is added to the risk register and that environmental controls are developed to effectively manage the potential impact.

### Objectives and Targets

TopRock quarry is committed to setting measurable objectives and targets in relation to its safety, quality and environment performance as well as its business goals. The organisations *Objectives and Targets* are outlined in *Appendix A* of the ISMP have been determined by both contract requirements as well as TopRock quarry's own strategic goals.

| WORK HEALTH & SAFETY / ENVIRONMENTAL OBJECTIVES & TARGETS | | |
|---|---|---|
| Objective | Target | Frequency |
| Reduce all injuries and events with potential. | Zero | Review monthly |
| To reduce the number and severity of workplace Incidents. | Workplace Safety / Environmental inspections carried out weekly | Review monthly |
| To reduce the number and severity of workplace injuries. | Carry out task observations of high risk activity – SWMS / JSA's Weekly | Review monthly |
| Conform to all relevant legislation regulations and guidelines. | No events resulting in statutory complaints or notices being issued | Review 6 monthly |

### Monitoring and Measurement

This site shall be monitored in accordance with *SP 16 Systems Audits, Site Inspections and Monitoring* and the ISMP. Hence, the following inspections and monitoring will apply to this project.

### Daily Checks

Prior to commencing work, the Site Supervisor and workers are required to conduct safety and environmental checks of their work area to identify any workplace hazards and impacts. Where issues are identified, action must be taken to control the areas of concern. No workers are to undertake unsafe work practices or use faulty equipment under any circumstances.

### Monthly Inspections

The Quarry Manager and/or the Site Supervisor must conduct a planned monthly inspection using the criteria outlined on *SPF 16.3 HSEQ Inspection and Behaviour Observation Checklist*.

### Task Observations

The Quarry Manager and/or the Site Supervisor must ensure procedures are regularly monitored to ensure work practices are safe, control measures are effective and they are compliant with legislation as well as contractual obligations. This includes subcontractor work procedures. Results of task observations must be recorded / attached to *SPF 16.3 HSEQ Inspection and Behaviour Observation Checklist*. Procedures selected for observation as well as intervals must be appropriate to the risk of activities being undertaken on site at the time as well as legislative requirements.

### Health Surveillance and Monitoring

The Site Supervisor must notify the Quarry Manager of all health surveillance requirements for workers. The Quarry Manager will coordinate health surveillance through suitably qualified health care providers. Records that identify individuals and the status of their health will be received directly by the Quarry Manager and stored confidentially with personnel files. Where health monitoring is carried out, the Quarry Manager will ensure that results are communicated back to the individuals in a private and confidential manner.

### Internal Audits

Additional inspections and task observations will be conducted as determined by the Site Senior Executive. Additional systems internal audits will also be conducted to meet contractual requirements.

### External Audits

Third party audits are routinely carried out against TopRock quarry's safety, quality or environmental systems. The Quarry Manager must ensure the auditor is provided with all documents, access and assistance as necessary for to complete audits.

### Non-conformance Corrective Action

All individuals working at the TopRock quarry site are responsible for notifying their supervisor of incidents, hazards, non-conformances, complaints and near misses as soon as practicably possible; in accordance with *SP 19 Incident Reporting & Investigation / Corrective and Preventive Action* procedure. In the case of emergencies, the procedures specified in the *Emergency Response Plan* will take priority and must be followed.

# 8 Water Management Plan

A site water management plan is incorporated into two Environmental Instructions: ENVI 04 - Erosion-Sediment Control and ENVI 09 - Water Quality.

As TopRock quarry is in the tropics, it is subject to tropical cyclones and has a significant chance of high rainfall events. Figure 12 shows the IFD Design Rainfall Depth for the grid cell coordinate of TopRock quarry. It shows that the 1 in 100 event or 1% AEP is slightly over 1000mm over a 7-day period.

TopRock quarry has two large catchment dams (Figure 2) to hold and supply water for dust suppression and to act as sediment control for large scale rain events. It is impossible to contain all water from the site from a 1 in 100-year event, however all practicable measures are made to eliminate the release of any contaminants. Wherever possible all surface runoff is sent to the holding dams to allow for sediment to be retained on site. Where this is not possible strict sediment controls are put in place, including sediment control fences and smaller rock sediment traps prior to water leaving site. No contaminated water leaves the site. Contamination of water by petrochemicals is treated by a water separator and the contaminants are disposed of in accordance with approved regulated waste management processes.

In schedule C – Water, of the Certificate of Registration No. RNRE00847608, condition of development approval, the licence states that the size of any sediment dam must be sufficient to contain run-off expected from a 24 hour storm with an average reoccurrence interval of 1 in 5 years (20% AEP). The 1:5-year event for 1 day is approximately 250mm.

From analysis using Google Earth, the catchment for the sediment dam in front of the weigh bridge is approximately 60,000m$^2$. The volume required to be contained is 15,000m$^3$. The weighbridge dam capacity is approximately 16,800m$^3$. The sediment dam situated next to the workshop has a catchment of approximately 63,000m$^2$. The capacity required is 15,750m$^3$. The dams calculated capacity is over 30,000m$^3$. Sediment dam capacity exceeds the minimum requirements of the licence. Dam capacity shall be monitored and maintained. Periodic sediment removal shall be implemented when required.

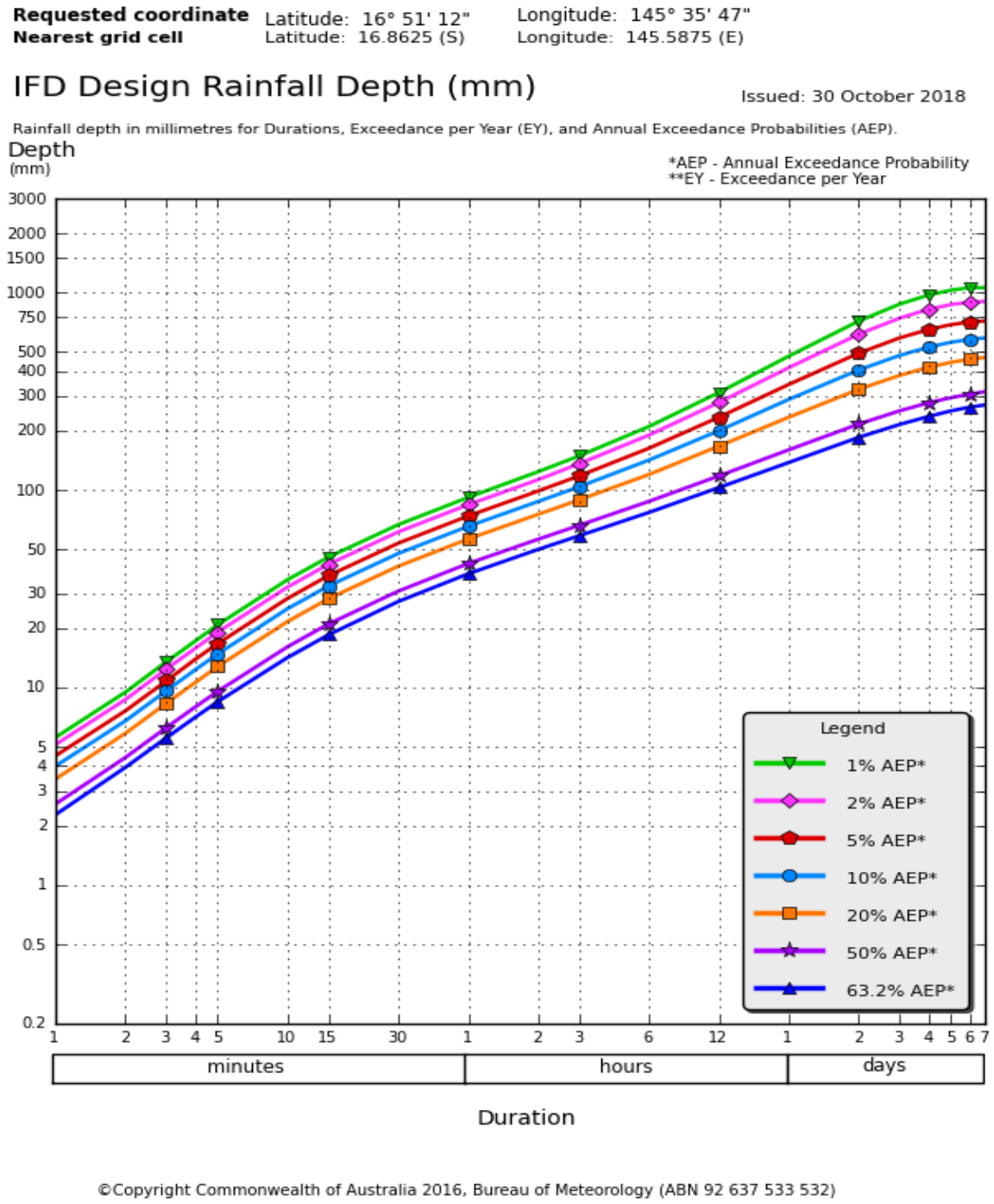



Figure 12: IFD Design Rainfall depth in mm

# 9 Incident Reporting

Incident reporting shall be conducted in accordance with *SP19 Incident Reporting & Investigations / Corrective and Preventive Action* procedure.

# 10 Closure Planning

Closure plans are in the process of development. It is envisaged that the site will have a long term secondary use such as subdivision. The final use will be taken into account when the quarry closure plan is developed. If the quarry is to be placed into care and maintenance, for a temporary period, then work will cease and the site made safe and monitored until a time when work shall recommence.

# 11 Appendices

Appendix A:
Deswik, Guidelines and Considerations for Open Pit Designers (March 2018), by Julian Poniewierski, Senior mining consultant

# 12 References


- Geochempet Services (September 2017) Petrographic report, on a source rock sample (1) from TopRock Quarry.
- Department of Transport & Main Roads (February 2015) QRS1: Quarry registration outline.
- Department of Transport & Main Roads (February 2015) QRS2: Preparing a quarry assessment report for a hard rock quarry.
- Department of Transport & Main Roads (February 2015) QRS4: Assigning quarry specific testing frequencies for source rock tests.
- Department of Environment and Resource Management (January 2010) Certificate of Registration No. ENRE00847608.
- Geoscience Australia, Australian Government: Australian stratigraphic units database.
- http://fgf.bom.gov.au/water/designRainfalls/revised-ifd/?design=very_frequent&sdday=true&nsd%5B%5D=&nsdunit%5B%5D=m&coordinate_type=dms&latdeg=16&latmin=51&latsec=12&londeg=145&lonmin=35&lonsec=47&user_label=TopRock+Quarry&values=depths&update=&year=2016
- Deswick, Guidelines and Considerations for Open Pit Designers (March 2018) by Julian Poniewierski, Senior mining consultant.
- fgf Developments TopRock quarry Integrated Site Management Plan (2018).
- Threatened Flora Survey Report for TopRock Quarry (September 2018) by Ecorex for Planning Plus Pty Ltd.

**Location**

**Lot 46 Kennedy Highway**

**Kuranda, QLD 4881**

**Phone: 0427 576 989**

**ABN: 67 102 951 039**




### Safety, Quality & Environmental

# Integrated Site Management Plan

| | | | |
|---|---|---|---|
| **Document Status** | Controlled ☒ | Uncontrolled ☐ | |
| **Revision** | 5 | | |

### Developed & Authorised for Release By:

| | | | |
|---|---|---|---|
| **Name** | Murray F Moule | **Position** | Site Senior Executive |
| **Signature** | | **Issue Date** | 31/01/2022 |

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## Plan Control

The latest version of this Plan will be available in hardcopy in the Site Office / Weighbridge for all Quarry personnel. Distribution of the ISMP will be to those detailed on the distribution listing below.

Controlled Copy Distribution List

| Name | Position | Company | No. of Copies |
|---|---|---|---|
| Murray F Moule | SSE / Quarry Manager | TopRock Quarry | 1 |
| | | | |

Document Modification History

| Revision | Sections Revised | Revision Description | Prepared by | Date | Authorised by | Date |
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| 1 | All | Initial draft | Mark Jeynes | 26/02/2018 | Murray F Moule | 15/03/2018 |
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| | | | | | | |
| | | | | | | |

## 1. Purpose

The following Integrated Site Management Plan (ISMP) sets the guidelines in relation to how TopRock Quarry will plan, control and deliver the highest possible standard. This ISMP will be used in conjunction with TopRock Quarry's integrated management system policies and procedures to deliver quarried product and services in accordance with our contractual, safety, quality and environmental responsibilities.

## 2. Integrated Management System (IMS)

TopRock Quarry maintains a Quality, Safety and Environmental Integrated Management System (IMS) that is compliant with the following standards:

- ISO 9001 Quality Management Systems
- ISO 14001 Environmental Management Systems
- ISO 45001 Occupational Health and Safety Management Systems

TopRock Quarry has adopted and approved for use fgf's IMS Procedures which support this ISMP and are listed below. These procedures will assist the Team in successfully achieving client requirements in a manner that is not only compliant but also practical, efficient and cost-effective.

| Procedure Number | Procedure Name |
|---|---|
| SP 01 | Management Review |
| SP 02 | Tender and Contract Review |
| SP 03 | Process Control / Service Delivery |
| SP 04 | Consultation, Communication and Dispute Resolution |
| SP 05 | Document and Data Control |
| SP 06 | Performance Management |
| SP 07 | Control of Non-conforming Product |
| SP 08 | Procurement and Subcontractor Management |
| SP 09 | Induction, Training and Competence |
| SP 10 | Handling, Storage, Packing, Preservation and Delivery |
| SP 11 | Calibrations, Servicing and Use of Measuring and Test Equipment |
| SP 12 | Plant and Equipment Maintenance |
| SP 13 | Emergency Preparedness and Response |
| SP 14 | Product ID and Traceability |
| SP 15 | Inspection Testing and Test Status |
| SP 16 | Systems Audits, Site Inspections and Monitoring |
| SP 17 | Risk Management |
| SP 18 | Legal and Other Requirements |
| SP 19 | Incident Reporting & Investigations / Corrective and Preventive Action |
| SP 20 | IMS Records Management |
| SP 21 | Workplace Rehabilitation |
| SP 22 | Permit to Work Procedure |
| SP 23 | Design Control |
| SP 24 | Hazardous Chemicals |
| SP 25 | Lockout / Tagout for Plant and Equipment |
| SP 26 | Asset Management |

## 3. Policies and Commitment

TopRock Quarry's policies are an integral part of our site operations and adherence to them is the prime responsibility of upper management as well all personnel involved with the delivery of Quarry activities. The following policies form part of this document as *Appendix A*:

- Quality, Safety, Health and Environmental Policy
- Fitness for Work Policy
- Equal Opportunity and Anti-Discrimination Policy
- Privacy Policy
- Rehabilitation Policy
- Drug and Alcohol Policy

These commitments will be communicated to all employees and contractors during the site-specific induction as well as via site notice boards.

## 4. Site Details

### General

| Site Address: | Lot 46 Kennedy Highway, Kuranda QLD 4881 |
|---|---|
| Scope of Works on Site | |
| Extraction, crushing, dry screening, stockpiling and transport operations of quarry products. | |

### Key Contacts

| Position | Name | Contact Number | Email |
|---|---|---|---|
| Quarry Manager/SSE | Murray F Moule | 0418 772 125 | murray@fgf.com.au |
| fgf Operations Manager | Brendan Rogina | 0427 576 980 | brendan@fgf.com.au |
| Site Supervisor | Peter Beck | 0427 576 989 | peter@fgf.com.au |
| Plant Operator | | | |

### Hours of Work

| Week Day | Day Shift Hours | Night Shift Works | Comments |
|---|---|---|---|
| Monday - Friday | 6am – 6pm | N/A | |

### Site Rules and Code of Conduct

*Site Rules and TopRock Quarry's Code of Conduct* are attached to this plan as *Appendix A* and must be communicated to the workforce through induction training as well as via site noticeboards. All personnel must comply with these rules at all times. Any workers who break these rules will be performance managed in accordance with *SP 06 Performance Management*.

## 5. Legal and Other Requirements

In accordance with *SP 18 Legal and Other Requirements*, all personnel and contractors working on this site must comply with the requirements of all federal, state and local legislation as well as any other specifications or guidelines applicable to the works undertaken.

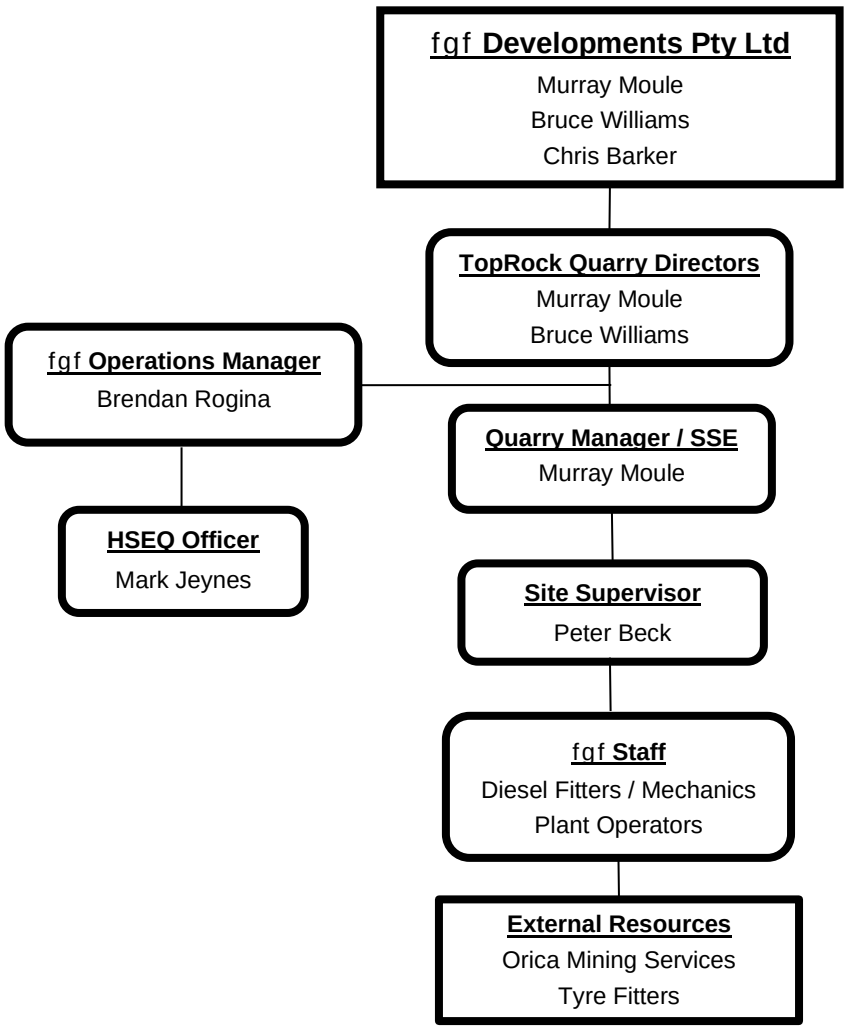
## 6. Objectives and Targets

TopRock Quarry is committed to setting measurable objectives and targets in relation to its safety, quality and environment performance. TopRock Quarry's *Objectives and Targets* have been determined by both fgf's requirements as well as TopRock Quarry's own strategic goals.

| WORK HEALTH & SAFETY / ENVIRONMENTAL OBJECTIVES & TARGETS | | |
|---|---|---|
| Objective | Target | Frequency |
| Reduce all injuries and events with potential. | Zero | Review monthly |
| To reduce the number and severity of workplace Incidents. | Workplace Safety / Environmental inspections carried out weekly | Review monthly |
| To reduce the number and severity of workplace injuries. | Carry out task observations of high-risk activity – SWMS / JSA's Weekly | Review monthly |
| Conform to all relevant legislation regulations and guidelines. | No events resulting in statutory complaints or notices being issued | Review 6 monthly |

## 7. Roles, Responsibility and Authority

TopRock Quarry Team Organisation Chart (example below)



### Responsibility and Authority

Responsibility and authority are communicated to all workers on induction, position descriptions as well as throughout TopRock Quarry's Management System Procedures. The responsibility and authority specific to this site is outlined throughout the site-specific management plans. A brief summary of responsibilities and authority is provided below.

| Position | Responsibility | Authority |
|---|---|---|
| Site Senior Executive | Manage the Quarry within budget as well as within the constraints of all applicable laws, company procedures, specifications and contractual obligations. | The Site Senior Executive is authorised to discuss and resolve contractual and technical issues with the Client, Suppliers and Subcontractor.<br><br>The Site Senior Executive is authorised to select, engage and control subcontractors and suppliers.<br><br>The Site Senior Executive is authorised to reject any suppliers or subcontractors who do not meet TopRock Quarry's or our client's standards. |
| Quarry Manager | Ensure all work operations are conducted within the constraints of all applicable drawings and specifications and as directed by the Site Senior Executive.<br><br>Execute the Integrated Quality, Safety and Environmental requirements in accordance with TopRock Quarry Management System Procedures and Contract Specifications.<br><br>Inspect subcontractors and suppliers works to ensure compliance. | The Quarry Manager is TopRock Quarry Management Representative.<br><br>Engage and monitor suppliers and subcontractors as directed by the Site Senior Executive.<br><br>Authority to facilitate inspection and testing processes to ensure compliance with TopRock Quarry management system and clients Specifications and contract requirements.<br><br>Authority to stop work if any activities are considered unsafe to undertake. Authority to consult appropriate specialist advice where required. |
| Site Supervisor | Supervise all work operations conducted. Supervise Operators and Quarry workers to ensure all work is constructed as safely and as per the contract. | Authority to stop work if any activities are considered unsafe to undertake.<br><br>Engage suppliers and subcontractors as directed by the Site Senior Executive. |
| Operators & Quarry Workers | Each operator and labourer are responsible for the satisfactory performance of their assigned tasks. | As directed of the Site Senior Executive, Quarry Manager or Site Supervisor. |

## 8. Quality Management

The Quarry processes are outlined in the Safe Work Method Statements (SWMS) and Safe Work Instructions (SWI). To ensure these processes meet all quality related obligations, operating instructions as well as identification and traceability procedures have been developed as outlined below. Specific procedures may be generated in addition to the operation instructions where the Site Senior Executive, deem it necessary based on the risk posed by that specific activity.

### Inspection and Testing

Inspection and testing will be undertaken to examine quality compliance of material stockpiles to check whether current site controls and processes are functioning effectively or require improvement.

All Operational Work Instructions and / or checklists are to be prepared and approved by the Site Senior Executive prior to the commencement of works on site. All non-conformances identified during TopRock Quarry's inspection and testing process will be reported and rectified in accordance with *SP 19 Corrective and Preventive Action*.

### External Testing

All testing laboratories must be NATA accredited. The Quarry Manager is responsible for ensuring all testing is supplied through an appropriate provider.

The nominated provider is:

| Laboratory | Contact Name | Contact No. | Location | NATA Accreditation No. |
|---|---|---|---|---|
| Construction Sciences | Craig Wilson | 0477 990 048 | Cairns | 1986 |

## 9. Resources and Infrastructure Management

The Site Senior Executive must consider all resourcing and infrastructure requirements for the Quarrying operation, this includes:

- Human resources
- Buildings, workspaces and associated utilities such: as office space, crib sheds and amenities
- Process equipment (both hardware and software)
- Essential services such as water and electricity
- Supporting services such as transport, communication or information systems

## 10. Time Management

Where required, the Site Senior Executive will be responsible for developing a Quarry production programme. This program should reflect Quarry targets that are subject to day-to-day variations in conditions, productivity and other influencing factors. Any proposed changes to this programme or potential delays must be immediately communicated to Clients in writing.

## 11. Safety Management

Safety is the number one priority when it comes to TopRock Quarry's day-to-day operations. Hence, the Site Senior Executive has ensured this ISMP defines the process for meeting TopRock Quarry's workplace health and safety obligations as well as the organisations safety objectives and targets.

## 12. Environmental Management

One of TopRock Quarry's goals is to respect and protect the environment we work in. To achieve this goal, TopRock Quarry has developed environmental controls for the works we undertake. Refer: *Appendix C - Environmental Instructions (ENVI)*. These ENVI's outline how TopRock Quarry will manage the environmental aspects applicable to its activities on site.

Please note, in accordance with environmental legislation, employees and contractors must take all reasonable and practical measures to prevent or minimise environmental harm and environmental nuisance while working for TopRock Quarry. Additionally, every employee and subcontractor also have a 'duty to notify' under environmental legislation. Therefore, if any person becomes aware of an activity or incident that is causing or could cause environmental harm, they have a responsibility to notify the Site Supervisor.

### Environmental Impacts

TopRock Quarry has adopted a process line model to facilitate continuous improvement of its business activities. The products, activities and services undertaken by personnel working for or on behalf of TopRock Quarry identified as having the potential for environmental impact have been summarised below:

Environmental Process Line Model

| | | |
|---|---|---|
| E | Earthworks / Extraction | (*incl. clearing, excavation and blasting)* |
| C | Crushing / Processing | (*incl. stockpiling and blending)* |
| T | Transport | (*incl. internal and external)* |

In addition, TopRock Quarry's environmental aspects have been identified and cross referenced to the company's activities below:

Environmental Aspects Associated with TopRock Quarry Operations

| Aspects | E | C | T |
|---|---|---|---|
| Air Quality | x | x | x |
| Cultural Heritage | x | | |
| Soil Erosion and Stability | x | x | x |
| Flora and Fauna | x | | |
| Hazardous Substances | x | x | x |
| Noise and Vibration | x | x | |
| Waste Generation | x | | x |
| Water Quality | x | x | |

### Environmental Risk Assessment

Refer to TopRock Quarry's environmental risk register *Appendix B – Hazard and Risk Register – Safety / Environmental.* This has been conducted for aspects identified as applicable to the company's operations and activities.

Please Note: Risks determined to be extreme or high are considered to be significant environmental impacts. Where practicable all implemented control measures should reduce the residual risk to a moderate or low level.

### Environmental Controls

Environmental Instructions have been developed for each environmental aspect applicable to TopRock Quarry's activities identified under the process line model as follows:

- Air Quality
- Cultural Heritage
- Soil Erosion and Stability
- Flora and Fauna
- Hazardous Substances
- Noise and Vibration
- Waste Generation
- Water Quality

Where additional environmental aspects are identified specific to TopRock Quarry, the Site Senior Executive is responsible for ensuring that the aspect is added to the risk register and that environmental controls are developed to effectively manage the potential impact.

## 13. Records Management

Records will be managed for TopRock Quarry in accordance with *SP 20 IMS Records Management*. Additionally, hardcopy records will be stored in a clean, dry environment that is free from excessive dust and pests, as well as in an area that is at the lowest risk of flooding, fire or theft.

## 14. Document Control

Documents will be secured and controlled in accordance with *SP 05 Document and Data Control*. The Quarry Manager is responsible for controlling the distribution of *SPF 5.1 Document Distribution Register* and notifying necessary personal. The primary documents that will be controlled on site and the people in charge of reviewing and approving them prior to use are as follows:

| Document Type | Custodian |
|---|---|
| Management Plans | Director |
| Site Drawings / Instructions | Site Senior Executive / Quarry Manager |
| All TopRock Quarry Safety Documentation & Records | HSEQ Officer |
| Company Policies, Procedures and Forms. | HSEQ Officer |

## 15. Training

### Site Induction and Training Requirements

All inductions and training for the Quarry will be handled in accordance with *SP 09 Induction, Training & Competence*. The Quarry Manager and Site Supervisor are to ensure that all personnel, including subcontractors, are suitably competent to carry out their allocated tasks in a safe and responsible manner. No workers are to commence work unless they have been site inducted, deemed competent and are fit for purpose. The Quarry Manager is responsible for keeping this register up to date and maintaining a copy of all applicable training records.

## 16. Risk Management

### Hazard Identification, Risk Assessment and Control

TopRock Quarry identify hazards and manage risk in accordance with *SP 17 Risk Management*. The hazards and risks related to this site have been assessed and are identified in the *Appendix B – Hazard and Risk Register – Safety / Environmental* along with the recommended measures to control those risks. The Site Senior Executive and Site Supervisor is responsible for ensuring these hazards and risks are communicated to all staff and that appropriate resources are allocated and trained to implement the control measures required. This includes ensuring adequate procedures, workers plant and equipment.

### High Risk Activities

When activities or tasks have an initial risk rating of high or extreme, the Site Senior Executive is responsible for developing a documented procedure that describes the task, identifies the hazards and documents how the task is to be performed to adequately minimise the risks. Typically, this will be in the form of a *Safe Work Method Statement (SWMS/JSA)* for safety risks.

No worker is authorised to undertake the activity under any circumstances until the associated risks can be reduced to an acceptable level.

High risk activities have been identified and are in the Hazard and Risk Register with SWMS developed to control the identified risks. Staff are not authorised to undertake these activities without prior training in these procedures. For reference purposes, the current documented procedures and any additional procedures identified are available in hard copy in the Site Office / Weighbridge. Should any worker wish to contribute to these procedures please feel free to mention any recommendations to the Site Supervisor at any time.

SWMS must be formally reviewed and updated when:

- A significant change to a task or activity is identified
- Changes to Legislation
- An incident occurs relating to the task or activity
- A significant hazard is identified relating to the task or activity or
- Periodically – every 12 months.

### Identifying / Reporting Hazards and Assessing Risks during Day to Day Activities

It is TopRock Quarry's policy that all workers remain alert and actively report any potential hazards and environmental impacts immediately to the Site Supervisor. Should any personnel feel uncomfortable about reporting a risk to the Site Supervisor, they are encouraged to report the issue to the Site Senior Executive / Quarry Manager. Supervisors and managers have an obligation to investigate all potential risks reported to them, ensuring they are addressed through consultation and by the appropriate personnel in accordance with *SP 17 Risk Management*. Any workers, supervisors or managers who fail to acknowledge and manage potential risks as far as reasonably practicable, will be investigated and disciplined where required.

### Traffic Management

All vehicles entering TopRock Quarry crushing / screening area shall be required to complete the Traffic Management training prior to entering the site. As this information will form part of the living Quarry (various stages of progress) this training will need to be updated as the stages vary.

## 17. Fitness for Work

In accordance with *PO-006 Drug and Alcohol Policy and PO-002 Fitness for Work (Appendix A)* all personnel will be required to present themselves fit for duty for each shift in order to not put themselves or others at risk. TopRock Quarry believes it is important that all personnel are aware of the risks involved with drugs and alcohol, stress and fatigue, and the ways these risks may be managed.

Nobody wants themselves or their work mates to be injured at work, therefore it is important that all personnel actively participate in this process, and encourage fitness for work by:

- Ensuring employees check that those onsite each day are fit for work prior to and during each shift.
- Notifying the Site Supervisor immediately of anyone who may not be fit for work.

If any person has a fitness-for-work issue that needs to be addressed confidentially, TopRock Quarry can arrange access to organisations and professionals who can work with the individual to ensure they can return fit for work as soon as possible. However, personnel should be prepared to openly discuss with the Site Supervisor not only their own fitness for work, but also that of work mates. The Quarry Manager will be responsible for ensuring the site working hours and rosters are within all applicable guidelines.

## 18. Procurement Management

### Procurement Process

All purchasing requirements must be determined and carried out in accordance with *SP 08 Procurement and Subcontractor Management*. As a result, the Quarry Manager is responsible for identifying the primary suppliers and subcontractors that will be utilised on the site. This plan will help minimise the safety, quality and environmental risks associated with the teams purchasing activities. In summary, when considering the purchasing requirements for this site the; Quarry Manager will:

- Give careful consideration to the safety, quality and environmental constraints identified and outlined in section 5 (legal and other requirements) of this document.
- Conduct risk assessments in accordance with *SP 17 Risk Management* and take all reasonable steps to eliminate or reduce the risk associated with the goods or services provided to TopRock Quarry where required.
- Ensure the goods or services anyone intends to provide can meet all specified requirements on delivery and throughout the Quarrying process.
- Ensure all safety, quality and environmental expectations are clearly documented and referenced in all quotation requests, purchase orders and subcontract agreements.
- Ensure satisfactory records are provided to verify that materials and services meet all specified requirements.
- The Quarry Manager shall ensure all subcontractors will be subject to supervision by an appropriately qualified and experienced TopRock Quarry representative and are monitored and reviewed throughout the operations life cycle.

### Client Supplied Product

All client-supplied products are to be handled in accordance with *SP 10 Handling, Storage, Packing, Preservation and Delivery*. It is the Site Senior Executive's responsibility to ensure all client services and materials are supplied in accordance with the contract as well as TopRock Quarry's policies, procedures and expectations.

## 19. Plant and Equipment Management

The Site Supervisor is responsible for overseeing that all workers who are operating plant and equipment including common plant are provided with adequate instruction to ensure they are able to operate the plant and equipment safely. Also, the Site Supervisor must oversee that all operators of load shifting equipment have been deemed competent in accordance with *SP 09 Induction, Training and Competence* and that the plant and equipment being utilised on site is fit for purpose.

Additionally, all mobile powered plant must undergo a daily prestart inspection prior to use. All plant and equipment will be inspected, serviced and maintained in accordance with manufactures guidelines as well as relevant risk assessments, inspection results, standards and regulations. If any plant or equipment becomes damaged or is deemed unsafe then the item must not be operated and should be clearly identified as inoperable though the use of adequate signage. The Site Supervisor must then be notified to determine a suitable solution.

## 20. Emergency Preparedness and Response Management

An Emergency Response Plan covering safety and environmental incidents has been developed in accordance with *SP 13 Emergency Preparedness and Response*. As per legislative requirements, all Emergency Response Plans must be tested through drills or other means as deemed appropriate by the Quarry Manager. Additionally, the Quarry Manager must ensure that all team members, subcontractors and site visitors are trained in site-specific emergency response protocol upon site induction. The *Emergency Response Plan* (*Appendix D)* for TopRock Quarry forms part of this document and must be made readily available, easily identifiable and accessible.

## 21. Consultation and Communication

### Consultation

All personnel associated with TopRock Quarry are entitled to provide feedback on all quarry-related procedures, hazards, risks and day to day issues at scheduled meetings, or immediately via the Site Supervisor at any time. All feedback must be reviewed and actioned accordingly. Remember, these meetings are meant to include input from everyone at the Quarry, if anyone has any ideas or queries the scheduled meetings below are the time to raise them. Safety is everyone's responsibility and the work methods talked over in these meetings will constitute how work will be conducted on site.

### Communication

TopRock Quarry will communicate safety, quality and environmental issues to all personnel involved in this site in accordance with *SP 04 Consultation, Communication and Dispute Resolution*. The Site Supervisor will ensure all issues raised during these meetings are appropriately dealt with and communicated to upper management meetings as applicable.

Noticeboards will also be used to communicate Mine Entry Records (MRE), safety bulletins, incident alerts, memorandums and other site related information, and are located in the Site Office / Weighbridge and common use areas that the workforce frequents (i.e. crib areas). Additionally, appropriate signage will be used around the workplace to draw the attention of persons working or entering an area and communicate the hazards and / or controls required for that area. Signs must be relevant and clearly visible.

### Client Communication

The Site Senior Executive and / or the Quarry Manager are responsible for all formal communications with the client and their representatives and ensuring they remain informed throughout their project.

### Community Engagement and Complaints Management

Additionally, maintaining effective communication with the local community is also very important to TopRock Quarry. TopRock Quarry will provide sufficient information to ensure timely notification to the community of Quarry activities and likely impacts.

Any contact with a member of the public must always be treated with the utmost importance and respect. A record of all issues raised by the public will be recorded in accordance with *SP 19 Incident Reporting & Investigation / Corrective and Preventative Action*. The Site Office / Weighbridge will have emergency contact information displayed for the public to be able to contact TopRock Quarry in relation to any problems, queries or needs.

## 22. Non-Conformance, Complaints, Preventative and Corrective Action

All individuals working at TopRock Quarry are responsible for notifying the Site Supervisor of incidents, hazards, non-conformances, complaints and near misses as soon as practicably possible; in accordance with *SP 19 Incident Reporting & Investigation / Corrective and Preventive Action*. In the case of emergencies, the procedures specified in the *Emergency Response Plan* will take priority and must be followed.

The type and extent of any investigation will be determined by the Site Senior Executive. All incidents and accidents need to be discussed during daily pre-start / toolbox meetings. All injuries will be reported to the Quarry Manager as soon as possible to ensure that the workplace rehabilitation process can begin immediately. All safety injuries will be managed in accordance with *PO-005 Rehabilitation Policy (see Appendix A).* TopRock Quarry's Rehabilitation Co-ordinator will consult with the injured worker, medical staff and the Quarry Manager to ensure that suitable duties can be arranged, with the intention of enabling employees to return to work as soon as practical after any injury.

## 23. Handling, Storage, Packing, Preservation and Delivery

### Materials

All goods must be handled in accordance with *SP 10 Handling, Storage, Packing, Preservation and Delivery*. This means the Site Supervisor must oversee that the risks associated with the storage, use and movement of goods and materials related to the Quarry are assessed and suitable controls are implemented.

### Hazardous Substances and Dangerous Goods

All personnel at the Quarry are responsible for notifying the Site Supervisor of any hazardous substances or dangerous goods to be used, prior to it arriving on site. The Site Supervisor will ensure that appropriate controls are implemented. A register will be kept on site along with the Safety Data Sheets (SDS). These documents will be readily accessible to all personnel in areas where hazardous substances are in use or stored.

### Waste Management

Additionally, to avoid the unnecessary creation of waste; all workers must reuse and recycle waste where ever possible. Where waste has been created, all personnel must ensure it has been appropriately assessed for risks and disposed of by an appropriately licenced service provider and that applicable records are maintained.

## 24. Essential Services, Site Amenities, Housekeeping and Public Safety

Essential Services will be provided on site for use by any person at the workplace and shall not be altered without the express permission of TopRock Quarry. TopRock Quarry shall provide instruction on the safe use of essential services supplied where required under WHS legislation.

This will include an adequate number of toilets located on site. The toilets are to be kept clean and provided with toilet paper and soap. TopRock Quarry will also provide a crib hut to ensure that there is a sheltered area for workers to eat meals and take breaks in. The crib hut will be provided with fresh drinking water as well as hand and face washing facilities. The toilet and crib are to be inspected weekly and all workers must ensure the crib area is always kept in a clean and tidy state.

Access to the work site will be restricted to only those personnel required to work on the site. The Site Supervisor will be responsible for ensuring that all access restrictions required for the site are implemented.

## 25. Audits, Inspections and Monitoring

This site will be monitored in accordance with *SP 16 Systems Audits, Site Inspections and Monitoring*. Hence, the following inspections and monitoring will apply to this project.

### Daily Checks

Prior to commencing work, the Site Supervisor and workers are required to conduct safety and environmental checks of their work area to identify any workplace hazards and impacts. Where issues are identified, action must be taken to control the areas of concern. No workers are to undertake unsafe work practices or use faulty equipment under any circumstances.

### Monthly Inspections

The Quarry Manager and / or the Site Supervisor must conduct a planned monthly inspection using the criteria outlined on *SPF 16.3 HSEQ Inspection and Behaviour Observation Checklist*.

### Task Observations

The Quarry Manager and / or the Site Supervisor must ensure procedures are regularly monitored to ensure work practices are safe, control measures are effective and they are compliant with legislation. This includes subcontractors work procedures. Results of task observations must be recorded / attached on *SPF 16.3 HSEQ Inspection and Behaviour Observation Checklist*. Procedures selected for observation as well as intervals must be appropriate to the risk of activities being undertaken on site at the time as well as legislative requirements.

### Health Surveillance and Monitoring

The Site Supervisor must notify the Quarry Manager of all health surveillance requirements for workers. The Quarry Manager will coordinate health surveillance through suitably qualified health care providers. Records that identify individuals and the status of their health will be received directly by the Quarry Manager and stored confidentially with personnel files. Where health monitoring is carried out, the Quarry Manager will ensure that results are communicated back to the individuals in a private and confidential manner.

NOTE: The national workplace exposure standard for respirable crystalline silica for an eight-hour time-weighted average airborne concentration is 0.05 milligrams per cubic metre ($mg/m^3$). It is recommended that lung testing be undertaken at least every 5 years.

### Internal Audits

Additional inspections and task observations will be conducted as determined by the Site Senior Executive. Additional systems internal audits will also be conducted to meet contractual requirements.

### External Audits

Should the Client wish to audit TopRock Quarry's Safety, Quality or Environmental Systems throughout the duration of their project, the Quarry Manager must ensure the auditor is provided with all documents, access and assistance necessary for the audits completion.

## 26. Appendices

A Policies / Code of Conduct / Site Rules / Site Specific Induction Record / Site Specific Induction Checklist / Plant Operator Competency Record
B Hazard and Risk Register – Safety / Environmental / SWMS / SWI / Plant Hazard Identification Checklist / Hazard and Risk Identification Worksheet / HSEQ Inspection & Behavioural Observation Checklist
C Environmental Instructions
D Emergency Response Plan
E Traffic Management Plan / TopRock Traffic Management Induction Register

# Site Specific Induction Checklist

**I have attended a Site Specific Induction for TopRock Quarry and understand my obligation to comply with all safety and environmental requirements, standards and directions given by the SSE / Quarry Manager or Site Supervisor.**

fgf **Employee / Visitor / Subcontractor:**
**(Circle one)**

**Given Names:** .....
**(Please Print)**

**Signature:** .....

**Date:** .....

**Other Information:**

**Next of Kin & Phone No.:(in case of emergency)**

.....

**Allergies or Special Requirements for Emergency Situations:**

.....

# Site Specific Induction Checklist

| Item No. | Description | ✓ To confirm |
|---|---|---|
| **General (Includes Security Issues)** | | |
| 1 | I have a current QLD Construction General Safety Induction Card which has been sighted by fgf management. | |
| 2 | I have been made aware of the Site Rules and well as the Code of Conduct. | |
| 3 | The use of **MOBILE PHONES** for personal use (calls, text messaging) shall be kept to a minimum, where I need to make or receive a call, I'm to stop what I'm doing and remove myself from harms way whilst making / receiving the call. I must not operate plant while on the phone.<br>⚠ **Public Media applications use shall only be permitted during designated breaks).** | |
| 4 | I must comply with any directions given by the SSE / Quarry manager or Site Supervisor with regards to activities on site. | |
| 5 | The standard work hours on site are Mon to Fri 6:30am to 4:00pm, where required works may be undertaken on Sat 6:30am to 1:00pm. No works will be undertaken on public holidays. | |
| 6 | I will not bring my personal vehicle on site. Personal vehicles must be parked in designated parking area. | |
| 7 | Radio channel on site is UHF channel 26. | |
| 8 | All vehicles on site must call ahead where required at nominated "Call Points" prior to proceeding. | |
| 9 | Speed limit through the Quarry is 20km/h, please obey this speed limit. | |
| 10 | I have been made aware of the current Traffic Management requirements for the Quarry. | |
| **Safety Issues** | | |
| 1 | Work activities that pose a significant risk are identified on TopRock Quarry Hazard Risk Register and have associated Safe Work Method Statements (SWMS) providing step by step instructions on how to conduct the work safely. SWMS along with the relevant assessment will be covered with you if you are involved in these activities. Subcontractors are required to provide their own SWMS as well as comply with fgf SWMS. | |
| 2 | All personnel on site must be in a fit state to complete their duties. As per fgf's Drug and Alcohol policy and Fitness for Work Policy, I will be required to participate in random testing if nominated. | |
| 3 | The minimum PPE required on site is a high visibility safety shirt or a safety vest, safety boots and safety helmet. All other safety gear required shall be as per the activity I'm undertaking. E.g. Hearing protection, safety glasses, safety gloves, dust mask. | |
| 4 | The national workplace exposure standard for respirable crystalline silica for an eight-hour time-weighted average airborne concentration is 0.05 milligrams per cubic metre ($mg/m^3$). Plant operators **MUST** keep the cabin door closed at all times during operation to assist with controlling dust inhalation, staff on foot working around plant in operation **MUST** wear a P2 dust mask and where possible stand up wind of dust. | |
| 5 | I am aware that there is a bund at the top and toe of the bench, this is to prevent falling / driving off and being struck by items falling from the bench / rock face, **at no time will I work inside the bunded area**. | |
| 6 | A register of hazardous substances (if used on site) will be kept in the Office / Weighbridge together with SDS. Contractors MUST provide all SDS's for substances they will be using to fgf. | |
| 7 | During an emergency, the Site Supervisor will direct staff what to do.<br>⚠ **The Emergency Assembly Area for TopRock Quarry is the front access gate.** | |
| 8 | All emergencies, accidents & injuries must be reported to the SSE / Quarry Manager or the Site Supervisor Immediately.<br>⚠ **The Site Supervisor is the First-aid Officer for TopRock Quarry.** | |
| 9 | I MUST attend the Daily Pre-start meeting and any toolbox meetings held on site. | |
| 10 | Do not drive or operate any mobile plant unless you are trained, hold the appropriate certificate or license, have a VOC provided by an RTO and are authorised to do so by SSE / Quarry Manager or Site Supervisor. | |

| | | |
|---|---|---|
| 11 | As a plant operator I **must** always use 3 point contact (2 hands & 1 foot or 2 feet & 1 hand) to enter or exit truck or mobile plant. I **must** never jump off a truck or mobile plant. | |
| 12 | I must not perform any work I consider potentially dangerous to my safety or health or that of others, I am to **STOP WORK** immediately and contact the Site Supervisor or HSEQ Officer. | |
| 13 | Apart from exercising common sense, I have a LEGAL OBLIGATION under the Mining and Quarrying Safety and Health Act and Work Health and Safety Act to work and act in a way that does not threaten the health and safety of myself or others at the Quarry. | |
| **Item No.** | **Description** | **✓ To confirm** |
| **Environmental** | | |
| 1 | As per my Environmental Duty and **s319 and s320 of the Qld Environmental Protection Act 1994,** I must not carry out any activity that causes, or is likely to cause, environmental harm unless all reasonable and practicable measures are in place to prevent or minimise harm, I must notify the SSE / Quarry Manager or Site Supervisor if whilst carrying out a work activity, I become aware of any event causing environmental harm. | |
| 2 | As an Employee, Contractor or Visitor I must act responsibly at all times to minimise the potential for causing an environmental incident, immediately report to SSE / Quarry Manager or Site Supervisor any potential for an environmental incident and must co-operate with fgf in their efforts to comply with environmental requirements. | |
| 3 | Any personal waste I bring to site I will take off site again or dispose of in the appropriate locations. **I WILL NOT** place personal rubbish on the ground. | |
| 4 | Any spillages of gravel material on roads or other areas outside the Quarry will immediately be reported to SSE / Quarry Manager or Site Supervisor. | |
| 5 | Haulage contractors will be required to ensure that their loads are covered and they are not overloaded prior to leaving the Quarry. | |
| 6 | Where a major Environmental Incident (chemical or fuel spill) occurs I shall contact the SSE / Quarry Manager or Site Supervisor **immediately** so that the appropriate authorities / emergency services can be alerted, and measures taken to manage the spill. | |
| 7 | Only areas approved for clearing shall have trees etc removed.<br>⚠ **Under no circumstances shall trees etc be removed outside of the permissible area**. | |
| 8 | If you discover any items or areas that you consider to have cultural heritage significance you are to cease work immediately and contact the SSE / Quarry Manager or Site Supervisor. | |
| **Housekeeping** | | |
| 1 | Toilets have been made available for use at the Office / Weighbridge, all personnel are advised that under no circumstances will they be permitted to use the surrounding bush land. | |
| 2 | Everyone is advised to bring food and drink supplies with them on site each morning. | |
| 3 | Any rubbish generated from works completed on site shall be removed from site at the end of each day and placed in the appropriate bins provided on site. | |
| 4 | I will only place equipment delivered to the site in the designated set-down area, I will not allow deliveries to be stored in front of emergency equipment, nor will I block access for emergency vehicles to enter site. I will also ensure all materials are stored and stacked correctly. | |
| 5 | I will keep all amenities in a clean state and remove all rubbish and place in bins provided. | |

| Inspection Date: | | Site / Location: | TopRock Quarry |
|---|---|---|---|

| House Keeping / Emergency Equipment | Yes | No | NA | Comments / Action Required |
|---|---|---|---|---|
| Are areas clear, hygienic & free of slip / trip hazards | ☐ | ☐ | ☐ | |
| Caps on star pickets | ☐ | ☐ | ☐ | |
| Are access ladders & stairs in good condition | ☐ | ☐ | ☐ | |
| Access routes and exits clear | ☐ | ☐ | ☐ | |
| Are first-aid kits available & maintained | ☐ | ☐ | ☐ | |
| Are workers aware of emergency procedures, emergency response personnel and emergency equipment onsite | ☐ | ☐ | ☐ | |
| Is clean drinking water readily available | ☐ | ☐ | ☐ | |
| **Personal Protective Equipment (PPE)** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Is safety footwear worn | ☐ | ☐ | ☐ | |
| Are hard hats worn on site | ☐ | ☐ | ☐ | |
| Is hearing and eye protection worn where required | ☐ | ☐ | ☐ | |
| Are dust masks being worn where required | ☐ | ☐ | ☐ | |
| Are high visibility clothing worn | ☐ | ☐ | ☐ | |
| Is correct PPE readily available to all including visitors | ☐ | ☐ | ☐ | |
| **Plant & Equipment Safety** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Is all moving machinery & nip points guarded / quick hitch safety pins in place | ☐ | ☐ | ☐ | |
| The guards that are in place are sound (not damaged) and are in good repair. | ☐ | ☐ | ☐ | |
| Are all lock out devices operating | ☐ | ☐ | ☐ | |
| Are plant pre-starts completed daily | ☐ | ☐ | ☐ | |
| Is all defective plant and equipment tagged out | ☐ | ☐ | ☐ | |
| Do operators hold appropriate certificates and/or licences | ☐ | ☐ | ☐ | |
| **Electrical Safety** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Is electrical equipment tested & tagged | ☐ | ☐ | ☐ | |
| Where required, are leads elevated | ☐ | ☐ | ☐ | |
| Is electrical equipment free of water, heat sources & cutting points | ☐ | ☐ | ☐ | |
| **Benches / Quarry Face** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Are top on benches bunded or barricaded | ☐ | ☐ | ☐ | |
| Are foot of benches bunded to reduce access | ☐ | ☐ | ☐ | |
| Is access and egress provided and bunded as required (half the height of the largest wheel). | ☐ | ☐ | ☐ | |
| Are spoil heaps clear of top of bench | ☐ | ☐ | ☐ | |
| **Hazardous Materials** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Are all hazardous materials clearly labelled | ☐ | ☐ | ☐ | |
| Are all Safety Data Sheets readily available & registered | ☐ | ☐ | ☐ | |
| Is material stored in the correct location | ☐ | ☐ | ☐ | |
| Storage areas designed to contain spills | ☐ | ☐ | ☐ | |
| **Working From Heights** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Are ladders tied off, angled correctly (1 in 4) & extend 1m above landing. | ☐ | ☐ | ☐ | |
| Working at heights equipment is inspected prior to use | ☐ | ☐ | ☐ | |
| **SWMS / JSA's / Safety procedures** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Workers are involved in SWMS / safety procedure development | ☐ | ☐ | ☐ | |
| Quarry risk register up to date | ☐ | ☐ | ☐ | |
| Reviews of SWMS or safety procedures carried out during inductions, prestart and safety meetings where required | ☐ | ☐ | ☐ | |
| Are workers inducted in SWMS applicable to their allocated tasks | ☐ | ☐ | ☐ | |
| Are Task Observations being carried out regularly | ☐ | ☐ | ☐ | |
| Are manual handling aids used where applicable | ☐ | ☐ | ☐ | |
| Has a marked up SWMS / JSA of the Task Observed during this site inspection been attached to this HSEQ Inspection checklist. | ☐ | ☐ | ☐ | |
| **Environmental Controls** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Are dust control activities effective | ☐ | ☐ | ☐ | |
| Are sedimentation controls effective | ☐ | ☐ | ☐ | |
| Is emergency spill kit on site | ☐ | ☐ | ☐ | |
| Is noise on site managed appropriately | ☐ | ☐ | ☐ | |

| Quality Controls | Yes | No | NA | Comments / Action Required |
|---|---|---|---|---|
| Are applicable documents controlled | ☐ | ☐ | ☐ | |
| Are all in process checks documented and evidence filed | ☐ | ☐ | ☐ | |
| Are all stockpile labelled with correct signs e.g. colour / Lot No. | ☐ | ☐ | ☐ | |
| **General** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| Are all required access & other permits held | ☐ | ☐ | ☐ | |
| Safety signage in place | ☐ | ☐ | ☐ | |
| All applicable management plans and procedures are up to date (e.g. safety plans, contractors SWMS, site safety rules, sediment etc) | ☐ | ☐ | ☐ | |
| Incidents & non-conformances reported | ☐ | ☐ | ☐ | |
| Have all workers been site inducted | ☐ | ☐ | ☐ | |
| Are bunds in place for all haul roads and of adequate height for all plant in use (half the height of the largest wheel). | ☐ | ☐ | ☐ | |
| **Other (Site Specific)** | **Yes** | **No** | **NA** | **Comments / Action Required** |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |
| | ☐ | ☐ | ☐ | |

| Item No. | Comments/Corrective Actions | Person Responsible | Status | FIXIT No. | Due Date (if applicable) |
|---|---|---|---|---|---|
| | | | ☐ Complete ☐ Incomplete | | |
| | | | ☐ Complete ☐ Incomplete | | |
| | | | ☐ Complete ☐ Incomplete | | |
| | | | ☐ Complete ☐ Incomplete | | |
| | | | ☐ Complete ☐ Incomplete | | |
| | | | ☐ Complete ☐ Incomplete | | |

| Inspection Participants | | | |
|---|---|---|---|
| Name | Position | Company | Signature |
| | | | |
| | | | |
| | | | |
| | | | |
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| | | | |
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Note: Copies of this inspection must be circulated to responsible persons for any rectifications required.

# fgf Hazard and Risk Register - SAFETY

| Activity/ Aspect | Risk Owner | Process Line Model | | | | | | | | | | | | Potential Hazard | Consequence | Initial Risk | | | Hierarchy of Controls Applied | | | | | | Proposed Control Measures | Controlled Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Concrete Works | Earth Works | Pavements | Storm Water | Sewerage Reticulation | Water Reticulation | Quarry Earthworks & Extraction | Crushing / Processing | Spray Seal | Asphalt Pavements | Depot and Workshop | Transport of Bitumen or Quarry products | | | L | C | RR | Elimination | Substitution | Isolation | Engineering | Administration | PPE | | L | C | RR |
| Clearing and Grubbing | fgf | x | x | x | x | x | x | x | | | | | | Contact with fauna and flora<br>Dust<br>Fatigue<br>Heat Stress<br>Hazardous manual task | Injury<br>Illness<br>Silicosis | Possible | Moderate | M-13 | | | | x | x | x | SWMS-Locate and Pothole Services<br>SWMS-Work with / Operation of Plant<br>SWMS-Working on or Adjacent to a Road<br>SWMS-Work Near OH Electrical Services<br>SWMS-Clear and Grub using Moblie Plant<br>SWMS-Using a Hazardous Substance<br>SWMS-Manual Tasks<br>SWI-Using Powered Small Plant | Unlikely | Insignificant | L-24 |
| Stockpiling | fgf | | x | x | | | | x | x | | | | | Dust<br>Trucks rolling over<br>Tipping of loads<br>Location, size and shape of the stockpile | Silicosis<br>Bodily injury<br>Potentially fatal engulfment from collaps of inappropriate batters | Unlikely | Moderate | M-16 | | | | x | x | x | SWMS-Work with / Operation of Plant<br>SWMS-Working on or Adjacent to a Road<br>SWI-Operation of a Tip Truck | Unlikely | Insignificant | L-24 |
| Noise | fgf | x | x | x | x | x | x | x | x | x | x | x | | Interaction with traffic<br>Interaction with public<br>Hazardous manual task<br>Working near roads | Community complaint<br>Hearing impearment / loss | Possible | Major | H-8 | | | | | x | x | Safety Management Plan<br>Environmental Management Plan<br>ENVI 07-Noise and Vibration<br>Health Surveillance and Monitoring | Unlikely | Minor | L-21 |
| Landscaping / Vegetation Protection Works | Subcontractor | x | x | x | x | x | x | x | | | | | | Recycled water<br>Fertilisers<br>Pesticides / Herbicides<br>Organic Soil Conditioners<br>Water Holding Agents<br>Hazardous manual task<br>Small plant | Injury / Illness<br>Lost time and productivity | Possible | Moderate | M-13 | | | | x | x | x | SWMS-Working on or Adjacent to a Road<br>SWMS-Using a Hazardous Substance<br>SWMS-Operating Chainsaw<br>SWMS-Manual Tasks<br>SWI-Working Outdoors<br>SWI-Using Powered Small Plant<br>SWI-Operation of a Tip Truck<br>SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Unlikely | Minor | L-21 |
| Site Camp and Facilities | fgf<br>Subcontractor | x | x | x | x | x | x | x | x | x | x | | x | Community and public access and safety<br>Damage of Existing Property<br>Visitor Access<br>Hazardous manual task | Hit by Moving Plant / Equipment<br>Injury<br>Potentital fatality | Likely | Moderate | H-9 | | | | | x | x | SWMS-Manual Tasks<br>SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Possible | Minor | M-17 |
| Traffic Management | fgf<br>Subcontractor | x | x | x | x | x | x | x | x | x | x | | x | Interaction with traffic<br>Interaction with public<br>Speed<br>Uneven surfaces<br>Changed traffic flow / conditions<br>Potential for exposure to external bullying or violence from road users or members of the public | Injury<br>Collision / Impact<br>Potentital fatality<br>Community complaint | Possible | Extreme | E-4 | | | | x | x | x | Traffic Management Plan<br>SWMS-Working on or Adjacent to a Road<br>SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Unlikely | Minor | L-21 |
| Blasting | Subcontractor | | x | | | | | x | | | | | | Premature detonation<br>Excessive noise<br>Dust<br>Projected objects and debris | Injury<br>Potentail fatality<br>Hearing impairment<br>Silicosis | Possible | Extreme | E-4 | | | | x | x | x | Approved Subcontractor Management Plan<br>Notification to Public<br>Exclusion Zones<br>SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Rare | Moderate | L-20 |
| Surveying | fgf<br>Subcontractor | x | x | x | x | x | x | x | | x | x | | | Working near roads<br>Mobile Plant<br>Wildlife | Bodily injury<br>Snake bites | Possible | Moderate | M-13 | | | | x | x | x | SWMS-Working on or Adjacent to a Road<br>SWMS-Survey Activities<br>SWMS-Manual Tasks<br>SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Unlikely | Minor | L-21 |
| Working at Heights (> 2m) | fgf | x | x | x | x | x | x | x | x | | | | | Uncontrolled falling from heights<br>Falling on a hard surface<br>Miscommunication<br>Slips / trips / falls<br>Falling objects<br>Fall protection and rescue equipment<br>Scaffolding<br>Elevated Platforms<br>Access and Egress | Injury<br>Potential loss of life<br>Property damage | Possible | Major | H-8 | | | | | | | Emergency Response Plan<br>Toolbox Meeting Form<br>Prestart Meeting Form<br>SWMS-Working 2m or Higher<br>SWMS-Operate Elevating Work Platform (EWP) | Unlikely | Moderate | M-16 |

# fgf Hazard and Risk Register - SAFETY

| Activity/ Aspect | Risk Owner | Process Line Model | | | | | | | | | | | | Potential Hazard | Consequence | Initial Risk | | | Hierarchy of Controls Applied | | | | | | Proposed Control Measures | Controlled Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Concrete Works | Earth Works | Pavements | Storm Water | Sewerage Reticulation | Water Reticulation | Quarry Earthworks & Extraction | Crushing / Processing | Spray Seal | Asphalt Pavements | Depot and Workshop | Transport of Bitumen or Quarry products | | | L | C | RR | Elimination | Substitution | Isolation | Engineering | Administration | PPE | | L | C | RR |
| Hiring Plant | Subcontractor | x | x | x | x | x | x | x | x | x | x | | x | Plant not maintained to manufacturers requirements<br>Plant not suitable for the task<br>Plant not supplied with appropriate information | Injury<br>Medical treatment | Possible | Moderate | M-13 | | | | x | x | | SP08 Procurement and Subcontractor Management Procedure<br>Verification of plant service history<br>Plant fitted with all safety devices<br>Plant serviced by qualified persons<br>Subcontractor to identify additional control measures as applicable | Rare | Insignificant | L-25 |
| Subcontactor Engagement | fgf | x | x | x | x | x | x | x | x | x | x | | x | Subcontractors with poor performance history<br>Lack of communication and planning | Injury<br>Potential loss of life | Unlikely | Major | M-12 | | | | | x | | SP08 Procurement and Subcontractor Management Procedure<br>Subcontractor Trade Contract<br>Subcontractor to identify additional control measures as applicable | Rare | Insignificant | L-25 |
| Handling, Storage and Transportation of Hazardous Substances | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Hazardous substances<br>Flammable substances<br>Toxic substances<br>Inhalation<br>Indigestion | Combustion<br>Poisioning<br>Damage to skin<br>Damage to eyes<br>Damage to respiratory tract | Possible | Moderate | M-13 | | | | x | x | x | SP10 Handling, Storage, Packaging, Preservation & Delivery Procedure<br>SP24 Hazardous Chemicals Procedure<br>Emergency Response Plan<br>SWMS-Using a Hazardous Substance<br>SWMS-Manual Tasks<br>SWI-Refuelling Plant (Diesel) | Unlikely | Minor | L-21 |
| Housekeeping | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Unsafe and clear entry to and from workplace<br>No system for collecting, storing and disposing of waste materials<br>Not enough area to store safety materials | Slips / trips / falls / injury / medical treatment | Likely | Moderate | H-8 | | | | | x | x | Project Specific Site Induction<br>SWMS-Manual Tasks<br>SWI-Housekeeping / Stacking and Storage | Unlikely | Insignificant | L-24 |
| Site Access and Egress | fgf | x | x | x | x | x | x | x | x | x | x | | | Traffic through and around the work area<br>Pedestrians moving through and around the work area<br>Speeding vehicles<br>Chemicals and fuels | Collision / Impact<br>Injury / slips / trips / falls | Unlikely | Moderate | M-16 | | | | x | x | x | Traffic Management Plan | Unlikely | Minor | L-21 |
| Inclement Weather | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Inclement weather | Poor visibility<br>Electrocution<br>Altered environment<br>Uncontrolled movement<br>Collision / impact<br>Slips / trips | Likely | Minor | M-14 | | | | x | x | x | SWI-Site Conditions<br>Emergency Response Plan | Rare | Minor | L-23 |
| Hot Works | fgf<br>Subcontractor | x | | x | x | x | x | x | x | x | x | x | | Burns / Fire / Explosion<br>Welding flash to workers and public | Injury<br>Potential loss of life | Unlikely | Major | M-12 | | | | x | x | x | Permit to Work<br>SWI-Welding / Oxy Acetylene Cutting<br>Emergency Response Plan<br>SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Unlikely | Minor | L-21 |
| Rock Drilling | Subcontractor | | x | | | | | x | | | | | | Working on slopes<br>Refuelling<br>Energised plant operating systems<br>Entanglement<br>Dust<br>Noise<br>Slips / trips / falls<br>Traffic<br>Interaction with the public<br>Damage to servics<br>Exhaust fumes<br>Uneven ground | Collision / Impact<br>Plant rollover<br>Potentail loss of life<br>Silicosis<br>Hearing impairment<br>Illness / injury<br>Slip / trip / fall | Unlikely | Major | M-12 | | | | x | x | x | SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Unlikely | Minor | L-21 |
| Hand Tools | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Sharp edges<br>Pinch points<br>Energised implements<br>Hazardous manual task | Injury<br>Potential loss of life | Possible | Moderate | M-13 | | | | | x | x | SP12 Plant, Machinery & Equipment Usage & Maintenance Procedure<br>SWMS-Manual Tasks<br>SWI-Using Hand Tools | Rare | Minor | L-23 |
| Hazardous Manual Tasks (Manual Handling) | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Lifting materials<br>Hazardous manual task | Injury / strain / sprain<br>Lost time<br>Decreased productivity<br>Fatigue | Possible | Moderate | M-13 | | | | | x | x | SWMS-Manual Tasks | Unlikely | Minor | L-21 |

# fgf Hazard and Risk Register - SAFETY

| Activity/ Aspect | Risk Owner | Process Line Model | | | | | | | | | | | | Potential Hazard | Consequence | Initial Risk | | | Hierarchy of Controls Applied | | | | | | Proposed Control Measures | Controlled Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Concrete Works | Earth Works | Pavements | Storm Water | Sewerage Reticulation | Water Reticulation | Quarry Earthworks & Extraction | Crushing / Processing | Spray Seal | Asphalt Pavements | Depot and Workshop | Transport of Bitumen or Quarry products | | | L | C | RR | Elimination | Substitution | Isolation | Engineering | Administration | PPE | | L | C | RR |
| Mobile Crane Activities | fgf Contractor | x | x | x | x | x | x | x | x | | | | x | Untrained operators<br>High wind conditions<br>Damaged / unstuitable lifting gear | Shortlegging<br>Injury<br>Potential loss of life | Unlikely | Major | M-12 | | | | x | x | x | Qualified Dogger / Rigger<br>SWMS-Working with / Operation of Plant<br>SWMS-Manual Tasks<br>SWI-Lifting and Slinging<br>SWMS as per Subcontractor<br>Subcontractor to identify additional control measures as applicable | Unlikely | Minor | L-21 |
| Mobile Powered Plant | fgf | x | x | x | x | x | x | x | x | x | x | | x | Working on slopes<br>Refuelling<br>Dust<br>Entanglement<br>Ergonomics<br>Noise<br>Slips / trips / falls<br>Traffic<br>Interaction with the public<br>Damage to servics<br>Exhaust fumes<br>Uneven ground<br>Steep Incline / Decline | Collision / Impact<br>Silicosis<br>Plant rollover<br>Potentail loss of life<br>Hearing impairment<br>Illness / injury<br>Slip / trip / fall | Possible | Major | H-8 | | | | x | x | x | SWMS-Working with / Operation of Plant<br>SWMS-Working on or Adjacent to a Road<br>SWI-Load and Unload Plant<br>SWI-Refuelling Plant (Diesel)<br>Machine Pre-start Checklist | Unlikely | Minor | L-21 |
| Forklift Operation | fgf | | | | | | | x | | | | x | | Untrained operators<br>Slips / trips / falls<br>Traffic<br>Interaction with the public<br>Exhaust fumes<br>Uneven ground | Illness / injury<br>Collision / Impact<br>Potential loss of life<br>Plant rollover | Likely | Extreme | E-2 | | | | x | x | x | Traffic Management Plan<br>SWMS-Forklift Operation | Unlikely | Extreme | H-7 |
| Refuelling | fgf | x | x | x | x | x | x | x | x | x | x | | x | Hazardous substances<br>Flammable substances<br>Toxic substances<br>Contaminated atmosphere<br>Contact with eyes / skin<br>Inhalation / ingestion | Uncontrolled release<br>Combustion / explosion<br>Skin or eye irritation<br>Central Nervous System effects<br>Dizziness / lack of concentration<br>Vomiting<br>Loss of consciousness | Possible | Moderate | M-13 | | | | x | x | x | SP24 Hazardous Chemicals Procedure<br>SWMS-Using a Hazardous Substances<br>SWI-Refuelling Plant (Diesel) | Rare | Minor | L-23 |
| Emergency Response | fgf | x | x | x | x | x | x | x | x | | | x | x | ¨ Fire<br>¨ Medical Emergency<br>¨ Heat Stress<br>¨ Bomb Threat<br>¨ Flooding<br>¨ Storm / Cyclone Threat<br>¨ Electrical Emergency<br>¨ Confined Space Incident<br>¨ Plant Rollover<br>¨ Fall from Heights<br>¨ Trench Collapse<br>¨ Traffic Incident<br>¨ Oil or Chemical Spill<br>¨ Gas Leak<br>¨ Explosion<br>¨ Structural Damage<br>¨ Personal Threat / Civil Disturbance<br>¨ Earthquake<br>¨ Armed Robbery<br>¨ Injured Fauna | Injury<br>Potential loss of life<br>Environmental harm<br>Damage to property<br>Damage to plant and equipment | Unlikely | Major | M-12 | | | | x | x | | SP13 Emergency Preparedness and Response Procedure<br>Emergency Response Plan<br>Emergency Equipment and First-Aid-assessment | Unlikely | Minor | L-21 |

# fgf Hazard and Risk Register - SAFETY

| Activity/ Aspect | Risk Owner | Process Line Model | | | | | | | | | | | | Potential Hazard | Consequence | Initial Risk | | | Hierarchy of Controls Applied | | | | | | Proposed Control Measures | Controlled Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Concrete Works | Earth Works | Pavements | Storm Water | Sewerage Reticulation | Water Reticulation | Quarry Earthworks & Extraction | Crushing / Processing | Spray Seal | Asphalt Pavements | Depot and Workshop | Transport of Bitumen or Quarry products | | | L | C | RR | Elimination | Substitution | Isolation | Engineering | Administration | PPE | | L | C | RR |
| Health Factor - Chemical | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Diesel Fuel, Smoking, Diesel Exhaust, Recreational Drugs<br><br>Chemicals Requiring Health Surveilance if present (NA = not on project)<br>Acrylonitrile - NA<br>Asbestos - NA<br>Benzene - NA<br>Cadmium - NA<br>Creosote - NA<br>Crystalline silica - NA<br>Inorganic arsenic - NA<br>Inorganic chromium - NA<br>Inorganic mercury - NA<br>Isocyanates - NA (often found in 2-pack glues and paints)<br>Organophosphate pesticides - NA<br>Pentachlorophenol (PCPs) - NA<br>Polycyclic aromatic hydrocarbons - NA<br>Thallium - NA<br>Vinyl chloride - NA<br>Lead - NA (lead dust, fumes or mist) | Potential illness to worker<br>Potential loss of life<br>Injury / acid burns<br>Respiratory burns<br>Dizziness / lightheadedness<br>Unconciousness<br>Combustion<br>Poisioning<br>Damage to skin<br>Damage to eyes<br>Damage to respiratory tract | Likely | Major | E-5 | x | x | x | | x | x | Emergency Response Plan<br>SWMS-Using a Hazardous Substance<br>SWI-Refuelling Plant (Diesel)<br>PPE provided - sunblock, gloves, wide brim hats<br>Smoking area allocated away from workplace<br>Drug and Alcohol Policy<br>SP24 Hazardous Chemicals Procedure<br>SP16 System Audits, Inspections and Health Monitoring Procedure<br>Site Rules and fgf Code of Practice<br>Hazardous Substance Risk Assessment | Unlikely | Moderate | M-16 |
| Health Factor - Biological | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Food Poisoning,<br>Water bourne infections,<br>Hepatitis A,<br>Poor personal hygiene,<br>Bitten or stung by wildlife (see Flora & Fauna),<br>Insect carrying disease | Personal injury / illness<br>Food Poisoning<br>Water bourne infection<br>Hepatitis<br>Anaphylactic shock<br>Allergic reaction<br>Ross River & Dengue Fever | Possible | Moderate | M-13 | | | | | x | x | SWI-Working Outdoors<br>Insect repellant provided<br>Accomodation licences checked for compliance with Food Safety Act.<br>Emergency Response Plan<br>SP16 System Audits, Inspections and Health Monitoring Procedure<br>Site Rules and fgf Code of Practice | Unlikely | Minor | L-21 |
| Health Factor - Physical | fgf | x | x | x | x | x | x | x | x | x | x | x | x | Heat,<br>Dust,<br>Noise and Vibration,<br>Radiation – UV,<br>Poor Workplace design,<br>Heavy use of VDU's,<br>Hazardous manual task | Sun Stroke<br>Heat Exhaustion<br>Silicosis<br>Temporary threshold shift (TTS)<br>Noise-induced hearing loss NIHL (tinnitus)<br>Skin burn<br>Skin cancer<br>Musculoskeletal injury (MSI)<br>Repetitive strain injury (RSI) | Possible | Major | H-8 | | | | | x | x | SWMS-Manual Tasks<br>SWI-Working Outdoors<br>PPE provided - sunblock, gloves, wide brim hats<br>Emergency Response Plan<br>SP16 System Audits, Inspections and Health Monitoring Procedure<br>Site Rules and fgf Code of Practice | Unlikely | Moderate | M-16 |

# fgf Hazard and Risk Register - ENVIRONMENTAL

| Environmental Aspect | Process Line Model | | | | | | | | | | | | Potential Hazard | Consequence | Initial Risk | | | Administrative Control Measures (Taking into Consideration the Hierarchy of Controls) | Behavioural Control Measures (Taking into Consideration the Hierarchy of Controls) | Physical Control Measures (Taking into Consideration the Hierarchy of Controls) | Controlled Risk | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Concrete Works | Earth Works | Pavements | Storm Water | Sewerage Reticulation | Water Reticulation | Quarry Earth Works & Extraction | Crushing / Processing | Spray Seal | Asphalt Pavements | Depot and Workshop | Transport of Bitumen or Quarry products | | | L | C | RR | | | | L | C | RR |
| Air Quality | x | x | x | x | | | x | x | x | x | x | x | Fumes and dust generated by earthworks, crushing and during the transport of quarried products. Dust can be generated from earthworks, stockpiling fill and transporting fill. Activities at the site have the potential to create large amounts of dust which could affect flora and fauna. | Reduced air quality and visibility.<br>Potential health and environmental productivity impacts.<br>Potential to carry contaminates to adjacent surface and stormwater. | Unlikely | Moderate | M-16 | ENVI 02: Air Quality<br>ENVI 09: Water Quality | Education and Site Inductions<br>Site Inspections and Monitoring<br>Environmental Awareness Training | All disturbed works to be regularly watered during dry and windy weather to prevent formation of dust.<br>Use of wheel shakers to minimise dirt tracked onto bitumen roads.<br>Remove dirt tracked onto roads removed by rotary sweeping or washing down.<br>Clean fuel and air filter elements along with regular maintenance of fuel injection systems. | Rare | Minor | L-23 |
| Hazardous Substances | x | x | x | x | x | x | x | x | x | x | x | x | Handling, use, transportation and storage hazardous substances have the potential to harm personnel and affect receiving environments if spilt or disposed of incorrectly. | The uncontrolled release of hazardous substances have the potential to contaminate land. In addition, spills and poor hazardous substance waste management may have a persistent toxic effect on both terrestrial and aquatic ecosystems. | Possible | Major | H-8 | ENVI 06: Hazardous Substances | Education and Site Inductions<br>Site Inspections and Monitoring<br>Environmental Awareness Training | Secure lids on all hazardous substances and materials.<br>Do not use hazardous substance and materials near water ways.<br>Constructing and implemenation of bunds.<br>Installation of silt curtains into waterways.<br>Rock check dams. | Possible | Insignificant | L-22 |
| Noise and Vibration | x | x | x | x | | | x | x | x | x | x | x | The major potential generation of noise during the construction / extraction period is the operation of vehicles, plant and equipment, trucks, earthmovers and jackhammers.<br>Ground vibrations generated during construction with particular reference to vibratory compaction have the potential to cause damage to property and/or nuisance-particularly for sensitive receptors. | Excessive and disturbing noise and vibration cause environmental nuisance and have the potential to disrupt normal activity.<br>This includes a reduced ability to communicate and concentrate, and increases in anxiety.<br>Noise and vibration may also have detrimental health effects such as hearing impairment, cardiovascular, skeletomuscular and mental health effects and may affect the breeding, feeding and roosting patterns of fauna. | Unlikely | Moderate | M-16 | ENVI 05: Fauna and Flora<br>ENVI 07: Noise and Vibration | Education and Site Inductions<br>Site Inspections and Monitoring<br>Dilapidation reports<br>Environement Awareness Training | Locate equipment e.g. compressors away from sensitive areas.<br>Only run noisy equipment when required.<br>Turn reversing alarms to low tone where able.<br>Limit work to hours specified by local by-laws.<br>Vibratory machinery not to be used within close proximity of buildings. | Unlikely | Minor | L-21 |
| Waste Management | x | x | x | x | x | x | x | x | x | x | x | x | The potential still exists for litter from workers to impact upon the habitat conditions of local flora and fauna.<br>Refuse, construction, sanitary and equipment waste should always be disposed of correctly.<br>Decomposing plant material stored on site can produce contaminants. | Waste contributes to landfill volume, attracts vermin, has the potential to harbour / spread disease and contribute to greenhouse gas emissions.<br>Poor waste management also contributes to visual disamentiy and may cause harm to fauna and flora. | Likely | Moderate | H-9 | ENVI 08: Waste Management | Education and Site Inductions<br>Site Inspections and Monitoring<br>Environmental Awareness Training | Provisions on site for the disposal of general refuse such as personal litter.<br>Removal of hazardous waste in accordance with Safety Data Sheets, DEHP requirements and local by-laws | Possible | Minor | M-17 |
| Water Quality | x | x | x | x | x | x | x | x | x | x | x | | Activities such as earthworks require a substantial amount of water to control dust.<br>Inadequate sediment control procedures or heavy rainfall periods may lead to contamination of stormwater drains, local creeks or other nearby waterways.<br>Contamination could be from excavation activities, concrete cutting or oil associated with construction equipment. | Increased turbidity and decreased dissolved oxygen in water bodies may lead to eutrophication.<br>Contaminants may have a toxic effect on aquatic ecosystems. | Likely | Major | E-5 | ENVI 01: Excavation Soil Management<br>ENVI 02: Air Quality<br>ENVI 04: Erosion-Sediment Control<br>ENVI 09: Water Quality | Education and Site Inductions<br>Site Inspections and Monitoring<br>Environmental Awareness Training | Installation of silt fencing / traps. | Possible | Minor | M-17 |

# Risk Matrix

| STEP 1 – CONSIDER CONSEQUENCES<br>What are the consequences of this hazard occurring? Consider what is the most probable consequence (below) with respect to this work hazard. | | | |
|---|---|---|---|
| | **OHS** | **Environmental** | **Quality**<br>**complaint / rework / plant, property damage.** |
| **Extreme** | Fatality or permanent disability, Life threatening event | Immediate, serious long term harm, high potential for adverse publicity and potential DEHP prosecution | Extreme financial impact > $500K for actual rework, property / equipment damage, loss |
| **Major** | Reported as Lost Time Injury (LTI) (lost days duration 4 days or more, potential for permanent disability); Potential life threatening event, Potential for OHS prosecution | Offsite impact and DEHP reportable incident (offsite = effecting neighbouring property soil, water etc.), Measurable environmental harm penalised by DEHP | Major financial impact between $50K and $500K for actual rework, property / equipment damage, loss |
| **Moderate** | Injury reported LTI for 1-3 days, Injury as defined for medical lost time injury with restricted duties | Localised impact (contained within the site boundary), Reportable to DEHP with infringement potential, Reported as an significant incident internally | Moderate loss between $10K and $50K rework, client complaint |
| **Minor** | Injury reported as medical injury, no restricted duties/ lost time, Technical breach/infringement of OHS Regulation | Minor impact - immediate containment/control, Potential harm to environment, some clean up, Reported as an incident internally | Minor between $1K and $10K loss or damage, rework, client complaint |
| **Insignificant** | Injury reported as First Aid Case, minor illness | Negligible impact or temporary inconvenience, Not requiring DEHP notification, Reported as an minor incident internally | Less than $1K loss or damage |

| STEP 2 – CONSIDER LIKELIHOOD (What is the likelihood (below) of the hazard consequence in Step 1 occurring?) | |
|---|---|
| **Almost Certain** | **Expected to occur in most circumstances/ repeating** |
| **Likely** | **Known to occur, or it has happened** |
| **Possible** | **Could occur** |
| **Unlikely** | **Event could occur at some time** |
| **Rare** | **May occur only in exceptional circumstances/ rare** |

| STEP 3 – CALCULATE RISK | | | | | |
|---|---|---|---|---|---|
| **1. Take Step 1 rating and select the correct column.**<br>**2. Take Step 2 rating and select the correct row.**<br>**3. Use the risk score where the two ratings cross on the matrix below.** | | | | | |
| **LIKELIHOOD** | **CONSEQUENCES** | | | | |
| | **INSIGNIFICANT** | **MINOR** | **MODERATE** | **MAJOR** | **EXTREME** |
| **Almost Certain** | **M-15** | **H-10** | **E-6** | **E-3** | **E-1** |
| **Likely** | **L-19** | **M-14** | **H-9** | **E-5** | **E-2** |
| **Possible** | **L-22** | **M-17** | **M-13** | **H-8** | **E-4** |
| **Unlikely** | **L-24** | **L-21** | **M-16** | **M-12** | **H-7** |
| **Rare** | **L-25** | **L-23** | **L-20** | **L-18** | **M-11** |

| Risk Process: Identify, Assess, Control | **Identify the hazards or risks of the work.**<br>**Assess the likelihood and consequences from the hazards or risks.**<br>**Control the hazards or risks using control options.** |
|---|---|

| Legend | | Control Options |
|---|---|---|
| **1 – 6**<br>**E** | **Extreme risk,** Do not proceed until all hazards are eliminated or reduced to moderate risk. | **ELIMINATE** - eliminate the process, material or substance completely.<br>**SUBSTITUTE** - replace the process, material, equipment or substance with a safer one.<br>**ISOLATE** - Isolate the person(s) from the process, material or substance.<br>**ENGINEER** - design or re-design the process, plant, equipment or premises.<br>**ADMINISTRATE** - limit exposure to risk - job rotation, procedure, training.<br>**PPE** - use protective equipment |
| **7 – 10**<br>**H** | **High risk,** Control measure need to be implemented to reduce risk to moderate. | |
| **11 – 17**<br>**M** | **Moderate risk,** Control measures implemented to reduce risk to as low as possible. | |
| **18 - 25**<br>**L** | **Low risk**, Ensure nominated control measures are in place. | |

# Environmental Instruction – ENVI 02
## Air Quality

| | |
|---|---|
| **OBJECTIVE:** | To undertake operations so that adverse impacts of dust and other air pollutants e.g. odours, vehicle exhaust fumes, other toxic gases on the surrounding environment are minimised i.e.:<br>• Health risk for nearby residents and site personnel<br>• Nuisance for residents and users of the area<br>• Build-up of dust on surrounding properties<br>• Build-up of dust on roadways and other surfaces. |
| **PLANNING & PREPARATION:** | Inform affected residents about the project and potential impacts.<br>Inform site personnel of the requirements to maintain schedules, perform pre-start checks and keep log books and daily diaries. |
| **SITE OPERATION:** | 1. Check wind direction before commencement of activities likely to cause dust or other air emissions.<br>2. Keep stockpiled topsoil (retained to top dress the finished allotments at the end of works) damp by watering which will also assist with grass coverage.<br>3. Where possible minimise the amount of overburden and soil stockpiled on the site.<br>4. Keep plant and vehicle movements to a minimum and do not operate outside the approved work area.<br>5. Cover the loads of all vehicles leaving the site with overburden or soil, if required.<br>6. In dry and windy conditions, stockpiles of soil, and vehicle access routes are to be kept damp by watering.<br>7. Use temporary covers or screens, where necessary.<br>8. Check exhaust colour and condition regularly.<br>9. Shut down the motor if exhaust is not normal.<br>10. Regularly maintain exhaust and engine systems to reduce exhaust emission.<br>11. Shut down plant that is not required for use, do not leave idling for long periods.<br>12. No fires or burning off onsite.<br>13. Complete daily site inspections to verify the above strategies are effective. |
| **PERFORMANCE INDICATOR:** | A visible build-up of dust on surrounding ground, vegetation and building surfaces would indicate unacceptable dust and air emissions, and corrective action should be taken.<br>In addition, more than one dust complaint in any one-week period could indicate unacceptable disturbance. If more than one complaint is received in this period, corrective action should be taken.<br>Visible evidence and smell of exhaust fumes. |
| **CORRECTIVE ACTION:** | 1. Review air pollution mitigation measures and modify accordingly.<br>2. Enforce exhaust checks and vehicle maintenance procedures. |
| **RESPONSIBILITY:** | Project Manager / Construction Supervisor/ Site Foreman |

Where obligations listed above are included in the client's scope under the contract, responsibility shall be appropriately transferred.

**NOTE:** This Environmental Instruction is not intended to be exhaustive or complete. Prior to commencement of work, task-specific hazards should be identified, risks assessed and risk control measures implemented.

# Environmental Instruction – ENVI 03
# Cultural Heritage

| | |
|---|---|
| **OBJECTIVE:** | To prevent damage to land or buildings of heritage value or cultural significance / sensitivity. |
| **PLANNING AND PREPARATION:** | 1. Undertake a survey of the site to identify any areas of significance. This may be undertaken by the Client / Superintendent or specialist consultant or relevant State Authority.<br>2. Develop a project specific procedure or Cultural Heritage Management Plan (if required) based on the findings or recommendations of the preliminary survey which takes into account the nature and timing of construction. This procedure should address delineation of significant areas, preventing disturbance to protected areas, maintaining safe working distances from significant site(s), and how the construction work will be undertaken to minimise the impact i.e. scar trees may need to be protected or relocated which would require a permit.<br>3. Ensure that the appropriate permits or authorisations (if any) have been received prior to undertaking work in these areas. Ensure relevant representatives are advised of construction program in advance so that they can be onsite during construction if necessary.<br>4. Comply with any special requirements of the job specifications.<br>5. Explain all requirements clearly at site induction.<br>6. Cooperate with the relevant authority representative/s direction and instruction while in these areas.<br>7. Should any items be found fgf shall immediately stop work and then follow the directions of the Principal's Representative or specialist consultant if present until such time that any discovery has been appropriately managed. |
| **SITE OPERATION:** | The Project Manager will ensure that all personnel are aware of any requirements. |
| **PERFORMANCE INDICATOR:** | Evidence at weekly safety and environmental inspections that the above requirements are not being observed. |
| **CORRECTIVE ACTION:** | Project Manager to fill out an *Incident / NCR Report Form and record on the Fixit Diary* and rectify the situation immediately.<br>Re-emphasise to site personnel to observe any requirements of the cultural / heritage compliance management procedures. |
| **RESPONSIBILITY:** | Project Manager / Construction Supervisor / Site Foreman |

Where obligations listed above are included in the client's scope under the contract, responsibility shall be appropriately transferred.

**NOTE:** This Environmental Work Instruction is not intended to be exhaustive or complete. Prior to commencement of work, task-specific hazards should be identified, risks assessed and risk control measures implemented.

# Environmental Instruction – ENVI 04
# Erosion-Sediment Control

| | |
|---|---|
| **OBJECTIVE:** | To minimise and eliminate wherever possible, sediment laden water (carrying mud, sand, earth or any other construction material) from entering the stormwater system and adjacent waterways.<br>• Minimise erosion of disturbed areas.<br>• Ensure that spoil stockpiles are not a source of water pollution. |
| **PLANNING & PREPARATION:** | • Assess the risks and prepare a site specific Erosion and Sediment Control Plan (ESCP).<br>• Prior to commencing works on site the Project Manager / Supervisor shall plan the implementation of control measures according to the site Erosion and Sediment Control Plan (ESCP). In situations of significant risk the control measures shall also be assessed and detailed within the Project Management Plan and given to the Client/Superintendent for approval.<br>• Type 2 and 3 sediment control techniques are commonly installed to physically stop the sediment material from entering the drain or stream. Usual methods include:<br>- Sand Bags or specifically designed entrapment devices,<br>- Geotextiles positioned on the ground or in the form of a retaining fence between the work and the stream or drainage area,<br>- Industry specific drain or pipe plugs<br>• Mark out the limit of clearing so that minimal ground disturbance is achieved for the shortest possible time.<br>• Identify suitable stockpile locations - a minimum of 50m away from runoff areas and possible erosion sources. |
| **SITE OPERATION:** | • The Project Manager / Supervisor is responsible for having the necessary equipment available that is required to satisfactorily complete the works in a safe environment manner.<br>• Site work and the removal of vegetation shall be limited to the smallest area possible.<br>• As specified in the project ESCP the Construction Foreman is responsible for the erection or placement of the control measures, and the regular monitoring and maintenance of the equipment.<br>• Construct silt traps to slow the flow, collect silt and sediment and minimise erosion.<br>• Provide temporary cut-off drains to divert flow from areas without vegetation and where stockpiles are created, or where erosion is likely to occur.<br>• Compact or stabilise stockpiles to minimise erosion and run-off.<br>• Stockpiles are to be surrounded with a secure sediment fence.<br>• Provide temporary sediment traps in all open drains or cut-off drains e.g. Straw bales, geo-textile barriers, litter booms, rock check dam.<br>• Where rock check dams are installed, the rock shall be clean, dense and durable, be well graded with a median size of 150mm and no material greater than 300mm.<br>• Rock to be placed so that the larger rocks are uniformly distributed throughout the protection work, and the smaller rocks fill the spaces between the large rocks without leaving any voids. The layers of rock shall be placed to include a defined spillway within the crest of the structure.<br>• The placing operations shall minimise the chances of rock running loose and damaging adjacent area.<br>• Work to be avoided where possible during periods of heavy rainfall. |

| | |
|---|---|
| | • Regular site inspections shall include the identification of any erosion or sedimentation issues and the efficiency of control measures in place.<br>• Prevent deposition of sediment on the road due to truck /equipment movements to and from the site. Any deposited matter to be cleaned up immediately.<br>• Where possible, conduct progressive restoration of disturbed areas.<br>• Inspect site after the works are complete to ensure erosion control devices have been removed along with any sediment in drainage lines and caught by erosion control devices and re-vegetation has been implemented in disturbed areas.<br>• Should a breach of the control measures occur or if no control measures are in place the Construction Foreman is responsible for:<br>- If possible repairing the breach and stop further flows into the drain or watercourse.<br>- Remove deposited silt and material and re-assess the ESC design and choice of sediment control technique.<br>- Contact Client/Superintendent and/or Government Agency (DEHP).<br>- Use a Non-Conformance to describe in detail the breach.<br>**NOTE:** All personnel on site have a *'duty to notify'* under environmental legislation. If any person becomes aware of an activity or incident that is causing or could cause environmental harm, they have a responsibility to notify their supervisor. |
| **PERFORMANCE INDICATOR:** | The following would indicate poor performance and requirements for additional controls:<br>- Significant erosion of soil stockpiles, erosion of banks / batters, silt laden water entering the stormwater system etc.<br>- Visible signs of sediment movement into drainage channels.<br>- Excessive build-up of dirt on public access roads.<br>Would all indicate unacceptable management of water onsite, and corrective action should be taken. |
| **CORRECTIVE ACTION:** | 1. Review the ESCP and modify accordingly.<br>2. If requires, provide additional erosion and sediment controls e.g. sedimentation basin.<br>3. It may be necessary to increase extent of sediment trapping (sediment fences, hay bales, etc.). |
| **RESPONSIBILITY:** | Project Manager / Construction Supervisor / Site Foreman / Site Personnel |

Where obligations listed above are included in the client's scope under the contract, responsibility shall be appropriately transferred.

**NOTE:** This Environmental Instruction is not intended to be exhaustive or complete. Prior to commencement of work, task-specific hazards should be identified, risks assessed and risk control measures implemented.

**E.g**. The removal of water from site, boring works, pit, excavation, dam etc.

**Preliminary**

Always try to minimise the amount of water requiring treatment. This can be done by:

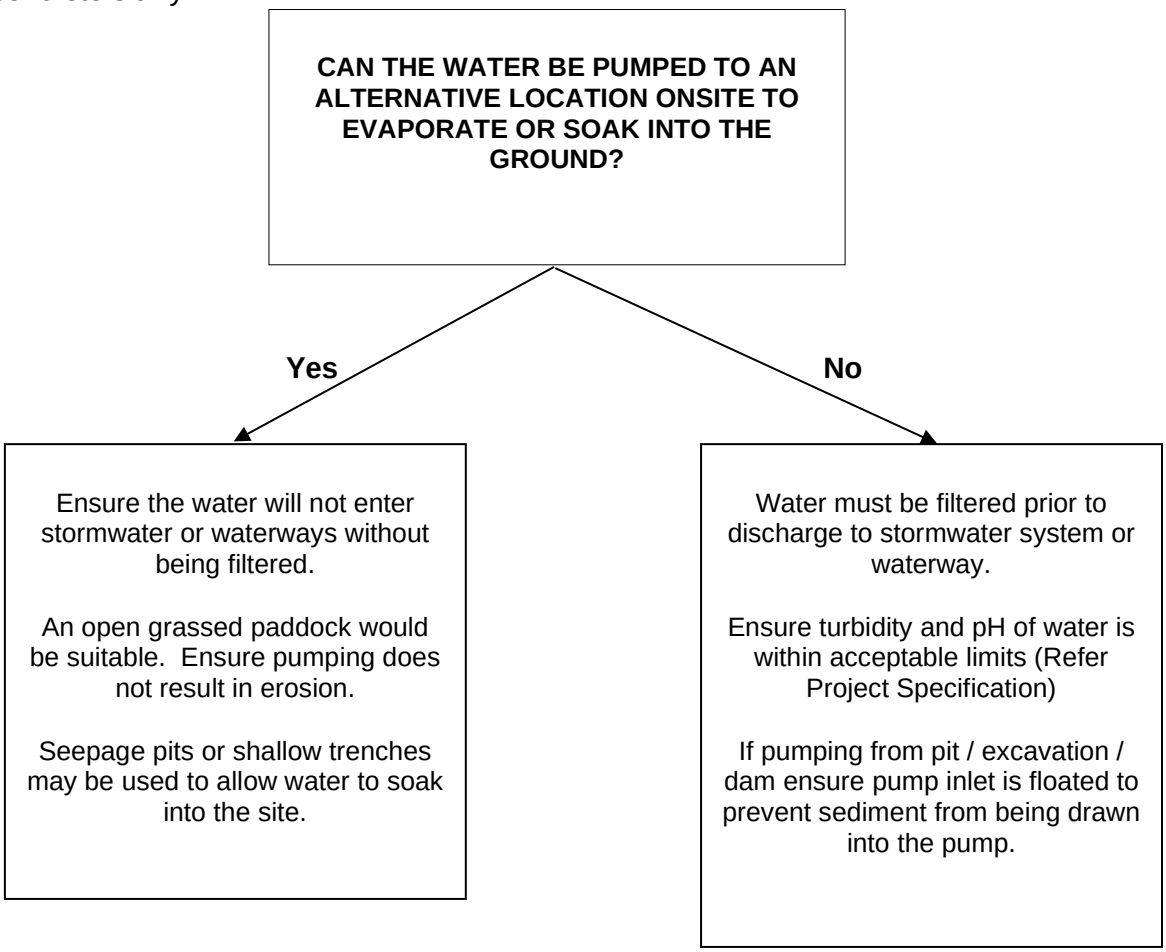
- Keeping the pressure to a minimum and turning the water off when it is not needed.
- Using cut off trenches, sheet piles, sand bags, hay bales etc. to hold the water in place.

If water does need to be removed the following steps should be undertaken:

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**SCENARIO 1 – No obvious contamination**

- No foams or scum
- No sheen or oil on surface
- No unusual odours
- No unusual colours or opacity
- No mud or sediment in the water
- No concrete slurry



**SCENARIO 2 – Water appears contaminated but the contamination is only due to combination of water and soil (muddy)**

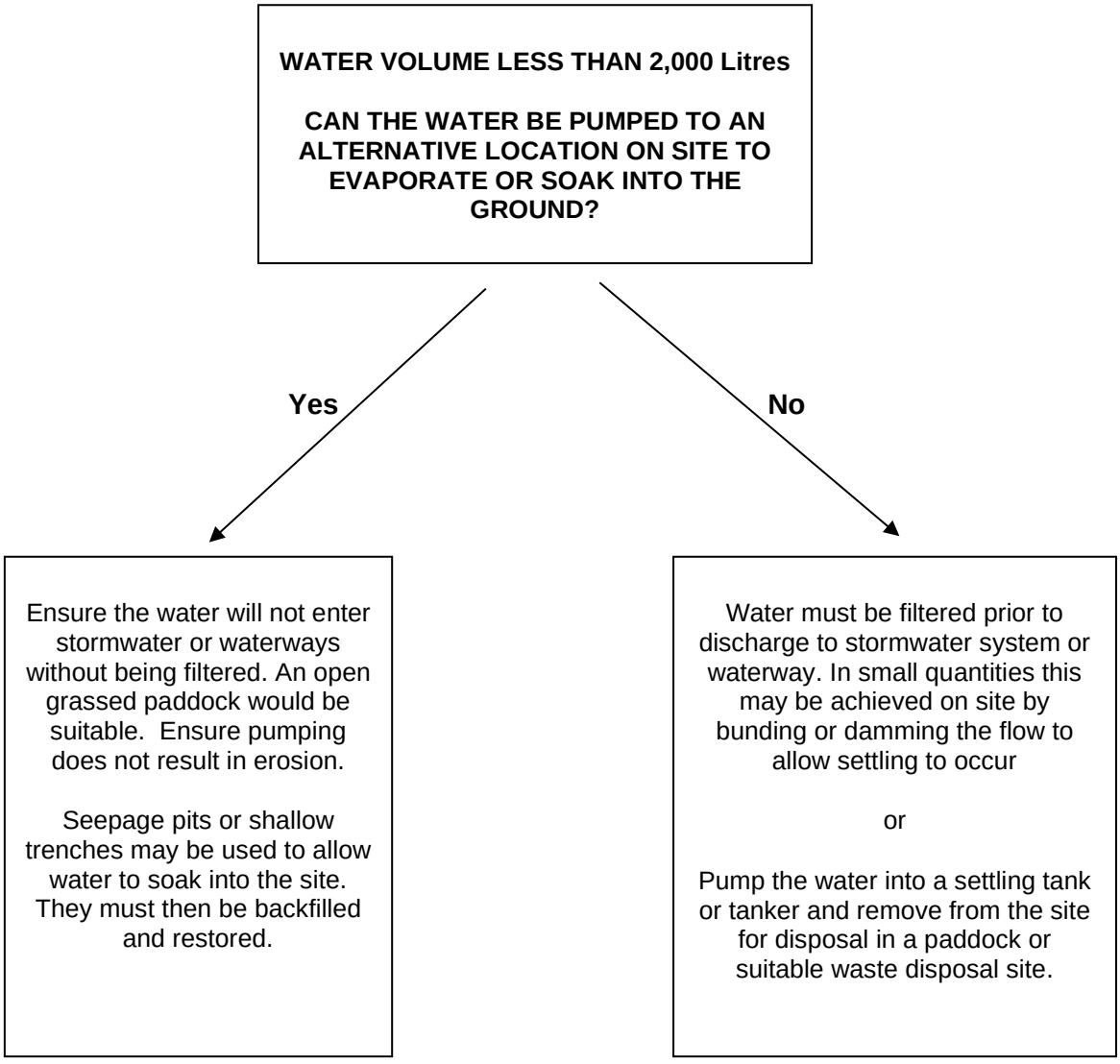
The **Construction Foreman** is experienced enough to judge that the contamination is only due to the mixing of existing soil with water e.g.

- Water containing mud or slurry from boring works.
- Water containing mud or slurry from directional drilling works.

**Condition:**

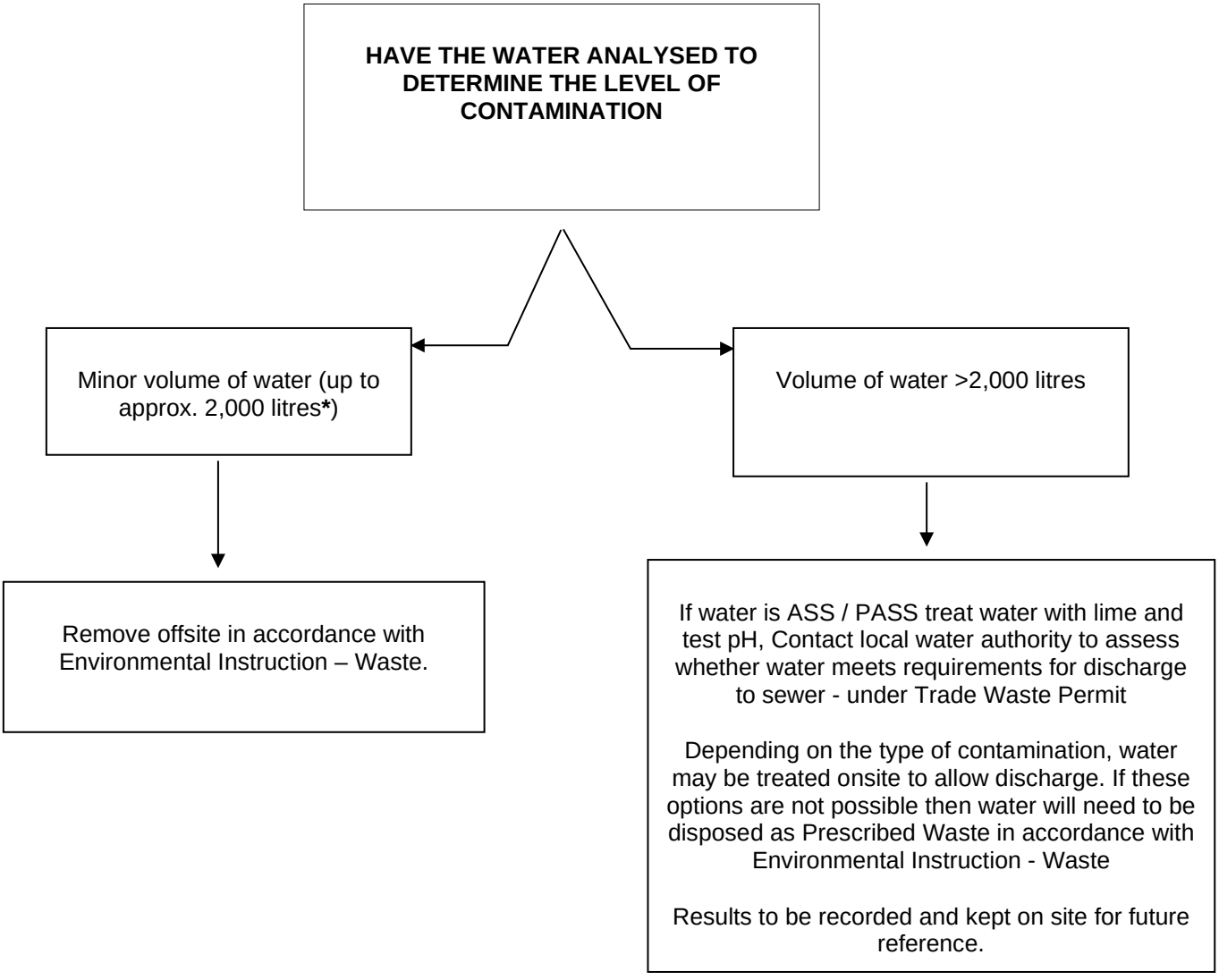
Volume of water is limited to less than 2,000 litres as described in **Scenario 3.**

If the volume of water is larger than 2,000 litres then **Scenario 3** must be applied and some extensive planning analysis and permission is required.



**SCENARIO 3 – Water appears contaminated (other than clean soil / mud)**

- May be odorous
- Unusual colour
- Foam or scum may be present
- Oil or sheen on surface
- May contain concrete slurry
- Contamination is known e.g. ASS / PASS




***Note:*** Undertaking a cost benefit analysis will aid in determining the most cost effective disposal option. Usually if there is only a minor volume of water it is not worthwhile applying for a Trade Waste Agreement.

# Environmental Instruction – ENVI 05
# Flora and Fauna

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| **OBJECTIVE:** | To protect existing trees and other vegetation within and adjacent to the construction site from unnecessary damage and minimise the impact of construction activities on local fauna.<br>To undertake operations so that adverse impacts on the environment from the spread of noxious weeds is minimised. |
| **PLANNING & PREPARATION:** | • Prior to commencing work the Project Manager / Supervisor will assess the risk to the vegetation and record any steps to take in the IPMP.<br>• Consider fauna / flora in natural habitats – check with the local Council and landowners before commencing clearing, in case protected habitats and endangered species are present.<br>• Identify and mark trees / shrubs to be retained in agreement with the client and local Council, if appropriate.<br>• Where natural Flora and Fauna exist or the specification nominates they must be protected, then use this instruction or prepare a specific action plan that takes into account the level of risk to them.<br>• Train staff to identify the protected / endangered Flora and Fauna and understand the actions to allow minimum disturbance of them.<br>• Encourage staff, to identify and report environmental incidents and consider alternatives that will minimise damage to the vegetation, within the area.<br>**Weeds and Seeds**<br>• Where a noxious weed or undesirable seed is identified or the specification nominates they exist, use this instruction or prepare a specific action plan that takes into account the risk of distribution.<br>• Check requirements and restrictions of any relevant Permits.<br>• Seek prior approval to compact or mulch in designated areas.<br>• Ensure staff have access to plant, equipment, and resources applicable to the risk, and the washing and cleaning that will be required. |
| **SITE OPERATION:** | **Before starting work at each location:**<br>• Hold toolbox meeting to discuss environmental issues and the need to protect the natural flora and fauna and minimise the disturbance to all vegetation and (where required) the requirement to wash plant and equipment before they leave an area of weed infestation.<br>• Prior to work starting The Project Manager / Supervisor or Construction Foreman will inspect the site with the Client / Superintendent.<br>• Identify the limit of clearing and grubbing by placing pegs or marking the area on the ground. Mark flora that has to be removed and transferred to another location as well as any noxious or undesirable weeds and seeds.<br>• No tree / shrub to be removed without the agreement of the Principal / Superintendent / Client.<br>• Retained vegetation is to be sufficiently barricaded to prevent damage.<br>**Grubbing and clearing:**<br>• Barricade sensitive areas with permanent or temporary fencing.<br>• Protect trees as necessary with barricading for root systems, or timber shields to stop damage to the trunk and branches.<br>• Use signs to prohibit entry and warn others of sensitive flora and fauna or heritage issues etc. |

- The Project Manager / Supervisor or Construction Foreman shall show the operator and relevant site personnel the extent of clearing and the Flora or Fauna that must be protected or moved.
- Remove the flora and fauna carefully and shift to a location agreed to within the IPMP. **NOTE:** Fauna relocation if required, is to be undertaken by a suitably qualified person (i.e. licenced spotter / Catcher).
- Salvage topsoil and vegetation for replacement at the completion of work.

**Recording the inspection and protection:**

The Construction Foreman shall keep a record of the inspection and removal of Fauna and Flora in the site diary.

- Limit vehicle movement to the designated access routes, to minimise the spread of weeds and seeds and disturbance to trees and surrounding earth.
- Isolate notifiable or noxious plants, chipping or mulching to be carried out only with the permission of the Principal / Superintendent / Client.
- Burning is not permitted, or environmentally appropriate.
- Any felled trees must remain within the approved clearing area.
- Trench excavation will be confined to the smallest possible area.
- The construction site will be restored, as close as possible, to its pre-construction condition.
- No firearms or pets are allowed on the construction site.
- Fauna habitat will not be removed unnecessarily.
- All site personnel immediately to report sighting of dead, injured or trapped fauna to their Supervisor.

**Rehabilitation:**

- Re-grass areas where vegetation is removed as soon as possible.
- Re grade or scarify to minimise erosion and assist new growth.
- In sensitive areas comply with contract conditions regarding landscaping and planting.

**Washing and cleaning process:**

- Wash and clean all plant and equipment that has left the roadway and entered the area that is identified with the undesirable plants and seeds.
- Where temporary clean-down bays are used, they shall be:

  a) located in areas easily accessible for ongoing maintenance;

  b) located greater than 200 metres from a watercourse, drainage line or environmentally sensitive area;

  c) designed to contain weed seeds, sediments, oils and greases; and

  d) designed to prevent vehicle recontamination.
- Normal procedure will be to wash down with the high-pressure pump on water truck.
- Inspect underneath the plant and equipment thoroughly before releasing to travel offsite.
- Notify the Project Manager / Supervisor if an item of plant or equipment cannot be cleaned satisfactorily with the resources made available and alter the process to allow the item of equipment to be cleaned.
- Ensure the cleaning site is kept tidy, free of pools of water and is not a HSE hazard.

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| **PERFORMANCE INDICATOR:** | Visible signs of damage to protected trees or other vegetation.<br>Unauthorised chipping or mulching onsite.<br>Burning of cleared vegetation.<br>A report of dead, injured or trapped fauna onsite.<br>Evidence of fauna habitat removal.<br>Noxious plants or seeds observed away from controlled areas.<br>Neighbouring parties complaining disbursement of noxious plants and/or seeds. |
| **CORRECTIVE ACTION:** | Modify removal and disposal procedures, to prevent disbursement.<br>Ensure washdown procedures are adequate.<br>Refer to relevant Permits and EPAs.<br>Review procedures for noxious weeds.<br>Hold Toolbox Meeting / Safety Committee Meeting and re-emphasise to vehicle operators and other site personnel to observe the above measures.<br>Rectify the situation immediately. |
| **RESPONSIBILITY:** | Project Manager / Construction Supervisor / Construction Foreman |

Where obligations listed above are included in the client's scope under the contract, responsibility shall be appropriately transferred.

**NOTE:** This Environmental Instruction is not intended to be exhaustive or complete. Prior to commencement of work, task-specific hazards should be identified, risks assessed and risk control measures implemented.

# Environmental Instruction – ENVI 06
# Hazardous Substances

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| **OBJECTIVE:** | To reduce the risk of fuel or chemical spills onsite.<br>To prevent land and water contamination onsite and downstream. |
| **PLANNING & PREPARATION:** | Keep the amount of fuels and chemicals stored on site to a minimum this will assist in storage requirements (segregation) and reduce the potential of spills.<br>Ensure a spill kit or alternative material (sand, spoil material) is available onsite or where fuel or chemicals are stored in the event that a spill occurs.<br>Spill kits on site should be General Purpose spill kits which are suitable for fuel and oils.<br>Ensure there are suitable containers available (metal tins with lids or heavy-duty plastic bags) to hold spilled or leaked material and waste cleaned up onsite.<br>At the site induction all personnel should be made aware of the location of the spill kit/s or clean up materials. |
| **SITE OPERATION:** | • All refuelling to take place offsite if possible and at least 30m away from drains, waterways or creeks.<br>• Refuelling to be supervised by a designated member of staff to reduce the risk of spills.<br>• Any fuel or oil spills are to be cleaned up immediately and contaminated soils are to be removed offsite for suitable disposal. The contaminated site shall be remediated to the Principal's Representative's satisfaction.<br>• If a hydraulic hose bursts, contain the oil in as small an area as possible, by building small bunds around the oil with dirt or sand. Stop the flow from the machine by releasing the pressure in the hydraulic tank (especially on excavators), tie hydraulic hoses high to avoid gravity flow from the tank and attempt to plug the end of the hose or break.<br>• Check that fuel, oil and hazardous substance containers and tanks are sound (no leaks) and caps and lids are firmly fastened and seals are in good condition.<br>• When transporting hazardous substances, ensure containers are stored securely, so that they cannot be punctured or ruptured.<br>• Site personnel are to be informed of the procedure for clean-up of spills.<br>• Regularly inspect and maintain hoses and fuel lines on plant and equipment for leaks or damage before they burst or fail.<br>• Advise the Construction Foreman immediately if a spill occurs, record any spill in a Site Diary and on the Fixit Diary.<br>• For disposal of spills, contact the local Council for the location of the nearest waste transfer station.<br>• Where a spill results in or has the potential to cause offsite environmental impact / harm e.g. uncontrolled major spill to stormwater system, contact DEHP and 000 immediately. |
| **PERFORMANCE INDICATOR:** | Visible evidence of oil or hazardous substance / spills on the ground. |
| **CORRECTIVE ACTION:** | **1. CONTROL the spill**<br>If a spill occurs identify the source and assess whether it can be controlled (stopped) in a safe manner. Protect stormwater drains and waterways by placing earth, sand or absorbent material around stormwater entrance points and alongside waterways to prevent pollution. |

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| | **2. CONTAIN the spill**<br>Stop the spill from spreading. Again, this can be done using absorbent material, booms, sand etc. This will minimise the area requiring clean up.<br>**3. CLEAN UP the spill**<br>Soak up the spill with absorbent material and ensure the surface is left clean. Material used to clean up the spill should be placed in a container or bag and removed from site as **prescribed waste** to a suitable disposal facility. Refer to Environmental Instruction – Waste. In some instances a **licensed tanker** (sucker truck approved to remove contaminated waste) may be required to vacuum up the liquid.<br>***Notes:*** Absorbent, particulate, sand and earth should not be used to absorb spills in water. Absorbent booms and pads can be obtained which are especially designed for water spills.<br>The contents of the spill kit should be replaced as soon as possible to ensure materials are available in the event of another spill occurring.<br>Report all spills to the Construction Foreman and record on the Fixit Diary. |
| **RESPONSIBILITY:** | Project Manager / Construction Supervisor / Site Foreman |

Where obligations listed above are included in the client's scope under the contract, responsibility shall be appropriately transferred.

**NOTE:** This Environmental Instruction is not intended to be exhaustive or complete. Prior to commencement of work, task-specific hazards should be identified, risks assessed and risk control measures implemented.

# Environmental Instruction – ENVI 07
# Noise and Vibration

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| **OBJECTIVE:** | To undertake operations so that adverse impacts on residents from noise and vibration are minimised.<br>• No complaints of dust from residents<br>• No damage to buildings / structures due to vibration. |
| **PLANNING & PREPARATION:** | Noise and Vibration is generated during some construction activities and has the potential to impact on human perception, buildings and structures and sensitive equipment e.g. operating theatres, electron microscopes, photographic equipment, analytical balances etc. The impact of noise and vibration is dependent on factors such as:<br>• type of soil;<br>• condition of buildings / structures;<br>• construction activity being undertaken and the type of equipment being used; and<br>• equipment or facilities located in nearby buildings.<br>**NOTE:** Vibration from any given source will vary with distance and ground conditions. In all cases an inspection and report including photos should be made of any structure at risk prior to works commencing. This report should be agreed by the owner and contractor and can be used to assess any damage.<br>Where doubt exists, measure the vibration adjacent to the structure using a geophone. This will enable method selection and vibration management.<br>Ensure that all affected residents have been informed about the project and are aware of the potential impacts.<br>Establish site hours. Normal construction hours (*Note: check with the local council as work hours may vary in some instances e.g. hospital, nursing home, school etc.):<br>Monday to Friday 7:00am - 5:30pm<br>Saturday 7:00am – 1:30pm<br>Construction personnel should not commence work outside approved working hours.<br>Where out-of-hours' work is necessary e.g. due to traffic management constraints, nearby residents will be notified (e.g. letter drop). The local Council and where required the Department of Environment and Heritage Protection (DEHP) will be informed so that they are aware the activity is taking place and the reason it has been scheduled out of hours. Council and DEHP may in some situations be supplied with a 24-hour contact number for the Project Manager.<br>1. Use of alternative construction methods, forms of communication or machinery e.g. bored piles instead of driven piles.<br>2. Use of noise barriers - barriers should be 0.5m above the highest noise source.<br>3. Scheduling noisy or vibrating activities at times of least impact.<br>4. Locate noise generating activities in non-sensitive areas.<br>5. Selection of equipment based on machinery noise levels.<br>6. Rescheduling work activities. |
| **SITE OPERATION:** | 1. Ensure all site personnel attend a site induction, so that they are informed of the above requirements.<br>2. Restrict the speed of heavy equipment and ensure trucks / vehicles use designated access roads rather than suburban streets where possible. |

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| | 3. Face reversing vehicles away from noise sensitive areas or introduce "White Noise Reverse Alarms".<br>4. Machinery and equipment generating excessive noise (e.g. due to poor maintenance) should not be used at the site.<br>5. Run motors and equipment only when required – DO NOT ALLOW EXCESSIVE IDLING.<br>6. Record unusually loud exhausts and motors on Machine Pre-start and in a Site Diary – they may need urgent servicing.<br>7. Minimise the use of vibration in compaction equipment or reduce the magnitude of vibration in sensitive areas.<br>8. Use smaller plant if possible.<br>9. Use alternative methods i.e. hydraulic hammer in lieu of explosives, bored piles rather than driven piles.<br>10. Select pile-driving equipment to minimise vibration. |
| **PERFORMANCE INDICATOR:** | More than one noise or vibration complaint in any one-week period could indicate unacceptable disturbance.<br>No damage to surrounding buildings / structures.<br>To avoid damage to structures the following limits are suggested:-<br>• 2.0mm/second for very fragile structures i.e. Historical buildings, monuments and buildings of special significance etc.<br>• 5.0mm/second for houses and low rise residential buildings, commercial buildings not included below.<br>• 5.0mm/second for commercial and industrial buildings or structures of reinforced concrete or steel construction including bridges.<br>The above is a guide only and individual situations should be assessed by competent personnel. The client should be aware of limits adopted.<br>If more than one complaint is received in any one-week period, corrective action should be taken. |
| **CORRECTIVE ACTION:** | 1. If possible, modify start and finish times.<br>2. Ensure plant and equipment is adequately maintained and log books kept and pre-start checks are carried out.<br>3. Engage specialist consultant to undertake geophone measurements and provide advice where required. |
| **RESPONSIBILITY:** | Project Manager / Construction Supervisor / Site Foreman |

Where obligations listed above are included in the client's scope under the contract, responsibility shall be appropriately transferred.

**NOTE:** This Environmental Instruction is not intended to be exhaustive or complete. Prior to commencement of work, task-specific hazards should be identified, risks assessed and risk control measures implemented.

# Environmental Instruction - ENVI 08
## Waste Management

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| **OBJECTIVE:** | To manage contaminated material (if found during site works) and scheduled (trackable) waste in accordance with Environmental Protection Regulation 2008. |
| **PLANNING & PREPARATION:** | Contaminated material / Scheduled Wastes can include low level contaminated soil, contaminated soil and water or existing ground that has been filled previously with hazardous materials such as asbestos (all chemical forms), batteries, chemicals, industrial waste, containers and bags containing hazardous compounds, detergents, paint sludge and residues, pesticides, household garbage or been contaminated by a previous use such as:<br>• Manufacturing industrial products such as asbestos or chemicals<br>• Gas works, fuel depot, service station.<br>• Horticulture<br>• Landfill or mining works.<br>Refer to Schedule 2E (Trackable Waste and Waste Codes) of Environmental Protection Regulation 2008.<br>If not managed properly, these wastes may pose a threat to the life or health of living organisms due to their toxic properties. Other wastes in this category may pose a threat to the safety of humans or equipment due to explosive, reactive or corrosive properties. |
| **SITE OPERATION:** | While all new development sites are routinely assessed for contamination at the planning stage, the Project Manager / Supervisor and Construction Foreman will stop and assess the situation if doubt exists that the site is contaminated or if contaminated material is found.<br>When a site is thought to be contaminated the following shall occur:<br>• Stop work and notify the Director or Project Manager / Supervisor.<br>• Contact the Client / Superintendent and determine whose responsibility it is to investigate further.<br>• Respond as required when the Client / Superintendent gives advice as to the result of the investigation.<br>• The Project Manager / Supervisor shall assess what wastes are regulated for the project (if any) and develop a process to manage the activity.<br>• If the activity is not expected to be ongoing then consider utilising a specialist subcontractor.<br>Control process if contaminated material is found:<br>• Notify the Director or Project Manager / Supervisor.<br>• Remove and isolate if the material is disturbed and small in quantity.<br>• Stop work and barricade off if contaminated material is found in large quantities.<br>• Notify the Client / Superintendent and determine who is responsible to remove or investigate further.<br>• Where fgf is responsible for the removal and disposal of the Hazardous Material and Contaminated soil or ground, the Project Manager / Supervisor shall ensure that fgf complies with the Environmental Protection Regulation 2008. Note: some waste oils and organic solvents can be recycled or reclaimed.<br>• If the activity is not expected to be ongoing then consider utilising a specialist subcontractor. |

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| **PERFORMANCE INDICATOR:** | Trackable waste receipts missing / not available. |
| **CORRECTIVE ACTION:** | Review waste management process and modify accordingly. |
| **RESPONSIBILITY:** | Project Manager / Construction Supervisor / Site Foreman |

Where obligations listed above are included in the client's scope under the contract, responsibility shall be appropriately transferred.

**NOTE:** This Environmental Instruction is not intended to be exhaustive or complete. Prior to commencement of work, task-specific hazards should be identified, risks assessed and risk control measures implemented.

# Annexure 12: SDAP Code Assessment

# State code 22: Environmentally relevant activities

Guideline – SDAP State code 22: Environmentally Relevant Activities provides direction on how to address this code.

## Table 22.1: All development

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **All ERAs** | | |
| **PO1** Development is suitably located and designed to avoid or mitigate **environmental harm** to the acoustic **environment**. | **AO1.1** Development meets the acoustic quality objectives for sensitive receptors identified in the Environmental Protection (Noise) Policy 2019. | Existing operation is subject to management documents included as **Annexure 12** to this report. |
| **PO2** Development is suitably located and designed to avoid or mitigate **environmental harm** to the air **environment**. | **AO2.1** Development meets the air quality objectives of the Environmental Protection (Air) Policy 2019. | Existing operation is subject to management documents included as **Annexure 12** to this report. |
| **PO3** Development (other than **intensive animal industry** for **poultry farming**), is suitably located and designed to avoid or mitigate **environmental harm** on adjacent **sensitive land uses** caused by odour. | No acceptable outcome is prescribed. | Proposal complies. |
| **PO4** Development is suitably located and designed to avoid or mitigate **environmental harm** to the receiving waters **environment**. | **AO4.1** Development meets the management intent, water quality guidelines and objectives of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019. | Existing operation is subject to management documents included as **Annexure 12** to this report. |
| **PO5** Development is designed to include elements which:<br>1. prevent or minimise the production of **hazardous contaminants** and **waste** as by-products; or<br>2. contain and treat **hazardous contaminants** on-site rather than releasing them into the **environment**; and<br>3. provide secondary containment to prevent the accidental release of **hazardous contaminants** to the **environment** from spillage or leaks. | No acceptable outcome is prescribed. | Existing operation is subject to management documents included as **Annexure 12** to this report. |
| **PO6 Environmentally hazardous materials** located on-site are stored to avoid or minimise their release into the **environment** due to inundation during flood events. | No acceptable outcome is prescribed. | Existing operation is subject to management documents included as **Annexure 12** to this report. |
| **All development – matters of state environmental significance** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO7** Development is designed and sited to:<br>1. avoid impacts on **matters of state environmental significance**; or<br>2. minimise and mitigate impacts on **matters of state environmental significance** after demonstrating avoidance is not reasonably possible; and<br>3. provide an **offset** if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable **significant residual impact** on a **matter of state environmental significance**.<br>Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan. | No acceptable outcome is prescribed. | Vegetation clearing is limited to that which is necessary to access the resource and an offset will be provided as required in relation to any significant residual impact. |
| **Intensive animal industry – poultry farming (ERA 4(2))** | | |
| **PO8 Poultry farming** development (where farming more than 200,000 birds) is suitably located and designed to avoid or mitigate **environmental harm** on adjacent **sensitive land uses**, caused by odour. | **AO8.1** For poultry farming involving 300,000 birds or less, development meets the separation distances as determined using the S-factor methodology to:<br>1. a **sensitive land use** in a rural zone; and<br>2. boundary of a non-rural zone.<br><br>OR<br><br>**AO8.2** Development meets the separation distances as determined by odour modelling using the following criteria:<br>1. 2.5 **odour units**, 99.5 percent, 1 hour average for a **sensitive land use** in a rural zone; or<br>2. 1.0 **odour units**, 99.5 percent, 1 hour average for the boundary of a non-rural zone. | N/A |

# State code 1: Development in a state-controlled road environment

## Table 1.1 Development in general

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Buildings, structures, infrastructure, services and utilities** | | |
| **PO1** The location of the development does not create a safety hazard for users of the **state-controlled road.** | **AO1.1** Development is not located in a **state-controlled road**.<br><br>AND<br><br>**AO1.2** Development can be maintained without requiring access to a **state-controlled road**. | Proposal complies. |
| **PO2** The design and construction of the development does not adversely impact the **structural integrity** or physical condition of the **state-controlled road** or **road transport infrastructure**. | No acceptable outcome is prescribed. | Proposal complies. |
| **PO3** The location of the development does not obstruct **road transport infrastructure** or adversely impact the operating performance of the **state-controlled road**. | No acceptable outcome is prescribed. | Proposal complies. |
| **PO4** The location, placement, design and operation of advertising devices, visible from the **state-controlled road**, do not create a safety hazard for users of the **state-controlled road**. | No acceptable outcome is prescribed. | Proposal complies. |
| **PO5** The design and construction of buildings and **structures** does not create a safety hazard by distracting users of the **state-controlled road**. | **AO5.1** Facades of buildings and **structures** fronting the **state-controlled road** are made of non-reflective materials. | Proposal complies. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | AND<br><br>**AO5.2** Facades of buildings and **structures** do not direct or reflect point light sources into the face of oncoming traffic on the **state-controlled road**.<br><br>AND<br><br>**AO5.3** External lighting of buildings and **structures** is not directed into the face of oncoming traffic on the **state-controlled road**.<br><br>AND<br><br>**AO5.4** External lighting of buildings and **structures** does not involve flashing or laser lights. | |
| **PO6** Road, pedestrian and bikeway bridges over a **state-controlled road** are designed and constructed to prevent projectiles from being thrown onto the **state-controlled road**. | **AO6.1** Road, pedestrian and bikeway bridges over the **state-controlled road** include throw protection screens in accordance with section 4.11 of the Design Criteria for Bridges and Other Structures Manual, Department of Transport and Main Roads, 2020. | N/A |
| **Landscaping** | | |
| **PO7** The location of landscaping does not create a safety hazard for users of the **state-controlled road**. | **AO7.1** Landscaping is not located in a **state-controlled road**.<br><br>AND<br><br>**AO7.2** Landscaping can be maintained without requiring access to a **state-controlled road**.<br><br>AND | Proposal complies. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO7.3** Landscaping does not block or obscure the sight lines for vehicular access to a **state-controlled road**. | |
| **Stormwater and overland flow** | | |
| **PO8** Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard for users of the **state-controlled road**. | No acceptable outcome is prescribed. | Proposal complies. |
| **PO9** Stormwater run-off or overland flow from the development site does not result in a material worsening of the operating performance of the **state-controlled road** or **road transport infrastructure**. | No acceptable outcome is prescribed. | Proposal complies. |
| **PO10** Stormwater run-off or overland flow from the development site does not adversely impact the **structural integrity** or physical condition of the **state-controlled road** or **road transport infrastructure**. | No acceptable outcome is prescribed. | Proposal complies. |
| **PO11** Development ensures that stormwater is lawfully discharged. | **AO11.1** Development does not create any new points of discharge to a **state-controlled road.**<br><br>AND<br><br>**AO11.2** Development does not concentrate flows to a **state-controlled road**.<br><br>AND<br><br>**AO11.3** Stormwater run-off is discharged to a **lawful point of discharge**.<br><br>AND | Proposal complies. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO11.4** Development does not worsen the condition of an existing **lawful point of discharge** to the **state-controlled road**. | |
| **Flooding** | | |
| **PO12** Development does not result in a material worsening of flooding impacts within a **state-controlled road**. | **AO12.1** For all flood events up to 1% **annual exceedance probability**, development results in negligible impacts (within +/- 10mm) to existing flood levels within a **state-controlled road**.<br><br>AND<br><br>**AO12.2** For all flood events up to 1% **annual exceedance probability**, development results in negligible impacts (up to a 10% increase) to existing peak velocities within a **state-controlled road**.<br><br>AND<br><br>**AO12.3** For all flood events up to 1% **annual exceedance probability**, development results in negligible impacts (up to a 10% increase) to existing time of submergence of a **state-controlled road**. | Proposal complies. |
| **Drainage Infrastructure** | | |
| **PO13** Drainage infrastructure does not create a safety hazard for users in the **state-controlled road**. | **AO13.1** Drainage infrastructure is wholly contained within the development site, except at the **lawful point of discharge**.<br><br>AND<br><br>**AO13.2** Drainage infrastructure can be maintained without requiring access to a **state-controlled road**. | Proposal complies. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO14** Drainage infrastructure associated with, or within, a **state-controlled road** is constructed, and designed to ensure the **structural integrity** and physical condition of existing drainage infrastructure and the surrounding drainage network. | No acceptable outcome is prescribed. | N/A |

## Table 1.2 Vehicular access, road layout and local roads

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Vehicular access to a state-controlled road or within 100 metres of a state-controlled road intersection** | | |
| **PO15** The location, design and operation of a **new or changed access** to a **state-controlled road** does not compromise the safety of users of the **state-controlled road**. | No acceptable outcome is prescribed. | No changes are proposed to access arrangements or traffic volumes. |
| **PO16** The location, design and operation of a **new or changed access** does not adversely impact the **functional requirements** of the **state-controlled road**. | No acceptable outcome is prescribed. | No changes are proposed to access arrangements or traffic volumes. |
| **PO17** The location, design and operation of a **new or changed access** is consistent with the **future intent** of the **state-controlled road**. | No acceptable outcome is prescribed. | No changes are proposed to access arrangements or traffic volumes. |
| **PO18 New or changed access** is consistent with the access for the relevant **limited access road policy**:<br>1. **LAR 1** where direct access is prohibited; or<br>2. **LAR 2** where access may be permitted, subject to assessment. | No acceptable outcome is prescribed. | No changes are proposed to access arrangements or traffic volumes. |
| **PO19 New or changed access** to a **local road** within 100 metres of an intersection with a **state-controlled road** does not compromise the safety of users of the **state-controlled road**. | No acceptable outcome is prescribed. | No changes are proposed to access arrangements or traffic volumes. |
| **PO20 New or changed access** to a **local road** within 100 metres of an intersection with a **state-controlled road** does not adversely impact on the operating performance of the intersection. | No acceptable outcome is prescribed. | No changes are proposed to access arrangements or traffic volumes. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Public passenger transport and active transport** | | |
| **PO21** Development does not compromise the safety of users of **public passenger transport infrastructure**, **public passenger services** and **active transport infrastructure**. | No acceptable outcome is prescribed. | Proposal does not impact any public passenger transport facilities. |
| **PO22** Development maintains the ability for people to access **public passenger transport infrastructure, public passenger services** and **active transport infrastructure**. | No acceptable outcome is prescribed. | Proposal does not impact any public passenger transport facilities. |
| **PO23** Development does not adversely impact the operating performance of **public passenger transport infrastructure, public passenger services** and **active transport infrastructure**. | No acceptable outcome is prescribed. | Proposal does not impact any public passenger transport facilities. |
| **PO24** Development does not adversely impact the **structural integrity** or physical condition of **public passenger transport infrastructure** and **active transport infrastructure**. | No acceptable outcome is prescribed. | Proposal does not impact any public passenger transport facilities. |

## Table 1.3 Network impacts

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO25** Development does not compromise the safety of users of the **state-controlled road** network. | No acceptable outcome is prescribed. | Proposal does not have any additional impact on the state-controlled road network. |
| **PO26** Development ensures **no net worsening** of the operating performance of the **state-controlled road** network. | No acceptable outcome is prescribed. | Proposal does not have any additional impact on the state-controlled road network. |
| **PO27** Traffic movements are not directed onto a **state-controlled road** where they can be accommodated on the **local road** network. | No acceptable outcome is prescribed. | Proposal does not have any additional impact on the state-controlled road network. |
| **PO28** Development involving haulage exceeding 10,000 tonnes per year does not adversely impact the pavement of a **state-controlled road**. | No acceptable outcome is prescribed. | Proposal does not have any additional impact on the state-controlled road network. |
| **PO29** Development does not impede delivery of **planned upgrades** of **state-controlled roads**. | No acceptable outcome is prescribed. | Proposal does not have any additional impact on the state-controlled road network. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO30** Development does not impede delivery of **corridor improvements** located entirely within the **state-controlled road corridor**. | No acceptable outcome is prescribed. | Proposal does not have any additional impact on the state-controlled road network. |

## Table 1.4 Filling, excavation, building foundations and retaining structures

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO31** Development does not create a safety hazard for users of the **state-controlled road** or **road transport infrastructure**. | No acceptable outcome is prescribed. | Proposal has no physical impact on the state-controlled road. |
| **PO32** Development does not adversely impact the operating performance of the **state-controlled road**. | No acceptable outcome is prescribed. | Proposal has no physical impact on the state-controlled road. |
| **PO33** Development does not undermine, damage or cause subsidence of a **state-controlled road**. | No acceptable outcome is prescribed. | Proposal has no physical impact on the state-controlled road. |
| **PO34** Development does not cause ground water disturbance in a **state-controlled road**. | No acceptable outcome is prescribed. | Proposal has no physical impact on the state-controlled road. |
| **PO35** Excavation, boring, piling, blasting and fill compaction do not adversely impact the physical condition or **structural integrity** of a **state-controlled road** or **road transport infrastructure**. | No acceptable outcome is prescribed. | Proposal has no physical impact on the state-controlled road. |
| **PO36** Filling and excavation associated with the construction of **new or changed access** do not compromise the operation or capacity of existing drainage infrastructure for a **state-controlled road.** | No acceptable outcome is prescribed. | Proposal has no physical impact on the state-controlled road. |

## Table 1.5 Environmental emissions

Statutory note: Where a **state-controlled road** is co-located in the same transport corridor as a railway, the development should instead comply with Environmental emissions in State code 2: Development in a railway environment.

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Reconfiguring a lot** | | |
| **Involving the creation of 5 or fewer new residential lots adjacent to a state-controlled road or type 1 multi-modal corridor** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO37** Development minimises free field noise intrusion from a **state-controlled road.** | **AO37.1** Development provides a noise barrier or earth mound which is designed, sited and constructed:<br>1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1);<br>2. in accordance with:<br>a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;<br>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;<br>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.<br><br>OR<br><br>**AO37.2** Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound.<br><br>OR<br><br>**AO37.3** Development provides a **solid gap-free fence** or other **solid gap-free structure** along the full extent of the boundary closest to the **state-controlled road**. | Proposal does not require noise mitigation. |
| **Involving the creation of 6 or more new residential lots adjacent to a state-controlled road or type 1 multi-modal corridor** | | |
| **PO38** Reconfiguring a lot minimises free field noise intrusion from a **state-controlled road.** | **AO38.1** Development provides noise barrier or earth mound which is designed, sited and constructed: | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1);<br>2. in accordance with:<br>a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;<br>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;<br>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.<br><br>OR<br><br>**AO38.2** Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound. | |
| **Material change of use (accommodation activity)** | | |
| **Ground floor level requirements adjacent to a state-controlled road or type 1 multi-modal corridor** | | |
| **PO39** Development minimises noise intrusion from a **state-controlled road** in **private open space**. | **AO39.1** Development provides a noise barrier or earth mound which is designed, sited and constructed:<br>1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.2) for **private open space** at the ground floor level;<br>2. in accordance with:<br>a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | Noise), Department of Transport and Main Roads, 2013;<br>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;<br>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.<br><br>OR<br><br>**AO39.2** Development achieves the maximum free field acoustic level in reference table 2 (item 2.2) for **private open space** by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound. | |
| **PO40** Development (excluding a **relevant residential building** or **relocated building)** minimises noise intrusion from a **state-controlled road** in **habitable rooms** at the facade. | **AO40.1** Development (excluding a **relevant residential building** or **relocated building**) provides a noise barrier or earth mound which is designed, sited and constructed:<br>1. to achieve the maximum building façade acoustic level in reference table 1 (item 1.1) for **habitable rooms**;<br>2. in accordance with:<br>a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;<br>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;<br>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | OR<br><br>**AO40.2** Development (excluding a **relevant residential building** or **relocated building**) achieves the maximum building façade acoustic level in reference table 1 (item 1.1) for **habitable rooms** by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound. | |
| **PO41 Habitable rooms** (excluding a **relevant residential building** or **relocated building**) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1). | No acceptable outcome is provided. | N/A |
| **Above ground floor level requirements (accommodation activity) adjacent to a state-controlled road or type 1 multi-modal corridor** | | |
| **PO42** Balconies, podiums, and roof decks include:<br>1. a continuous **solid gap-free structure** or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia);<br>2. highly acoustically absorbent material treatment for the total area of the soffit above balconies, podiums, and roof decks. | No acceptable outcome is provided. | N/A |
| **PO43 Habitable rooms** (excluding a **relevant residential building** or **relocated building**) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1). | No acceptable outcome is provided. | N/A |
| **Material change of use (other uses)** | | |
| **Ground floor level requirements (childcare centre, educational establishment, hospital) adjacent to a state-controlled road or type 1 multi-modal corridor** | | |
| **PO44** Development:<br>1. provides a noise barrier or earth mound that is designed, sited and constructed:<br>a. to achieve the maximum free field acoustic level in reference table 2 (item | No acceptable outcome is provided. | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 2.3) for all **outdoor education areas** and **outdoor play areas**;<br>b. in accordance with:<br>i. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;<br>ii. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;<br>iii. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020; or<br>2. achieves the maximum free field acoustic level in reference table 2 (item 2.3) for all **outdoor education areas** and **outdoor play areas** by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound. | | |
| **PO45** Development involving a **childcare centre** or **educational establishment**:<br>1. provides a noise barrier or earth mound that is designed, sited and constructed:<br>2. to achieve the maximum building facade acoustic level in reference table 1 (item 1.2);<br>3. in accordance with:<br>a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; | No acceptable outcome is provided. | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;<br>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020; or<br>4. achieves the maximum building facade acoustic level in reference table 1 (item 1.2) by **alternative noise attenuation measures** where it is not practical to provide a noise barrier or earth mound. | | |
| **PO46** Development involving:<br>1. **indoor education areas** and **indoor play areas**; or<br>2. sleeping rooms in a **childcare centre**; or<br>3. **patient care areas** in a **hospital** achieves the maximum internal acoustic level in reference table 3 (items 3.2-3.4). | No acceptable outcome is provided. | N/A |
| **Above ground floor level requirements (childcare centre, educational establishment, hospital) adjacent to a state-controlled road or type 1 multi-modal corridor** | | |
| **PO47** Development involving a **childcare centre** or **educational establishment** which have balconies, podiums or elevated **outdoor play areas** predicted to exceed the maximum free field acoustic level in reference table 2 (item 2.3) due to noise from a **state-controlled road** are provided with:<br>1. a continuous **solid gap-free structure** or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia);<br>2. highly acoustically absorbent material treatment for the total area of the soffit above balconies or elevated **outdoor play areas**. | No acceptable outcome is provided. | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO48** Development including:<br>1. **indoor education areas** and **indoor play areas** in a **childcare centre** or **educational establishment**; or<br>2. sleeping rooms in a **childcare centre**; or<br>3. **patient care areas** in a **hospital** located above ground level, is designed and constructed to achieve the maximum internal acoustic level in reference table 3 (items 3.2-3.4). | No acceptable outcome is provided. | N/A |
| **Air, light and vibration** | | |
| **PO49 Private open space**, **outdoor education areas** and **outdoor play areas** are protected from air quality impacts from a **state-controlled road**. | **AO49.1** Each dwelling or unit has access to a **private open space** which is shielded from a **state-controlled road** by a building, **solid gap-free fence**, or other **solid gap-free structure**.<br><br>OR<br><br>**AO49.2** Each **outdoor education area** and **outdoor play area** is shielded from a **state-controlled road** by a building, **solid gap-free fence,** or other **solid gap-free structure**. | N/A |
| **PO50 Patient care areas** within **hospitals** are protected from vibration impacts from a **state-controlled road** or **type 1 multi-modal corridor**. | **AO50.1 Hospitals** are designed and constructed to ensure vibration in the patient treatment area does not exceed a vibration dose value of $0.1m/s^{1.75}$.<br><br>AND<br><br>**AO50.2 Hospitals** are designed and constructed to ensure vibration in the ward of a **patient care area** does not exceed a vibration dose value of $0.4m/s^{1.75}$. | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO51** Development is designed and sited to ensure light from infrastructure within, and from users of, a **state-controlled road** or **type 1 multi-modal corridor**, does not:<br>1. intrude into buildings during night hours (10pm to 6am);<br>2. create unreasonable disturbance during evening hours (6pm to 10pm). | No acceptable outcomes are prescribed. | N/A |

## Table 1.6: Development in a future state-controlled road environment

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO52** Development does not impede delivery of a **future state-controlled road**. | **AO52.1** Development is not located in a **future state-controlled road**.<br><br>OR ALL OF THE FOLLOWING APPLY:<br><br>**AO52.2** Development does not involve filling and excavation of, or material changes to, a **future state-controlled road**.<br><br>AND<br><br>**AO52.3** The intensification of lots does not occur within a **future state-controlled road**.<br><br>AND<br><br>**AO52.4** Development does not result in the landlocking of parcels once a **future state-controlled road** is delivered. | Proposal does not impact any future state-controlled road. |
| **PO53** The location and design of **new or changed access** does not create a safety hazard for users of a **future state-controlled road**. | **AO53.1** Development does not include **new or changed access** to a **future state-controlled road**. | Proposal does not impact any future state-controlled road. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO54** Filling, excavation, building foundations and **retaining structures** do not undermine, damage or cause subsidence of a **future state-controlled road**. | No acceptable outcome is prescribed. | Proposal does not impact any future state-controlled road. |
| **PO55** Development does not result in a material worsening of stormwater, flooding, overland flow or drainage impacts in a **future state-controlled road** or **road transport infrastructure**. | No acceptable outcome is prescribed. | Proposal does not impact any future state-controlled road. |
| **PO56** Development ensures that stormwater is lawfully discharged. | **AO56.1** Development does not create any new points of discharge to a **future state-controlled road**.<br><br>AND<br><br>**AO56.2** Development does not concentrate flows to a **future state-controlled road**.<br><br>AND<br><br>**AO56.3** Stormwater run-off is discharged to a **lawful point of discharge**.<br><br>AND<br><br>**AO56.4** Development does not worsen the condition of an existing **lawful point of discharge** to the **future state-controlled road**. | Proposal does not impact any future state-controlled road. |

# State code 6: Protection of state transport networks

## Table 6.2 Development in general

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Network impacts** | | |
| **PO1** Development does not compromise the safety of users of the **state-controlled road** network. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO2** Development does not adversely impact the structural integrity or physical condition of a **state-controlled road** or **road transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO3** Development ensures **no net worsening** of the operating performance the **state-controlled road** network. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO4** Traffic movements are not directed onto a **state-controlled road** where they can be accommodated on the **local road** network. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO5** Development involving haulage exceeding 10,000 tonnes per year does not damage the pavement of a **state-controlled road**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO6** Development does not require a new **railway** level crossing. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO7** Development does not adversely impact the operating performance of an existing **railway crossing**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO8** Development does not adversely impact on the safety of an existing **railway crossing**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO9** Development is designed and constructed to allow for on-site circulation to ensure vehicles do not queue in a **railway crossing**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO10** Development does not create a safety hazard within the **railway corridor**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO11** Development does not adversely impact the operating performance of the **railway corridor**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO12** Development does not interfere with or obstruct the **railway transport infrastructure** or **other rail infrastructure**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO13** Development does not adversely impact the structural integrity or physical condition of a **railway corridor** or **rail transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **Stormwater and overland flow** | | |
| **PO14** Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard for users of a **state transport corridor** or **state transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO15** Stormwater run-off or overland flow from the development site does not result in a material worsening of operating performance of a **state transport corridor** or **state transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO16** Stormwater run-off or overland flow from the development site does not interfere with the structural integrity or physical condition of the **state transport corridor** or **state transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **PO17** Development associated with a **state-controlled road** or **road transport infrastructure** ensures that stormwater is lawfully discharged. | **AO17.1** Development does not create any new points of discharge to a **state transport corridor** or **state transport infrastructure**.<br><br>AND<br><br>**AO17.2** Development does not concentrate flows to a **state transport corridor**.<br><br>AND<br><br>**AO17.3** Stormwater run-off is discharged to a **lawful point of discharge**.<br><br>AND<br><br>**AO17.4** Development does not worsen the condition of an existing **lawful point of discharge** to a **state transport corridor** or **state transport infrastructure**. | Proposal will not have any additional impacts on the state-controlled road or railway network. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Flooding** | | |
| **PO18** Development does not result in a material worsening of flooding impacts within a **state transport corridor** or **state transport infrastructure** | *For a **state-controlled road** or **road transport infrastructure**, all of the following apply:*<br><br>**AO18.1** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (within +/- 10mm) to existing flood levels within a **state transport corridor**.<br><br>AND<br><br>**AO18.2** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (up to a 10% increase) to existing peak velocities within a **state transport corridor**.<br><br>AND<br><br>**AO18.3** For all flood events up to 1% annual exceedance probability, development ensures there are negligible impacts (up to a 10% increase) to existing time of submergence of a **state transport corridor**.<br><br>*No acceptable outcome is prescribed for a **railway corridor** or **rail transport infrastructure**.* | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **Drainage infrastructure** | | |
| **PO19** Drainage infrastructure does not create a safety hazard in a **state transport corridor**. | *For a **state-controlled road** environment, both of the following apply:*<br><br>**AO19.1** Drainage infrastructure associated with, or in a **state-controlled road** is wholly contained within the development site, except at the **lawful point of discharge**.<br><br>AND | Proposal will not have any additional impacts on the state-controlled road or railway network. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO19.2** Drainage infrastructure can be maintained without requiring access to a **state transport corridor**.<br><br>*For a **railway** environment both of the following apply:*<br><br>**AO19.3** Drainage infrastructure associated with a **railway corridor** or **rail transport infrastructure** is wholly contained within the development site.<br><br>AND<br><br>**AO19.4** Drainage infrastructure can be maintained without requiring access to a **state transport corridor**. | |
| **PO20** Drainage infrastructure associated with, or in a **state-controlled road** or **road transport infrastructure** is constructed and designed to ensure the structural integrity and physical condition of existing drainage infrastructure and the surrounding drainage network is maintained. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |
| **Planned upgrades** | | |
| **PO21** Development does not impede delivery of **planned upgrades** of **state transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not have any additional impacts on the state-controlled road or railway network. |

## Table 6.3 Public passenger transport infrastructure and active transport

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO22** Development does not damage or interfere with **public passenger transport infrastructure**, **active transport infrastructure** or **public passenger services**. | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO23** Development does not compromise the safety of **public passenger transport infrastructure**, **public passenger services** and **active transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not impact any public passenger transport infrastructure or active transport infrastructure. |
| **PO24** Development does not adversely impact the operating performance of **public passenger transport infrastructure, public passenger services** and **active transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not impact any public passenger transport infrastructure or active transport infrastructure. |
| **PO25** Development does not adversely impact the structural integrity or physical condition of **public passenger transport infrastructure** and **active transport infrastructure**. | No acceptable outcome is prescribed. | Proposal will not impact any public passenger transport infrastructure or active transport infrastructure. |
| **PO26** Upgraded or new **public passenger transport infrastructure** and **active transport infrastructure** is provided to accommodate the demand for **public passenger transport** and **active transport** generated by the development. | No acceptable outcome is prescribed. | N/A |
| **PO27** Development is designed to ensure the location of **public passenger transport infrastructure** prioritises and enables efficient **public passenger services**. | No acceptable outcome is prescribed. | N/A |
| **PO28** Development enables the provision or extension of **public passenger services**, **public passenger transport infrastructure** and **active transport infrastructure** to the development and avoids creating indirect or inefficient routes for **public passenger services**. | No acceptable outcome is prescribed. | N/A |
| **PO29** New or modified road networks are designed to enable development to be serviced by **public passenger services**. | **AO29.1** Roads catering for buses are arterial or **sub-arterial roads**, collector or their equivalent.<br><br>AND<br><br>**AO29.2** Roads intended to accommodate buses are designed and constructed in accordance with:<br>1. Road Planning and Design Manual, 2nd Edition, Volume 3 – Guide to Road Design; Department of Transport and Main Roads; | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 2. Supplement to Austroads Guide to Road Design (Parts 3, 4-4C and 6), Department of Transport and Main Roads;<br>3. Austroads Guide to Road Design (Parts 3, 4-4C and 6);<br>4. Austroads Design Vehicles and Turning Path Templates;<br>5. Queensland Manual of Uniform Traffic Control Devices, Part 13: Local Area Traffic Management and AS 1742.13-2009 Manual of Uniform Traffic Control Devices – Local Area Traffic Management;<br><br>AND<br><br>**AO29.3** Traffic calming devices are not installed on roads used for buses in accordance with section 2.3.2 Bus Route Infrastructure, Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015. | |
| **PO30** Development provides safe, direct and convenient access to existing and future **public passenger transport infrastructure** and **active transport infrastructure**. | No acceptable outcome is prescribed. | N/A |
| **PO31** On-site vehicular circulation ensures the safety of both **public passenger transport services** and pedestrians. | No acceptable outcome is prescribed. | N/A |
| **PO32 Taxi facilities** are provided to accommodate the demand generated by the development. | No acceptable outcome is prescribed. | N/A |
| **PO33** Facilities are provided to accommodate the demand generated by the development for community transport services, courtesy transport services, and **booked hire services** other than taxis. | No acceptable outcome is prescribed. | N/A |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO34 Taxi facilities** are located and designed to provide convenient, safe and equitable access for<br>passengers. | **AO34.1** A **taxi facility** is provided parallel to the kerb and adjacent to the main entrance.<br><br>AND<br><br>**AO34.2 Taxi facilities** are designed in accordance with:<br>1. AS2890.5–1993 Parking facilities – on-street parking and AS1428.1–2009 Design for access and mobility – general requirements for access – new building work;<br>2. AS1742.11–1999 Parking controls – manual of uniform traffic control devices<br>3. AS/NZS 2890.6–2009 Parking facilities –off street parking for people with disabilities;<br>4. Disability standards for accessible public<br>5. transport 2002 made under section 31(1) of the Disability Discrimination Act 1992;<br>6. AS/NZS 1158.3.1 – Lighting for roads and public spaces, Part 3.1: Pedestrian area (category P) lighting – Performance and design requirements;<br>7. Chapter 7 Taxi Facilities, Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015. | N/A |
| **PO35** Educational establishments are designed to ensure the safe and efficient operation of **public passenger services**, pedestrian and cyclist access and **active transport infrastructure**. | **AO35.1** Educational establishments are designed in accordance with the provisions of the Planning for Safe Transport Infrastructure at Schools, Department of Transport and Main Roads, 2011. | N/A |

# State code 16: Native vegetation clearing

For guidance on how to address this code, please refer to the State Development Assessment Provisions Guidance material: State code 16: Native vegetation clearing.

**Please note:** It is only necessary to provide a response to the performance outcomes relevant to the clearing purpose(s). Table 16.1 below specifies which tables of performance outcomes are relevant for each clearing purpose. Tables that are not relevant to your clearing purpose can be left blank or deleted.

As an example, only Table 16.2 and Table 16.15 are relevant for a development application for operational works that involves managing thickened vegetation. The remaining tables may be deleted.

## Table 16.1: Relevant code provisions for each type of development

| Clearing purpose | Relevant provisions |
|---|---|
| **Material change of use and / or reconfiguring a lot and / or operational work** | |
| **Public safety**, **relevant infrastructure activities** and / or **consequential development of IPA approval** | Table 16.2 and Table 16.3 |
| **Extractive industry** | Table 16.2 and Table 16.4 |
| **Coordinated project** (agriculture) | Table 16.2 and Table 16.5 |
| **Coordinated project** (**extractive industry**) | Table 16.2 and Table 16.6 |
| **Coordinated project** (all other purposes) | Table 16.2 and Table 16.7 |
| Material change of use and / or reconfiguring a lot for all other purposes | Table 16.2 and Table 16.8 |
| Material change of use and / or reconfiguring a lot for which there will be no **clearing as a result of the material change of use** or **reconfiguring a lot** | Table 16.9 |
| Material change of use and / or reconfiguring a lot for which **clearing** is limited to **clearing** that could be done as **exempt clearing work** for the purpose of the development prior to the material change of use or reconfiguring a lot application being approved | Table 16.2 and Table 16.10 |
| **Operational work** | |
| **Necessary environmental clearing** | Table 16.2 and Table 16.11 |
| Control non-native plants or **declared pests** | Table 16.2 and Table 16.12 |
| **Encroachment** | Table 16.2 and Table 16.13 |
| **Fodder harvesting** | Table 16.2 and Table 16.14 |
| **Managing thickened vegetation** | Table 16.2 and Table 16.15 |

## Table 16.2: General

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO1 Clearing** of **vegetation** is consistent with any **notice requiring compliance** on the land subject to the development application, unless a **better environmental outcome** can be achieved. | No acceptable outcome is prescribed. | N/A |
| **PO2 Clearing** of **vegetation** is consistent with **vegetation management requirements** for **particular regulated areas** unless a **better environmental outcome** can be achieved. | No acceptable outcome is prescribed. | N/A |
| **PO3 Clearing** of **vegetation** in a **legally secured offset area**:<br>1. is consistent with the **offset** delivery plan; or<br>2. is consistent with an **agreement** for the **offset area** on the land subject to the development application; or<br>3. only occurs if an additional **offset** is provided. | No acceptable outcome is prescribed. | N/A |

## Table 16.3: Public safety, relevant infrastructure activities and / or consequential development of IPA approval

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO4 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands** | | |
| **PO5 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion; | **AO5.1 Clearing** does not occur in a natural **wetland** or within 100 metres of the **defining bank** of any natural **wetland**.<br><br>OR<br><br>**AO5.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland**: | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | 1. does not occur within 10 metres of the **defining bank** of any natural **wetland**; and<br>2. does not exceed widths in reference table 1 in this code. | |
| **PO6** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Clearing associated with watercourses and drainage features** | | |
| **PO7 Clearing** of **vegetation** within a **watercourse** and/or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature,** maintains the composition, structure and function of the **regional ecosystem** associated with the **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO7.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and<br>2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR<br><br>**AO7.2 Clearing** within any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code:<br>1. does not exceed the widths in reference table 1 of this code; and<br>2. does not occur within 10 metres of the **defining bank**, unless **clearing** is required into or across the **watercourse** or **drainage feature**. | |
| **PO8** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Connectivity** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO9 Regional ecosystems** on the subject land and any adjacent land retain sufficient **vegetation** to:<br>1. maintain **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO9.1 Clearing** occurs in accordance with reference table 3 in this code. | |
| **Soil erosion if the local government is not the assessment manager for the development application** | | |
| **PO10 Clearing** of **vegetation** does not result in **accelerated soil erosion** within or outside the land the subject of the development application. | **AO10.1 Clearing** only occurs if an **erosion and sediment control plan** is developed and implemented to prevent increased **soil erosion and instability** resulting from the **clearing**. | |
| **Salinity** | | |
| **PO11 Clearing** of **vegetation** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO11.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Conserving least concern regional ecosystems - Minimising clearing of areas temporarily required to enable construction of the infrastructure** | | |
| **PO12 Clearing** of **vegetation** for temporary use areas to construct necessary infrastructure, such as temporary use roads or access tracks, maintains the composition, structure and function of **least concern regional ecosystems**. | **AO12.1 Clearing** for temporary use areas to construct necessary infrastructure does not occur in a **least concern regional ecosystem**.<br><br>OR<br><br>**AO12.2** Total **clearing** for temporary use areas to construct necessary infrastructure in any **regional ecosystem** combined does not exceed the widths prescribed in table reference table 1 of this code.<br><br>OR<br><br>**AO12.3** Total **clearing** for temporary use areas to construct necessary infrastructure in any **regional ecosystem** combined does not exceed areas prescribed in table reference table 1 of this code. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO13** Where **clearing** of **vegetation** in a **regional ecosystem** for temporary use areas to construct necessary infrastructure does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the **cleared** area is **rehabilitated**. | No acceptable outcome is prescribed. | |
| **Conserving endangered and of concern regional ecosystems** | | |
| **PO14 Clearing** of **vegetation** maintains the composition, structure and function of **endangered regional ecosystems** and/or **of concern regional ecosystems**. | **AO14.1 Clearing** does not occur in an **endangered regional ecosystem** or an **of concern regional ecosystem**.<br><br>OR<br><br>**AO14.2** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed the widths prescribed in table reference table 1 of this code.<br><br>OR<br><br>**AO14.3** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed areas prescribed in table reference table 1 of this code. | |
| **PO15** Where **clearing** of **vegetation** in an **endangered regional ecosystem** or an **of concern regional ecosystems** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the **cleared** area cannot reasonably be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO16 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO16.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO16.2 Clearing** in **essential habitat** does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO16.3 Clearing** in **essential habitat** does not exceed the areas prescribed in table reference table 1 of this code. | |
| **PO17** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact for** each **protected wildlife** species individually. | No acceptable outcome is prescribed. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO18 Clearing** of **vegetation** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides;<br>2. mobilisation of acid or metals. | **AO18.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO18.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where:<br>1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |

# Table 16.4: Extractive industry

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO19 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | Clearing of vegetation is limited to the area which is considered necessary for future operations to extract a necessary resource for the local construction industry. Watercourses have been avoided and setbacks maintained to minimise adverse impacts. |
| **Clearing associated with wetlands** | | |
| **PO20 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO20.1 Clearing** does not occur in a natural **wetland** or within 100 metres of the **defining bank** of any natural **wetland**.<br><br>OR<br><br>**AO20.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland**:<br>1. does not occur within 10 metres of the **defining bank** of any natural **wetland**; and<br>2. does not exceed widths in table reference table 1 in this code. | N/A |
| **PO21** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | N/A |
| **Clearing associated with watercourses and drainage features** | | |
| **PO22 Clearing** of **vegetation** within a **watercourse** and /or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature,** maintains the composition, structure and function of the **regional ecosystem** associated with the **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants; | **AO22.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and<br>2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR | Proposal complies – watercourses are avoided and setbacks are maintained in accordance with table 2. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 3. aquatic habitat;<br>4. terrestrial habitat. | **AO22.2 Clearing** within any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code:<br>1. does not exceed the widths in table reference table 1 of this code; and<br>2. does not occur within 10 metres of the **defining bank**, unless **clearing** is required into or across the **watercourse** or **drainage feature**. | |
| **PO23** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | N/A |
| **Connectivity** | | |
| **PO24 Regional ecosystems** on the subject land and any adjacent land retain sufficient **vegetation** to maintain:<br>1. **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO24.1 Clearing** occurs in accordance with reference table 3 in this code. | Proposal is understood to comply with table 3. The proposed clearing does not compromise the broader connectivity of regional ecosystems across the site and surrounding land. |
| **Soil erosion if the local government is not the assessment manager for the development application** | | |
| **PO25 Clearing** does not result in **accelerated soil erosion** within or outside the land the subject of the development application. | **AO25.1 Clearing** only occurs if an **erosion and sediment control plan** is developed and implemented to prevent **soil erosion and instability** resulting from the **clearing**. | Current operations are subject to documented erosion and sediment control practices. |
| **Salinity** | | |
| **PO26 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO26.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | N/A |
| **Conserving endangered and of concern regional ecosystems** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO27 Clearing** of **vegetation** maintains the composition, structure and function of **endangered regional ecosystems** and/or **of concern regional ecosystems**. | **AO27.1 Clearing** does not occur in an **endangered regional ecosystem** or an **of concern regional ecosystem**.<br><br>OR<br><br>**AO27.2** Total **clearing** of **endangered regional** ecosystems and **of concern regional ecosystems** combined does not exceed the widths prescribed in table reference table 1 of this code.<br><br>OR<br><br>**AO27.3** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed areas prescribed in table reference table 1 of this code. | Proposed clearing exceeds the requirements of table 1. Refer to PO28. |
| **PO28** Where **clearing** of **vegetation** in an **endangered regional ecosystem** or an **of concern regional ecosystems** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the cleared area cannot be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | Cleared land will be progressively rehabilitated as the extraction activity moves to different areas within the proposed extraction area and any significant residual impact will be offset as required by financial or land-based means. |
| **Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO29 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO29.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO29.2 Clearing** in **essential habitat** does not exceed the widths prescribed in table reference table 1 of this code. | Proposed clearing exceeds the requirements of table 1. Refer to PO30. |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | OR<br><br>**AO29.3 Clearing** in **essential habitat** does not exceed the areas prescribed in table reference table 1 of this code. | |
| **PO30** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact for** each **protected wildlife** species individually. | No acceptable outcome is prescribed. | Cleared land will be progressively rehabilitated as the extraction activity moves to different areas within the proposed extraction area and any significant residual impact will be offset as required by financial or land-based means. |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO31 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides<br>2. mobilisation of acid or metals. | **AO31.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO31.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where:<br>1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | N/A |
| **Staged clearing** | | |
| **PO32 Clearing** of **vegetation**:<br>1. is staged in line with operational needs that restrict **clearing** to the current operational area; and<br>2. only occurs in the area from which material will be extracted, and any reasonably associated **built infrastructure**, within the term of the development approval; and<br>3. does not occur without required permits. | No acceptable outcome is prescribed. | Proposal complies. |

# Table 16.5: Coordinated project (agriculture)

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO33 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands** | | |
| **PO34 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO34.1 Clearing** does not occur in a natural **wetland** or within 100 metres of the **defining bank** of any natural **wetland**.<br><br>OR<br><br>**AO34.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland**:<br>1. does not occur within 10 metres of the **defining bank** of any natural **wetland**; and<br>2. does not exceed widths in table reference table 1 in this code. | |
| **PO35** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Clearing associated with watercourses and drainage features** | | |
| **PO36 Clearing** of **vegetation** within a **watercourse** and /or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature,** maintains the composition, structure and function of the | **AO36.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **regional ecosystem** associated with the **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | 2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR<br><br>**AO36.2 Clearing** within any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code:<br>1. does not exceed the widths in table reference table 1 of this code; and<br>2. does not occur within 10 metres of the **defining bank**, unless **clearing** is required into or across the **watercourse** or **drainage feature**. | |
| **PO37** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Connectivity** | | |
| **PO38 Regional ecosystems** on the subject land and any adjacent land retain sufficient **vegetation** to:<br>1. maintain **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO38.1 Clearing** occurs in accordance reference table 3 of this code. | |
| **PO39** Where:<br>1. **clearing** of **vegetation** in a **regional ecosystem** does not maintain **ecological processes**; and<br>2. the **regional ecosystem** does not remain in the landscape despite **threatening processes**; and<br>3. the **clearing** cannot be avoided; and<br>4. the **clearing** has been mitigated | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| an **offset** is provided for any acceptable **significant residual impact**. | | |
| **Soil erosion if the local government is not the assessment manager for the development application** | | |
| **PO40 Clearing** does not result in **accelerated soil erosion** within or outside the land the subject of the development application. | **AO40.1 Clearing** only occurs if an **erosion and sediment control plan** is developed and implemented to prevent **soil erosion and instability** resulting from the **clearing**. | |
| **Salinity** | | |
| **PO41 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO41.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Conserving endangered and of concern regional ecosystems** | | |
| **PO42 Clearing** of **vegetation** maintains the composition, structure and function of **endangered regional ecosystems** and/or **of concern regional ecosystems**. | **AO42.1 Clearing** does not occur in an **endangered regional ecosystem** or an **of concern regional ecosystem**.<br><br>OR<br><br>**AO42.2** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed the widths prescribed in table reference table 1 of this code.<br><br>OR<br><br>**AO42.3** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed areas prescribed in table reference table 1 of this code. | |
| **PO43** Where **clearing** of **vegetation** in an **endangered regional ecosystem** or an **of concern regional ecosystems** does not maintain the composition, structure and function of the **regional** | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the cleared area cannot be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | | |
| **Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO44 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO44.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO44.2 Clearing** in **essential habitat** does not exceed the widths prescribed in table reference table 1 of this code.<br><br>OR<br><br>**AO44.3 Clearing** in **essential habitat** does not exceed the areas prescribed in table reference table 1 of this code. | |
| **PO45** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact for** each **protected wildlife** species individually. | No acceptable outcome is prescribed. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO46 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides;<br>2. mobilisation of acid or metals. | **AO46.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO46.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where: | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |
| **Clearing for agriculture** | | |
| **PO47 Clearing** of **vegetation** only occurs where the land is suitable for agriculture having regard to topography, climate and soil attributes. | No acceptable outcome is prescribed. | |
| **PO48** For applications for irrigated crops, the owner of the land has, or may have, access to enough water for establishing, cultivating and harvesting the crops to which the **clearing** of **vegetation** relates. | No acceptable outcome is prescribed. | |

# Table 16.6: Coordinated project (extractive industry)

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO49 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands** | | |
| **PO50 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat; | **AO50.1 Clearing** does not occur in a natural **wetland** or within 100 metres of the **defining bank** of any natural **wetland**.<br><br>OR<br><br>**AO50.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland**:<br>1. does not occur within 10 metres of the **defining bank** of any natural **wetland**; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 4. terrestrial habitat. | 2. does not exceed widths in reference table 1 in this code. | |
| **PO51** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Clearing associated with watercourses and drainage features** | | |
| **PO52 Clearing** of **vegetation** within a **watercourse** and /or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature,** maintains the composition, structure and function of the **regional ecosystem** associated with the **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO52.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and<br>2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR<br><br>**AO52.2 Clearing** within any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code:<br>1. does not exceed the widths in reference table 1 of this code; and<br>2. does not occur within 10 metres of the **defining bank**, unless **clearing** is required into or across the **watercourse** or **drainage feature**. | |
| **PO53** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact.** | No acceptable outcome is prescribed. | |
| **Connectivity** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO54 Regional ecosystems** on the subject land and any adjacent land retain sufficient **vegetation** to:<br>1. maintain **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO54.1 Clearing** occurs in accordance with reference table 3 of this code. | |
| **PO55** Where:<br>1. **clearing** of **vegetation** in a **regional ecosystem** does not maintain **ecological processes;** and<br>2. the **regional ecosystem**; and<br>3. the **clearing** cannot be avoided; and<br>4. the **clearing** has been mitigated<br>an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Soil erosion if the local government is not the assessment manager for the development application** | | |
| **PO56 Clearing** does not result in **accelerated soil erosion** within or outside the land the subject of the development application. | **AO56.1 Clearing** only occurs if an **erosion and sediment control plan** is developed and implemented to prevent **soil erosion and instability** resulting from the **clearing**. | |
| **Salinity** | | |
| **PO57 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO57.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Conserving endangered and of concern regional ecosystems** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO58 Clearing** of **vegetation** maintains the composition, structure and function of **endangered regional ecosystems** and/or **of concern regional ecosystems**. | **AO58.1 Clearing** does not occur in an **endangered regional ecosystem** or an **of concern regional ecosystem**.<br><br>OR<br><br>**AO58.2** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO58.3** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed areas prescribed in reference table 1 of this code. | |
| **PO59** Where **clearing** of **vegetation** in an **endangered regional ecosystem** or an **of concern regional ecosystems** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the cleared area cannot be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO60 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO60.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO60.2 Clearing** in **essential habitat** does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO60.3 Clearing** in **essential habitat** does not exceed the areas prescribed in reference table 1 of this code. | |
| **PO61** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact for** each **protected wildlife** species individually. | No acceptable outcome is prescribed. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO62 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides;<br>2. mobilisation of acid or metals. | **AO62.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO62.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where:<br>1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |
| **Staged clearing** | | |
| **PO63 Clearing**:<br>1. is staged in line with operational needs that restrict **clearing** to the current operational area; and<br>2. only occurs in the area from which material will be extracted, and any reasonably associated **built infrastructure**, within the term of the development approval; and<br>3. does not occur without required permits. | No acceptable outcome is prescribed. | |

# Table 16.7: Coordinated project (all other purposes)

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO64 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands** | | |
| **PO65 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO65.1 Clearing** does not occur in a natural **wetland** or within 100 metres of the **defining bank** of any natural **wetland**.<br><br>OR<br><br>**AO65.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland**:<br>1. does not occur within 10 metres of the **defining bank** of any natural **wetland**; and<br>2. does not exceed widths in table reference table 1 in this code. | |
| **PO66** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Clearing associated with watercourses and drainage features** | | |
| **PO67 Clearing** of **vegetation** within a **watercourse** and/or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature,** maintains the composition, structure and function of the **regional ecosystem** associated with the **watercourse** and/or **drainage feature** to protect all of the following: | **AO67.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and<br>2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO67.2 Clearing** within any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code:<br>1. does not exceed the widths in table reference table 1 of this code; and<br>2. does not occur within 10 metres of the **defining bank**, unless **clearing** is required into or across the **watercourse** or **drainage feature**. | |
| **PO68** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Connectivity** | | |
| **PO69 Regional ecosystems** on the subject land and any adjacent land retain sufficient **vegetation** to:<br>1. maintain **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO69.1 Clearing** occurs in accordance with reference table 3 of this code. | |
| **PO70** Where:<br>1. **clearing** of **vegetation** in a **regional ecosystem** does not maintain **ecological processes;** and<br>2. the **regional ecosystem**; and<br>3. the **clearing** cannot be avoided; and<br>4. the **clearing** has been mitigated<br>an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Soil erosion if the local government is not the assessment manager for the development application** | | |
| **PO71 Clearing** does not result in **accelerated soil erosion** within or outside the land the subject of the development application. | **AO71.1 Clearing** only occurs if an **erosion and sediment control plan** is developed and implemented to prevent **soil erosion and instability** resulting from the **clearing**. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Salinity** | | |
| **PO72 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO72.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Conserving least concern regional ecosystems - Minimising clearing of areas temporarily required to enable construction of the infrastructure** | | |
| **PO73 Clearing** of **vegetation** for temporary use areas to construct necessary infrastructure, such as temporary use roads or access tracks, maintains the composition, structure and function of **least concern regional ecosystems**. | **AO73.1 Clearing** for temporary use areas to construct necessary infrastructure does not occur in a **least concern regional ecosystem**.<br><br>OR<br><br>**AO73.2** Total **clearing** for temporary use areas to construct necessary infrastructure in any **regional ecosystem** combined does not exceed the widths prescribed in table reference table 1 of this code.<br><br>OR<br><br>**AO73.3** Total **clearing** for temporary use areas to construct necessary infrastructure in any **regional ecosystem** combined does not exceed areas prescribed in table reference table 1 of this code. | |
| **PO74** Where **clearing** of **vegetation** in a **regional ecosystem** for temporary use areas to construct necessary infrastructure does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the **cleared** area is **rehabilitated**. | No acceptable outcome is prescribed. | |
| **Conserving endangered and of concern regional ecosystems** | | |
| **PO75 Clearing** of **vegetation** maintains the composition, structure and function of **endangered regional ecosystems** and/or **of concern regional ecosystems**. | **AO75.1 Clearing** does not occur in an **endangered regional ecosystem** or an **of concern regional ecosystem**.<br><br>OR | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO75.2** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed the widths prescribed in table reference table 1 of this code.<br><br>OR<br><br>**AO75.3** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed areas prescribed in reference table 1 of this code. | |
| **PO76** Where **clearing** of **vegetation** in an **endangered regional ecosystem** or an **of concern regional ecosystems** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the cleared area cannot be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO77 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO77.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO77.2 Clearing** in **essential habitat** does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO77.3 Clearing** in **essential habitat** does not exceed the areas prescribed in reference table 1 of this code. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO78** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact for** each **protected wildlife** species individually. | No acceptable outcome is prescribed. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO79 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides<br>2. mobilisation of acid or metals. | **AO79.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO79.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where:<br>1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |

# Table 16.8: Material change of use and / or reconfiguring a lot for all other purposes

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO80 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands** | | |
| **PO81 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the | **AO81.1 Clearing** does not occur in a natural **wetland** or within 100 metres of the **defining bank** of any natural **wetland**. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | OR<br><br>**AO81.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland**:<br>1. does not occur within 10 metres of the **defining bank** of any natural **wetland**; and<br>2. does not exceed widths in reference table 1 in this code. | |
| **PO82** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Clearing associated with watercourses and drainage features** | | |
| **PO83 Clearing** of **vegetation** within a **watercourse** and /or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature,** maintains the composition, structure and function of the **regional ecosystem** associated with the **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO83.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and<br>2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR<br><br>**AO83.2 Clearing** within any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code:<br>1. does not exceed the widths in table reference table 1 of this code; and<br>2. does not occur within 10 metres of the **defining bank**, unless **clearing** is required into or across the **watercourse** or **drainage feature**. | |
| **PO84** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact**. | | |
| **Connectivity** | | |
| **PO85 Regional ecosystems** on the subject land and any adjacent land, retain sufficient **vegetation** to maintain:<br>1. **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO85.1 Clearing** occurs in accordance with reference table 3 in this code**.** | |
| **Soil erosion if the local government is not the assessment manager for the development application** | | |
| **PO86 Clearing** does not result in **accelerated soil erosion** within or outside the land the subject of the development application. | **AO86.1 Clearing** only occurs if an **erosion and sediment control plan** is developed and implemented to prevent **soil erosion and instability** resulting from the **clearing**. | |
| **Salinity** | | |
| **PO87 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO87.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Conserving endangered and of concern regional ecosystems** | | |
| **PO88 Clearing** of **vegetation** maintains the composition, structure and function of **endangered regional ecosystems** and/or **of concern regional ecosystems**. | **AO88.1 Clearing** does not occur in an **endangered regional ecosystem** or an **of concern regional ecosystem**.<br><br>OR<br><br>**AO88.2** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO88.3** Total **clearing** of **endangered regional ecosystems** and **of concern regional ecosystems** combined does not exceed areas prescribed in reference table 1 of this code. | |
| **PO89** Where **clearing** of **vegetation** in an **endangered regional ecosystem** or an **of concern regional ecosystems** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the cleared area cannot be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO90 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO90.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO90.2 Clearing** in **essential habitat** does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO90.3 Clearing** in **essential habitat** does not exceed the areas prescribed in reference table 1 of this code. | |
| **PO91** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact for** each **protected wildlife** species individually. | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO92 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides;<br>2. mobilisation of acid or metals. | **AO92.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO92.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where:<br>1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the Queensland Acid Sulfate Soil Technical Manual. | |

## Table 16.9: Material change of use and / or reconfiguring a lot for which there will be no clearing as a result of the material change of use or reconfiguring a lot

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO93 Clearing as a result of a material change of use** or **clearing as a result of reconfiguring a lot** does not occur. | No acceptable outcome is prescribed. | |

## Table 16.10: Material change of use and / or reconfiguring a lot for which clearing is limited to clearing that could be done as exempt clearing work for the purpose of the development prior to the material change of use or reconfiguring a lot application being approved

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO94 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing that could already be done under an exemption** | | |
| **PO95 Clearing** of **vegetation** does not occur unless it is **clearing** that could be done as **exempt clearing work** for the purpose of the development prior to the material change of use or reconfiguring a lot application being approved. | No acceptable outcome is prescribed. | |

# Table 16.11: Necessary environmental clearing

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO96 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands (Land Restoration and Natural Disaster Preparation)** | | |
| **PO97 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO97.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of any natural **wetland**; and<br>2. within 100 metres of the **defining bank** of any natural **wetland**.<br><br>OR<br><br>**AO97.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland** only occurs where:<br>1. **clearing** does not exceed 0.5 hectares; and<br>2. **clearing** retains all **mature trees** and **habitat trees**; and<br>3. **clearing** that is for **flood preparation** complies with all of the following:<br>a. **clearing** is undertaken by **felling** only; and:<br>b. **clearing** does not exceed 100 square metres; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | c. **clearing** does not occur outside the **defining banks** of a natural **wetland**..<br><br>OR<br><br>**AO97.3 Clearing** to provide necessary access to undertake **necessary environmental clearing** only occurs where **clearing**:<br>1. does not exceed 10 metres in width; and<br>2. retains all **mature trees** and **habitat trees**; and<br>3. the access track:<br>a. runs parallel to a natural **wetland** and **clearing** is not within 10 metres of the **defining bank** of a natural **wetland**; or<br>b. is required to provide access across the **wetland**. | |
| **PO98** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area is **rehabilitated**. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands (natural channel diversion and contaminants removal)** | | |
| **PO99 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with any natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO99.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of any natural **wetland**; and<br>2. within 100 metres of the **defining bank** of any natural **wetland**.<br><br>OR<br><br>**AO99.2 Clearing** within 100 metres of the **defining bank** of any natural **wetland** only occurs where:<br>1. **clearing** does not exceed 0.5 hectares; and<br>2. **clearing** retains all **mature trees** and **habitat trees**. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | OR<br><br>**AO99.3 Clearing** to provide necessary access to undertake **necessary environmental clearing** only occurs where **clearing**:<br>1. does not exceed 10 metres in width; and<br>2. retains all **mature trees** and **habitat trees**; and<br>3. the access track:<br>a. runs parallel to a natural **wetland** and **clearing** is not within 10 metres of the **defining bank** of a natural **wetland**; or<br>b. is required to provide access across the **wetland**. | |
| **PO100** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a natural **wetland** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the **cleared** area cannot reasonably be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | No acceptable outcome is prescribed. | |
| **Clearing associated with watercourses and drainage features (Land Restoration and Natural Disaster Preparation)** | | |
| **PO101 Clearing** of **vegetation** within a **watercourse** and/or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature** maintains the composition, structure and function of any **regional ecosystem** associated with any **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO101.1 Clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and<br>2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR<br><br>**AO101.2 Clearing** in any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code only occurs where: | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 1. **clearing** does not exceed 0.5 hectares; and<br>2. **clearing** retains all **mature trees** and **habitat trees**; and<br>3. **clearing** that is for **flood preparation** complies with all of the following:<br>a. **clearing** is undertaken by **felling** only; and<br>b. **clearing** does not exceed 100 square metres; and<br>c. **clearing** does not occur outside of the **defining bank** of any **watercourse** or **drainage feature**.<br><br>OR<br><br>**AO101.3 Clearing** to provide necessary access to undertake **necessary environmental clearing** only occurs where **clearing**:<br>1. does not exceed 10 metres in width; and<br>2. retains all **mature trees** and **habitat trees**; and<br>3. the access track:<br>a. runs parallel to a **watercourse** or **drainage feature** and **clearing** is not within 10 metres of the **defining bank** of a **watercourse** or **drainage feature**; or<br>b. is required to provide access across the **watercourse** or **drainage feature**. | |
| **PO102** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the **cleared** area is **rehabilitated**. | No acceptable outcome is prescribed. | |
| **Clearing associated with watercourses and drainage features (natural channel diversion and contaminants removal)** | | |
| **PO103 Clearing** of **vegetation** within a **watercourse** and/or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature maintains** the composition, structure and function of any | **AO103.1 Clearing** does not occur within any of the following areas:<br>1. inside the **defining bank** of a **watercourse** or **drainage feature**; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **regional ecosystem** associated with any **watercourse** or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | 2. within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code.<br><br>OR<br><br>**AO103.2 Clearing** in any **watercourse** or **drainage feature**, or within the relevant distance of the **defining bank** of any **watercourse** or **drainage feature** in reference table 2 of this code only occurs where:<br>1. **clearing** does not exceed 0.5 hectares; and<br>2. **clearing** retains all **mature trees** and **habitat trees**.<br><br>OR<br><br>**AO103.3 Clearing to provide necessary access to undertake necessary environmental clearing only occurs where:**<br>1. **clearing** does not exceed 10 metres in width; and<br>2. **clearing** retains all **mature trees** and **habitat trees**; and<br>3. the access track:<br>a. runs parallel to a **watercourse** or **drainage feature** and **clearing** is not within 10 metres of the **defining bank** of a **watercourse** or **drainage feature**; or<br>b. is required to provide access across the **watercourse** or **drainage feature**. | |
| **PO104** Where **clearing** of **vegetation** in a **regional ecosystem** associated with a **watercourse** and/or **drainage feature** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 2. where the **cleared** area cannot reasonably be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | | |
| **Connectivity (land restoration and natural disaster preparation)** | | |
| **PO105 Regional ecosystems** on the subject land and any adjacent land retain sufficient **vegetation** to:<br>1. maintain **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO105.1 Clearing** occurs in accordance with reference table 3 of this code. | |
| **PO106** Where:<br>1. **clearing** of **vegetation** in a **regional ecosystem** does not maintain **ecological processes;** and<br>2. the **regional ecosystem** does not remain in the landscape despite **threatening processes;** and<br>3. the **clearing** cannot be avoided; and<br>4. the **clearing** has been mitigated;<br>the **cleared** area is **rehabilitated**. | No acceptable outcome is prescribed. | |
| **Connectivity (natural channel diversion and contaminants removal)** | | |
| **PO107 Regional ecosystems** on the subject land and any adjacent land retain sufficient **vegetation** to:<br>1. maintain **ecological processes**; and<br>2. ensure the **regional ecosystem** remains in the landscape despite **threatening processes**. | **AO107.1 Clearing** occurs in accordance with reference table 3 of this code. | |
| **PO108** Where:<br>1. **clearing** of **vegetation** in a **regional ecosystem** does not maintain **ecological processes**; and<br>2. the **regional ecosystem** does not remain in the landscape despite **threatening processes;** and<br>3. the **clearing** cannot be avoided; and<br>4. the **clearing** has been mitigated;<br>the **cleared** area:<br>a. is **rehabilitated**; or | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| b. where the **cleared** area cannot reasonably be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | | |
| **Soil erosion if the local government is not the assessment manager for the development application** | | |
| **PO109 Clearing** does not result in **accelerated soil erosion** within or outside the land the subject of the development application. | **AO109.1 Clearing** only occurs if an **erosion and sediment control plan** is developed and implemented to prevent **soil erosion and instability** resulting from the **clearing**. | |
| **Salinity** | | |
| **PO110 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO110.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Essential habitat (land restoration and natural disaster preparation) excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO111 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO111.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO111.2 Clearing** in **essential habitat** does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO111.3 Clearing** in **essential habitat** does not exceed the areas prescribed in reference table 1 of this code. | |
| **PO112** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually, and cannot | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| be avoided and has been mitigated, the **cleared** area is **rehabilitated**. | | |
| **Essential habitat (natural channel diversion and contaminants removal) excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO113 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO113.1 Clearing** does not occur in **essential habitat**.<br><br>OR<br><br>**AO113.2 Clearing** in **essential habitat** does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO113.3 Clearing** in **essential habitat** does not exceed the areas prescribed in reference table 1 of this code. | |
| **PO114** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually, and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the **cleared** area cannot reasonably be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact** for each **protected wildlife** species individually. | No acceptable outcome is prescribed. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO115 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides;<br>2. mobilisation of acid or metals. | **AO115.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO115.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where: | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |
| **Maintaining the composition, structure and function of the regional ecosystem (land restoration and natural disaster preparation)** | | |
| **PO116 Clearing** of **vegetation** maintains the composition, structure and function of the **regional ecosystem**. | **AO116.1 Clearing** retains all of the following:<br>1. **habitat trees**;<br>2. **mature trees**; and<br>3. the natural floristic composition and **range of sizes** across the **application area**.<br><br>OR<br><br>**AO116.2 Clearing** is for the purpose of **natural disaster preparation** and does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO116.3 Clearing** is for the purpose of **natural disaster preparation** and does not exceed the areas prescribed in reference table 1 of this code. | |
| **PO117** Where **clearing** of **vegetation** in a **regional ecosystem** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, the cleared area is **rehabilitated**. | No acceptable outcome is prescribed. | |
| **Maintaining the composition, structure and function of the regional ecosystem (natural channel diversion and contaminants removal)** | | |
| **PO118 Clearing** of **vegetation** maintains the composition, structure and function of the **regional ecosystem**. | **AO118.1 Clearing** retains all of the following:<br>1. **habitat trees**;<br>2. **mature trees**; and<br>3. the natural floristic composition and **range of sizes** across the **application area**. | |
| **PO119** Where **clearing** of **vegetation** in a **regional ecosystem** does not maintain the composition, structure and function of the **regional ecosystem**, | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| and cannot be avoided and has been mitigated, the cleared area:<br>1. is **rehabilitated**; or<br>2. where the **cleared** area cannot reasonably be **rehabilitated**, an **offset** is provided for any acceptable **significant residual impact**. | | |
| **Duration of clearing, preventing land degradation, and maintaining biodiversity, ecological processes and regional ecosystems (Land Restoration, Natural Disaster Preparation and Contaminates Removal)** | | |
| **PO120 Clearing** occurs only during a period that:<br>1. will not contribute to **land degradation**; and<br>2. ensures the ongoing maintenance of **ecological processes** and **biodiversity**; and<br>3. maintains the **regional ecosystem**. | No acceptable outcome is prescribed. | |

# Table 16.12: Control non-native plants or declared pests

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing avoids and minimises impacts** | | |
| **PO121 Clearing** of **vegetation** and **adverse impacts of clearing vegetation** do not occur unless the application has demonstrated that the **clearing** and the **adverse impacts of clearing** have been:<br>1. reasonably avoided; or<br>2. reasonably minimised where it cannot be reasonably avoided. | No acceptable outcome is prescribed. | |
| **Clearing associated with wetlands** | | |
| **PO122 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with a natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO122.1 Mechanical clearing** does not occur in any of the following areas, unless it is required to provide necessary access to control non-native plants or **declared pests**:<br>1. inside the **defining bank** of any natural **wetland**; and<br>2. within 20 metres of the **defining bank** of any natural **wetland**.<br><br>AND | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO122.2 Clearing** to provide necessary access to control non-native plants or **declared pests** only occurs where:<br>1. **clearing** does not exceed five metres in width; and<br>2. **clearing** retains all **mature trees** and **habitat trees**; and<br>3. the access track:<br>a. runs parallel to a natural **wetland** and **clearing** is not within 10 metres of the **defining bank** of a natural **wetland**; or<br>b. is required to provide access across the **wetland**.<br><br>AND<br><br>**AO122.3** Chemical **clearing** retains:<br>1. all **mature trees**; and<br>2. all **habitat trees**; and<br>3. at least 50 per cent of **immature trees** in each 50 metre by 50 metre area.<br><br>AND<br><br>**AO122.4** Root absorbed broad spectrum herbicides are not applied within whichever is the greater distance from the **defining bank** of a natural **wetland**:<br>1. 100 metres; or<br>2. the distance specified on the approved product label; or<br>3. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority.<br><br>AND | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO122.5 Aerial application** of a **foliar herbicide** does not occur within whichever is the greater distance from the **defining bank** of a natural **wetland**;<br>1. 50 metres; or<br>2. the distance specified for **wetlands** on the approved product label; or<br>3. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority. | |
| **Clearing associated with watercourses or drainage features** | | |
| **PO123 Clearing** of **vegetation** within a **watercourse** and/or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature** maintains the composition, structure and function of any **regional ecosystem** associated with any **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO123.1 Mechanical clearing** does not occur in any of the following areas, unless it is required to provide necessary access to control non-native plants or **declared pests**:<br>1. inside the **defining bank** of any **watercourse** or **drainage feature**; and<br>2. within 10 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 1 or 2 **watercourse** or **drainage feature**; and<br>3. within 15 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 3 or 4 **watercourse** or **drainage feature**; and<br>4. within 20 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 5 or more **watercourse** or **drainage feature**.<br><br>AND<br><br>**AO123.2 Clearing** to provide necessary access to control non-native plants or **declared pests** only occurs where:<br>1. **clearing** does not exceed five metres in width; and<br>2. **clearing** retains all **habitat trees** and **mature trees**; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 3. the access track:<br>a. runs parallel to the **watercourse** or **drainage feature** and is not within 10 metres of the **defining bank** of the **watercourse** or **drainage feature**; or<br>b. is required to provide access across the **watercourse** or **drainage feature**.<br><br>AND<br><br>**AO123.3** Chemica**l clearing** retains all of the following:<br>1. **mature trees;** and<br>2. **habitat trees**; and<br>3. at least 50 per cent of **immature trees** in any 50 metre by 50 metre area.<br><br>AND<br><br>**AO123.4 Root absorbed broad spectrum herbicides** are not applied within whichever is the greater distance from the **defining bank** of a **watercourse or drainage feature**:<br>1. 100 metres; or<br>2. any distance specified on the approved product label; or<br>3. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority.<br><br>AND<br><br>**AO123.5 Aerial application** of a **foliar herbicide** does not occur within whichever is the greater distance from the **defining bank** of a **watercourse or drainage feature**:<br>1. 50 metres; or<br>2. any distance specified on the approved product label; or | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 3. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority. | |
| **Soil erosion** | | |
| **PO124 Clearing** of **vegetation** does not result in **accelerated soil erosion** within or outside the land subject of the development application. | **AO124.1 Clearing** only occurs where **recognised best practice methods** are employed to:<br>1. prevent **soil erosion and instability** resulting from the **clearing**; and<br>2. stabilise **soil erosion and instability** which would result from **clearing**; and<br>3. prevent increased sediment run-off entering a **wetland**, **watercourse** or **drainage feature** as a result of the **clearing**.<br><br>AND<br><br>**AO124.2 Mechanical clearing:**<br>1. does not occur on a **slope** greater than 15 percent; and<br>2. in each 50 by 50 metre area (0.25 hectares), retains 50 per cent of the **ground cover** and does not disturb more than 50 per cent of the **ground cover**.<br><br>AND<br><br>**AO124.3** New access tracks required to provide necessary access to control a non-native plant or **declared pests** do not exceed five metres in width or de-stabilise the banks of any **watercourse** or **drainage feature** as a result of crossing, construction or use. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO125 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides;<br>2. mobilisation of acid or metals. | **AO125.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO125.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where:<br>1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |
| **Conserving remnant vegetation that is a regional ecosystem** | | |
| **PO126 Clearing** activities:<br>1. maintain the natural floristic composition and **range of sizes** of each species of the **regional ecosystem** evenly spaced across the **application area**; and<br>2. retain all **habitat trees** and **mature trees**. | **AO126.1 Mechanical clearing**:<br>1. only occurs within 1.5 metres from the edge of the canopy of individual non-native plants, unless the **clearing** is required to provide necessary access to control a non-native plant or **declared pest**; and<br>2. does not occur using two machines linked by chain or cable; and<br>3. retains all **habitat trees** and **mature trees**.<br><br>AND<br><br>**AO126.2 Clearing** to provide necessary access to control non-native plants or **declared pests** does not exceed five metres in width.<br><br>AND<br><br>**AO126.3** Any **regional ecosystem burn** is undertaken in accordance with the fire guideline for the **regional ecosystem**, as outlined in the Regional Ecosystem Description Database (REDD).<br><br>AND<br><br>**AO126.4** Chemical **clearing** retains all of the following:<br>1. **mature trees**; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 2. **habitat trees**; and<br>3. at least 50 per cent of **immature trees** in each 50 metre by 50 metre area.<br><br>AND<br><br>**AO126.5 Aerial application** of a **root-absorbed broad spectrum herbicides** does not occur.<br><br>AND<br><br>**AO126.6 Root-absorbed broad spectrum herbicides** are not applied within whichever distance is the greater from a **mature tree** or a **habitat tree**;<br>1. 30 metres; or<br>2. the distance specified on the approved product label; or<br>3. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority. | |
| **Duration of clearing, preventing land degradation, and maintaining biodiversity, ecological processes and regional ecosystems** | | |
| **PO127 Clearing** occurs only during a period that:<br>1. will not contribute to **land degradation**; and<br>2. ensures the ongoing maintenance **of ecological processes** and **biodiversity**; and<br>3. maintains the **regional ecosystem**. | No acceptable outcome is prescribed. | |

# Table 16.13: Encroachment

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing associated with wetlands** | | |
| **PO128 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with a natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion; | **AO128.1 Mechanical clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of any natural **wetland**; and<br>2. within 20 metres of the **defining bank** of any natural **wetland**. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | AND<br><br>**AO128.2 Root absorbed broad spectrum herbicides** are not applied within whichever is the greater distance from the **defining bank** of a natural **wetland**:<br>1. 100 metres; or<br>2. the distance specified on the approved product label; or<br>3. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority. | |
| **Clearing associated with watercourses or drainage features** | | |
| **PO129 Clearing** of **encroachment** maintains:<br>1. bank stability by protecting against bank erosion; and<br>2. water quality by filtering sediments, nutrients and other pollutants; and<br>3. aquatic habitat; and<br>4. terrestrial habitat. | **AO129.1 Mechanical clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of any **watercourse** or **drainage feature**; and<br>2. within 10 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 1 or 2 **watercourse** or **drainage feature**; and<br>3. within 15 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 3 or 4 **watercourse** or **drainage feature**; and<br>4. within 20 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 5 or more **watercourse** or **drainage feature**.<br><br>AND<br><br>**AO129.2 Root-absorbed broad spectrum herbicides** are not applied within whichever is the greater distance from the **defining bank** of a **watercourse** or **drainage feature**:<br>1. 100 metres; or<br>2. any distance specified on the approved product label; or | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 3. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority. | |
| **Soil erosion** | | |
| **PO130 Clearing** does not result in **accelerated soil erosion** within or outside the land subject of the development application. | **AO130.1 Clearing** only occurs where **recognised best practice methods** are employed to:<br>1. prevent **soil erosion and instability** resulting from the **clearing**; and<br>2. stabilise **soil erosion and instability** which would result from **clearing**; and<br>3. prevent increased sediment run-off entering a **wetland**, **watercourse** or **drainage feature** as a result of the **clearing**.<br><br>AND<br><br>**AO130.2 Mechanical clearing** does not occur in any of the following areas:<br>1. within 50 metres of an area of **soil erosion and instability**; and<br>2. **slopes** greater than five per cent. | |
| **Salinity** | | |
| **PO131 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO131.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO132 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following:<br>1. aeration of horizons containing iron sulphides; or<br>2. mobilisation of acid or metals. | **AO132.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR<br><br>**AO132.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where: | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |
| **Clearing limited to specific regional ecosystems** | | |
| **PO133 Clearing** of **encroachment** does not occur, other than in the **regional ecosystems** listed in reference table 5 of this code. | No acceptable outcome is prescribed. | |
| **Conserving vegetation** | | |
| **PO134 Clearing activities**:<br>1. result in the restoration of the **regional ecosystem**; and<br>2. retain all **habitat trees**; and<br>3. retain all **groves**; and<br>4. retain species which make up the natural floristic composition of the **regional ecosystem**, distributed in a natural pattern. | **AO134.1 Clearing** retains all of the following:<br>1. all **mature trees**; and<br>2. all **habitat trees**; and<br>3. all woody **vegetation** within a **grove,** unless it is undertaken by a **regional ecosystem burn**.<br><br>AND<br><br>**AO134.2** Any **regional ecosystem burn** is undertaken in accordance with the fire guideline for the **regional ecosystem**, as outlined in the Regional Ecosystem Description Database (REDD).<br><br>AND<br><br>**AO134.3 Clearing** does not result in debris being stacked or pushed against a **mature tree** or a **habitat tree**.<br><br>AND<br><br>**AO134.4 Mechanical clearing** does not occur within 10 metres of a **mature tree** or a **habitat tree**.<br><br>AND | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO134.5 Aerial application** of a herbicide does not occur.<br><br>AND<br><br>**AO134.6** Chemical **clearing** does not occur within five metres of a **mature tree** or a **habitat tree**.<br><br>AND<br><br>**AO134.7 Root-absorbed broad spectrum herbicides** are not applied in any of the following areas:<br>1. **regional ecosystems** 11.4.11 and 11.8.11; and<br>2. within whichever is the greater distance from a **mature tree** or a **habitat tree**:<br>a. 10 metres; or<br>b. the distance specified by the approved product label; or<br>c. the distance specified in the safety and use conditions prescribed by the Australian Pesticides and Veterinary Medicines Authority; and<br>3. within whichever is the greater distance from a **grove**:<br>a. 30 metres; or<br>b. the distance specified by the approved product label; or<br>c. the distance specified in the safety and use conditions issued by the Australian Pesticides and Veterinary Medicines Authority. | |
| **Duration of clearing, preventing land degradation, and maintaining biodiversity, ecological processes and regional ecosystems** | | |
| **PO135 Clearing** occurs only during a period that:<br>1. will not contribute to **land degradation**; and | No acceptable outcome is prescribed. | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 2. ensures the ongoing maintenance of **ecological processes** and **biodiversity**; and<br>3. maintains the **regional ecosystem**. | | |

# Table 16.14: Fodder harvesting

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing associated with wetlands** | | |
| **PO136 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with a natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO136.1 Mechanical clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of any natural **wetland**; and<br>2. within 20 metres of the **defining bank** of any natural **wetland**.<br><br>AND<br><br>**AO136.2 Mechanical clearing** that is strip harvesting or block harvesting does not occur in any of the following areas:<br>1. inside the **defining bank** of any natural **wetland**; and<br>2. within 100 metres of the **defining bank** of any natural **wetland**. | |
| **Clearing associated with watercourses or drainage features** | | |
| **PO137 Clearing** of **vegetation** within a **watercourse** and/or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature** maintains the composition, structure and function of any **regional ecosystem** associated with any **watercourse** and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO137.1 Mechanical clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of any **watercourse** or **drainage feature**; and<br>2. within 20 metres of the **defining bank** of any **watercourse** or **drainage feature**.<br><br>AND<br><br>**AO137.2 Mechanical clearing** that is **strip harvesting** or **block harvesting** does not occur in any of the following areas:<br>1. inside the **defining bank** of any **watercourse** or **drainage feature**; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 2. within 100 metres of the **defining bank** of any **watercourse** or **drainage feature**. | |
| **Soil erosion** | | |
| **PO138 Clearing** does not result in **accelerated soil erosion** within or outside the land subject of the development application. | **AO138.1 Clearing** only occurs where **recognised best practice methods** are employed to:<br>1. prevent **soil erosion and instability** resulting from the **clearing**; and<br>2. stabilise **soil erosion and instability** which would result from **clearing**; and<br>3. prevent increased sediment run-off entering a **wetland**, **watercourse** or **drainage feature** as a result of the **clearing**.<br><br>AND<br><br>**AO138.2 Mechanical clearing** does not occur on a **slope** greater than five percent.<br><br>OR<br><br>**AO138.3 Mechanical clearing** does not occur within 50 metres of an area of **soil erosion and instability**. | |
| **Salinity** | | |
| **PO139 Clearing** within 100 metres of a **salinity expression area** does not contribute to or accelerate **land degradation** through either of the following:<br>1. **waterlogging**;<br>2. the **salinisation** of **groundwater**, surface water or soil. | **AO139.1 Clearing** does not occur within 100 metres of a **salinity expression area**. | |
| **Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10, Part 10 of the Planning Regulation 2017** | | |
| **PO140 Clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** maintains the composition, structure and function of the **regional ecosystem** for each **protected wildlife** species individually. | **AO140.1 Clearing** does not occur in **essential habitat**.<br><br>OR | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO140.2 Clearing** in **essential habitat** does not exceed the widths prescribed in reference table 1 of this code.<br><br>OR<br><br>**AO140.3 Clearing** in **essential habitat** does not exceed the areas prescribed in reference table 1 of this code. | |
| **PO141** Where **clearing** of **vegetation** in a **regional ecosystem** that is an area of **essential habitat** does not maintain the composition, structure and function of the **regional ecosystem**, and cannot be avoided and has been mitigated, an **offset** is provided for any acceptable **significant residual impact for** each **protected wildlife** species individually. | No acceptable outcome is prescribed. | |
| **Limits to clearing for fodder harvesting** | | |
| **PO142 Clearing** is limited to:<br>1. the extent necessary to provide fodder for stock; and<br>2. areas where the stock is located, and the stock have sufficient water. | No acceptable outcome is prescribed. | |
| **PO143 Clearing** must only occur:<br>1. in **regional ecosystems** listed in reference table 6 or reference table 7 of this code; and<br>2. in accordance with the harvesting method limitations for the **regional ecosystem** listed in reference table 6 or reference table 7 of this code. | No acceptable outcome is prescribed. | |
| **PO144 Clearing** consists predominantly of **fodder species**. | No acceptable outcome is prescribed. | |
| **Conserving vegetation** | | |
| **PO145 Clearing** is carried out in a way that conserves:<br>1. **remnant vegetation** in perpetuity; and<br>2. the **regional ecosystem** in which the **vegetation** is situated. | **AO145.1 Clearing** does not result in the removal of non-**fodder species** with a height of four metres or more.<br><br>AND<br><br>**AO145.2 Selective harvesting**: | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 1. retains all non-**fodder species** except where the damage is an unavoidable consequence of **clearing** the selected fodder tree; and<br>2. when using a chainsaw in **regional ecosystems** listed in reference table 6 of this code, retains at least one fodder tree for every fodder tree **cleared**; and<br>3. in **least concern regional ecosystems** listed in reference table 7 of this code, retains at least one fodder tree for each fodder tree **cleared**; and<br>4. in **of concern regional ecosystems** listed in reference table 7 of this code, retains at least two fodder trees for each fodder tree **cleared**.<br><br>AND<br><br>**AO145.3 Strip harvesting** and **block harvesting**:<br>1. where **fodder harvesting** has previously occurred in an area of a lot, only occurs if all of the following apply:<br>a. the **vegetation** has not been cleared in the last 10 years; and<br>b. the average height of the fodder trees is at least 70 per cent of the height of the tallest stands of **fodder species** in the **regional ecosystem**; and<br>c. the fodder trees that were previously harvested have now attained an average height of at least 4 metres; and<br>2. aligns **clearing** along the contour where practical; and<br>3. does not occur in patches of **regional ecosystems** that are less than 10 hectares in area or less than 500 metres wide.<br><br>AND<br><br>**AO145.4 Strip harvesting**: | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 1. does not result in any **strip harvesting area** exceeding 50 metres in width; and<br>2. results in all **strip retention areas**:<br>a. being preserved along the length of **strip harvest areas** to a width of at least 1.5 times that of the adjacent **strip harvest area**; and<br>b. containing **fodder species** with an average height of at least four metres; and<br>3. does not result in **clearing** for machinery access between **strip harvest areas** exceeding 15 metres in width.<br><br>AND<br><br>**AO145.5 Block harvesting**:<br>1. does not result in any **block harvest area** exceeding one hectare; and<br>2. results in **block retention areas**:<br>a. being preserved between **block harvest areas** in accordance with the widths specified in reference table 8 of this code; and<br>b. containing **fodder species** with an average height of at least four metres; and<br>3. does not result in **clearing** for machinery access between **block harvest areas** exceeding 10 metres in width. | |
| **Cleared vegetation** | | |
| **PO146 Fodder harvesting** is carried out in a way that results in the woody biomass of the **cleared vegetation** remaining where it is **cleared**. | No acceptable outcome is prescribed. | |
| **Conserving the fodder resource** | | |
| **PO147 Fodder harvesting** is carried out in a way that will conserve the fodder resource. | **AO147.1 Clearing** does not occur:<br>1. in an area that has been **cleared** in the previous 10-year period; and<br>2. more than once in the same area of a lot; and | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | 3. in more than 50 per cent of the area of the **regional ecosystem** listed in reference table 6 and reference table 7 of this code on the lot; and<br>4. in areas required to be retained under this code, a development approval or any **accepted development vegetation clearing code**. | |
| **Duration of clearing, preventing land degradation, and maintaining biodiversity, ecological processes and regional ecosystems** | | |
| **PO148 Clearing** occurs only during a period that:<br>1. will not contribute to **land degradation**; and<br>2. ensures the ongoing maintenance of **ecological processes** and **biodiversity**; and<br>3. maintains the **regional ecosystem**. | No acceptable outcome is prescribed. | |

# Table 16.15: Managing thickened vegetation

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **Clearing associated with wetlands** | | |
| **PO149 Clearing** of **vegetation** within a natural **wetland** and/or within 100 metres of the **defining bank** of a natural **wetland** maintains the composition, structure and function of any **regional ecosystem** associated with a natural **wetland** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **AO149.1 Mechanical clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of a natural **wetland**; and<br>2. within 20 metres of the **defining bank** of a natural **wetland**. | |
| **Clearing associated with watercourses or drainage features** | | |
| **PO150 Clearing** of **vegetation** within a **watercourse** and/or **drainage feature** and/or within the relevant distance (listed in reference table 2) of a **watercourse** and/or **drainage feature** maintains the composition, structure and function of any **regional ecosystem** associated with any **watercourse** | **AO150.1 Mechanical clearing** does not occur in any of the following areas:<br>1. inside the **defining bank** of any **watercourse drainage feature**;<br>2. within 10 metres of the **defining bank** of a **watercourse** or **drainage** feature that is a | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| and/or **drainage feature** to protect all of the following:<br>1. bank stability by protecting against bank erosion;<br>2. water quality by filtering sediments, nutrients and other pollutants;<br>3. aquatic habitat;<br>4. terrestrial habitat. | **stream order** 1 or 2 **watercourse** or **drainage feature**;<br>3. within 15 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 3 or 4 **watercourse** or **drainage feature**;<br>4. within 20 metres of the **defining bank** of a **watercourse** or **drainage feature** that is a **stream order** 5 or more **watercourse** or **drainage feature**. | |
| **Soil erosion** | | |
| **PO151 Clearing** does not result in **accelerated soil erosion** within or outside the land subject of the development application. | **AO151.1 Clearing** only occurs where **recognised best practice methods** are employed to:<br>1. prevent **soil erosion and instability** resulting from the **clearing**; and<br>2. stabilise **soil erosion and instability** which would result from **clearing**; and<br>3. prevent increased sediment run-off entering a **wetland**, **watercourse** or **drainage feature** as a result of the **clearing**.<br><br>AND<br><br>**AO151.2 Mechanical clearing** does not:<br>1. occur in a **regional ecosystem** in reference table 4 of this code that states '**mechanical clearing** not permitted';<br>2. disturb more than 50 per cent of the ground surface or result in any hectare having less than 50 per cent **ground cover**;<br>3. occur on a **slope** greater than five per cent; and<br>4. occur within 50 metres of an area of **soil erosion and instability**. | |
| **Acid sulfate soils if the local government is not the assessment manager for the development application** | | |
| **PO152 Clearing** does not result in, or accelerate, disturbance of acid sulfate soils or changes to the hydrology of the location that will result in either of the following: | **AO152.1 Clearing** does not occur in **land zone 1**, **land zone 2** or **land zone 3**.<br><br>OR | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| 1. aeration of horizons containing iron sulphides;<br>2. mobilisation of acid or metals. | **AO152.2 Clearing** in **land zone 1**, **land zone 2** or **land zone 3** in areas below the five metre Australian Height Datum only occurs where:<br>1. **mechanical clearing** does not disturb the soil to a depth greater than 30 centimetres; and<br>2. acid sulfate soils are managed consistent with the soil management guidelines in the Queensland Acid Sulfate Soil Technical Manual. | |
| **Restoring the regional ecosystem** | | |
| **PO153 Clearing** activities:<br>1. restore the natural floristic composition and **range of sizes** of each species of the **regional ecosystem** evenly spaced across the **application area**; and<br>2. retain **mature trees**, **habitat trees** and **tall immature trees** and **thickets**. | **AO153.1 Clearing** does not occur in **thickets**.<br><br>AND<br><br>**AO153.2 Clearing** retains:<br>1. all **mature trees** and **habitat trees**;<br>2. a full **range of sizes** and species typical of the **regional ecosystem** in the area; and<br>3. where the number of **mature trees** plus **habitat trees** is less than 20 per hectare, **tall immature trees** to total 20 **mature trees**, **habitat trees** and **tall immature trees** per hectare.<br><br>AND<br><br>**AO153.3 Clearing** does not result in debris stacked or pushed against a **mature tree**, **habitat tree** or **tall immature tree**.<br><br>AND<br><br>**AO153.4** If **clearing immature trees**, retain **immature trees** in each 50 metre by 50 metre area to at least the density specified reference table 4 of this code.<br><br>AND | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| | **AO153.5** If **clearing low shrubs**:<br>1. in **regional ecosystems** where **clearing** is restricted to **low shrubs** as specified in reference table 4 of this code – **clearing** retains all **immature trees**;<br>2. in **regional ecosystems** where **clearing** is not restricted to **low shrubs** as specified in reference table 4 of this code – **clearing** retains at least the number of **immature trees** specified in reference table 4 of this code; and<br>3. **clearing** retains at least 10 per cent of the predominate species that have thickened.<br><br>AND<br><br>**AO153.6 Mechanical clearing** does not occur within 5 metres of the trunk of a **mature tree**, **habitat tree** or **tall immature tree**.<br><br>AND<br><br>**AO153.7 Clearing** is not undertaken by:<br>1. **aerial application** of any herbicide; and/or<br>2. application of a **root-absorbed broad spectrum herbicide**.<br><br>AND<br><br>**AO153.8** Chemical **clearing** does not occur within five metres of the trunk of a **mature tree**, **habitat tree** or **tall immature tree**.<br><br>AND<br><br>**AO153.9** Any **regional ecosystem burn** is undertaken in accordance with the fire guideline for the **regional ecosystem**, as outlined in the Regional Ecosystem Description Database (REDD). | |
| **Clearing limited to specific regional ecosystems and specific clearing methods** | | |

| Performance outcomes | Acceptable outcomes | Response |
|---|---|---|
| **PO154 Clearing** must be for the purpose of restoring the remnant **regional ecosystem** and only occur if all of the following apply:<br>1. **clearing** is in **regional ecosystems** prescribed in reference table 4 of this code; and<br>2. **clearing** is in accordance with the **clearing** restrictions for the **regional ecosystem** prescribed in reference table 4 of this code. | No acceptable outcome is prescribed. | |
| **PO155 Clearing** occurs only during a period that:<br>1. will not contribute to **land degradation**; and<br>2. ensures the ongoing maintenance of **ecological processes** and **biodiversity**; and<br>3. maintains the **regional ecosystem**. | No acceptable outcome is prescribed. | |

# Annexure 13: Planning Scheme Code Assessment

### 6.2.9 Rural zone code

#### 6.2.9.1 Application

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

#### 6.2.9.2 Purpose

(1) The purpose of the Rural zone code is to:
  (a) provide for rural uses including cropping, intensive horticulture, intensive animal industries, animal husbandry, animal keeping and other primary production activities;
  (b) provide opportunities for non-rural uses that are compatible with agriculture, the environmental features, and landscape character of the rural area where the uses do not compromise the long-term use of the land for rural purposes;
  (c) protect or manage significant natural resources and processes to maintain the capacity for primary production.

(2) Mareeba Shire Council's purpose of the Rural zone code is to recognise the importance of primary production to the economy of the region and to maintain and strengthen the range of primary industries which contribute to the rural economy.

The purpose of the Rural zone code is to:
  (a) recognise the diversity of rural uses that exists throughout the region;
  (b) protect the rural character of the region;
  (c) provide facilities for visitors and tourists that are accessible and offer a unique experience;
  (d) protect the infrastructure of the Mareeba-Dimbulah Irrigation Scheme Area from development which may compromise long term use for primary production;
  (e) maintain distinct boundaries between the rural areas and the villages, towns and urban areas of the region;
  (f) provide for a range of uses, compatible and associated with rural or ecological values including recreational pursuits and tourist activities;
  (g) prevent adverse impacts of development on ecological values;
  (h) preserve land in large holdings; and
  (i) facilitate the protection of strategic corridors across the landscape which link remnant areas of intact habitat and transport corridors.

(3) The purpose of the Rural zone code will be achieved through the following overall outcomes:
  (a) Areas for use for primary production are conserved and fragmentation below economically viable lot sizes is avoided;
  (b) The establishment of a wide range of rural pursuits is facilitated, including cropping, intensive horticulture, forestry, intensive animal industries, animal husbandry and animal keeping and other compatible primary production uses;
  (c) The establishment of extractive industries, mining and associated activities and alternative forms of energy generation is appropriate where environmental impacts and land use conflicts are minimised;
  (d) Uses that require isolation from urban areas as a consequence of their impacts such as noise or odour may be appropriate where land use conflicts are minimised;

(e) Development is reflective of and responsive to the environmental constraints of the land;
(f) Residential and other development is appropriate only where directly associated with the rural nature of the zone;
(g) Low-impact tourism and recreation activities do not compromise the long-term use of the land for rural purposes;
(h) The viability of both existing and future rural uses and activities is protected from the intrusion of incompatible uses;
(i) Visual impacts of clearing, building, materials, access ways and other aspects of development are minimised or appropriately managed;
(j) Adverse impacts of development both on-site and from adjoining areas are avoided and any impacts are minimised through location, design, operation and management; and
(k) Natural features such as creeks, gullies, waterways, wetlands and bushland are retained, managed, enhanced and separated from adjacent development.

### 6.2.9.3 Criteria for assessment

**Table 6.2.9.3—Rural zone code - For accepted development subject to requirements and assessable development**

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For accepted development subject to requirements and assessable development** | | | |
| **Height** | | | |
| **PO1**<br>Building height takes into consideration and respects the following:<br>(a) the height of existing buildings on adjoining premises;<br>(b) the development potential, with respect to height, on adjoining premises;<br>(c) the height of buildings in the vicinity of the site;<br>(d) access to sunlight and daylight for the site and adjoining sites;<br>(e) privacy and overlooking; and<br>(f) site area and street frontage length. | **AO1.1**<br>Development, other than buildings used for rural activities, has a maximum building height of:<br>(a) 8.5 metres; and<br>(b) 2 storeys above ground level. | **N/A** | |
| | **AO1.2**<br>Buildings and structures associated with a rural activity including machinery, equipment, packing or storage buildings do not exceed 10 metres in height. | **N/A** | |
| **Siting, where not involving a Dwelling house**<br><br>Note—Where for Dwelling house, the setbacks of the Queensland Development Code apply. | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO2**<br>Development is sited in a manner that considers and respects:<br>(a) the siting and use of adjoining premises;<br>(b) access to sunlight and daylight for the site and adjoining sites;<br>(c) privacy and overlooking;<br>(d) air circulation and access to natural breezes;<br>(e) appearance of building bulk; and<br>(f) relationship with road corridors. | **AO2.1**<br>Buildings and structures include a minimum setback of:<br>(a) 40 metres from a frontage to a State-controlled road; and<br>(b) 10 metres from a boundary to an adjoining lot. | **N/A** | |
| | **AO2.2**<br>Buildings and structures, where for a Roadside stall, include a minimum setback of 0 metres from a frontage to a road that is not a State-controlled road. | **N/A** | |
| | **AO2.3**<br>Buildings and structures, expect where a Roadside stall, include a minimum setback of:<br>(a) 10 metres from a frontage to a sealed road that is not a State-controlled road; and<br>(b) 100 metres from a frontage to any other road that is not a State-controlled road; | **N/A** | |
| **Accommodation density** | | | |
| **PO3**<br>The density of Accommodation activities:<br>(a) respects the nature and density of surrounding land use;<br>(b) is complementary and subordinate to the rural and natural landscape values of the area; and<br>(c) is commensurate to the scale and frontage of the site. | **AO3.1**<br>Residential density does not exceed one dwelling house per lot. | **N/A** | |
| | **AO3.2**<br>Residential density does not exceed two dwellings per lot and development is for:<br>(a) a secondary dwelling; or<br>(b) Caretaker's accommodation and includes building work or minor building work with a maximum gross floor area of 100m$^2$; or<br>(c) Rural worker's accommodation. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For assessable development** | | | |
| **Site cover** | | | |
| **PO4**<br>Buildings and structures occupy the site in a manner that:<br>(a) makes efficient use of land;<br>(b) is consistent with the bulk and scale of buildings in the surrounding area; and<br>(c) appropriately balances built and natural features. | **AO4**<br>No acceptable outcome is provided. | **N/A** | |
| **PO5**<br>Development complements and integrates with the established built character of the Rural zone, having regard to:<br>(a) roof form and pitch;<br>(b) eaves and awnings;<br>(c) building materials, colours and textures; and<br>(d) window and door size and location. | **AO5**<br>No acceptable outcome is provided. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **Amenity** | | | |
| **PO6**<br>Development must not detract from the amenity of the local area, having regard to:<br>(a) noise;<br>(b) hours of operation;<br>(c) traffic;<br>(d) advertising devices;<br>(e) visual amenity;<br>(f) privacy;<br>(g) lighting;<br>(h) odour; and<br>(i) emissions. | **AO6**<br>No acceptable outcome is provided. | ✔ | **Proposal relates to the expansion of an existing operation which will not impact the amenity of the surrounding area as it will remain visually screened and does not increase traffic as extraction volumes remain unchanged.** |
| **PO7**<br>Development must take into account and seek to ameliorate any existing negative environmental impacts, having regard to:<br>(a) noise;<br>(b) hours of operation;<br>(c) traffic;<br>(d) advertising devices;<br>(e) visual amenity;<br>(f) privacy;<br>(g) lighting;<br>(h) odour; and<br>(i) emissions. | **AO7**<br>No acceptable outcome is provided. | ✔ | **As above, the proposed expansion of existing operations is not considered to exacerbate any impacts listed under PO7.** |

### 6.2.3 Conservation zone code

#### 6.2.3.1 Application

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

#### 6.2.3.2 Purpose

(1) The purpose of the Conservation zone code is to provide for the protection, restoration and management of areas identified as supporting significant biological diversity and ecological integrity.

(2) Mareeba Shire Council's purpose of the Conservation zone code is to ensure that the shire's outstanding natural environment, ecological processes and biodiversity values are conserved, enhanced and restored.

(3) The purpose of the code will be achieved through the following overall outcomes:
   (a) Areas identified as having significant values for biological diversity, water catchment, ecological functioning and historical or cultural values are protected from development;
   (b) Low intensity development based on appreciation of the conservation value of the area, such as ecotourism and outdoor recreation, may be facilitated where a demonstrated community need exists and where it is consistent with any management plan for the area;
   (c) Adverse impacts on conservation values from on and off-site development or operation of development are minimised through the location, design and management of development and activities;
   (d) Development is reflective of and responsive to the environmental values of the area;
   (e) Natural features such as creeks, gullies, waterways, wetlands and native vegetation are protected and appropriate buffers are established;
   (f) Low-impact, small-scale rural living opportunities and rural activities are facilitated where compatible with the maintenance of conservation values.

### 6.2.3.3 Criteria for assessment

**Table 6.2.3.3—Conservation zone code — For assessable development**

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **Height** | | | |
| **PO1**<br>Building height takes into consideration and respects the following:<br>(a) the height of existing buildings on adjoining premises;<br>(b) the height of surrounding vegetation;<br>(c) the height of buildings in the vicinity of the site;<br>(d) access to sunlight and daylight for the site and adjoining sites;<br>(e) privacy and overlooking; and<br>(f) an appropriate balance between built and natural features. | **AO1**<br>Development has a maximum building height of:<br>(a) 8.5 metres; and<br>(b) 2 storeys above ground level. | **N/A** | |
| **Siting** | | | |
| **PO2**<br>Development is sited in a manner that considers and respects:<br>(a) the siting and use of adjoining premises;<br>(b) access to sunlight and daylight for the site and adjoining sites;<br>(c) privacy and overlooking;<br>(d) air circulation and access to natural breezes;<br>(e) relationship with road corridors; and<br>(f) an appropriate balance between built and natural features. | **AO2**<br>Buildings and structures include a minimum setback of:<br>(a) 10 metres from any road frontage; and<br>(b) 10 metres from side and rear boundaries. | **N/A** | |
| **Accommodation density** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO3**<br>The density of Accommodation activities:<br>(a) contributes to housing choice and affordability;<br>(b) respects the nature and density of surrounding land use;<br>(c) is commensurate to the size and frontage of the site;<br>(d) does not cause amenity impacts beyond the reasonable expectation of accommodation density for the zone; and<br>(e) appropriately balances built and natural features. | **AO3**<br>Development provides a maximum density for Accommodation activities of 1 dwelling or accommodation unit per lot. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **Site cover** | | | |
| **PO4**<br>Buildings and structures occupy the site in a manner that:<br>(a) protects the ecological features and values of the site and surrounds;<br>(b) is consistent with the bulk and scale of buildings in the surrounding area; and<br>(c) appropriately balances built and natural features. | **AO4**<br>Site cover does not exceed 10%. | **N/A** | |
| **Building design** | | | |
| **PO5**<br>Development complements and integrates with the established built and environmental character of the Conservation zone, having regard to:<br>(a) roof form and pitch;<br>(b) eaves and awnings;<br>(c) building materials, colours and textures; and<br>(d) window and door size and location. | **AO5**<br>No acceptable outcome is provided. | **N/A** | |
| **Amenity** | | | |
| **PO6**<br>Development must not detract from the amenity of the local area, having regard to:<br>(a) noise;<br>(b) hours of operation;<br>(c) traffic;<br>(d) advertising devices;<br>(e) visual amenity;<br>(f) privacy;<br>(g) lighting;<br>(h) odour; and<br>(i) emissions. | **AO6**<br>No acceptable outcome is provided. | ✔ | **Proposal relates to the expansion of an existing operation which will not impact the amenity of the surrounding area as it will remain visually screened and does not increase traffic as extraction volumes remain unchanged.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO7**<br>Development must take into account and seek to ameliorate any existing negative environmental impacts, having regard to:<br>(a) noise;<br>(b) hours of operation;<br>(c) traffic;<br>(d) advertising devices;<br>(e) visual amenity;<br>(f) privacy;<br>(g) lighting;<br>(h) odour; and<br>(i) emissions. | **AO7**<br>No acceptable outcome is provided. | ✔ | **As above, the proposed expansion of existing operations is not considered to exacerbate any impacts listed under PO7.** |

## 9.3.5 Industrial activities code

### 9.3.5.1 Application

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

### 9.3.5.2 Purpose

(1) The purpose of the Industrial activities code is to ensure Industrial activities are:
  (a) appropriately located within designated industrial areas;
  (b) established and operated in an efficient manner with minimal impact on the character, scale, amenity and environmental values of the surrounding area; and
  (c) managed to allow for progressive rehabilitation where involving Extractive industry.

(2) The purpose of the code will be achieved through the following overall outcomes:
  (a) Industrial activities are appropriately located having regard to topography, surrounding land uses, natural environment, accessibility, local character and potential social and community impacts;
  (b) Industrial activities meet the needs of the local community and the local economy through well located, safe and convenient points of service;
  (c) Industrial activities are designed to have minimal impact on the character, amenity and environment of the surrounding area;
  (d) Industrial activities provide a safe working environment;
  (e) Industrial activities are designed to promote sustainability and energy efficiency;
  (f) Industrial activities are co-located with complimentary and compatible uses;
  (g) External impacts associated with Extractive industry operations do not impact on the character and amenity of the surrounding area and the safety and wellbeing of the community;
  (h) Extractive industry operations are adequately separated from potentially incompatible land uses; and
  (i) Extractive industry sites are progressively rehabilitated.

### 9.3.5.3 Criteria for assessment

**Table 9.3.5.3—Industrial activities code– For accepted development subject to requirements and assessable development**

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For accepted development subject to requirements and assessable development** | | | |
| **Separation** | | | |
| **PO1**<br>Industrial activities are appropriately separated from sensitive uses to ensure their amenity is maintained, having regard to:<br>(a) noise;<br>(b) odour;<br>(c) light; and<br>(d) emissions.<br><br>Note—Development proposed to be located closer than the separation distances specified in AO2 requires supporting investigations to demonstrate that the expected impacts from the industry use have been adequately mitigated in consideration of the local context. | **AO1**<br>Development is separated from sensitive uses as follows:<br>(a) medium impact industry–250 metres; or<br>(b) high impact industry–500 metres; or<br>(c) special industry– 1.5 kilometres. | ✔ | **Proposal complies.** |
| **For assessable development** | | | |
| **Amenity** | | | |
| **PO2**<br>Industrial activities protect and enhance the character and amenity of the locality and streetscape through the appropriate location and screening of:<br>(a) air conditioning;<br>(b) refrigeration plant;<br>(c) mechanical plant; and<br>(d) refuse bin storage areas. | **AO2**<br>No acceptable outcome is provided. | **N/A** | |
| **PO3**<br>Development avoids and, where unavoidable, mitigates impacts on ground water, particularly where ground water is heavily drawn upon for irrigation or domestic purposes. | **AO3**<br>No acceptable outcome is provided. | **N/A** | |
| **If for Extractive industry** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO4**<br>The site has sufficient area and dimensions to safely accommodate:<br>(a) the extractive use;<br>(b) vehicular access and on site vehicular movements;<br>(c) buildings including staff facilities;<br>(d) parking areas for visitors and employees;<br>(e) storage areas and stockpiles;<br>(f) any environmentally significant land; and<br>(g) landscaping and buffer areas.<br><br>Note—Refer to Planning Scheme Policy 3 - Extractive Industry. | **AO4**<br>No acceptable outcome is provided. | ✔ | **Proposal complies – refer to proposed site plan.** |
| **PO5**<br>Extractive industry is established and operated in a way that does not impact on public safety. | **AO5**<br>Safety fencing is provided for the full length of the perimeter of the site and is appropriately signed with warning signs advising of the nature of the use and any danger or hazard. | **Complies with PO** | **Entrance to site is gated. It is not practical or necessary to fence the entire site perimeter.** |
| **PO6**<br>Extractive industry is appropriately located to adequately mitigate visual, noise, vibration and dust impacts on sensitive uses. | **AO6**<br>All aspects of the Extractive industry are setback from all boundaries:<br>(a) 200 metres where not involving blasting or crushing; and<br>(b) 1,000 metres for where involving blasting or crushing.<br><br>Note—Refer to Planning Scheme Policy 3 - Extractive Industry. | **Complies with PO** | **Proposal does not achieve prescribed setbacks but will not impact sensitive uses.** |
| **PO7**<br>The Extractive industry is designed and managed to appropriately address its interface with the natural environment and landscape, having regard to:<br>(a) water quality; | **AO7.1**<br>The Extractive industry does not cause a reduction in the quality of ground water or receiving surface waters. | ✔ | **Existing operation is subject to management documents included as Annexure 10 to this report which address water quality.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| (b) existing vegetation; and<br>(c) declared plants. | **AO7.2**<br>Vegetation is retained on site that contributes towards alleviating the impact of the development on the visual amenity of surrounding sensitive land uses. | ✔ | **Vegetation is retained adjacent to the Kennedy Highway and surrounding sensitive uses are well separated from the site.** |
| | **AO7.3**<br>No declared plants are transported from the site. | ✔ | **Proposal complies.** |
| **PO8**<br>Extractive industry actively integrates rehabilitation into the ongoing operations on the site to progressively restore the site to its original (or an improved) condition, having regard to matters of:<br>(a) locally prevalent plant species;<br>(b) plant spacing;<br>(c) local climatic conditions;<br>(d) locations of waterways and wetlands;<br>(e) ongoing maintenance;<br>(f) potential habitat opportunities;<br>(g) erosion and sediment control; and<br>(h) fencing.<br><br>Note—A revegetation plan must be prepared by a suitably experienced person in the field of natural area revegetation and rehabilitation, at a standard acceptable to Council, which addresses the items identified in Performance Outcome PO8. | **AO8**<br>No acceptable outcome is provided. | ✔ | **Proposal complies. Council may condition a rehabilitation plan.** |

### 8.2.3 Bushfire hazard overlay code

#### 8.2.3.1 Application

(1) This code applies to assessing development where:
  (a) land the subject of development is located within a Bushfire hazard area and Potential impact buffer (100 metres) identified on the **Bushfire hazard overlay maps (OM-003a-o)**; and
  (b) it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

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

#### 8.2.3.2 Purpose

(1) The purpose of the Bushfire hazard overlay code is to minimise the threat of bushfire to people and property.

(2) The purpose of the code will be achieved through the following overall outcomes:
  (a) Development in a Bushfire hazard area is compatible with the nature of the hazard;
  (b) The number of people and properties subject to bushfire hazards are minimised through appropriate building design and location;
  (c) Development does not result in a material increase in the extent, duration or severity of bushfire hazard; and
  (d) Appropriate infrastructure is available to emergency services in the event of a bushfire.

#### 8.2.3.3 Criteria for assessment

**Table 8.2.3.3—Bushfire hazard overlay code — For accepted development subject to requirements and assessable development**

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For accepted development subject to requirements and assessable development** | | | |
| **Water supply for fire-fighting purposes** | | | |
| **PO1**<br>Development where within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)** maintains the safety of people and property by providing an adequate, accessible and reliable water supply for fire-fighting purposes which is safely located and has sufficient flow and pressure characteristics.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | **Where within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o)**<br>**AO1.1**<br>Where in a reticulated water service area, the on-site water supply has flow and pressure characteristics of 10 litres a second at 200 kPa.<br>OR | N/A | |
| | **AO1.2**<br>Where access to the reticulated water network is not available, a minimum on site water storage of 5,000 litres is provided that must comprise:<br>(a) a separate tank; or | ✔ | **The site includes 2 x dams with significant storage capacity.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| | (b) a reserve section in the bottom part of the main water supply tank; or<br>(c) a dam; or<br>(d) a swimming pool.<br>Note—Where a water tank is provided for fire-fighting purposes it is fitted with standard rural fire brigade fittings and the tank is provided with a hardstand area for heavy vehicles. | | |
| **For assessable development** | | | |
| **Land use** | | | |
| **PO2**<br>Development within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)** is appropriate to the bushfire hazard risk having regard to the:<br>(a) the bushfire risk compatibility of development;<br>(b) the vulnerability of and safety risk to persons associated with the use; and<br>(c) consequences of bushfire in regard to impacts on essential infrastructure, buildings and structures.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | **AO2**<br>All buildings, structures, infrastructure and facilities associated with the following uses are located outside any area of the site located within a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)**:<br>(a) child care centre; or<br>(b) community care centre; or<br>(c) correctional facility; or<br>(d) educational establishment; or<br>(e) emergency services; or<br>(f) hospital; or<br>(g) residential care facility; or<br>(h) retirement facility; or<br>(i) rooming accommodation; or<br>(j) shopping centre; or<br>(k) tourist park; or<br>(l) tourist attraction. | N/A | |
| **Lot design** | | | |
| **PO3**<br>Reconfiguring a lot within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)** minimises the potential adverse impacts of bushfire on the safety of people, property and the environment through lot design that:<br>(a) is responsive to the nature and extent of bushfire risk; and<br>(b) allows efficient emergency access to | **Where within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o)**<br><br>**AO3.1**<br>No new lots are created.<br><br>OR<br><br>**AO3.2**<br>All lots include a building envelope that achieves a radiant heat flux level of 29kW/$m^2$ at the | N/A | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| buildings for fire-fighting appliances.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | permitter of the building envelope.<br><br>Note—Where a radiant heat flux of 29kW/$m^2$ is achieved and this relies on cleared or maintained land external to the land the subject of the development application it must be demonstrated that land external to the site will be maintained to a standard that does not exceed the level of bushfire hazard identified in a Bushfire hazard management plan. | | |
| **Firebreaks and access** | | | |
| **PO4**<br>In a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)**, vehicular access is designed to mitigate against bushfire hazard by:<br>(a) ensuring adequate access for fire-fighting and other emergency vehicles;<br>(b) ensuring adequate access for the evacuation of residents and emergency personnel in an emergency situation, including alternative safe access routes should access in one direction be blocked in the event of a fire; and<br>(c) providing for the separation of developed areas and adjacent bushland.<br><br>Note—Where it is not practicable to provide firebreaks in accordance with A04.2 Fire Maintenance Trails are provided in accordance with the following:<br>i. located as close as possible to the boundaries of the lot and the adjoining hazardous vegetation;<br>ii. the minimum cleared width not less than 6 metres;<br>iii. the formed width is not less than 2.5 metres;<br>iv. the formed gradient is not greater than 15%;<br>v. vehicular access is provided at both ends;<br>*vi.* passing bays and turning areas are provided for fire- | **AO4.1**<br>In a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)**, roads are designed and constructed:<br>(a) with a maximum gradient of 12.5%;<br>(b) to not use cul-de-sacs; and<br>(c) a constructed road width and weather standard complying with Planning Scheme Policy 4 - FNQROC Regional Development Manual. | N/A | |
| | **AO4.2**<br>In a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)**, firebreaks are provided:<br>(a) consisting of a perimeter road that separates lots from areas of bushfire hazard;<br>(b) a minimum cleared width of 20 metre;<br>(c) a maximum gradient of 12.5%; and<br>(d) a constructed road width and weather standard complying with Planning Scheme Policy 4 - FNQROC Regional Development Manual. | N/A | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| fighting appliances located on public land.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | | | |
| **Hazardous materials** | | | |
| **PO5**<br>Public safety and the environment are not adversely affected by the detrimental impacts of bushfire of hazardous materials manufactured or stored in bulk.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | **AO5**<br>The processing or storage of dangerous goods or hazardous materials is not undertaken in a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)**. | ✔ | **Site operations are subject to emergency response procedures.** |
| **Landscaping** | | | |
| **PO6**<br>Landscaping within a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)** does not result in a material increase in the extent, duration or severity of bushfire hazard having regard to:<br>(a) fire ecology;<br>(b) slope of site; and<br>(c) height and mix of plant species.<br><br>Note—Frost hollows and the associated grass kill facilitates a rapid curing of fuel and exacerbates bushfire hazard.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | **AO6**<br>No acceptable outcome is provided. | N/A | |
| **Infrastructure** | | | |
| **PO7**<br>Infrastructure services located in a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on | **AO7**<br>The following infrastructure services are located below ground:<br>(a) water supply;<br>(b) sewer; | ✔ | **Proposal complies.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| the **Bushfire hazard overlay maps (OM-003a-o)** are protected from damage or destruction in the event of a bushfire.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | (c) electricity;<br>(d) gas; and<br>(e) telecommunications | | |
| **Private driveways** | | | |
| **PO8**<br>All premises located in a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the **Bushfire hazard overlay maps (OM-003a-o)** are provided with vehicular access that enables safe evacuation for occupants and easy access by fire-fighting appliances.<br><br>Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome. | **AO8**<br>Private driveways:<br>(a) do not exceed a length of 60 metres from the street frontage;<br>(b) do not exceed a gradient of 12.5%;<br>(c) have a minimum width of 3.5 metres;<br>(d) have a minimum vertical clearance of 4.8 metres;<br>(e) accommodate turning areas for fire-fighting appliances in accordance with the Queensland Fire and Emergency Services' Fire Hydrant and Vehicle Access Guidelines; and<br>(f) serve no more than three dwellings or buildings. | ✔ | **Site access is suitable for emergency services.** |

## 8.2.4 Environmental significance overlay code

### 8.2.4.1 Application

(1) This code applies to assessing development where:
   (a) land the subject of development is affected by a constraint category identified on the **Environmental significance overlay maps (OM-004a-z)**; and
   (b) it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

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

### 8.2.4.2 Purpose

(1) The purpose of the Environmental significance overlay code is to identify and protect matters of environmental significance, which include matters of state environmental significance (MSES) as defined under the state planning policy.

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

(2) The purpose of the code will be achieved through the following overall outcomes:
   (a) the biodiversity values, ecosystem services and climate change resilience of areas of environmental significance are protected, managed, enhanced and rehabilitated;
   (b) the biodiversity values of protected areas and legally secured offset areas are protected from development unless overriding community need is demonstrated;
   (c) development is located, designed and managed to minimise the edge effects of development on areas of regulated vegetation and wildlife habitat;
   (d) areas of regulated vegetation and wildlife habitat are managed to minimise biodiversity losses;
   (e) development maintains, protects and enhances a regional network of vegetated corridors that assist in wildlife movement and contribute to the maintenance of habitat and biological diversity;
   (f) development is appropriately setback from waterways and high ecological significance wetlands to minimise direct and indirect impacts on water quality and biodiversity; and
   (g) riparian vegetation and vegetation associated with high ecological significance wetlands is protected and enhanced to improve water quality and natural ecosystem function.

### 8.2.4.3 Criteria for assessment

**Table 8.2.4.3A - Environmental significance overlay code - For accepted development subject to requirements and assessable development**

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For accepted development subject to requirements and assessable development** | | | |
| **Regulated vegetation** | | | |
| **PO1**<br>Vegetation clearing in areas mapped as 'Regulated vegetation' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** is avoided unless:<br>(a) it is demonstrated that the area does not support regulated vegetation as mapped;<br>(b) the loss or reduction in regulated vegetation is for community infrastructure and associated access facilities that cannot be avoided;<br>(c) wildlife interconnectivity is maintained or enhanced at a local and regional scale; and<br>(d) the loss or reduction in regulated vegetation is minimised and any residual impacts are offset.<br><br>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports. | **AO1.1**<br>No clearing of native vegetation is undertaken within areas of 'Regulated vegetation' identified on the **Environmental Significance Overlay Maps (OM-004a-o)**. | **Performance outcome** | **The proposed clearing of regulated vegetation is unavoidable to access this resource which is critical for the local construction industry. Clearing is limited to that which is necessary for the operation, does not impact broader habitat connectivity and will be offset in accordance with State requirements.**<br><br>**Notwithstanding the above, an Ecological Assessment Report has been provided with the application.** |
| **PO2**<br>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:<br>(a) does not interrupt, interfere, alter or otherwise impact on underlying natural ecosystem processes such as water quality, hydrology, | **AO2**<br>Development (excluding roads, earthworks, drainage infrastructure and underground infrastructure) is not located within 20 metres of 'Regulated vegetation' areas identified on the **Environmental Significance Overlay Maps (OM-004a-o)**. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| geomorphology and biophysical processes;<br>(b) does not negatively impact the movement of wildlife at a local or regional scale; and<br>(c) avoids noise, light, vibration or other edge affects, including weed and pest incursion on identified environmental values.<br><br>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports. | | | |
| **Regulated vegetation intersecting a watercourse** | | | |
| **PO3**<br>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.<br><br>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports. | **Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)**<br><br>**AO3.1**<br>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)**. | ✔ | **10m setback from watercourse top of bank is to be maintained.** |
| | **Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)**<br><br>**AO3.2**<br>No clearing of native vegetation is undertaken within the minimum setback identified at **AO3.1**. | ✔ | **10m setback from watercourse top of bank is to be maintained.** |
| **Waterways and wetlands** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO4**<br>'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:<br>(a) maintaining adequate separation distances between waterways/wetlands and development;<br>(b) maintaining and enhancing aquatic and terrestrial habitat including vegetated corridors to allow for native fauna (terrestrial and aquatic) movement;<br>(c) maintaining waterway bank stability by minimising bank erosion and slumping;<br>(d) maintaining water quality by providing buffers to allow filtering of sediments, nutrients and other pollutants; and<br>(e) retaining and improving existing riparian vegetation and existing vegetation associated with a wetland.<br><br>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports. | **Where within a 'Waterway buffer' on Environmental Significance - Waterway Overlay Maps (OM-004p-z)**<br>**AO4.1**<br>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)**. | ✔ | **10m setback from watercourse top of bank is to be maintained.** |
| | **Where within a 'High ecological significance wetland buffer' on Environmental Significance Overlay Maps (OM-004a-o)**<br>**AO4.2**<br>A minimum buffer of 200 metres is provided between development and the edge of a 'High ecological significance wetland' identified on the **Environmental Significance Overlay Maps (OM-004a-o)**. | **N/A** | |
| | **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)**<br>**AO4.3**<br>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)**.<br><br>Note— An alternative outcome is required to demonstrate that the | ✔ | **Stormwater will be managed so as to not enter the waterways.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| | ecological impacts of stormwater discharge to a 'Waterway' or 'High ecological significance wetland' are mitigated in accordance with PO3 through appropriate stormwater management / treatment (where possible). | | |
| | **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)**<br>**AO4.4**<br>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)**.<br><br>Note— A alternative outcome is required to demonstrate that the ecological impacts of wastewater discharge to a 'Waterway' or 'High ecological significance wetland' are mitigated in accordance with PO3 through appropriate wastewater management / treatment (where possible). | ✔ | **Proposal complies.** |
| **For assessable development** | | | |
| **Wildlife Habitat** | | | |
| **PO5**<br>Development within a 'Wildlife habitat' area identified on the **Environmental Significance Overlay Maps (OM-004a-o)**:<br>(a) protects and enhances the habitat of Endangered, Vulnerable and Near Threatened (EVNT) species and local species of significance;<br>(b) incorporates siting and design measures to protect and retain identified ecological values and underlying ecosystem processes | **AO5**<br>No acceptable outcome is provided | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| within or adjacent to the development site;<br>(c) maintains or enhances wildlife interconnectivity at a local and regional scale; and<br>(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).<br><br>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.<br><br>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports. | | | |
| **Legally secured offset areas** | | | |
| **PO6**<br>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.<br><br>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports. | **AO6**<br>No acceptable outcome is provided. | **N/A** | |
| **Protected areas** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO7**<br>Development within a 'Protected area' identified on the **Environmental Significance Overlay Maps (OM-004a-o)** is consistent with the values of the Protected Area and:<br>(a) supports the inherent ecological and community values of the Protected Area asset;<br>(b) maintains or enhances wildlife interconnectivity at a local and regional scale; and<br>(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.<br><br>Note—A supporting Ecological Assessment Report is prepared in accordance with Planning Scheme Policy 2 – Ecological Assessment Reports. | **AO7**<br>No acceptable outcome is provided | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **Ecological corridors and Habitat linkages** | | | |
| **PO8**<br>Development located:<br>(a) in the Conservation zone, Emerging community zone, Recreation and open space zone, Rural zone or Rural residential zone; and<br>(b) within an 'Ecological corridor' or a 'Habitat linkage' identified on the **Environmental Significance Overlay Maps (OM-004a-o)**<br><br>does not compromise the provision of habitat connectivity of the corridor/linkage, having regard to:<br>(a) the environmental values of the area of the site identified in the 'Ecological corridor' or 'Habitat linkage';<br>(b) the environmental values of adjoining and nearby land within the 'Ecological corridor' or 'Habitat linkage';<br>(c) the extent of any modification proposed to the natural environment including (but not limited to) vegetation and topography;<br>(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<br>(e) the ability for the 'Ecological corridor' or 'Habitat linkage' to be enhanced to improve ecological connectivity. | **AO8**<br>No acceptable outcome is provided | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| 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. | | | |

**Table 8.2.4.3B - Setback and buffer distances from waterways**

| Stream order | Setback and buffer from waterways |
|---|---|
| 1 | 10 metres from top of high bank |
| 2-4 | 25 metres from top of high bank |
| 5 or more | 50 metres from top of high bank |

Note—The steam order of a 'waterway' is to be determined on a case by case basis.

### 9.4.2 Landscaping code

#### 9.4.2.1 Application

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

#### 9.4.2.2 Purpose

(1) The purpose of the Landscaping code is to ensure all development is landscaped to a standard that:
- (a) complements the scale and appearance of the development;
- (b) protects and enhances the amenity and environmental values of the site;
- (c) complements and enhances the streetscape and local landscape character; and
- (d) ensures effective buffering of incompatible land uses to protect local amenity.

(2) The purpose of the code will be achieved through the following overall outcomes:
- (a) Landscaping is a functional part of development design and is commensurate with the intended use;
- (b) Landscaping accommodates the retention of existing significant on site vegetation where appropriate and practical;
- (c) Landscaping treatments complement the scale, appearance and function of the development;
- (d) Landscaping contributes to an attractive streetscape;
- (e) Landscaping enhances the amenity and character of the local area;
- (f) Landscaping enhances natural environmental values of the site and the locality;
- (g) Landscaping provides effective screening both on site, if required, and between incompatible land uses;
- (h) Landscaping provides shade in appropriate circumstances;
- (i) Landscape design enhances personal safety and reduces the potential for crime and vandalism; and
- (j) Intensive land uses incorporate vegetated buffers to provide effective screening of buildings, structures and machinery associated with the use.

### 9.4.2.3 Criteria for assessment

**Table 9.4.2.3A—Landscaping code - For accepted development subject to requirements and assessable development**

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For accepted development subject to requirements and assessable development** | | | |
| **PO1**<br>Development, other than in the Rural zone, includes landscaping that:<br>(a) contributes to the landscape character of the Shire;<br>(b) compliments the character of the immediate surrounds;<br>(c) provides an appropriate balance between built and natural elements; and<br>(d) provides a source of visual interest. | **AO1**<br>Development, other than in the Rural zone, provides:<br>(a) a minimum of 10% of the site as landscaping;<br>(b) planting in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species;<br>(c) for the integration of retained significant vegetation into landscaping areas;<br>(d) on-street landscaping works in accordance with the Design Guidelines set out in Section D9 Landscaping, of the Planning Scheme Policy 4 - FNQROC Regional Development Manual.<br><br>Note—Where development exceeds a site cover of 90%, areas of landscaping may be provided above ground level to achieve a total supply of landscaping equivalent to 10% of the site area. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO2**<br>Development, other than in the Rural zone, includes landscaping along site frontages that:<br>(a) creates an attractive streetscape;<br>(b) compliments the character of the immediate surrounds;<br>(c) assists to break up and soften elements of built form;<br>(d) screen areas of limited visual interest or servicing;<br>(e) provide shade for pedestrians; and<br>(f) includes a range and variety of planting. | **AO2**<br>Development, other than in the Rural zone, includes a landscape strip along any site frontage:<br>(a) with a minimum width of 2 metres where adjoining a car parking area;<br>(b) with a minimum width of 1.5 metres in all other locations; and<br>(c) in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species.<br><br>Note—Where development is setback from a frontage less than 1.5 metres, the setback area is provided as a landscape strip | **N/A** | |
| **PO3**<br>Development includes landscaping and fencing along side and rear boundaries that:<br>(a) screens and buffer land uses;<br>(b) assists to break up and soften elements of built form;<br>(c) screens areas of limited visual interest;<br>(d) preserves the amenity of sensitive land uses; and<br>(e) includes a range and variety of planting. | **AO3.1**<br>Development provides landscape treatments along side and rear boundaries in accordance with **Table 9.4.2.3B**. | **N/A** | |
| | **AO3.2**<br>Shrubs and trees provided in landscape strips along side and rear boundaries:<br>(a) are planted at a maximum spacing of 1 metre;<br>(b) will grow to a height of at least 2 metres;<br>(c) will grow to form a screen of no less than 2 metres in height; and<br>(d) are mulched to a minimum depth of 0.1 metres with organic mulch. | **N/A** | |
| | **AO3.3**<br>Any landscape strip provided along a side or rear boundary is designed in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO4**<br>Car parking areas are improved with a variety of landscaping that:<br>(a) provides visual interest;<br>(b) provides a source of shade for pedestrians;<br>(c) assists to break up and soften elements; and<br>(d) improves legibility. | **AO4.1**<br>Landscaping is provided in car parking areas which provides:<br>(a) a minimum of 1 shade tree for every 4 parking spaces, or part thereof, where the car parking area includes 12 or more spaces;<br>(b) a minimum of 1 shade tree for every 6 parking spaces, or part thereof, otherwise; and<br>(c) where involving a car parking area in excess of 500m$^2$:<br>(i) shade structures are provided for 50% of parking spaces; and<br>(ii) a minimum of 10% of the parking area as landscaping.<br><br>Note—Where a shade structure is provided over part of a car parking area, shade tree planting is not required in this area of the car parking area. | **N/A** | |
| | **AO4.2**<br>Landscaping in car parking areas is designed in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species. | **N/A** | |
| **PO5**<br>Landscaping areas include a range and variety of planting that: | **AO5.1**<br>Plant species are selected from the Plant Schedule in Planning Scheme Policy 6 - Landscaping and preferred plant species. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| (a) is suitable for the intended purpose and local conditions;<br>(b) contributes to the natural character of the Shire;<br>(c) includes native species;<br>(d) includes locally endemic species, where practical; and<br>(e) does not include invasive plants or weeds. | **AO5.2**<br>A minimum of 25% of (new and existing) plants is provided as larger, advanced stock with a minimum plant height of 0.7 metres and mulched to a minimum depth of 0.1 metres with organic mulch. | **N/A** | |
| **PO6**<br>Landscaping does not impact on the ongoing provision of infrastructure and services to the Shire. | **AO6.1**<br>Tree planting is a minimum of<br>(a) 2 metres from any underground water, sewer, gas, electricity or telecommunications infrastructure; and<br>(b) 4 metres from any inspection chamber. | **N/A** | |
| | **AO6.2**<br>Vegetation below or within 4 metres of overhead electricity lines and power poles has a maximum height of 3.5 metres at maturity. | **N/A** | |
| | **AO6.3**<br>Vegetation adjoining an electricity substation boundary, at maturity, will have:<br>(a) a height of less than 4 metres; and<br>(b) no foliage within 3 metres of the substation boundary, unless the substation has a solid wall along any boundary. | **N/A** | |
| **For assessable development** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO7**<br>Landscaping areas are designed to:<br>(a) be easily maintained throughout the ongoing use of the site;<br>(b) allow sufficient area and access to sunlight and water for plant growth;<br>(c) not cause a nuisance to occupants of the site or members of the public; and<br>(d) maintain or enhance the safety of pedestrians through the use of Crime Prevention Through Environmental Design principles. | **AO7**<br>No acceptable outcome is provided. | **N/A** | |

**Table 9.4.2.3B—Side and rear boundary landscape treatments**

| Location or use | Landscape Strip Minimum Width | Screen Fencing Minimum Height | Extent of treatment |
|---|---|---|---|
| Where car parking, servicing or manoeuvring areas adjoin a side or rear boundary | 1 metre | Not applicable | To the extent these areas adjoin the boundary |
| Where involving a use other than a dwelling house on a site with a common boundary with land in the Low density residential zone, the Medium density residential zone or the Rural residential zone: | 1.5 metres | 1.8 metres | Along the common boundary. |
| Development for an industrial activity which has a common boundary with land not within the Industry zone | 2 metres | 1.8 metres | Along the common boundary |
| Development involving<br>(a) Tourist park not in the Rural zone<br>(b) Sales office<br>(c) Multiple dwelling<br>(d) Residential care facility; or<br>(e) Dual occupancy | Not applicable | 1.8 metres | Along all side and rear boundaries and between dwellings for a Dual occupancy. |
| Development involving<br>(a) Tourist park in the Rural zone<br>(b) Service station<br>(c) Car wash; or<br>(d) Utility installation | 2 metres | Not applicable | Along all side and rear boundaries |
| For:<br>(a) waste storage;<br>(b) equipment;<br>(c) servicing areas; and<br>(d) private open space and site facilities associated with Caretaker's accommodation. | Not applicable | 1.8 metres | To prevent visibility |

Note—Where more than one landscape treatment is applicable to a development in the above table, the development is to provide a landscape treatment that satisfies all applicable minimum specifications.

### 9.4.3 Parking and access code

#### 9.4.3.1 Application

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

#### 9.4.3.2 Purpose

(1) The purpose of the Parking and access code is to ensure:
- (a) parking areas are appropriately designed, constructed and maintained;
- (b) the efficient functioning of the development and the local road network; and
- (c) all development provides sufficient parking, loading/service and manoeuvring areas to meet the demand generated by the use.

(2) The purpose of the code will be achieved through the following overall outcomes:
- (a) Land uses have a sufficient number of parking and bicycle spaces designed in a manner to meet the requirements of the user;
- (b) Parking spaces and associated manoeuvring areas are safe, functional and provide equitable access;
- (c) Suitable access for all types of vehicles likely to utilise a parking area is provided in a way that does not compromise the safety and efficiency of the surrounding road network;
- (d) Premises are adequately serviced to meet the reasonable requirements of the development; and
- (e) End of trip facilities are provided by new major developments to facilitate alternative travel modes.

#### 9.4.3.3 Criteria for assessment

**Table 9.4.3.3A—Parking and access code – For accepted development subject to requirements and assessable development**

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For accepted development subject to requirements and assessable development** | | | |
| **Car parking spaces** | | | |
| **PO1**<br>Development provides sufficient car parking to accommodate the demand likely to be generated by the use, having regard to the:<br>(a) nature of the use;<br>(b) location of the site;<br>(c) proximity of the use to public transport services;<br>(d) availability of active transport infrastructure; and<br>(e) accessibility of the use to all members of the community. | **AO1**<br>The number of car parking spaces provided for the use is in accordance with **Table 9.4.3.3B**.<br>Note—Car parking spaces provided for persons with a disability are to be considered in determining compliance with AO1. | ✔ | **Existing parking provision is sufficient as extraction volumes and general operations are not proposed to change.** |
| **Vehicle crossovers** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO2**<br>Vehicle crossovers are provided to::<br>(a) ensure safe and efficient access between the road and premises;<br>(b) minimize interference with the function and operation of roads; and<br>(c) minimise pedestrian to vehicle conflict. | **AO2.1**<br>Vehicular access to/from Council roads is designed and constructed in accordance with the Standard drawings in Planning Scheme Policy 4 - FNQROC Regional Development Manual. | **N/A** | **Existing access is via state controlled road.** |
| | **AO2.2**<br>Development on a site with two or more road frontages provides vehicular access from:<br>(a) the primary frontage where involving Community activities or Sport and recreation activities, unless the primary road frontage is a State-controlled road; or<br>(b) from the lowest order road in all other instances. | **N/A** | |
| | **AO2.3**<br>Vehicular access for particular uses is provided in accordance with **Table 9.4.3.3E**. | ✔ | **Existing access complies.** |
| **PO3**<br>Access, manoeuvring and car parking areas include appropriate pavement treatments having regard to:<br>(a) the intensity of anticipated vehicle movements;<br>(b) the nature of the use that they service; and<br>(c) the character of the surrounding locality. | **AO3**<br>Access, manoeuvring and car parking areas include pavements that are constructed in accordance with **Table 9.4.3.3C**. | ✔ | **Existing use is considered to comply.** |
| **For assessable development** | | | |
| **Parking area location and design** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO4**<br>Car parking areas are located and designed to:<br>(a) ensure safety and efficiency in operation; and<br>(b) be consistent with the character of the surrounding locality. | **AO4.1**<br>Car parking spaces, access and circulation areas have dimensions in accordance with AS/NZS 2890.1 Off-street car parking. | ✔ | **Existing use is considered to comply.** |
| | **AO4.2**<br>Disabled access and car parking spaces are located and designed in accordance with AS/NZS 2890.6 Parking facilities - Off-street parking for people with disabilities. | **N/A** | |
| | **AO4.3**<br>The car parking area includes designated pedestrian routes that provide connections to building entrances. | **N/A** | |
| | **AO4.4**<br>Parking and any set down areas are:<br>(a) wholly contained within the site;<br>(b) visible from the street where involving Commercial activities, Community activities, Industrial activities or a use in the Recreation and open space zone;<br>(c) are set back behind the main building line where involving a Dual occupancy, Multiple dwelling, Residential care facility or Retirement facility; and<br>(d) provided at the side or rear of a building in all other instances. | **N/A** | |
| **Site access and manoeuvring** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO5**<br>Access to, and manoeuvring within, the site is designed and located to:<br>(a) ensure the safety and efficiency of the external road network;<br>(b) ensure the safety of pedestrians;<br>(c) provide a functional and convenient layout; and<br>(d) accommodate all vehicles intended to use the site. | **AO5.1**<br>Access and manoeuvrability is in accordance with :<br>(a) AS28901 – Car Parking Facilities (Off Street Parking); and<br>(b) AS2890.2 – Parking Facilities (Off-street Parking) Commercial Vehicle Facilities.<br><br>Note—Proposal plans should include turning circles designed in accordance with AP34/95 (Austroads 1995) Design Vehicles and Turning Path Templates. | ✔ | **Existing use is considered to comply.** |
| | **AO5.2**<br>Vehicular access has a minimum sight distance in accordance with Part 5 of AUSTROADS. | ✔ | **Existing use is considered to comply.** |
| | **AO5.3**<br>Vehicular access is located and designed so that all vehicles enter and exit the site in a forward gear. | ✔ | **Existing use complies.** |
| | **AO5.4**<br>Pedestrian and cyclist access to the site:<br>(a) is clearly defined;<br>(b) easily identifiable; and<br>(c) provides a connection between the site frontage and the entrance to buildings and end of trip facilities (where provided). | **N/A** | |
| **PO6**<br>Development that involves an internal road network ensures that it's design:<br>(a) ensure safety and efficiency in operation; | **AO6.1**<br>Internal roads for a Tourist park have a minimum width of:<br>(a) 4 metres if one way; or<br>(b) 6 metres if two way. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| (b) does not impact on the amenity of residential uses on the site and on adjoining sites, having regard to matters of:<br>(i) hours of operation;<br>(ii) noise<br>(iii) light; and<br>(iv) odour;<br>(c) accommodates the nature and volume of vehicle movements anticipated to be generated by the use;<br>(d) allows for convenient access to key on-site features by pedestrians, cyclists and motor vehicles; and<br>(e) in the Rural zone, avoids environmental degradation. | **AO6.2**<br>For a Tourist park, internal road design avoids the use of cul-de-sacs in favour of circulating roads, where unavoidable, cul-de-sacs provide a full turning circle for vehicles towing caravans having:<br>(a) a minimum approach and departure curve radius of 12 metres; and<br>(b) a minimum turning circle radius of 8 metres. | **N/A** | |
| | **AO6.3**<br>Internal roads are imperviously sealed and drained, apart from those for an Energy and infrastructure activity or Rural activity. | **N/A** | |
| | **AO6.4**<br>Speed control devices are installed along all internal roads, apart from those for an Energy and infrastructure activity or Rural activity, in accordance with Complete Streets. | **N/A** | |
| | **AO6.5**<br>Internal roads, apart from those for an Energy and infrastructure activity or Rural activity, are illuminated in accordance with AS 4282 (as amended) - Control of Obtrusive effects of outdoor lighting. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| | **AO6.6**<br>Where involving an accommodation activity, internal roads facilitate unobstructed access to every dwelling, accommodation unit, accommodation site and building by emergency services vehicles. | **N/A** | |
| | **AO6.7**<br>For an Energy and infrastructure activity or Rural activity, internal road gradients:<br>(a) are no steeper than 1:5; or<br>(b) are steeper than 1:5 and are sealed. | **N/A** | |
| **Servicing** | | | |
| **PO7**<br>Development provides access, maneuvering and servicing areas on site that:<br>(a) accommodate a service vehicle commensurate with the likely demand generated by the use;<br>(b) do not impact on the safety or efficiency of internal car parking or maneuvering areas;<br>(c) do not adversely impact on the safety or efficiency of the road network;<br>(d) provide for all servicing functions associated with the use; and<br>(e) are located and designed to minimise their impacts on adjoining sensitive land uses and streetscape quality. | **AO7.1**<br>All unloading, loading, service and waste disposal areas are located:<br>(a) on the site;<br>(b) to the side or rear of the building, behind the main building line;<br>(c) not adjacent to a site boundary where the adjoining property is used for a sensitive use. | ✔ | **Existing operation complies.** |
| | **AO7.2**<br>Unloading, loading, service and waste disposal areas allow service vehicles to enter and exit the site in a forward gear. | ✔ | **Existing operation complies.** |
| | **AO7.3**<br>Development provides a servicing area, site access and maneuvering areas to accommodate the applicable minimum servicing vehicle specified in **Table 9.4.3.3B**. | ✔ | **Existing operation complies.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **Maintenance** | | | |
| **PO8**<br>Parking areas are used and maintained for their intended purpose. | **AO8.1**<br>Parking areas are kept and used exclusively for parking and are maintained in a suitable condition for parking and circulation of vehicles. | ✔ | **Existing operation complies.** |
| | **AO8.2**<br>All parking areas will be compacted, sealed, drained, line marked and maintained until such time as the development ceases. | ✔ | **Existing operation complies.** |
| **End of trip facilities** | | | |
| **PO9**<br>Development within the Centre zone; Industry zone or Emerging community zone provides facilities for active transport users that:<br>(a) meet the anticipated demand generated from the use;<br>(b) comprise secure and convenient bicycle parking and storage; and<br>(c) provide end of trip facilities for all active transport users. | **AO9.1**<br>The number of bicycle parking spaces provided for the use is in accordance with **Table 9.4.3.3D**. | **N/A** | |
| | **AO9.2**<br>End of trip facilities are provided in accordance with **Table 9.4.3.3D**. | **N/A** | |
| **If for Educational establishment or Child care centre where involving more than 100 vehicle movements per day or Renewable energy facility, Sport and recreation activities or Tourist park** | | | |
| **PO10**<br>The level of traffic generated by the development on the surrounding local road network must not result in unacceptable impacts on adjacent land and local road users. | **AO10**<br>A traffic impact report is prepared by a suitably qualified person that identifies:<br>(a) the expected traffic movements to be generated by the facility;<br>(b) any associated impacts on the road network; and<br>(c) any works that will be required to address the identified impacts. | **N/A** | |
| **If for Educational establishment or Child care centre where involving more than 100 vehicle movements per day or Renewable energy facility, Sport and recreation activities or Tourist park** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO11**<br>The level of traffic generated by the development on the surrounding local road network must not result in unacceptable impacts on adjacent land and local road users. | **AO11**<br>A traffic impact report is prepared by a suitably qualified person that identifies:<br>(d) the expected traffic movements to be generated by the facility;<br>(e) any associated impacts on the road network; and<br>(f) any works that will be required to address the identified impacts. | **N/A** | |

**Table 9.4.3.3B—Vehicle Parking and Service Vehicle Space Requirements**

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Adult store** | Inside the Centre zone:<br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 20m$^2$ or part thereof of GFA above 400m$^2$.<br>Outside the Centre zone:<br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 10m$^2$ or part thereof of GFA above 400m$^2$. | One SRV space. |
| **Agricultural supplies store** | Inside the Centre zone:<br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 15m$^2$ or part thereof of GFA above 400m$^2$.<br>Outside the Centre zone:<br>One space per 30m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 10m$^2$ or part thereof of GFA above 400m$^2$.<br><br>Queuing for 3 vehicles should be supplied where a GFA is greater than 600m$^2$. | One HRV space. |
| **Air services** | If accepted development subject to requirements development:<br>One space per 90m$^2$ or part thereof of net lettable area; or<br><br>If Assessable development:<br>As determined by Council. | If accepted development subject to requirements:<br>One space per 200m$^2$ or part thereof of net lettable area.<br><br>If assessable development:<br>As determined by Council. |
| **Animal husbandry** | If accepted development subject to requirements :<br>One space.<br><br>If assessable development:<br>As determined by Council. | If accepted development subject to requirements:<br>Nil.<br><br>If assessable development:<br>As determined by Council. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Animal keeping** | Minimum of three spaces or one space per 200m$^2$ of use area, whichever is greater. | One SRV space. |
| **Aquaculture** | <u>If accepted development subject to requirements:</u><br>• In the rural or rural residential zones - two spaces; or<br>• Enclosed within a building - one space per 90m$^2$ of net lettable area.<br><br><u>If assessable development:</u><br>As determined by Council. | <u>If accepted development subject to requirements:</u><br>Nil.<br><br><u>If assessable development:</u><br>As determined by Council. |
| **Brothel** | As determined by Council. | As determined by Council. |
| **Bulk landscape supplies** | Minimum of five spaces or one space per 250m$^2$ of use area, whichever is greater. | One AV if the site has an area of greater than 2,000m$^2$; or<br>One HRV space. |
| **Car wash** | Minimum of two parking spaces plus 1 car queuing space for each car wash or service bay and parking at rates applicable to ancillary use/s. | One AV space. |
| **Caretaker's accommodation** | One space per dwelling unit. | Nil. |
| **Cemetery** | As determined by Council. | As determined by Council. |
| **Child care centre** | A minimum of 3 spaces will be required to be used for setting down and picking up of children, plus one space per 10 children for staff parking. | One SRV space. |
| **Club** | Minimum of 5 spaces per use or one space per 25m$^2$ or part thereof of GFA, whichever is greater. | One SRV space; and<br>One HRV space if greater than 500m$^2$. |
| **Community care centre** | Minimum of 5 spaces per use or one space per 25m$^2$ or part thereof of GFA, whichever is greater. | One SRV space. |
| **Community residence** | Three spaces. | Nil. |
| **Community use** | Minimum of 5 spaces per use or one space per 50m$^2$ or part thereof of GFA, whichever is greater. | One SRV space if greater than 500m$^2$ GFA. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Crematorium** | One space per 30m$^2$ GFA or part thereof. | As determined by Council. |
| **Cropping** | <u>If accepted development subject to requirements:</u><br>Two spaces.<br><br><u>If assessable development:</u><br>As determined by Council. | <u>If accepted development subject to requirements:</u><br>Nil.<br><br><u>If assessable development:</u><br>As determined by Council. |
| **Detention facility** | As determined by Council. | As determined by Council. |
| **Dual occupancy** | One covered space per dwelling; and<br>One visitor space. | Nil. |
| **Dwelling house** | One covered space per dwelling house.<br>One space per secondary dwelling. | Nil. |
| **Dwelling unit** | One covered space per dwelling unit.<br><br>A minimum of 0.25 spaces per dwelling is to remain in common property for visitor use. | Nil |
| **Educational establishment** | <u>For all establishments:</u><br>1 space per every10 students plus 1 space per employee, and<br><br>Provision for 3 vehicles for loading and unloading of passengers in addition to the requirements above. | <u>For accepted development subject to requirements:</u><br>One HRV space; and<br>One SRV space; and<br>A minimum of 3 Bus / coach parking / set down areas.<br><br><u>For assessable development:</u><br>As determined by Council. |
| **Emergency services** | Minimum of 5 spaces per use or one space per 25m$^2$ or part thereof of GFA, whichever is greater. | As determined by Council. |
| **Environment facility** | As determined by Council. | As determined by Council. |
| **Extractive industry** | As determined by Council. | As determined by Council. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Food and drink outlet** | Accepted in an existing building within the Centre zone.<br><br><u>Inside the Centre zone:</u><br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA and one space per 15m$^2$ or part thereof of GFA above 400m$^2$.<br><u>Outside the Centre zone:</u><br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA and one space per 10m$^2$ or part thereof of GFA above 400m$^2$.<br><u>Drive-through:</u><br>Queuing spaces for 6 passenger vehicles within the site boundaries.<br><br>One service vehicle space per use or one service vehicle space per 1,000m$^2$ GFA, whichever is greater. | One HRV space. |
| **Function facility** | One space per 30m$^2$ or part thereof of GFA. | One SRV space. |
| **Funeral parlour** | Accepted in an existing building within the Centre zone.<br><br><u>Inside the Centre zone:</u><br>One space per 20m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 10m$^2$ or part thereof of GFA above 400m$^2$.<br><u>Outside the Centre zone:</u><br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 15m$^2$ or part thereof of GFA above 400m$^2$. | One SRV space. |
| **Garden centre** | A minimum of 5 spaces for customer parking or one space per 150m$^2$ or part thereof of use area, whichever is greater.<br><br>One service vehicle space per use or one service vehicle space per 800m$^2$ use area, whichever is greater. | One AV if the site has an area of greater than 2,000m$^2$, otherwise One HRV space. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Hardware and trade supplies** | Accepted in an existing building within the Centre zone.<br><br><u>Inside the Centre zone:</u><br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per or part thereof of GFA above 400m$^2$.<br><u>Outside the Centre zone:</u><br>One space per or part thereof of GFA up to 400m$^2$ GFA, and one space per 15m$^2$ or part thereof of GFA above 400m$^2$. | One AV if the site has an area of greater than 2,000m$^2$, otherwise One HRV space. |
| **Health care services** | Accepted in an existing building within the Centre zone.<br><br><u>Inside the Centre zone:</u><br>One space per 40m$^2$ or part thereof of net lettable area.<br><u>Outside the Centre zone:</u><br>One space per 20m$^2$ of or part thereof of net lettable area. | One SRV space per 500m$^2$ GFA. |
| **High impact industry** | One space per 90m$^2$ GFA or part thereof. | One AV space if the site has an area greater than 2,000m$^2$, otherwise One HRV. |
| **Home based business** | <u>Bed and breakfasts:</u><br>One space per guest room.<br><br><u>Other home based business:</u><br>One space for home based business and one covered space for the dwelling. | Nil. |
| **Hospital** | One space per 6 residential care beds.<br>One space per 4 hostel unit beds.<br>Visitor parking at 30% of resident parking requirements. | One HRV space.<br>One SRV for every 800m$^2$ of GFA and part thereof; and<br>One space for an emergency vehicle. |
| **Hotel** | One space per 10m$^2$ or part thereof of GFA per bar, beer garden and other public area.<br>One space per 50m$^2$ or part thereof of GFA per bulk liquor sales area.<br>One space per guest room. | One HRV space. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Indoor sport and recreation** | If accepted development subject to requirements:<br>One space per 25m$^2$ of net lettable area.<br>If assessable development:<br>As determined by Council. | An internal bus set down and pick up area that enables the bus to be in a forward motion at all times whilst onsite<br><br>Internal dedicated taxi bays provided within 200 metres of the site entrance. |
| **Intensive animal industries** | If accepted development subject to requirements:<br>Two spaces.<br><br>If assessable development:<br>As determined by Council. | One SRV space. |
| **Intensive horticulture** | If accepted development subject to requirements:<br>Two spaces.<br><br>If assessable development:<br>As determined by Council. | If accepted development subject to requirements:<br>Nil.<br><br>If assessable development:<br>As determined by Council. |
| **Landing** | As determined by Council. | As determined by Council. |
| **Low impact industry** | One space per 90m$^2$ GFA or part thereof. | One AV space if the site has an area greater than 2,000m$^2$, otherwise One HRV. |
| **Major electricity infrastructure** | As determined by Council. | As determined by Council. |
| **Major sport, recreation and entertainment facility** | As determined by Council. | As determined by Council. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Marine industry** | One space per 90m$^2$ GFA or part thereof. | One HRV space if the site has an area greater than 1,000m$^2$, otherwise One SRV space. |
| **Market** | As determined by Council. | As determined by Council. |
| **Medium impact industry** | One space per 90m$^2$ GFA or part thereof. | One AV space if the site has an area greater than 2,000m$^2$, otherwise One HRV. |
| **Motor sport facility** | As determined by Council. | As determined by Council. |
| **Multiple dwelling** | One covered space per dwelling.<br><br>One dedicated vehicle wash-down bay for premises containing 5 or more dwellings.<br><br>A minimum of 0.25 spaces per dwelling is to remain in common property for visitor use. | Nil. |
| **Nature-based tourism** | One space per dwelling; or<br>0.75 spaces per guest room if in dormitory or shared facilities. | As determined by Council. |
| **Nightclub entertainment facility** | One space per 60m$^2$ GFA or part thereof. | Nil. |
| **Non-resident workforce accommodation** | One space per dwelling unit. | Nil. |
| **Office** | Accepted in an existing building within the Centre zone.<br><br><u>Inside the Centre zone:</u><br>One space per 20m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 10m$^2$ or part thereof of GFA above 400m$^2$.<br><u>Outside the Centre zone:</u><br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 15m$^2$ or part thereof of GFA above 400m$^2$. | One SRV space. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Outdoor sales** | A minimum of 5 spaces for customer parking or one space per 150m$^2$ of use area, whichever is greater.<br><br>One service vehicle space per use or one service vehicle space per 800m$^2$, whichever is greater. | One AV if the site has an area of greater than 2,000m$^2$, otherwise One HRV space. |
| **Outdoor sport and recreation** | Coursing, horse racing, pacing or trotting:<br>• One space per five seated spectators; plus<br>• One space per 5m$^2$ of other spectator areas.<br>Football:<br>• 50 spaces per field.<br>Lawn bowls:<br>• 30 spaces per green.<br>Swimming pool:<br>• 15 spaces; plus<br>• One space per 100m$^2$ of useable site area.<br>Tennis or other Court:<br>• Four spaces per court.<br>Golf Course:<br>• Four spaces per tee on the course; plus<br>• One space per 50m$^2$ of net lettable area.<br><br><u>Any other use:</u><br>As determined by council. | An internal bus set down and pick up area that enables the bus to be in a forward motion at all times whilst onsite<br><br>Internal dedicated taxi bays provided within 200 metres of the site entrance. |
| **Park** | As determined by Council. | As determined by Council. |
| **Parking station** | Not applicable | Nil. |
| **Permanent plantation** | <u>If accepted development subject to requirements:</u><br>Two spaces.<br><br><u>If assessable development:</u><br>As determined by Council. | <u>If accepted development subject to requirements:</u><br>Nil.<br><br><u>If assessable development:</u><br>As determined by Council. |
| **Place of worship** | Minimum of 5 spaces per use or one space per 25m$^2$ or part thereof of GFA, whichever is greater. | One SRV space. |
| **Port services** | As determined by Council. | As determined by Council. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Relocatable home park** | One space for each home site plus 1 space for each 5 home sites or part thereof for visitors. | One HRV space. |
| **Renewable energy facility** | As determined by Council. | As determined by Council. |
| **Research and technology industry** | One space per 90m$^2$ GFA or part thereof. | One HRV space if the site has an area greater than 1,000m$^2$, otherwise One SRV space. |
| **Residential care facility** | One space per 4 hostel unit beds.<br>Visitor parking at 30% of resident parking requirements. | One SRV space; and<br>One space for an emergency vehicle. |
| **Resort complex** | As determined by Council. | As determined by Council. |
| **Retirement facility** | One covered space per unit and 0.5 spaces for visitors parking. | One SRV space; and<br>One space for an emergency vehicle. |
| **Roadside stall** | One space per stall. | Nil. |
| **Rooming accommodation** | Inside the Centre zone:<br>One space per 15 beds.<br>Outside the Centre zone:<br>One space per 8 beds. | One SRV space.<br>One space for a 20 seater bus. |
| **Rural industry** | One space per 90m$^2$ GFA or part thereof. | One AV space. |
| **Rural workers' accommodation** | If accepted development subject to requirements:<br>Nil<br><br>If Assessable development:<br>As determined by Council. | If accepted development subject to requirements:<br>Nil<br><br>If Assessable development:<br>As determined by Council. |
| **Sales office** | One space per 25m$^2$ GFA or part thereof. | Nil. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Service industry** | Accepted where in an existing building within the Centre zone.<br><br>Inside the Centre zone:<br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 10m$^2$ or part thereof of GFA above 400m$^2$.<br>Outside the Centre zone:<br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 15m$^2$ or part thereof of GFA above 400m$^2$. | One HRV space if the site is greater than 2,000m$^2$, otherwise One SRV space. |
| **Service station** | Minimum of four spaces plus car parking at rates applicable to ancillary use/s. | One AV space. |
| **Shop** | Accepted where in an existing building within the Centre zone.<br><br>Inside the Centre zone:<br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 10m$^2$ or part thereof of GFA above 400m$^2$.<br>Outside the Centre zone:<br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 15m$^2$ or part thereof of GFA above 400m$^2$. | One HRV space if the site is greater than 2,000m$^2$, otherwise One SRV space. |
| **Shopping centre** | Inside the Centre zone:<br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA and one space per 25m$^2$ or part thereof of GFA above 400m$^2$.<br>Outside the Centre zone:<br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA and one space per 15m$^2$ or part thereof of GFA above 400m$^2$. | One AV space per 1,000m$^2$; and<br>One SRV space per 500m$^2$; or<br>One SRV space per every 2 specialty uses, whichever the greater. |
| **Short-term accommodation** | One space per unit. | One HRV space if involves the serving of food or beverage; otherwise<br>One SRV space. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Showroom** | Accepted in an existing building within the Centre zone.<br><br>Inside the Centre zone:<br>One space per 25m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 10m$^2$ or part thereof of GFA above 400m$^2$.<br>Outside the Centre zone:<br>One space per 50m$^2$ or part thereof of GFA up to 400m$^2$ GFA, and one space per 15m$^2$ or part thereof of GFA above 400m$^2$. | One AV space and One SRV space if the site is greater than 2,000m$^2$; or<br>One HRV space; and<br>One SRV Space. |
| **Special industry** | One space per 90m$^2$ GFA or part thereof. | One AV space if the site has an area greater than 2,000m$^2$, otherwise One HRV. |
| **Substation** | If assessable development:<br>As determined by Council. | As determined by Council. |
| **Telecommunications facility** | If accepted development subject to requirements:<br>Nil.<br><br>If assessable development:<br>As determined by Council. | If accepted development subject to requirements:<br>Nil.<br><br>If assessable development:<br>As determined by Council. |
| **Theatre** | One space per 15m$^2$ or part thereof of net lettable area, or one space per 5 seated spectators whichever is the greater. | One SRV space. |
| **Tourist attraction** | As determined by Council. | As determined by Council. |
| **Tourist park** | One space within each accommodation site plus 1 additional visitor space per 10 accommodation sites.<br><br>Queuing for 2 vehicles towing caravans and 1 holding bay for a vehicle towing a caravan plus additional queuing for 1 vehicle towing a caravan per 40 accommodation sites. | One HRV space. |

| Definition | Minimum number of Car parking spaces | Minimum Service Vehicle Space Provision |
|---|---|---|
| **Transport depot** | One space per 125m$^2$ GFA or part thereof. | One AV space if the site has an area greater than 2,000m$^2$, otherwise One HRV. |
| **Utility installation** | <u>If accepted development subject to requirements:</u><br>Nil.<br><br><u>If assessable development:</u><br>As determined by Council. | <u>If accepted development subject to requirements:</u><br>Nil.<br><br><u>If assessable development:</u><br>As determined by Council. |
| **Veterinary services** | Accepted in an existing building within the Centre zone.<br><br><u>Inside Centre zone:</u><br>One space per 40m$^2$ or part thereof of net lettable area.<br><u>Outside Centre zone:</u><br>One space per 20m$^2$ or part thereof of net lettable area. | One HRV space if greater than 500m$^2$ GFA; and One SRV space per 500m$^2$ GFA. |
| **Warehouse** | One space per 90m$^2$ GFA or part thereof. | One AV space if the site has an area greater than 2,000m$^2$, otherwise One HRV. |
| **Wholesale nursery** | As determined by Council. | As determined by Council. |
| **Winery** | As determined by Council. | As determined by Council. |

Note—Any use not herein defined - as determined by Council.

**Table 9.4.3.3C—Pavement Standards for Access, Manoeuvring and Car Parking areas**

| Zone | Compacted Gravel Base (minimum thickness) | Surfacing Options |
|---|---|---|
| **All development other than dwelling house** | | |
| All zones other than the Conservation zone or the Rural zone | 75mm | Reinforced concrete with a minimum thickness of:<br>• 100mm for parking areas; and<br>• 150mm for access ways. |
| | 150mm | Asphalt with a minimum thickness of 25mm |
| | 150mm | Two coat sprayed bitumen seal |
| | 150mm | Concrete pavers |
| Conservation zone or Rural zone | Not applicable | Minimum 150mm thickness compacted gravel suitable for all weather and dust free |
| **Dwelling house** | | |
| All zones | 75mm | Reinforced concrete with a minimum thickness of:<br>• 100mm for parking areas; and<br>• 150mm for access ways. |
| | 150mm | Asphalt with a minimum thickness of 25mm |
| | 150mm | Two coat sprayed bitumen seal |
| | 150mm | Concrete pavers |
| | Not applicable | Minimum 150mm thickness compacted gravel suitable for all weather and dust free |

Note—Where more than one surfacing option is listed, any one of the treatments listed may be provided.

**Table 9.4.3.3D—Bicycle Parking and End of Trip Facility Requirements**

| Definition | Minimum number of bicycle parking spaces | Minimum end of trip facilities |
|---|---|---|
| **Commercial activities** | New or redeveloped commercial activities buildings (other than a shopping centre), provide:<br>• For employees - secure bicycle storage for 8% of building staff (based on one person per 60m$^2$ Gross leasable area). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and<br>• visitor facilities:<br>- one bicycle rack space per 750m$^2$ NLA or part thereof; and<br>- bicycle parking, signposted; and adjacent to a major public entrance to the building. | New or redeveloped commercial activities buildings (other than a shopping centre), provide the following employee facilities, which are continually accessible to employees:<br>• accessible showers at the rate of one shower per 10 bicycle spaces provided or part thereof;<br>• changing facilities adjacent to showers; and<br>• secure lockers in the changing facilities for 20% of building staff (based on one person per 60m$^2$ GLA to cater for walkers, cyclists and other active users. |
| **Community use** | Four spaces per 1,500m$^2$ GFA. | As determined by Council. |

| Definition | Minimum number of bicycle parking spaces | Minimum end of trip facilities |
|---|---|---|
| **Educational establishment** | New or redeveloped education facilities, provide:<br>• For employees - secure bicycle storage for 8% of building staff (based on one person per 75m$^2$ GLA). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and<br>• For students:<br>- minimum of 8%of the peak number of students using the building at any one time (with 75% occupancy); and<br>- bicycle storage within 100m of the building front entrance(s); or added to the campus central bicycle storage area. | New or redeveloped education facilities, provide the following employee facilities, which are continually accessible to employees:<br>• accessible showers at the rate of one per 10 bicycle spaces provided or part thereof;<br>• changing facilities adjacent to showers; and<br>• secure lockers in changing facilities for 20% of building staff (based on one person per 75m$^2$ GLA) to cater for cyclists, walkers and other active users. |
| **Food & drink outlet** | One space per 100m$^2$ GFA. | As determined by Council. |
| **Function facility** | One space per 300m$^2$ GFA. | As determined by Council. |

| Definition | Minimum number of bicycle parking spaces | Minimum end of trip facilities |
|---|---|---|
| **Health care services** | New or redeveloped healthcare facilities, provide the following facilities:<br>• For employees - secure bicycle storage for 5% of building staff (based on one person per 75m$^2$ GLA). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and<br>• For visitors:<br>- facilities with in-patient accommodation provide one space per each 30 beds;<br>- facilities without in-patient accommodation provide one space per each 4 practitioners;<br>- aged care facilities provide one space per each 60 beds;<br>- In every instance above, provide a minimum of 5 bicycle parking spaces; and<br>- bicycle parking provided: in an accessible location, signposted and within 10m a major public entrance to the building. | New or redeveloped healthcare facilities, provide the following employee facilities, which are continually accessible to employees:<br>• accessible showers at the rate of one per 10 bicycle spaces provided or part thereof;<br>• changing facilities adjacent to showers; and<br>• secure lockers in changing facilities for 20% of building staff (based on one person per 75m$^2$ GLA) to cater for cyclists, walkers and other active users. |
| **Hospital** | As determined by Council. | As determined by Council. |
| **Indoor sport and recreation** | One space per employee plus 1 space per 200m$^2$ GFA | As determined by Council. |
| **Park** | As determined by Council. | As determined by Council. |
| **Rooming accommodation** | One space per 4 letting rooms. | As determined by Council. |
| **Short term accommodation** | One space per 4 letting rooms. | As determined by Council. |

| Definition | Minimum number of bicycle parking spaces | Minimum end of trip facilities |
|---|---|---|
| **Shop or Shopping centre** | New or redeveloped shopping centres, provide:<br>• For employees - secure bicycle storage for 8% of building staff (based on one person per 60m$^2$ Gross leasable area). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and<br>• visitor facilities:<br>- one space per 500m$^2$ GLA or part thereof for centres under 30,000m$^2$; or<br>- one space per 750m$^2$ GLA or part thereof for centres between 30,000m$^2$ and 50,000m$^2$; and<br>- bicycle parking is signposted and within 10m of a major public entrance to the building. | New or redeveloped shopping centres, provide the following employee facilities, which are continually accessible to employees:<br>• accessible showers at the rate of one shower per 10 bicycle spaces provided or part thereof;<br>• changing facilities adjacent to showers; and<br>• secure lockers in the changing facilities for 20% of building staff (based on one person per 60m$^2$ GLA to cater for walkers, cyclists and other active users. |
| **Theatre** | One space per 100m$^2$ GFA. | As determined by Council. |

**Table 9.4.3.3E—Vehicular Access for Specific Uses**

| Use | Design |
|---|---|
| Dwelling house | A secondary dwelling shares a vehicle crossover with the Dwelling house. |
| Car wash<br>Service station | Site access involves:<br>(a) a maximum width of 9 metres of any vehicle crossover across a footpath;<br>(b) a minimum separation of 12 metres between any vehicle crossover and a road intersection;<br>(c) a separate entrance and exit; and<br>(d) a minimum separation between vehicle crossovers of 14 metres. |
| Industrial activities | Each lot is provided with no more than one access point every 15 metres. |
| Roadside stall | A single vehicular access point is provided to the site. |
| Tourist park | (a) a single vehicular access point is provided to the site; and<br>(b) no accommodation site has individual vehicular access. |

### 9.4.5 Works, services and infrastructure code

#### 9.4.5.1 Application

(1) This code applies to assessing development where it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

#### 9.4.5.2 Purpose

(1) The purpose of the Works, services and infrastructure code is to ensure that all development is appropriately serviced by physical infrastructure, public utilities and services and that work associated with development is carried out in a manner that does not adversely impact on the surrounding area.

(2) The purpose of the code will be achieved through the following overall outcomes:
- (a) Development provides an adequate, safe and reliable supply of potable, fire-fighting and general use water in accordance with relevant standards;
- (b) Development provides for the treatment and disposal of wastewater and ensures there are no adverse impacts on water quality, public health, local amenity or ecological processes;
- (c) Development provides for the disposal of stormwater and ensures that there are no adverse impacts on water quality or ecological processes;
- (d) Development connects to the road network and any adjoining public transport, pedestrian and cycle networks while ensuring no adverse impacts on the safe, convenient and efficient operation of these networks;
- (e) Development provides electricity and telecommunications services that meet its desired requirements;
- (f) Development is connected to a nearby electricity network with adequate capacity without significant environment, social or amenity impact;
- (g) Development does not affect the efficient functioning of public utility mains, services or installations;
- (h) Infrastructure dedicated to Council is cost effective over its life cycle;
- (i) Work associated with development does not cause adverse impacts on the surrounding area; and
- (j) Development prevents the spread of weeds, seeds or other pests.

#### 9.4.5.3 Criteria for assessment

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

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **For accepted development subject to requirements and assessable development** | | | |
| **Water supply** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO1**<br>Each lot has an adequate volume and supply of water that:<br>(a) meets the needs of users;<br>(b) is adequate for fire-fighting purposes;<br>(c) ensures the health, safety and convenience of the community; and<br>(d) minimises adverse impacts on the receiving environment. | **AO1.1**<br>Development is connected to a reticulated water supply system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located:<br>(a) in the Conservation zone, Rural zone or Rural residential zone; and<br>(b) outside a reticulated water supply service area. | **N/A** | |
| | **AO1.2**<br>Development, where located outside a reticulated water supply service area and in the Conservation zone, Rural zone or Rural residential zone is provided with:<br>(a) a bore or bores are provided in accordance with the Design Guidelines set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; or<br>(b) on-site water storage tank/s:<br>(i) with a minimum capacity of 90,000L;<br>(ii) fitted with a 50mm ball valve with a camlock fitting; and<br>(iii) which are installed and connected prior to the occupation or use of the development. | ✔ | **Existing use complies.** |
| **Wastewater disposal** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO2**<br>Each lot provides for the treatment and disposal of effluent and other waste water that:<br>(a) meets the needs of users;<br>(b) is adequate for fire-fighting purposes;<br>(c) ensures the health, safety and convenience of the community; and<br>(d) minimises adverse impacts on the receiving environment. | **AO2.1**<br>Development is connected to a reticulated sewerage system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located:<br>(a) in the Conservation zone, Rural zone or Rural residential zone; and<br>(b) outside a reticulated sewerage service area. | **N/A** | |
| | **AO2.2**<br>An effluent disposal system is provided in accordance with ASNZ 1547 On-Site Domestic Wastewater Management (as amended) where development is located:<br>(a) in the Conservation zone, Rural zone or Rural residential zone; and<br>(b) outside a reticulated sewerage service area. | ✔ | **Existing use is considered to comply.** |
| **Stormwater infrastructure** | | | |
| **PO3**<br>Stormwater infrastructure is designed and constructed to collect and convey the design storm event to a lawful point of discharge in a manner that mitigates impacts on life and property. | **AO3.1**<br>Where located within a Priority infrastructure area or where stormwater infrastructure is available, development is connected to Council's stormwater network in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| | **AO3.2**<br>On-site drainage systems are constructed:<br>(a) to convey stormwater from the premises to a lawful point of discharge; and<br>(b) in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual. | ✔ | **Existing use is considered to comply.** |
| **Electricity supply** | | | |
| **PO4**<br>Each lot is provided with an adequate supply of electricity | **AO4**<br>The premises:<br>(a) is connected to the electricity supply network; or<br>(b) has arranged a connection to the transmission grid; or<br>(c) where not connected to the network, an independent energy system with sufficient capacity to service the development (at near average energy demands associated with the use) may be provided as an alternative to reticulated electricity where:<br>(i) it is approved by the relevant regulatory authority; and<br>(ii) it can be demonstrated that no air or noise emissions; and<br>(iii) it can be demonstrated that no adverse impact on visual amenity will occur. | ✔ | **Existing use complies.** |
| **Telecommunications infrastructure** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO5**<br>Each lot is provided with an adequate supply of telecommunication infrastructure | **AO5**<br>Development is provided with a connection to the national broadband network or telecommunication services. | ✔ | **Existing use complies.** |
| **Existing public utility services** | | | |
| **PO6**<br>Development and associated works do not affect the efficient functioning of public utility mains, services or installations. | **AO6**<br>Public utility mains, services are relocated, altered or repaired in association with the works so that they continue to function and satisfy the relevant Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual. | ✔ | **Proposal complies.** |
| **Excavation or filling** | | | |
| **PO7**<br>Excavation or filling must not have an adverse impact on the:<br>(a) streetscape;<br>(b) scenic amenity;<br>(c) environmental values;<br>(d) slope stability;<br>(e) accessibility; or<br>(f) privacy of adjoining premises. | **AO7.1**<br>Excavation or filling does not occur within 1.5 metres of any site boundary. | **Complies with PO** | **AO is not practicable for extractive activities. Proposal complies with PO7.** |
| | **AO7.2**<br>Excavation or filling at any point on a lot is to be no greater than 1.5 metres above or below natural ground level. | **Complies with PO** | **AO is not practicable for extractive activities. Proposal complies with PO7.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| | **AO7.3**<br>Earthworks batters:<br>(a) are no greater than 1.5 metres in height;<br>(b) are stepped with a minimum width 2 metre berm;<br>(c) do not exceed a maximum of two batters and two berms (not greater than 3.6 metres in total height) on any one lot;<br>(d) have a slope no greater than 1 in 4; and<br>(e) are retained. | **Complies with PO** | **AO is not practicable for extractive activities. Proposal complies with PO7.** |
| | **AO7.4**<br>Soil used for filling or spoil from excavation is not stockpiled in locations that can be viewed from:<br>(a) adjoining premises; or<br>(b) a road frontage, for a period exceeding 1 month from the commencement of the filling or excavation. | ✔ | |
| | **AO7.5**<br>All batters and berms to be constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual. | **N/A** | |
| | **AO7.6**<br>Retaining walls have a maximum height of 1.5 metres and are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual. | **N/A** | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| | **AO7.7**<br>Excavation or filling at any point on a lot is to include measures that protect trees at the foot or top of cut or fill batters by the use of appropriate retaining methods and sensitive earth removal or placement and in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual. | **N/A** | |
| **For assessable development** | | | |
| **Transport network** | | | |
| **PO8**<br>The development has access to a transport network of adequate standard to provide for the safe and efficient movement of vehicles, pedestrians and cyclists. | **AO8.1**<br>Vehicle access, crossovers, road geometry, pavement, utilities and landscaping to the frontage/s of the site are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual. | ✔ | **Existing use is considered to comply.** |
| | **AO8.2**<br>Development provides footpath pavement treatments in accordance with Planning Scheme Policy 9 – Footpath Paving. | **N/A** | |
| **Public infrastructure** | | | |
| **PO9**<br>The design, construction and provision of any infrastructure that is to be dedicated to Council is cost effective over its life cycle and incorporates provisions to minimise adverse impacts. | **AO9**<br>Development is in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual. | **N/A** | |
| **Stormwater quality** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO10**<br>Development has a non-worsening effect on the site and surrounding land and is designed to:<br>(a) optimise the interception, retention and removal of waterborne pollutants, prior to the discharge to receiving waters;<br>(b) protect the environmental values of waterbodies affected by the development, including upstream, on-site and downstream waterbodies;<br>(c) achieve specified water quality objectives;<br>(d) minimise flooding;<br>(e) maximise the use of natural channel design principles;<br>(f) maximise community benefit; and<br>(g) minimise risk to public safety. | **AO10.1**<br>The following reporting is prepared for all Material change of use or Reconfiguring a lot proposals:<br>(a) a Stormwater Management Plan and Report that meets or exceeds the standards of design and construction set out in the Queensland Urban Drainage Manual (QUDM) and the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; and<br>(b) an Erosion and Sediment Control Plan that meets or exceeds the Soil Erosion and Sedimentation Control Guidelines (Institute of Engineers Australia), including:<br>(i) drainage control;<br>(ii) erosion control;<br>(iii) sediment control; and<br>(iv) water quality outcomes. | ✔ | **Existing operation is subject to management documents included within this report which address these matters.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| | **AO10.2**<br>For development on land greater than 2,500m$^2$ or that result in more than 5 lots or more than 5 dwellings or accommodation units, a Stormwater Quality Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) is prepared that demonstrates that the development:<br>(a) meets or exceeds the standards of design and construction set out in the Urban Stormwater Quality Planning Guideline and the Queensland Water Quality Guideline;<br>(b) is consistent with any local area stormwater water management planning;<br>(c) accounts for development type, construction phase, local climatic conditions and design objectives; and<br>(d) provides for stormwater quality treatment measures reflecting land use constraints, such as soil type, landscape features (including landform), nutrient hazardous areas, acid sulfate soil and rainfall erosivity. | ✔ | **Existing operation is subject to management documents included within this report which address these matters.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO11**<br>Storage areas for stormwater detention and retention:<br>(a) protect or enhance the environmental values of receiving waters;<br>(b) achieve specified water quality objectives;<br>(c) where possible, provide for recreational use;<br>(d) maximise community benefit; and<br>(e) minimise risk to public safety. | **AO11**<br>No acceptable outcome is provided. | ✔ | **Existing operation is subject to management documents included within this report which address these matters.** |
| **Excavation or filling** | | | |
| **PO12**<br>Traffic generated by filling or excavation does not impact on the amenity of the surrounding area. | **AO12.1**<br>Haul routes used for transportation of fill to or from the site only use major roads and avoid residential areas. | ✔ | **Existing use complies.** |
| | **AO12.2**<br>Transportation of fill to or from the site does not occur:<br>(a) within peak traffic times; and<br>(b) before 7am or after 6pm Monday to Friday;<br>(c) before 7am or after 1pm Saturdays; and<br>(d) on Sundays or Public Holidays. | ✔ | **No changes to existing hours of operation are proposed.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO13**<br>Air pollutants, dust and sediment particles from excavation or filling, do not cause significant environmental harm or nuisance impacts. | **AO13.1**<br>Dust emissions do not extend beyond the boundary of the site. | ✔ | **Existing operation is subject to management documents included within this report which address these matters.** |
| | **AO13.2**<br>No other air pollutants, including odours, are detectable at the boundary of the site. | ✔ | **Existing operation is subject to management documents included within this report which address these matters.** |
| | **AO13.3**<br>A management plan for control of dust and air pollutants is prepared and implemented. | ✔ | **Existing operation is subject to management documents included within this report which address these matters.** |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO14**<br>Access to the premises (including driveways and paths) does not have an adverse impact on:<br>(a) safety;<br>(b) drainage;<br>(c) visual amenity; and<br>(d) privacy of adjoining premises. | **AO14**<br>Access to the premises (including all works associated with the access):<br>(a) must follow as close as possible to the existing contours;<br>(b) be contained within the premises and not the road reserve, and<br>(c) are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual. | ✔ | **Existing use complies.** |
| **Weed and pest management** | | | |
| **PO15**<br>Development prevents the spread of weeds, seeds or other pests into clean areas or away from infested areas. | **AO15**<br>No acceptable outcome is provided. | ✔ | **Existing operation is subject to management documents included within this report which address these matters.** |
| **Contaminated land** | | | |
| **PO16**<br>Development is located and designed to ensure that users and nearby sensitive land uses are not exposed to unacceptable levels of contaminants | **AO16**<br>Development is located where:<br>(a) soils are not contaminated by pollutants which represent a health or safety risk to users; or<br>(b) contaminated soils are remediated prior to plan sealing, operational works permit, or issuing of building works permit. | ✔ | **Proposal complies.** |
| **Fire services in developments accessed by common private title** | | | |

| Performance outcomes | Acceptable outcomes | Complies | Comments |
|---|---|---|---|
| **PO17**<br>Fire hydrants are located in positions that will enable fire services to access water safely, effectively and efficiently. | **AO17.1**<br>Fire hydrants are located in accessways or private roads held in common private title at a maximum spacing of:<br>(a) 120 metres for residential development; and<br>(b) 90 metres for any other development. | **N/A** | |
| | **AO17.2**<br>Fire hydrants are located at all intersections of accessways or private roads held in common private title. | **N/A** | |