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Douglas Shire Council
PO Box 723
MOSSMAN QLD 4873
Attention: Daniel Lamond

**RESPONSE TO INFORMATION REQUEST - MCUC 2021_4540/1 (1060670) - COMBINED APPLICATION
MATERIAL CHANGE OF USE FOR DWELLING HOUSE & OPERATIONAL WORKS - 105 CONNOLLY ROAD
MOWBRAY - LOT 40 N157650 AND LOT 27 NR72**

The following information is provided in accordance with the requirements of the *Planning Act 2016* in response to the Information Request dated 12 January 2022 for the above development application, in order to complete the assessment of the application:

Bushfire hazard risk assessment

1. Provide a bushfire hazard risk assessment prepared by a suitably qualified bushfire hazard consultant demonstrating compliance with AS3959-2009. Confirmation of the necessary building setback to vegetation line is requested.

Attachment 1 contains a Bushfire Hazard and Risk Analysis prepared by Mr Bryan Cifuentes dated 10th March 2022 for the proposed development. The assessment contains a bushfire hazard risk assessment and identifies mitigating actions required.

The assessment determines that the bushfire attack level for the proposed development is Low. The type of slope and type of vegetation surrounding the proposed location of the development results in a low possibility of bush fire occurring. As such, the building is not required to be setback from surrounding vegetation given the low risk associated with the potential bushfire hazard.

The assessment also states that the proposed 40,000L water storage tanks (including swimming pool storage, if required) will give ample supply to protect the structure from any vegetation fire, however the water tank must be accessible to attach a 50mm suction hose from the water tank to a firefighting appliance. The firefighting appliance can access the proposed dwelling via the driveway and pedestrian access to connect the hose to the tank is provided along the rear of the dwelling.

It is considered that the bushfire hazard risk assessment provided satisfies the additional information requested in relation to this matter.

Vegetation clearing and ecology

2. Provide an ecology report prepared by a suitably qualified consultant to determine if any matters of

State or local environmental significant are present within the proposed clearing footprint. If any species of significance are discovered, demonstrate how these are to be appropriately managed.

Attachment 2 contains the Ecology Assessment prepared by R2G Environmental Management Consultant dated March 2022.

The report provides an ecological assessment to determine if any matters of state or local environmental significance are present within the proposed clearing footprint at 105 Connolly Road, Mowbray. In addition, the report assesses the findings with relevance to state and commonwealth matters considering the proposed dwelling construction.

Field surveys were conducted on 22 February 2022 within the proposed footprint of the works. No Endangered, Vulnerable and Near Threatened species listed under State or Commonwealth legislation were identified in the vicinity of the clearing impact area. Clearing of vegetation on the land for the dwelling is consistent with the objectives of the *Vegetation Management Act 1999*. In terms of impacted species listed under the *Nature Conservation Act 1994* and *Environmental Protection and Biodiversity Conservation Act 1999* there is a negligible risk that conservation significant species could be impacted by the project.

The assessment concluded that the development is considered unlikely to have an impact on a matter of national significance due to the absence of species and habitat values that could support significant species. It was also recommended that in order to ensure no fauna is impacted during clearing, a spotter catcher is recommended during the removal of any mature trees with habitat potential. Which maybe included as a condition of the development approval.

It is considered that the ecology assessment provided satisfies the additional information requested in relation to this matter.

Bridge plans

3. Provide certified plans of the proposed bridge construction for the gully.

Attachment 3 contains a set of detailed bridge design drawings prepared by Ferox Group Limited (Plans S01 to S17). The plans show all aspects of the proposed bridge crossing including the proposed location, alignment, design, abutment location and design and construction.

The bridge design drawings are noted as “for information”, however, the design has been reviewed by a structural RPEQ and it is confirmed that a Form 15 and RPEQ certification will be provided prior to construction phase, and maybe conditioned as such. It is considered that the comprehensive plans provided herein confirm the bridge crossing has been designed appropriately.

Additionally, the plans confirm that the proposed bridge crossing is a 22m long, single span structure without the need for any instream piers or supports. As stated in the application this design ensures that any associated instream damage to ecological values or disturbance to the watercourse is avoided.

It is considered that the plans provided satisfies the additional information requested in relation to this matter.

Earthworks plan

4. Provide an earthworks cut and fill plan inclusive of existing and proposed levels for affected areas.

Attachment 4 contains the following updated Trinity Engineering and Consulting (TEC) Drawings:

- SKETCH 1520-1 Rev A dated 5 April 2022
- SKETCH-1520-2 Rev B dated 4 April 2022
- SKETCH-1520-3 Rev C dated 4 April 2022
- SKETCH 1520-4 Rev B dated 5 April 2022
- SKETCH 1520-5 Rev D dated 4 April 2022

The drawings detail the proposed earthworks cut and fill areas for the affected areas by the proposed development (cut areas in grey and the fill areas in yellow). Top and bottom levels for retaining walls are also provided on the plans.

Generally, the fill areas are on the eastern portion of the development and are supported by rendered masonry retaining walls. The retaining walls enable stepping of the site and provide garden beds to landscape the eastern extents to minimise and soften the visual impacts.

No earthworks will be taken off the owner's property. Any excess cut material not required for the fill zone will be taken down to the lower area of the site where a previous borrow pit exists.

The proposed earthworks for the house pad will generate an excess of cut which will be used to rehabilitate this old borrow area close to Connelly Road.

It is considered that the plans provided satisfies the additional information requested in relation to this matter.

Regards

Paul Steele

Attachment 1 - Bushfire Hazard and Risk Analysis

Bushfire Hazard and Risk Analysis with Mitigating Actions

Property Description: 105 Connolly Road Mowbray
Lot 27 on NR72 and Lot 40 on N 157650

Local Authority Area: Douglas Shire Council

Assessment Inspection: 10th March, 2022

Assessor: Bryan Cifuentes

Dated 17th March, 2022

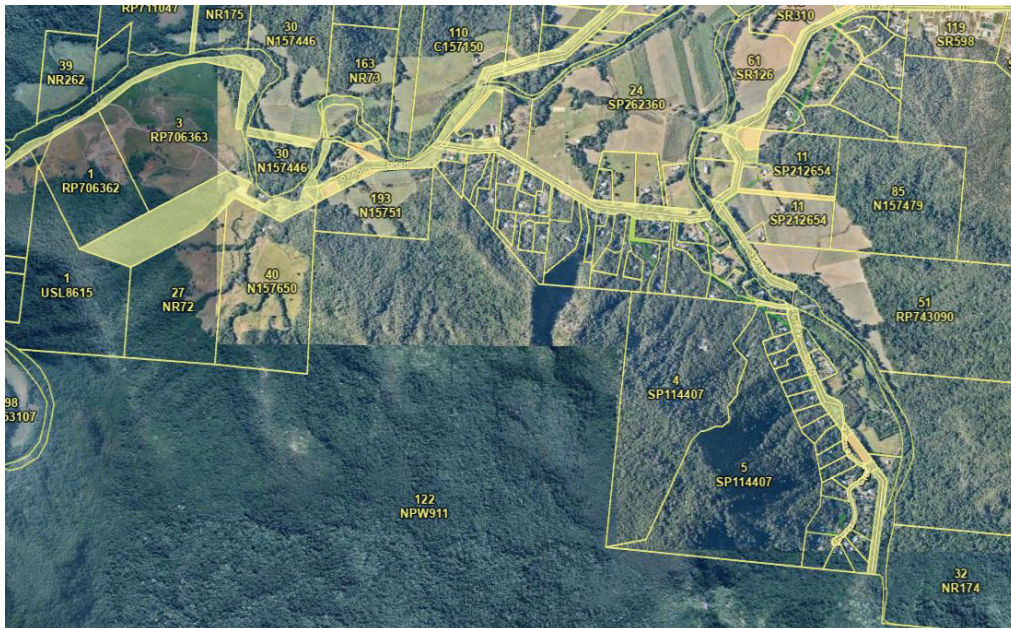


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Attachment 1	State Bushfire Risk mapping Mowbray
Attachment 2	NAFI Fire History Macalister Range/Mowbray
Attachment 3	Hazard Analysis Field Assessment sheet
Attachment 4	Photos of Vegetation

1. Purpose:

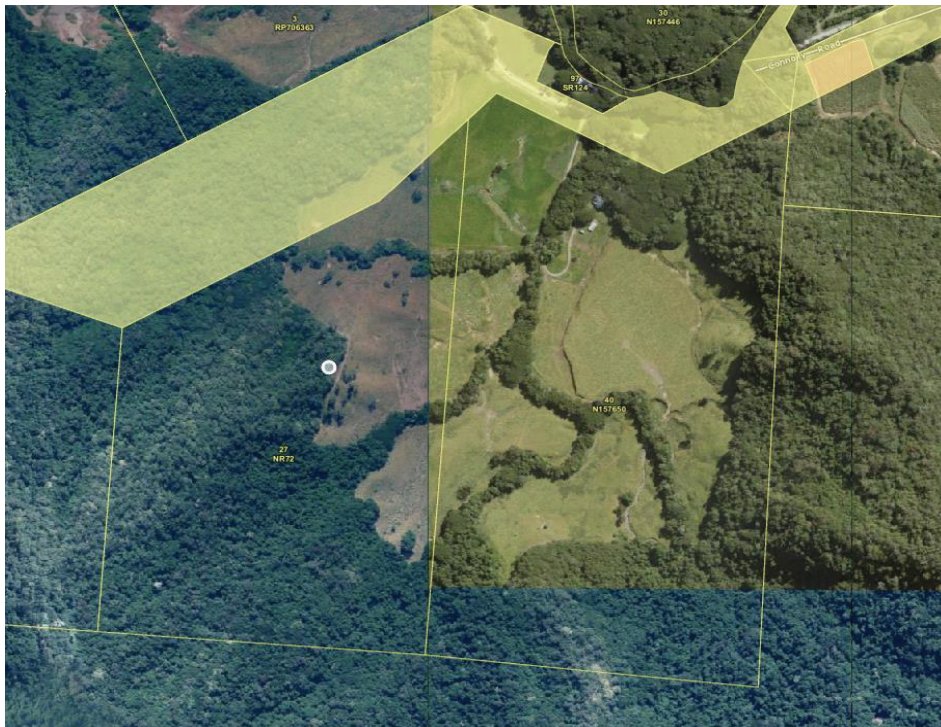
- Assess the bushfire risk of the property as per the State Planning Policy guide to identify any adverse impacts on people, property, economic activity, and the environment on the proposed site layout for house construction.
- Produce a written report outlining any bushfire hazard and recommend remedial actions if required.

2. Site Description:

Lot 27 NR72 comprises of approximately one third improved pasture on the north eastern side of the block on the lower foothills with the remaining two thirds comprising of natural treed vegetation with rising elevation leading up and bordering on two sides by National Park. The majority of the treed vegetation ecosystem type is rainforest with some ridgelines consisting of some emergent eucalypt species with a transitional to rainforest understory dominating.

The overall site for construction comprises a proposed level benched building envelope located on top of a ridge just within the treed area with the proposed access coming up the same ridgeline on an existing track alignment.

Access to the block is via Connolly Road, there is no reticulated water supply.



3. Local Climatic Environment:

To provide clarity of the dynamics of fire behaviour in this location I provide the following basic preamble explanation.

Fire requires three elements of heat; oxygen and vegetation to sustain the chemical reaction, two of these elements of heat and oxygen are determined by the sun, season and general atmosphere and are not controllable in a broad acre sense.

The vegetation or fuel that fire feeds on is the only area of fire control and the dynamics of how fire behaviour is determined are characterised through the vegetation type, arrangement, amount, dryness and size coupled with topographic variables of aspect and slope that may impact on rate of spread and severity. Some vegetation species are fire resistant and depend on fire to regenerate and some species are fire retardant where they will not carry fire.

The sun and season determine the growing pattern and dryness of this vegetation with identified effects relative to how fire behaves.

The north of the State differs greatly to the south of the State as does the coastal strips that maintain a higher moisture content (humidity) in the airflow then does inland locations. In the wet tropics the temperature and humidity over annual seasons are vastly different to the colder temperate zones of southern localities. Higher humidity plays an integral role in fire behaviour severity determining whether a fire crowns or not in the tree tops of flammable vegetation types. Even dead vegetation is hygroscopic and absorbs moisture content from the atmosphere producing differing effect on the combustion process. Fire in this tropical location will not carry a crown fire in the tree tops.

Given the general locality of this land in the northern wet tropics, any wildfire left unchecked may have potential to cause infrastructure loss but the fire severity is lower and easily escaped. Radiant heat from any fire front would also be minimised and confined.

4. Bushfire Hazard Identification:

Under the State Planning Policy Bushfire Hazard Overlay Code Identification –A Bushfire Risk Analysis for the shire has been undertaken by the Rural Fire Service of the Queensland Fire and Emergency Services resulting in some areas lying in three categories:

- Medium Bushfire Risk
- High Bushfire Risk.
- Very High Risk

All these above categories across the state are outlined with an associated standard 100-meter impact buffer zone.

The attached map bushfire hazard assessment shows the areas outlined on the subject construction location. **(See attachment 1)** Note the pixelated high bushfire hazard rated locations aspect is, in part, encompassing non- flammable rainforest locations. This indicates

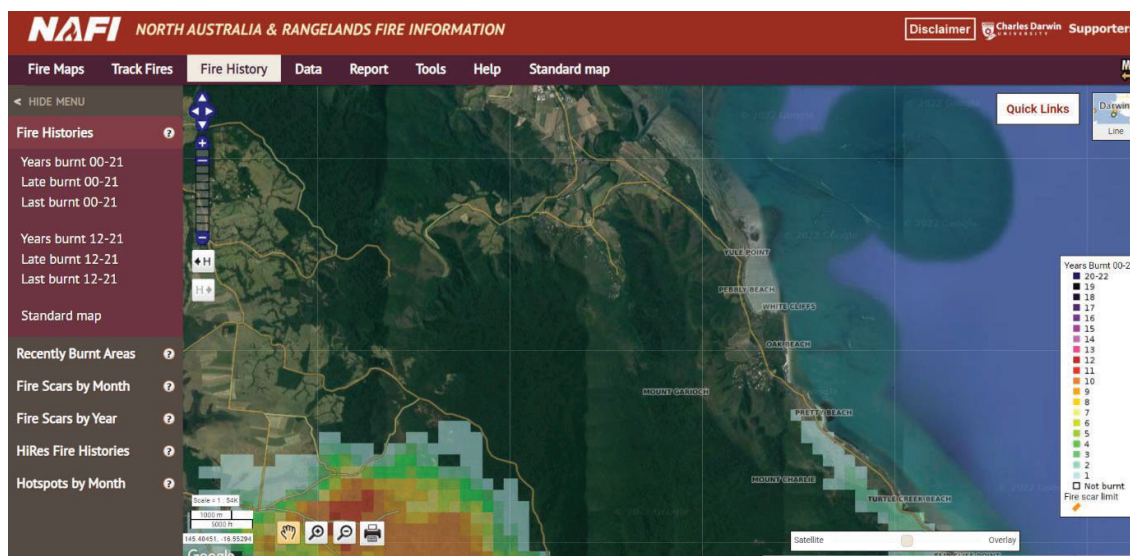
it is probable the local site has not previously been ground truthed for validity of the desk top hazard rating mapping undertaken by the Rural Fire Service.

Please also note that since the original hazard assessment prior to June 2003 that significant change in vegetation cover has occurred compared to today's date and the date it was originally mapped.

Given the neighbouring farms and subdivision to the east is partly cleared, historically there is no bushfire risk what so ever from that direction. Sugar cane once farmed in the area may in the past had regular fire ignition from the foothill's upslope, or, the occasional unwanted accidental ignition, into what was once shown as open woodland thus maintaining such open woodland landscape type. (Fire frequency and intensity in the landscape will shape the ecosystem and eucalypt species that depend on fire for regeneration) In the broader area the land use changes many years past from farming to lifestyle subdivision has stopped this fire practice in the local area. In addition, this location is relatively confined to traffic by the locals who reside and no through traffic therefore minimising exposure to unwanted fire ignition sources.

Given there was no evidence of charcoal scarred trees during the inspection it was evident a fire had not been in these hills for an extended period of many years. Therefore, fire frequency has not been prevalent in maintaining that high fire prone vegetation type previously mapped. (Very High Potential Bushfire mapped as open woodland)

The Northern Australian Fire Information (NAFI) satellite fire monitoring program has been recording fire activity history since 1990 and there has been no fire in the area for 20 plus years. **(See attachment 2)** This confirmed proof of no major fire activity has occurred and the vegetation ecosystem has subsequently altered considerably with a thicker canopy cover shading out native grasses, particularly in the gully and riparian zones.



5.0 Methodology Assessing Hazard Scores:

(See **attachment 3** Bushfire Hazard Analysis score conducted on site.)

The vegetation or fuel that fire feeds on is the only area of fire control and the dynamics of how fire behaviour is determined are characterised through the vegetation type, arrangement, amount, dryness and size coupled with topographic variables of aspect and slope that may impact on rate of spread and severity. The assessment criteria is based on the following;

1. Vegetation communities
2. Slope
3. Aspect

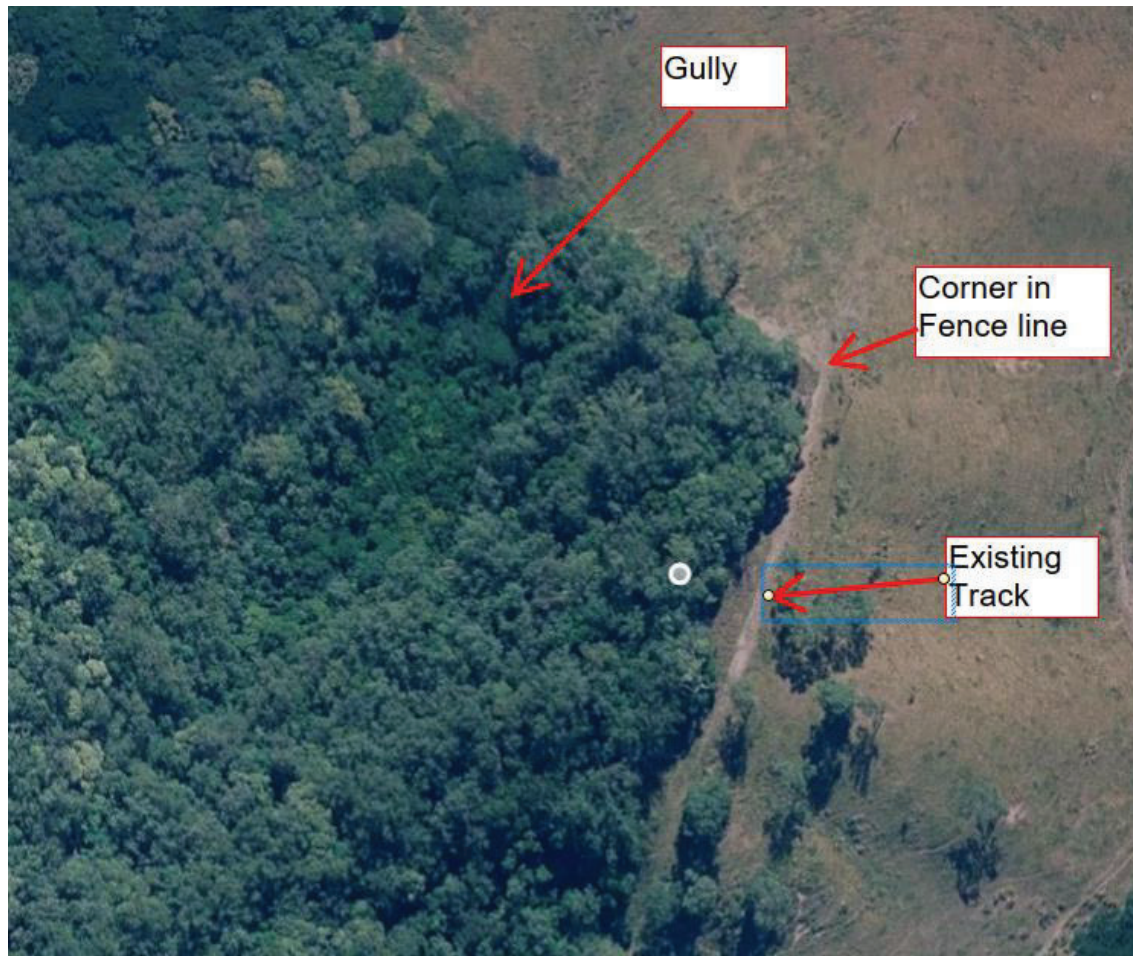
Assessment of Vegetation Communities

Note 1: Vegetation assessment should be based upon examination of the vegetation on the subject site and surrounding the subject site. Narrow strips of vegetation may be flammable; however, bushfires will not generally reach their full intensity where bushfire fronts are less than 100 metres wide. For this reason the following examples may be viewed as having the next lower hazard score (i.e. paperbark heath would have a score of 6 not 8, cypress pine forest 5 not 6): • areas with a linear shape (e.g. roadside vegetation beside a cleared paddock); and • units of vegetation less than 50 hectares in area and more than one kilometre from the nearest extensive vegetation. (SPP Guideline 1/03 June 2003)

The amount or tonnes per hectare of fine fuels available for combustion determine the severity of intensity for a bushfire, ground fuels and intermediate fuels dictate flame height and radiant heat. Some vegetation communities with a closed canopy such as rainforest eliminate the finer grass fuels and command a wetter environment. Complex mesophyll and vine forest (dense rainforest) can indeed act as a firebreak.

The understory ground fuels observed on the subject site with no grass were very low relative to tonnes per hectare and the canopy cover is closed consisting of numerous pioneering rainforest soft bark species (fire retardant) with the occasional eucalypt/open woodland emergent of Moreton Bay ash and Red Box Mahogany. The canopy has shaded out all understory grasses and comprehensively transitioning the forest type to a warm and moist rainforest. **(See attachment 4)** This is in contrast to the bushfire hazard mapping aerial photography used which then showed a very high-risk forest type used in the desktop scenario and no ground truthing carried out. The vegetation ecosystem has since changed dramatically in this wet tropical location.

The proposed benching of the site will provide substantial separation from the natural bush on the upslope side, given the two-tiered bank cutting. Clearing should allow sufficient space for a light/medium attack fire appliance to get to the rear of the building.



Slope

Slope Hazard score Gorges and mountains (>30%) 5

Steep Hills (>20% to 30%) 4

Rolling Hills (>10% to 20%) 3

Undulating (>5% to 10%) 2

Plain (0% to 5%) 1

[Note: For site-specific assessment of bushfire hazard, if the site is downhill from the hazard, the slope effect may be taken as zero as the fire intensity will be less. However, burning heavy fuels may roll downhill and trees may fall down, so recommended setbacks from the hazard still need to be observed.] SPP Guideline 1/03 June 2003.

All treed vegetation is mostly upslope with virtually low possibility of bush fire occurring given the vegetation category. (Fire spread increases 4 times per 20 degrees upslope and

decreases by times 4 per 20 degrees down slope but requires the fire prone vegetation to carry it.) Slope along the ridge is 5 to 10 degrees and drops away on both eastern and western sides of around 20 to 25 degrees. The western slope is treed and downslope from the proposed construction but is vegetated with the transitional type and is rainforest in the gully.

Any risk of unwanted fire would potentially come from the improved pasture grass downslope on the eastern side. (Prevailing winds and grass fuels) The driveway will provide an additional firebreak and access point enabling increased access for firefighting purposes if required, and, I recommend this access extends to the rear of the house site bench giving access to the water tank and a turnaround reverse in for a medium attack fire appliance. This is along the alignment of the existing track and fence line along the south eastern side of the proposed bench and treed area. Also a 3m access to the water tank along the western side of the house is recommended.

Aspect

East South East facing with a low-risk Hazard score of 2.

5.1 Hazard Score

See attached assessment sheet

Vegetation	Slope	Aspect	Rating
Transitional with comprehensive soft bark rainforest understory with some eucalypt emergent. No grasses obviously being shaded out by rainforest canopy. No evidence of fire scarring.	5-15 degrees slope with level building envelope.	East to south	Low risk

6.0 Mitigation:

Water: Single house site bench and subsequently access can be gained via the proposed driveway entrance. The main driveway access is not serviced by Fire Hydrants or reticulated water supply. Water is proposed to be stored in a 40,000-litre holding tank southern side of the house on the same ridge/spur and a water bore on the flat to pump water to the holding tank. This will give ample supply to protect the structure from any vegetation fire but accessing the tank is important.

The proposed construction includes a swimming pool which will provide added water supply for any firefighting purposes. Responding fire appliances have mechanical pumps enabling them to draw water supply. (Electricity supply can be cut)

The location is within the Mowbray volunteer Rural Fire Brigade area of response with the fire station located 2.5klms in distance from lot 27. This volunteer brigade is equipped with an appliance with off road capability but will require hose fittings of 50mm male Camlock to access the water tank.

Access: Vegetation separation of 8 meters can be achieved in accompany with the extension of the access to the rear of the house site benching providing access for a medium attack fire appliance. This is along the alignment of the existing track and fence line along the south eastern side of the proposed bench and treed area. The access will be required to enable access for the fitting of the 50mm suction hose to the appliance from the water holding tank at the rear of the house. Additionally, an optional access of a 3m access to the water tank from the western side of the house is recommended. (Can be lawn but clear of trees)

Mitigating actions:

- Low risk, however the access to the water tank is recommended.
- A 50 mm gate valve with a 50mm camlock male fitting to be installed/fitted to the rear of the 40,000L water tank.

7.0 Conclusion:

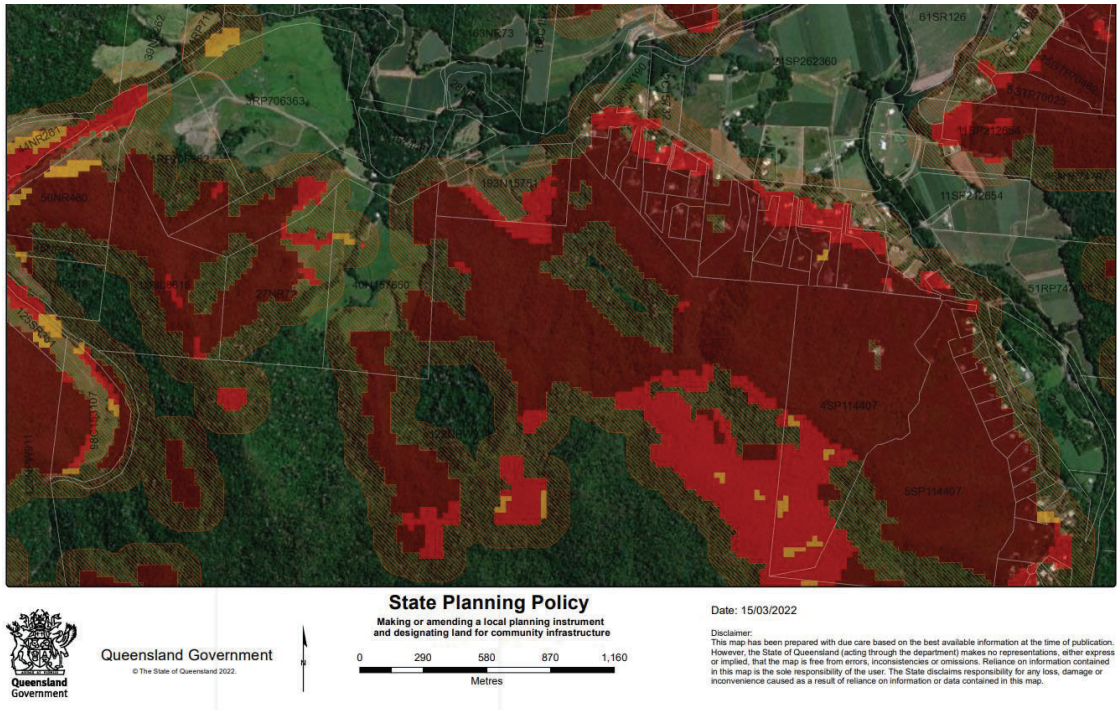
Given the major change in vegetation type in a tropical high rainfall area the bushfire potential of very high severity does not exist and unless a major disaster occurs and destroys the closed canopy vegetation there is no bushfire threat.

The bushfire attack level of the proposed construction at 105 Connolly Road has been determined as Low.

Bryan Cifuentes

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Mob: 0487342519

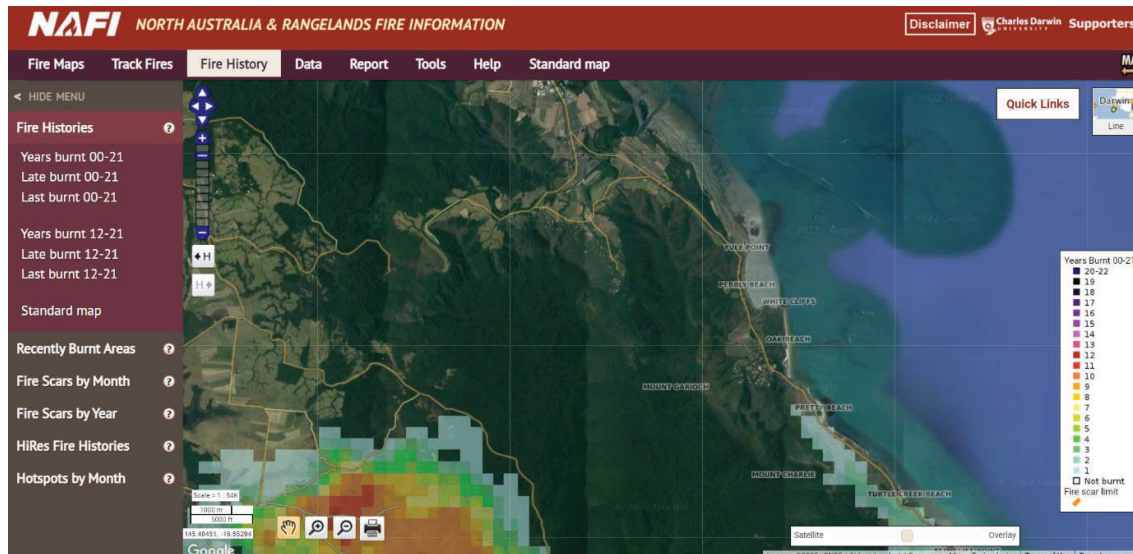
Attachment 1



Legend

- Cadastre (25k)**
- Cadastre (25k)
- Bushfire prone area**
- Very High Potential Bushfire Intensity
 - High Potential Bushfire Intensity
 - Medium Potential Bushfire Intensity
 - Potential Impact Buffer

Attachment 2



Attachment 3

BUSHFIRE HAZARD ON SITE ANALYSIS

LOCAL AUTHORITY AREA: Douglas Shire Council

REGION: Mowbray Valley

Property Description- Lot 27 NR72 & Lot 40 N157650

ASSESSOR: Bryan Cifuentes

DATE: 10/03/2022

1. FIRE SEASON SEVERITY:

VERY HIGH (Normally Very High to Extreme Fire Danger exists)	5	<input type="checkbox"/>
HIGH	4	<input type="checkbox"/>
MODERATE (Normally Moderate Fire Danger exists)	3	<input type="checkbox"/>
LOW	2	2
VERY LOW (Normally Low to Very Low Fire Danger exists)	1	<input type="checkbox"/>

2. PROTECTION VALUE:

VERY HIGH (No protection measures required)	1	<input type="checkbox"/>
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Bushfire Hazard Analysis –105 Connelly Road Mowbray Valley

HIGH	2	<input type="checkbox"/>
MODERATE (Some fire protection measures will be required)	3	3
LOW	4	<input type="checkbox"/>
VERY LOW (Highly developed protection measures required)	5	<input type="checkbox"/>

3. IGNITION SOURCES:

VERY HIGH (Very frequent outbreaks)	10	<input type="checkbox"/>
HIGH (Frequent fires 1/2 years)	8	<input type="checkbox"/>
MODERATE (Occasional fires 1/3-5 years)	5	<input type="checkbox"/>
LOW (Rarely fires 1/6-10 years)	2	<input type="checkbox"/>
VERY LOW (No previous fires)	1	1

4. FUEL TYPE:

Fuel Levels:	VERY HIGH	15.1 t/ha +	5	<input type="checkbox"/>
	HIGH	10.1 - 15.0	4	<input type="checkbox"/>
	MODERATE	5.1 - 10.0	3	<input type="checkbox"/>
	LOW	2.1 - 5.0	2	<input type="checkbox"/>

Bushfire Hazard Analysis –105 Connelly Road Mowbray Valley

	VERY LOW	0.1 - 2.0	1	1
Specie Type:	Grass + 30% Forest cover		5	<input type="checkbox"/>
	Eucalypt 30 – 70% Cover		4	<input type="checkbox"/>
	Grass - Dry Sclerophyl		3	<input type="checkbox"/>
	Wallum		3	<input type="checkbox"/>
	Wattle/Transitional		2	2
	Crops		2	<input type="checkbox"/>
	Rainforest and other types		1	<input type="checkbox"/>
	4.	SUB-TOTAL	3

5. DAMAGE POTENTIAL:

VERY HIGH	(Complete destruction possible)	10	<input type="checkbox"/>
HIGH	(Partial destruction, complete scorch)	8	<input type="checkbox"/>
MODERATE	(Some severe scorch)	5	<input type="checkbox"/>
LOW	(Minimal damage can occur)	2	2

Bushfire Hazard Analysis –105 Connelly Road Mowbray Valley

VERY LOW	(No damage)	1	<input type="checkbox"/>
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6. TOPOGRAPHIC FEATURES:

Slope	Very Steep	16° +	5	<input type="checkbox"/>
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	Steep	11° - 15°	4	4
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	Moderate	7° - 10°	3	<input type="checkbox"/>
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	Gentle	2° - 6°	2	<input type="checkbox"/>
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	Flat	< 1°	1	<input type="checkbox"/>
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Aspect:	North	5	<input type="checkbox"/>
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	Northwest to west	4	<input type="checkbox"/>
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	Mixed	3	3
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	North to east	2	<input type="checkbox"/>
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	East to south	1	<input type="checkbox"/>
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6.	SUB TOTAL 7
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7. HOUSING/BUILDING DEVELOPMENT:

VERY HIGH	(One house per 0.5ha.)	10	<input type="checkbox"/>
HIGH	(One house per 0.6 – 2ha.)	8	<input type="checkbox"/>
MODERATE	(One house per 2-10ha.)	6	<input type="checkbox"/>
LOW	(One house per 10-50ha.)	4	<input type="checkbox"/>
VERY LOW	(One house per 50ha. +)	2	2

SCORE FROM:

1.2
2.3
3.1
4.3
5.2
6.7
7.2

TOTAL SCORE: 20

CATEGORIES/RISK:

VERY LOW Score: 10 – 18

LOW Score: 19 – 29

MODERATE Score: 30 – 40

HIGH Score: 41 – 51

VERY HIGH Score: 52 – 60

Fire Brigade Status Form is attached, if appropriate.

Located within the Mowbray Valley volunteer Rural Fire Brigade response area with the fire station 2.5klms from the front entrance. No water reticulation supply.

B.J.Cifuentes

10 Spurwood Close,

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ABN: 27864264336

Attachment 4



Looking west red box mahogany with rainforest soft bark understory.



Looking north edge of proposed bench site



Looking east from building site



Improved pasture eastern side with occasional Moreton Bay ash. (Looking south at Rainforest backdrop)



Looking west south west



Looking from Connolly Road towards the hills behind the site.

EMPLOYMENT HISTORY & EXPERIENCE

- 16-06-2014 to 18-07-2015** **Deputy Commissioner
Emergency Services Volunteers**
- 9-1-2012 to 15-06-2014** **Queensland Fire and Rescue Service
Rural Operations
Cairns Peninsula Area including Torres Strait
Position: Inspector**
- Appointed Panel member of the “Malone Review into
Rural Fire Service Queensland”**
- 1-2-2011 to 1-12-2011** **Cape York Sustainable Futures Inc.
Position: Deputy CEO & Fire Projects Manager
 (12 months Long Service Leave from Dept.
 Community Safety)**
- 4-2-2007 to 5-2-2008** **Cape York Development Association**
- Position: Project Manager
 Rangelands Fire Management across
 Queensland.**
- 12 month special project identifying best
 practice in utilising fire and monitoring via
 satellite technology.**
- 8-8-2006 to 11-1-2011** **Queensland Fire and Rescue Service
Rural Operations
Position: Inspector**
- 19-3-1990 to 8-8-2006** **Queensland Rural Fire Service
Position: Inspector**
- Training:**
- >Cert IV Training and Assessment
 - >Leadership Course Whyte Island
 - >Frontline Management Diploma
 - >Fireline Leadership Development
 - >Senior First Aid
 - >Workplace Health and Safety Levels 1 and 2
 - >Purchasing Procurement Level 1
 - >Purchasing Procurement Level 2 modules.
 - >Treasury course – Accrual accounting; >Budgets, GST.
 - >Team Building
 - >Emergency Service Risk Management - Introduction.
 - >Counter Disaster Management Introduction
 - >Public Sector Management Course- modules complete -
 assignments incomplete.
 - >Aerial Incendiary Bombardiers Course. (Instructor)
 - >Financial management
 - >Buildings Fire Safety Level 1
 - >Fire Investigation in Grass, Scrub and Forest
 - >Anti-Discrimination
 - >Conflict Resolution

- >Computer Introduction
- >Forestry Advanced Fire Course - Gympie
- >Hazardous Material Management.
- >Media Management
- >Incident Management System (5 day)
- >Infection Control for Emergency Workers
- >Rural Hazard Analysis & Risk Mapping
- >Member of Rural Fire Association of Queensland
- >National Medal

21-4-1986 to 16-3-1990

Fraser Island Recreation Board

Position: Ranger in Charge National Parks

Training:

- >Law Enforcement
- >Fire Management
- >Advanced First Aid
- >Public Relation/Interpretation
- >Search and Rescue
- >Medivac (Flying Doctor Kits)
- >Finance (Collection of public monies and balance)
- >Staff and Time management
- >Aerial Ignition
- >Fire Behavior Gympie Forestry Fire School

1-9-1978 to 18-4-1986

National Parks and Wildlife Service

Position: Surveyor

Training:

- >Law Enforcement -Investigation, Court Procedure.
- >Ecology and park proposal evaluation
- >Weed Identification
- >Fire management and Fire Boss
- >Radio communication
- >Small motors
- >Media relations
- >Basic First Aid
- >Bush Survival Techniques

8-2-1971 to 31-8-1978

Department of Forestry

Position: Forest Management trained as a Forest Surveyor.

Training:

- >Botanical Identification
- >Compass and chain surveying
- >Theodolite control surveying
- >Cadastral surveying
- >Drafting of precision plans
- >Advanced Map and plan reading
- >Reading of aerial photography
- >Bushmanship
- >Levelling (cuts and fill); Road Location/Design

- >Four wheel driving
- >Firefighting techniques
- >Chainsaw operation

Attachment 2 - Ecology Assessment



Ecology Assessment for Dwelling at 105 Connolly Road, Mowbray

PO Box 382
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Tel: 0499057006
Email: cameronslack@bigpond.com



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In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

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Document Status

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1.0 Introduction

This report provides an ecological assessment to determine if any matters of state or local environmental significance are present within the proposed clearing footprint at 105 Connolly Road, Mowbray (the site). This assessment seeks to fulfill the information requested in Douglas Shire Councils Information Request dated 12 January 2022.

In addition, the report assesses the findings with relevance to state and commonwealth (EPBC Act) matters considering the proposed dwelling construction. This report assesses potential likelihood of presence of EPBC species identified within data base searches and inferences to potential for their impact.

1.1 Site Details

The site is located at 105 Connolly Road, Mowbray, formally described as Lot 27 on NR72 and Lot 40 on N157650. The site's location is shown in **Figure 1**. The proposed development consists of clearing and earthworks required as part of constructing a dwelling house on Lot 27. As the house is located on a ridge line engineered cut and fill excavation will be undertaken to provide a stable foundation. This will require large exposed batters to accommodate the building envelope.

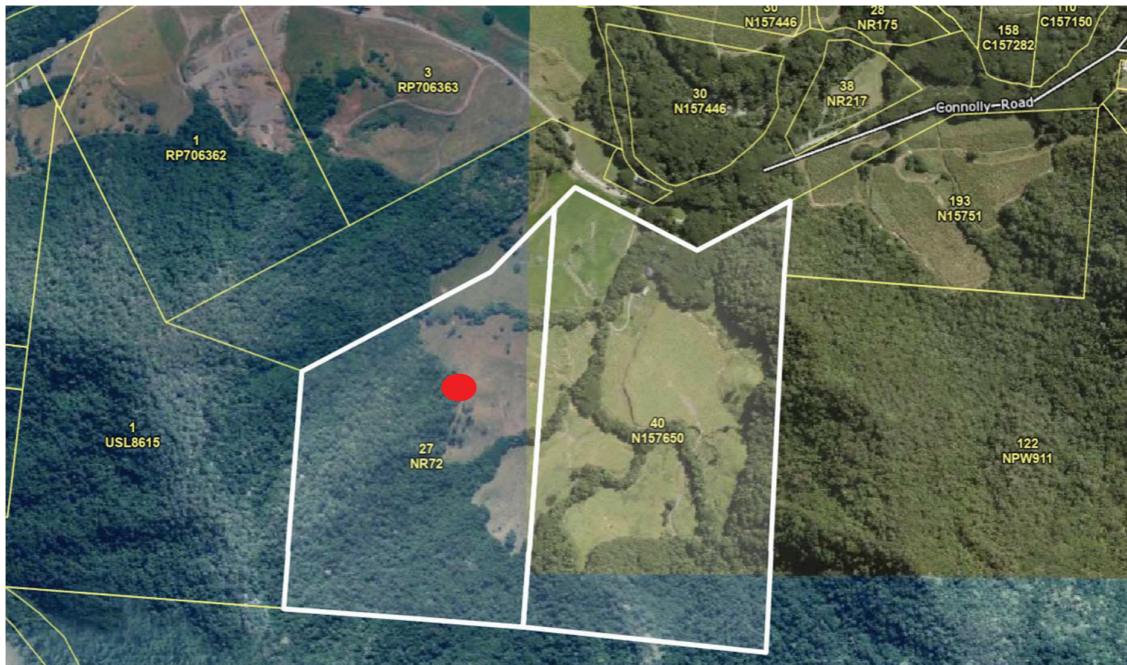


Figure 1: Site Locality with approximate house location shown in red

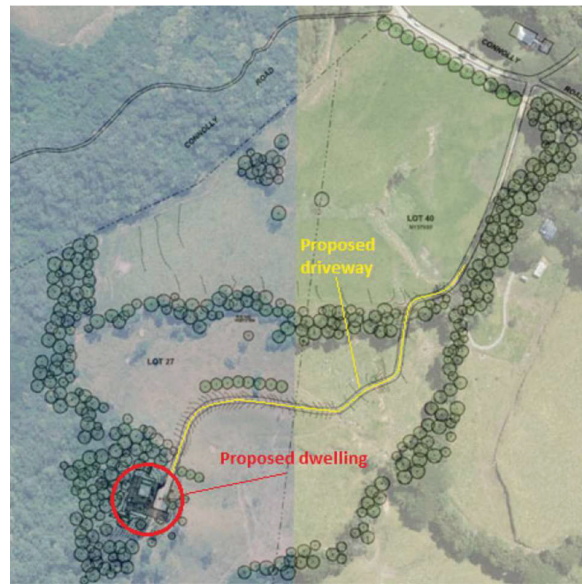


Figure 2: Proposed development at 105 Connolly Road, Mowbray

2.0 Desktop Assessment

To assist in identifying potential environmental constraints to the proposed development, a search of relevant databases were conducted. This included searches of databases for Endangered, Vulnerable and Near Threatened (EVNT) plant species that may be located in the study area, including the Wildlife Online Atlas of Living Australia EPBC Protected Matters and Protected Plant Flora Survey Trigger Mapping online database searches.

A total of 4 EVNT species were identified as potentially existing within a 2 km radius of the site as shown in **Attachment 1**.

Table 1. Wildnet conservation significant species recorded within the area of interest and its 1km buffer.

Scientific Name	Common Name	NCA	EPBC	Likelihood of Presence
<i>Myiagra cyanoleuca</i>	Satin flycatcher	Special Least Concern	None	Possible although migratory species and site does not contain a breeding or foraging area that if removed would significantly impact this species
<i>Symposiachrus trivirgatus</i>	Spectacled monarch	Special Least Concern	None	Possible although migratory species and site does not contain a breeding or foraging area that if removed would significantly impact this species
<i>Cyclopsitta diophthalma macleayana</i>	Macleay's fig-parrot	Vulnerable	None	Possible however very small area for a species that breeds widely. No significant food source or hollows for these parrots present
<i>Rhipidura rufifrons</i>	Rufous fantail	Special Least Concern	None	Possible although migratory species and site does not contain a breeding or foraging area that if removed would significantly impact this species

A search of the EPBC Online Database data identified 37 protected species within 1km of the site as identified in **Table 2** and provided in **Attachment 2**.

Table 2. EPBC Act Protected Matters search (5 km)

Scientific Name	Common Name	Status ¹	Likelihood of Presence
<i>Calidris canutus</i>	Red Knot, Knot	Endangered	Unlikely Wader
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered	Unlikely Wader
<i>Casuaris casuaris johnsonii</i>	Southern Cassowary	Endangered	Possible- within rainforest habitat adjacent to the site
<i>Charadrius leschenaultii</i>	Greater Sand Plover	Vulnerable	Unlikely Wader
<i>Erythrotriorchis radiatus</i>	Red Goshawk	Vulnerable	Unlikely- no nest or stag close to water typically occupied by this species
<i>Falco hypoleucos</i>	Grey Falcon	Vulnerable	Unlikely- potential as part of a wide foraging home range
<i>Hirundapus caudacutus</i>	White-throated Needletail	Vulnerable	No caves or breeding areas for this species
<i>Limosa lapponica baueri</i>	Nunivak Bar-tailed Godwit	Vulnerable	Unlikely Wader
<i>Numenius madagascariensis</i>	Eastern Curlew	Critically Endangered	Unlikely Wader

Scientific Name	Common Name	Status ¹	Likelihood of Presence
<i>Rostratula australis</i>	Australian Painted Snipe	Endangered	Unlikely Wader
<i>Turnix olivii</i>	Buff-breasted Button-quail	Endangered	Unlikely- outside typical habitat area for sightings of this species
<i>Tyto novaehollandiae kimberli</i>	Masked Owl	Vulnerable	Unlikely- possible as part of a larger home range foraging area
<i>Stiphodon semoni</i>	Opal Cling Goby	Critically Endangered	Possible- outside known areas
<i>Litoria dayi</i>	Australian Lace-lid, Lace-eyed Tree Frog	Vulnerable	Possible- although lacks significant instream habitat features
<i>Litoria nyakalensis</i>	Mountain Mistfrog	Critically Endangered	Possible- although lacks significant instream habitat features
<i>Dasyurus hallucatus</i>	Northern Quoll	Endangered	Possible- disturbed habitat at edge of rainforest community
<i>Dasyurus maculatus gracilis</i>	Spotted-tailed Quoll	Endangered	
<i>Hipposideros semoni</i>	Semon's Leaf-nosed Bat	Vulnerable	Unlikely- no significant caves or rocky habitat suitable for this species
<i>Macroderma gigas</i>	Ghost Bat	Vulnerable	Unlikely- no significant caves or rocky habitat suitable for this species
<i>Mesembriomys gouldii rattoides</i>	Black-footed Tree-rat	Vulnerable	Unlikely- known from cape York habitat areas close to the coast
<i>Phascolarctos cinereus</i>	Koala	Endangered	Unlikely
<i>Pteropus conspicillatus</i>	Spectacled Flying-fox	Endangered	Not present- No roosts
<i>Rhinolophus robertsi</i>	Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat	Vulnerable	Unlikely- no significant caves or rocky habitat suitable for this species
<i>Saccolaimus saccolaimus nudicluniatus</i>	Bare-rumped Sheath-tailed Bat	Vulnerable	Unlikely- no significant caves or rocky habitat suitable for this species
<i>Egernia rugosa</i>	Yakka Skink	Vulnerable	Unlikely
Plants			
<i>Acriopsis emarginata</i>	Pale Chandelier Orchid	Vulnerable	Unlikely
<i>Canarium acutifolium</i>		Vulnerable	Possible
<i>Cyclophyllum costatum</i>		Vulnerable	Unlikely
<i>Diplazium cordifolium</i>		Vulnerable	Unlikely
<i>Myrmecodia beccarii</i>		Vulnerable	Unlikely
<i>Phaius australis</i>	Lesser Swamp-orchid	Endangered	Unlikely
<i>Phaius pictus</i>		Vulnerable	Unlikely
<i>Phalaenopsis amabilis subsp. rosenstromii</i>	Native Moth Orchid	Endangered	Unlikely
<i>Toechima pterocarpum</i>		Endangered	Unlikely
<i>Vappodes lithocola</i>	Dwarf Butterfly Orchid, Cooktown Orchid	Endangered	Unlikely
<i>Vappodes phalaenopsis</i>	Cooktown Orchid	Vulnerable	Unlikely

Scientific Name	Common Name	Status ¹	Likelihood of Presence
<i>Zeuxine polygonoides</i>	<i>Velvet Jewel Orchid</i>	<i>Vulnerable</i>	Unlikely

Queensland Regional Ecosystems (*Vegetation Management Act 1999 (VMA)*)

Queensland Regional Ecosystems (RE) Mapping identifies four vegetation communities on the site. Mapping identifies the site as containing the following regional ecosystems:

Regional Ecosystem	Short Description	BD Status	Area (Ha)	% of AOI
7.11.44	Eucalyptus tereticornis open forest to woodland on coastal metamorphic foothills	Of concern	0.35	1.3
7.11.49	Eucalyptus leptophleba, Corymbia clarksoniana and E. platyphylla open forest to woodland on metamorphic foothills	Of concern	7.15	26.37
7.11.7a	Complex notophyll vine forest with Agathis robusta emergents on foothills and uplands on metamorphics	No concern at present	11.13	41.06
7.3.45b	Corymbia clarksoniana +/- C. tessellaris +/- E. drepanophylla open forest to open woodland on alluvial plains	Of concern	0.27	0.98
non-remnant	None	None	8.21	30.3

Works are proposed predominantly within the non-remnant and of concern 7.11.49 regional ecosystem areas of the site as identified in Figure 3.

Figure 3 Regional Ecosystem Mapping With Dwelling Approximate Location Shown in Red

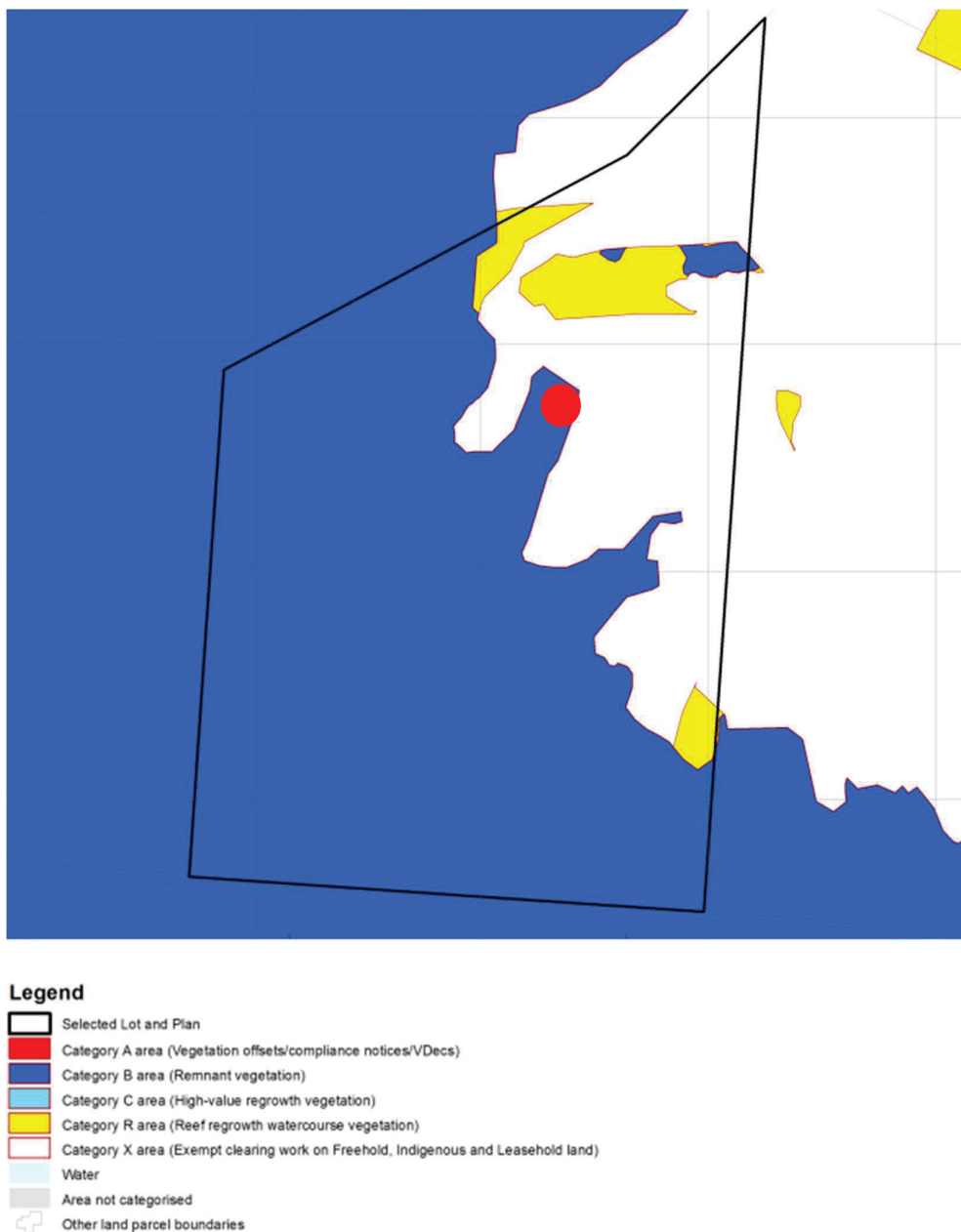


Figure 4: Regulated Vegetation Mapping With Dwelling Approximate Location Shown in Red

Waterways and Wetlands

Rocky Creek is a “amber waterway” fish passage stream under the *Fisheries Act 1994 Waterways for Waterway Barrier Works* as shown in **Figure 5**. Given that the current design shows the bridge for the driveway crossing upstream of rocky creek and outside this amber waterway then no approval for waterway barrier works is required.

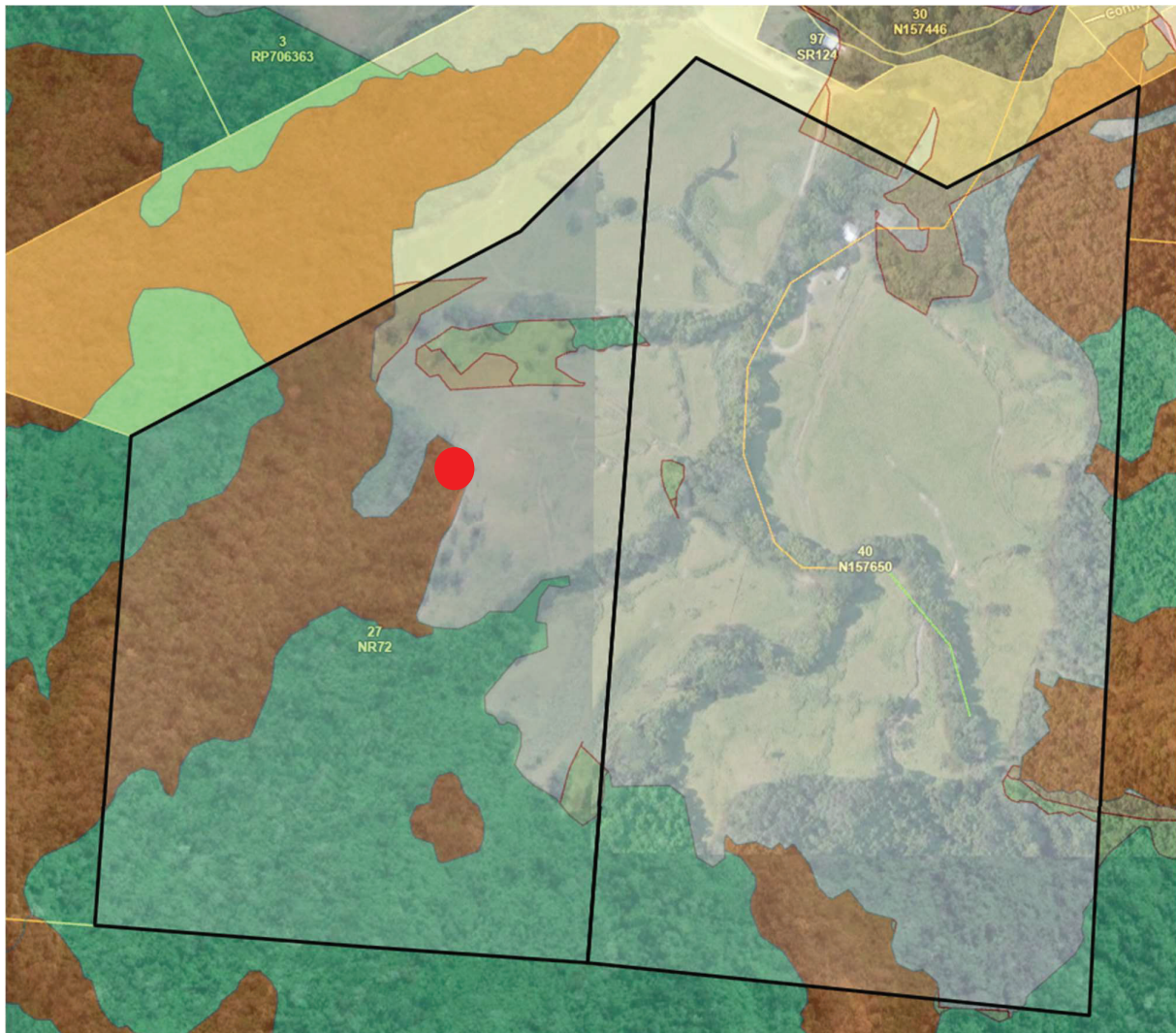


Figure 5: Waterways for fish passage and waterway barrier works

2.1 MSES

The Department of Infrastructure and Local Government and Planning (DILGP) interactive mapping identifies features of environmental interest associated with the site as shown in extract in **Appendix 4**.

The MSES search shows values for the adjacent site that are present including;

- Regional Ecosystems (of concern vegetation)
- Regulated Vegetation (great barrier reef watercourse)

Given the proposed location of the driveway and dwelling, impacts to these MSES values are expected to be negligible.



Figure 6: MSES Values - House site contains mapped remnant vegetation although is located outside Essential Habitat

3.0 Flora and Fauna Survey Methodology

A random meander survey of the area impacted by the proposed house construction and immediate surrounds was undertaken on the 22nd of February 2022 to assess the environmental values present on the site and potential for species or habitat values for Matters of State Environmental Significance.

As stated the site is not within a protected plant Flora Survey Trigger Area (PPFSA) as provided in **Appendix 3** and as such a detail flora survey in accordance the PPFSA Guideline is not required.

The flora assessment confirmed the vegetation community that was present and considered the potential for any rare and threatened species to be present as identified by the database searches.

The Fauna was assessed through observations of species, signs, scats, scratches, hollows and available habitat on the site. A targeted search for evidence of protected species identified by the database searches was undertaken. Any evidence of breeding places such as burrows or nests were recorded where identified to identify structures or habitat features that would require consideration under the NCA.

4.0 Flora and Fauna Survey Results

No species of conservation significance were identified on the site during the site inspection.

4.1 Flora

Observations were made including correlating the dominant vegetation assemblage species with current Regional Ecosystems and to consider condition of the habitat present in the vicinity of the proposed development. The vegetation present on site is consistent with the Regional Ecosystems mapping description of 7.11.49 *Eucalyptus Leptophleba*, *Corymbia clarksoniana* and *E. Platyphylla* open forest to woodland on metamorphic hills although lacking the presence of *E. Platyphylla*. Species present in the biologically dominant layer included *Eucalyptus Leptophleba*, *Corymbia clarksoniana*, *Corymbia tessellaris*, *Lophostemon saueolens*, *Acacia aulacocarpa* and *Acacia Celsa*. The sublayer contained vegetation including *Jagera pseudorhus*, *Chionanthus ramiflora*, *Buchanania arborescens* and *Canarium australe*. *Eucalyptus tereticornis* was present in the vegetation assemblage up slope from the proposed construction site and would be consistent with 7.11.44 *Eucalyptus tereticornis* open forest to woodland on coastal metamorphic hills however is at a scale that would not be mapped by the Queensland Regional Ecosystems mapping scheme.

Ground cover vegetation typically comprises low density vegetation, including native arrow root *Tacca leontopetaloides*, *Cajanus marmoratus*, vines *Ipomea sp.* and *Cissus* with grasses (giant spear grass *Heteropogon contortus* and Kangaroo grass *Themeda triandra*) present within open areas and around the edge habitat areas.

The vegetation assemblage is located mid slope on a ridge line ultimately connecting with Wet Tropics World Heritage areas. The eucalypt vegetation persists on the ridgeline up slope although there is evidence of previous disturbance in the form of an access track which may have been an old logging trail. The “Bump Track” on the next ridgeline to the north and the ridge with the proposed house site connects to this track to the west. Complex Mesophyll vine forest vegetation is present within gullies and on hills adjacent to the ridgeline. Adjacent vegetation to the north within the gully appears to be regenerating rainforest communities.

4.2 Fauna

Key observations during the field assessment identified hollows within habitat trees, bandicoot and yellow footed scrub hen scratchings and conical feeding burrows within the ground layer. Typical species identified in association with the site are highly motile species such as birds Spangled drongo, sulfur crested cockatoo, forest kingfisher and would also provide some habitat for sugar gliders. Some large Molloy Box (*E. Leptophleba*) were identified in the vicinity of the construction footprint with some potential nesting hollows. No evidence of occupation of nesting hollows was identified. Some hollows were orientated such that they would not be suitable for nesting birds or mammals. No nests or burrows were identified within the impact area or immediate surrounds during the assessment.

Habitat present is typically a wet sclerophyll assemblage of eucalypts with emergent rainforest species in the understorey. No scat or signs of cassowary were identified in or adjacent to the area although are known to inhabit contiguous areas with the site further into the hills associated with the WTWHA. MSES mapping for cassowary although identified to the south and north of the proposed site is not recognised on for the RE present at the proposed development site.

The creek is located to the north of the construction site down slope a few hundred meters from the proposed construction area and has potential to provide habitat for significant species. This habitat has been impacted for access tracks for grazing activities and is present as a regenerating band of vegetation along the creek line. Water quality within the creek is relative good with clear water although due to adjacent grazing activities would be expected to be impacted during rainfall events and did have silt present at

crossings. Typically protected frog species require pristine habitat with overhanging and instream vegetation. The stream typically did not have extensive overhanging in stream vegetation and as such considered sub optima habitat for these species.

4.3 Weeds and pests

All Queenslanders have a general biosecurity obligation (GBO) under *Queensland's Biosecurity Act 2014* to ensure you do not spread a pest, disease or a contaminant. Weed species identified include *Ageratum houstonianum* (Blue Billygoat Weed) and Snake Weed *Stachytarpheta jamaicanensis*, which although present, are in low numbers on the site.

Plant species identified on the site are recognised as environmental weeds and as such are not restricted or requiring notification under the *Biosecurity Act 2014*. To meet the GBO, spread of weeds should be managed through wash down of equipment and restricting movement of soil to clean areas such that weeds are not spread from the site into the environment. There is no restricted mapping identified over the site that require a permit under the *Biosecurity Act 2014*.

4.4 Clearing Impact Area

No EVNT species listed under State or Commonwealth legislation were identified in the vicinity of the clearing impact area. The survey was conducted with a high level of confidence for detecting EVNT species at the site. In terms of impacted species listed under the Nature Conservation Act 1994 and EPBC Act 1999 there is a negligible risk that conservation significant species could be impacted by the project.

The proposed house site sits at the eastern edge of contiguous habitat that connects to the WTWHA. Relatively steep disturbed and cleared areas around this site as well as an old access track has reduced the value of the habitat for supporting conservation significant species. Similarly the area is of lesser value to support fauna of conservation significance although there are large habitat trees that may provide breeding places for fauna although no evidence of usage of potential breeding areas were identified at the time of the site inspection. In order to ensure no fauna is impacted during clearing, a spotter catcher is recommended during the removal of any mature trees with habitat potential.

Essential habitat mapping (MSES recognised RE) has identified potential habitat for the cassowary at the rear of the property within wet gullies and rises, however not in the location of the proposed development which is located on a dry Eucalypt dominated ridge line. The site inspection confirmed that habitat values on the site are not suitable to support cassowary as there is a lack of large fruiting forage trees or water and as such it is unlikely they would utilise this area. Cassowary would also be unlikely to utilise the area as a movement corridor as it is located down a ridgeline in an area that is relatively dry. Cassowary typically inhabit areas close to water and where the terrain is relatively gentle. Cassowary are likely to be present in the general vicinity of the property however unlikely to be significantly impacted by the proposal.

The creek line may support frogs of significance however it has been significantly disturbed for grazing and access and vegetation is present as a narrow band trees along the banks which reduces the values of this habitat for supporting protected species. Although significant clearing or construction works are not proposed at this location, care should be taken at this location to maintain water quality values by implementing erosion and sediment controls in accordance with IECA guidelines to retain in stream values. This should also be implemented for the proposed house construction with appropriate drainage control in areas with steep slopes.

5.0 Summary

Flora and Fauna

Field surveys were conducted on 22 February 2022 within the proposed footprint of the works. No EVNT species listed under State or Commonwealth legislation were identified in the vicinity of the clearing impact area. Clearing of vegetation on the land for a dwelling is consistent with the objectives of the *Vegetation management Act 1999*. In terms of impacted species listed under the Nature Conservation Act 1994 and EPBC Act 1999 there is a negligible risk that conservation significant species could be impacted by the project. In order to ensure no fauna is impacted during clearing, a spotter catcher is recommended during the removal of any mature trees with habitat potential.

The project is considered unlikely to have an impact on a matter of national significance due to the absence of species and habitat values that could support significant species. This assessment provides a self-assessment of potential impacts and is suitable for demonstrating due care in progressing with the proposal.

It is concluded that the proposed development is consistent with the performance requirements of the State MSES.

Biosecurity

General management for weeds and pests such as obtaining weed hygiene declarations for machinery coming to site should be undertaken to reduce the risk of introduction and spread of pests and weeds.

Suitability of the Author

Cameron Slack has a Bachelor of Science from the University of Queensland and is an Ecologist with over 18 years of experience undertaking flora and fauna surveys in Queensland. Cameron has recently prepared Flora Surveys within the last 5 years including Coen Flora and Fauna Survey (Peddle Thorp), Mt Cook Proposed Heli Pad Flora Survey, Mountain View Estate Flora Survey and for the Department of Transport and Main Roads for proposed quarry sites on Cape York including Wolverton Resource Area Flora Survey, Kennedy River Resource Area Flora Survey and Review of Environmental Factors, Telstra Tower (Weipa) Resource Area Flora Survey, Fairview Resource Area Flora Survey, Archer to Telecom Tower Flora Survey for the Road Sealing Project, Kitja Resource Area Flora and Fauna Surveys, 10 Mile Realignment Flora Survey. Cameron has also submitted specimen records (*Cajanus mareebensis*) to the Queensland Herbarium. Cameron has undertaken plant identification courses at the James Cook University Cairns Campus Australian Tropical Herbarium.

Appendix I Wildnet Conservation Significant Species List

WildNet Records

Conservation Significant Species List

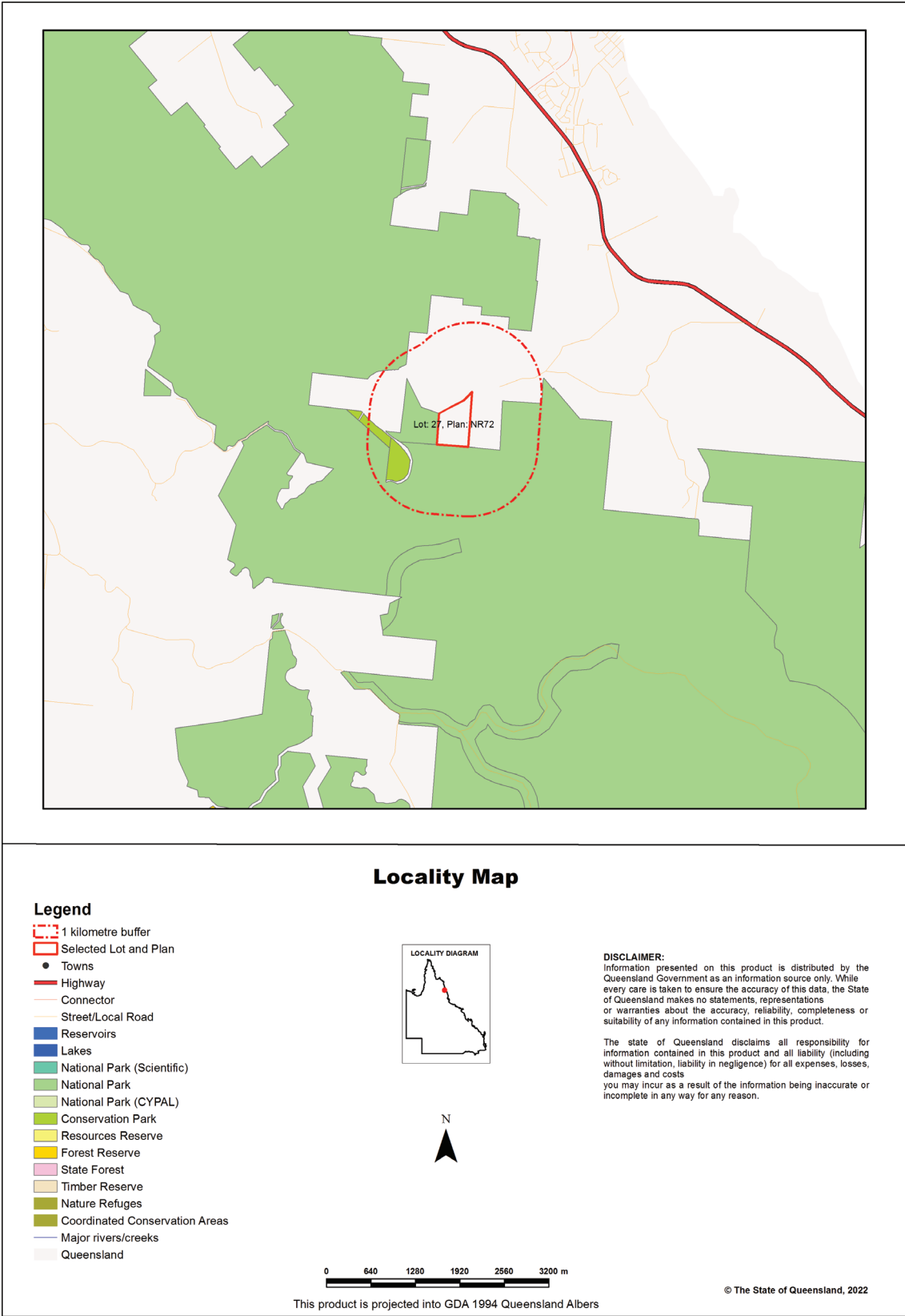


For the selected area of interest 27.1ha Lot: 27 Plan: NR72

Current as at 26/02/2022

WildNetCSSpeciesList

Map 1. Locality Map



Summary Information

The following table provides an overview of the area of interest Lot: 27 Plan: NR72.

Table 1. Area of interest details

Size (ha)	27.1
Local Government(s)	Douglas Shire
Bioregion(s)	Wet Tropics
Subregion(s)	Macalister, Daintree - Bloomfield
Catchment(s)	Mossman

Protected Area(s)

No estates or reserves are located within the area of interest.

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.

Conservation Significant Species List

Introduction

This report is derived from a spatial layer generated from the [WildNet database](#) managed by the Department of Environment and Science. The layer which is generated weekly contains the 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.

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:
 - o Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
 - o China-Australia Migratory Bird Agreement
 - o Japan-Australia Migratory Bird Agreement
 - o Republic of Korea-Australia Migratory Bird Agreement

The WildNet dataset is constantly being enhanced and the taxonomic and status information revised. If a 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 (Refer Links and Support).

Table 2 lists the species recorded within the area of interest and its one kilometre buffer.

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
1599	Animalia	Aves	Monarchidae	<i>Myiagra cyanoleuca</i>	satin flycatcher	SL	None	0	1	01/01/1970
1597	Animalia	Aves	Monarchidae	<i>Symposiachrus trivirgatus</i>	spectacled monarch	SL	None	0	2	31/05/2000
1165	Animalia	Aves	Psittacidae	<i>Cyclopsitta diophthalma macleayana</i>	Macleay's fig-parrot	V	None	0	1	31/05/2000
1578	Animalia	Aves	Rhipiduridae	<i>Rhipidura rufifrons</i>	rufous fantail	SL	None	0	2	31/05/2000

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 latest record of the taxon.

Links and Support

Other sites that deliver species information from the [WildNet database](#) include:

- [Species profile search](#) - access species information approved for publication including species names, statuses, notes, images, distribution maps and records
- [Species lists](#) - generate species lists for Queensland protected areas, forestry areas, local governments and areas defined using coordinates
- [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 wildlife data API](#) - access WildNet species information approved for publication such as notes, images and records etc.
- [WetlandMaps](#) - view species records, survey locations etc. approved for publication
- [WetlandSummary](#) - 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](#).

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 \(OZCAM\)](#)
- [Australia's Virtual Herbarium \(AVH\)](#)
- [Protected Matters Search Tool](#)

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government, to the maximum extent permitted by law, 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.



Appendix 2 EPBC Online 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.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 21/02/22 18:15:40

[Summary](#)

[Details](#)

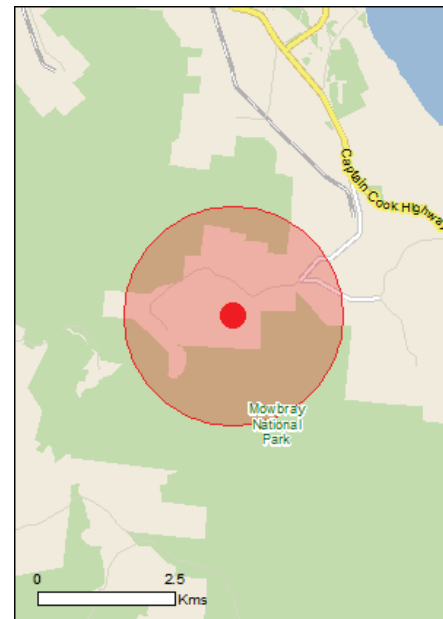
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

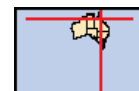
[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 2.0Km



Summary

Matters of National Environmental 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:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	38
Listed Migratory Species:	26

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 <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	30
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	2
Regional Forest Agreements:	None
Invasive Species:	24
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

World Heritage Properties		[Resource Information]
Name	State	Status
Wet Tropics of Queensland	QLD	Declared property
National Heritage Properties		[Resource Information]
Name	State	Status
Natural		
Wet Tropics of Queensland	QLD	Listed place
Indigenous		
Wet Tropics World Heritage Area (Indigenous Values)	QLD	Within listed place

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.		
Name	Status	Type of Presence
Broad leaf tea-tree (<i>Melaleuca viridiflora</i>) woodlands in high rainfall coastal north Queensland	Endangered	Community may occur within area
Lowland tropical rainforest of the Wet Tropics	Endangered	Community likely to occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Casuarius casuarius johnsonii Southern Cassowary, Australian Cassowary, Double-wattled Cassowary [25986]	Endangered	Species or species habitat known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Turnix olivii Buff-breasted Button-quail [59293]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
Fish		
Stiphodon semoni Opal Cling Goby [83909]	Critically Endangered	Species or species habitat likely to occur within area
Frogs		
Litoria dayi Australian Lace-lid, Lace-eyed Tree Frog, Day's Big-eyed Treefrog [86707]	Vulnerable	Species or species habitat likely to occur within area
Litoria nyakalensis Mountain Mistfrog, Nyakala Frog [1820]	Critically Endangered	Species or species habitat likely to occur within area
Mammals		
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Dasyurus maculatus gracilis Spotted-tailed Quoll (North Queensland), Yarri [64475]	Endangered	Species or species habitat may occur within area
Hipposideros semoni Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii rattoides Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area
Pteropus conspicillatus Spectacled Flying-fox [185]	Endangered	Species or species habitat likely to occur within area
Rhinolophus robertsi Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheath-tail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Acriopsis emarginata Pale Chandelier Orchid [83928]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Canarium acutifolium [23956]	Vulnerable	Species or species habitat likely to occur within area
Cyclophyllum costatum a shrub [82770]	Vulnerable	Species or species habitat may occur within area
Diplazium cordifolium [15585]	Vulnerable	Species or species habitat may occur within area
Myrmecodia beccarii Ant Plant [11852]	Vulnerable	Species or species habitat likely to occur within area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat may occur within area
Phaius pictus [22564]	Vulnerable	Species or species habitat likely to occur within area
Phalaenopsis amabilis subsp. rosenstromii Native Moth Orchid [87535]	Endangered	Species or species habitat likely to occur within area
Toechima pterocarpum [4690]	Endangered	Species or species habitat may occur within area
Vappodes lithocola Dwarf Butterfly Orchid, Cooktown Orchid [78893]	Endangered	Species or species habitat likely to occur within area
Vappodes phalaenopsis Cooktown Orchid [78894]	Vulnerable	Species or species habitat may occur within area
Zeuxine polygonoides Velvet Jewel Orchid [46794]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Sharks		
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat known to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Migratory Marine Species		

Name	Threatened	Type of Presence
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Cecropis daurica Red-rumped Swallow [80610]		Species or species habitat known to occur within area
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area
Monarcha frater Black-winged Monarch [607]		Species or species habitat likely to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur

Name	Threatened	Type of Presence
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		within area Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species	[Resource Information]	
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anous stolidus Common Noddy [825]		Species or species habitat known to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat may occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Hirundo daurica Red-rumped Swallow [59480]		Species or species habitat known to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha frater Black-winged Monarch [607]		Species or species habitat likely to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Reptiles

Crocodylus porosus		
Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Mowbray	QLD
Mowbray	QLD

Invasive Species	[Resource Information]
Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.	

Name	Status	Type of Presence
Birds		
Acridotheres tristis		
Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata		
Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus		
House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis		
Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area

Frogs

Rhinella marina		
Cane Toad [83218]		Species or species habitat known to occur within area

Mammals

Canis lupus familiaris		
Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus		
House Mouse [120]		Species or species

Name	Status	Type of Presence
Oryctolagus cuniculus Rabbit, European Rabbit [128]		habitat likely to occur within area Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Plants		
Andropogon gayanus Gamba Grass [66895]		Species or species habitat likely to occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913] Dolichandra unguis-cati Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Jatropha gossypifolia Cotton-leaved Physic-Nut, Bellyache Bush, Cotton-leaf Physic Nut, Cotton-leaf Jatropha, Black Physic Nut [7507] Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892] Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Reptiles		
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for 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 reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-16.5694 145.45346

Acknowledgements

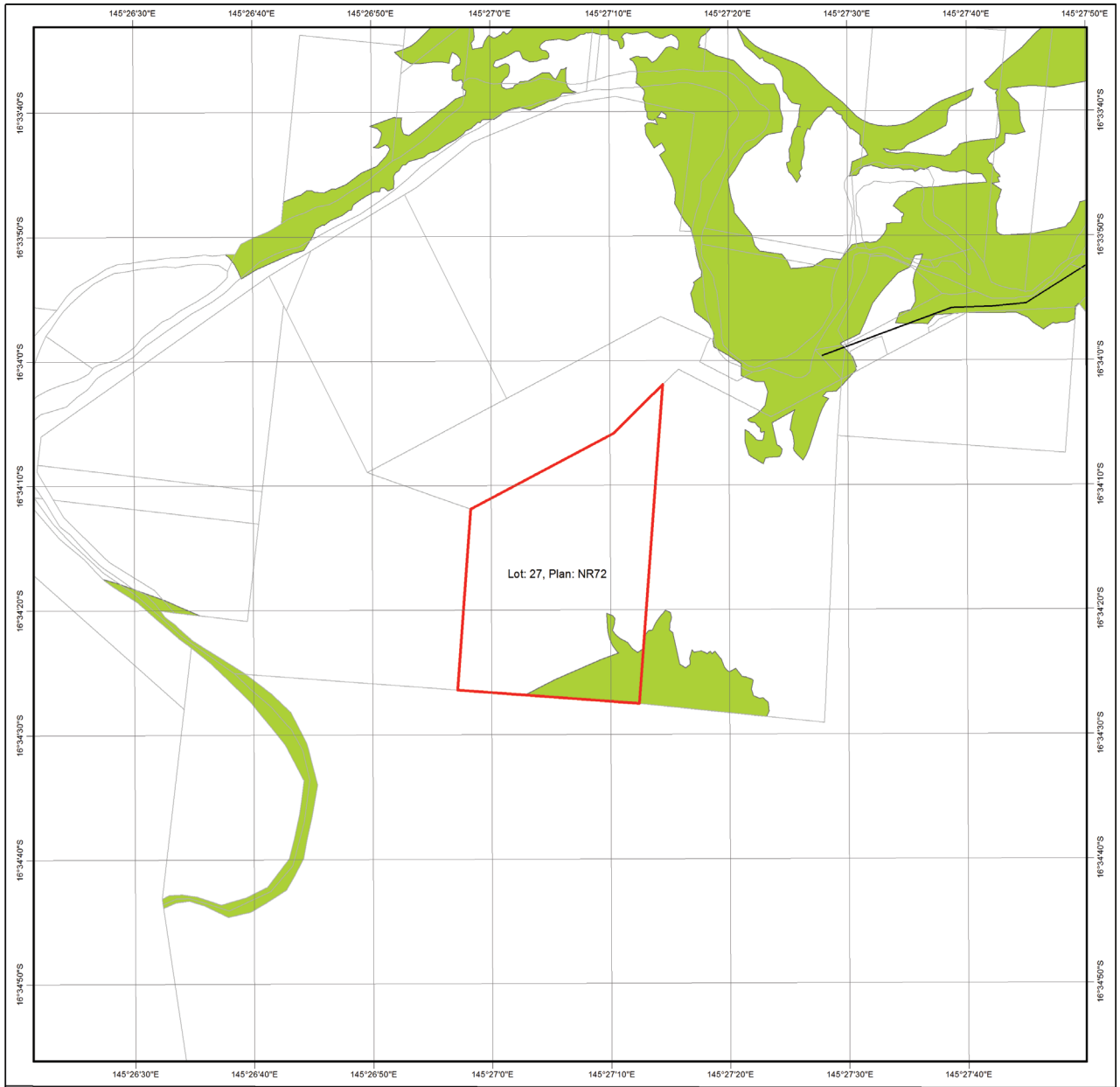
This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [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.

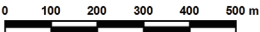
Appendix 3 Protected Plants Flora Survey Trigger Map



Protected Plants Flora Survey Trigger Map

Legend

- Selected Lot and Plan
- High risk area
- Other land parcel boundaries
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:
GDA 1994 Queensland Albers

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

Land parcel boundaries are provided as locational aid only.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Science at palm@des.qld.gov.au

Disclaimer:
While every care is taken to ensure the accuracy of the data used to generate this product, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damages) and costs which might be incurred as a consequence of reliance on the data, or as a result of the data being inaccurate or incomplete in any way and for any reason.

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 Environment and Science 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 Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.

Appendix 4 Matters of State Environmental Significance (MSES)



Queensland Government

Department of Environment and Science

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest
Lot: 27 Plan: NR72

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@des.qld.gov.au

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.



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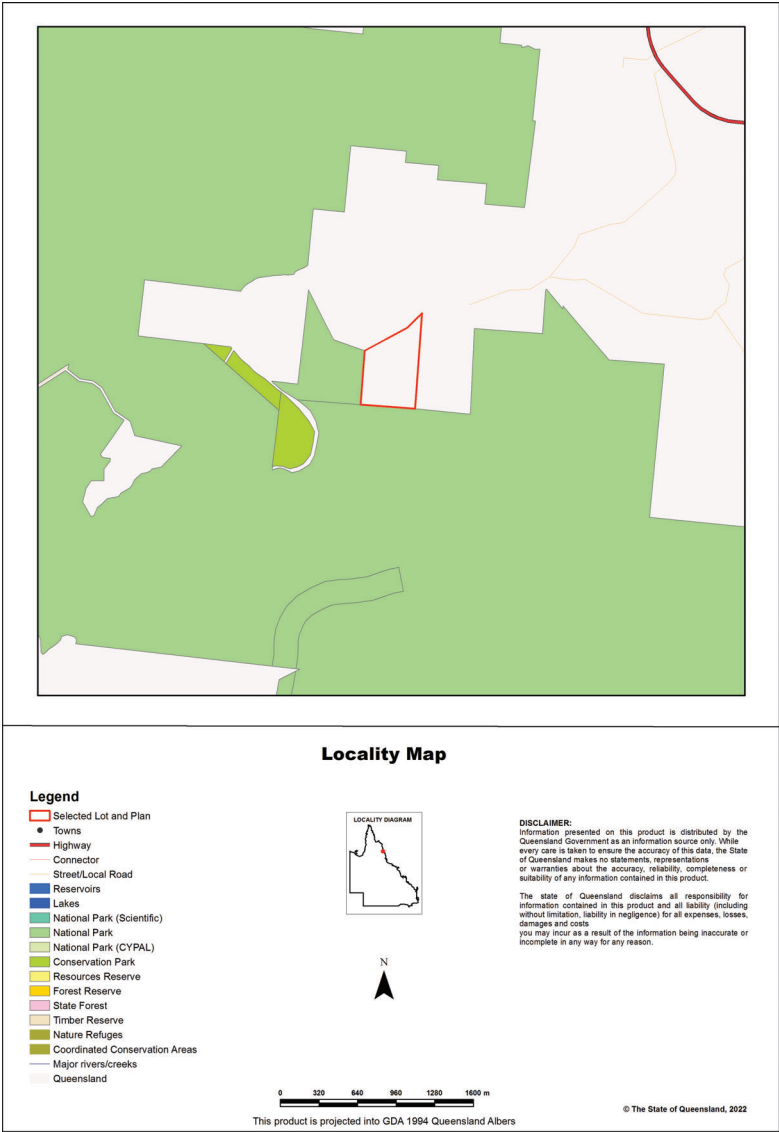
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Assessment Area Details

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: 27 Plan: NR72

Size (ha)	27.1
Local Government(s)	Douglas Shire
Bioregion(s)	Wet Tropics
Subregion(s)	Macalister, Daintree - Bloomfield
Catchment(s)	Mossman



Matters of State Environmental Significance (MSES)

MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992* ;
- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the *Marine Parks Act 2004* ;
- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;
- Threatened wildlife under the *Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;
- Regulated vegetation under the *Vegetation Management Act 1999* that is:
 - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
 - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
 - Category R areas on the regulated vegetation management map;
 - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
 - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;
- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;
- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;
- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

Table 2: Summary of MSES present within the AOI

1a Protected Areas- estates	0.0 ha	0.0 %
1b Protected Areas- nature refuges	0.0 ha	0.0 %
1c Protected Areas- special wildlife reserves	0.0 ha	0.0 %
2 State Marine Parks- highly protected zones	0.0 ha	0.0 %
3 Fish habitat areas (A and B areas)	0.0 ha	0.0 %
4 Strategic Environmental Areas (SEA)	0.0 ha	0.0 %
5 High Ecological Significance wetlands on the map of Referable Wetlands	0.0 ha	0.0 %
6a High Ecological Value (HEV) wetlands	0.0 ha	0.0 %
6b High Ecological Value (HEV) waterways **	0.0 km	Not applicable
7a Threatened (endangered or vulnerable) wildlife	12.11 ha	44.7%
7b Special least concern animals	0.0 ha	0.0 %
7c i Koala habitat area - core (SEQ)	0.0 ha	0.0 %
7c ii Koala habitat area - locally refined (SEQ)	0.0 ha	0.0 %
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	7.1 ha	26.2%
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	0.0 ha	0.0 %
8c Regulated Vegetation - Category R (GBR riverine regrowth)	1.19 ha	4.4%
8d Regulated Vegetation - Essential habitat	11.4 ha	42.1%
8e Regulated Vegetation - intersecting a watercourse **	0.6 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	0.0 ha	0.0 %
9a Legally secured offset areas- offset register areas	0.0 ha	0.0 %
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	0.0 ha	0.0 %

Additional Information with Respect to MSES Values Present

MSES - State Conservation Areas

1a. Protected Areas - estates

(no results)

1b. Protected Areas - nature refuges

(no results)

1c. Protected Areas - special wildlife reserves

(no results)

2. State Marine Parks - highly protected zones

(no results)

3. Fish habitat areas (A and B areas)

(no results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

MSES - Wetlands and Waterways

4. Strategic Environmental Areas (SEA)

(no results)

5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values

(no results)

6a. Wetlands in High Ecological Value (HEV) waters

(no results)

6b. Waterways in High Ecological Value (HEV) waters

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

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

Threatened (endangered or vulnerable) wildlife habitat suitability models

Species	Common name	NCA status	Presence
<i>Boronia keysii</i>		V	None
<i>Calyptorhynchus lathami</i>	Glossy black cockatoo	V	None
<i>Casuarus casuarus johnsonii</i>	Sthn population cassowary	E	Core
<i>Crinia tinnula</i>	Wallum froglet	V	None
<i>Denisonia maculata</i>	Ornamental snake	V	None
<i>Litoria freycineti</i>	Wallum rocketfrog	V	None
<i>Litoria olongburensis</i>	Wallum sedgefrog	V	None
<i>Melaleuca irbyana</i>		E	None
<i>Petaurus gracilis</i>	Mahogany Glider	E	None
<i>Petrogale persephone</i>	Proserpine rock-wallaby	E	None
<i>Phascolarctos cinereus</i>	Koala - outside SEQ*	V	None
<i>Pezoporus wallicus wallicus</i>	Eastern ground parrot	V	None
<i>Taudactylus pleione</i>	Kroombit tinkerfrog	E	None
<i>Xeromys myoides</i>	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)

*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)** 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
7.11.49	O-dom	rem_oc
7.11.44	O-dom	rem_oc

8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)

Not applicable

8c. Regulated Vegetation - Category R (GBR riverine regrowth)

Regulated vegetation map category	Map number
R	7964

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

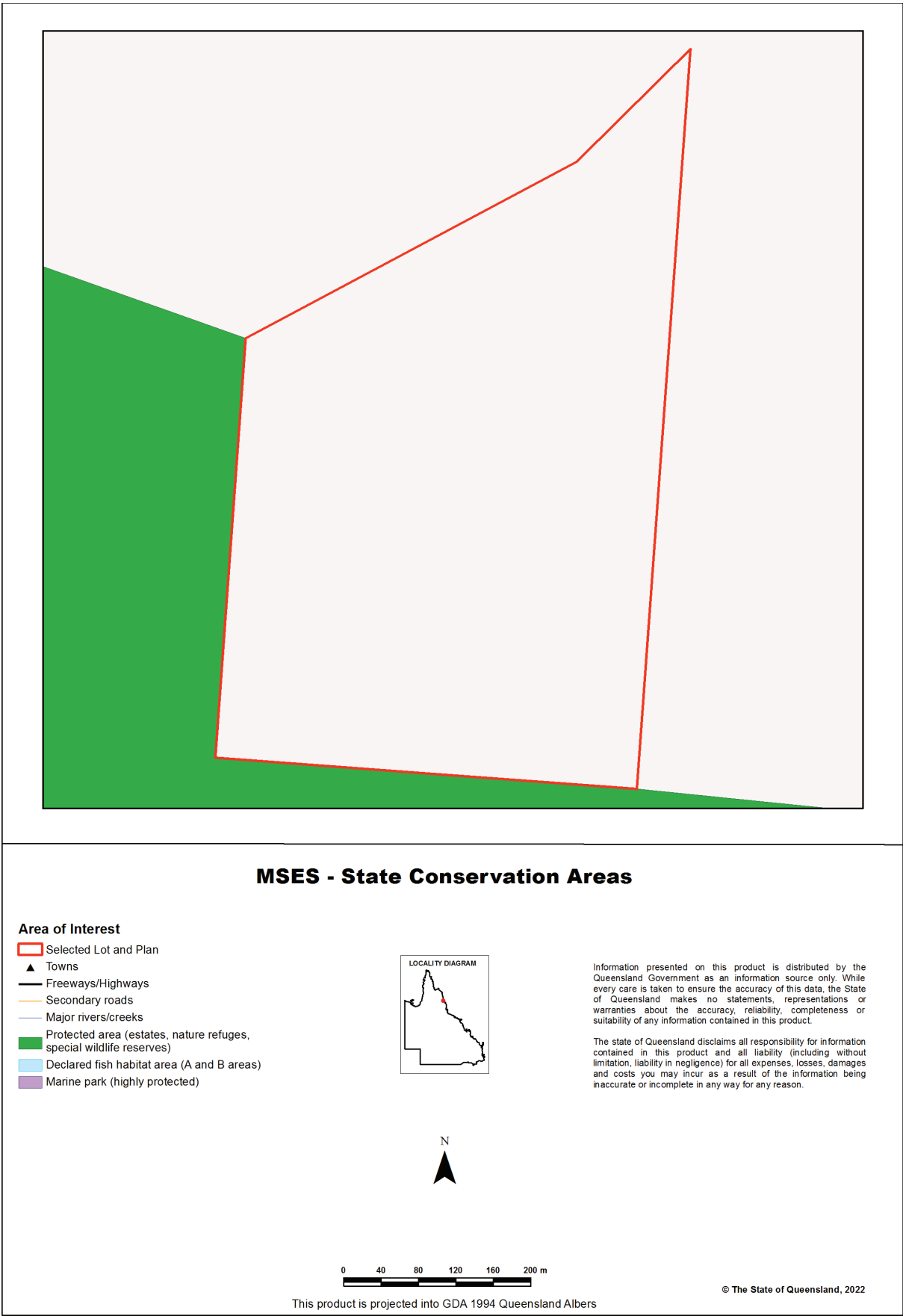
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9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation

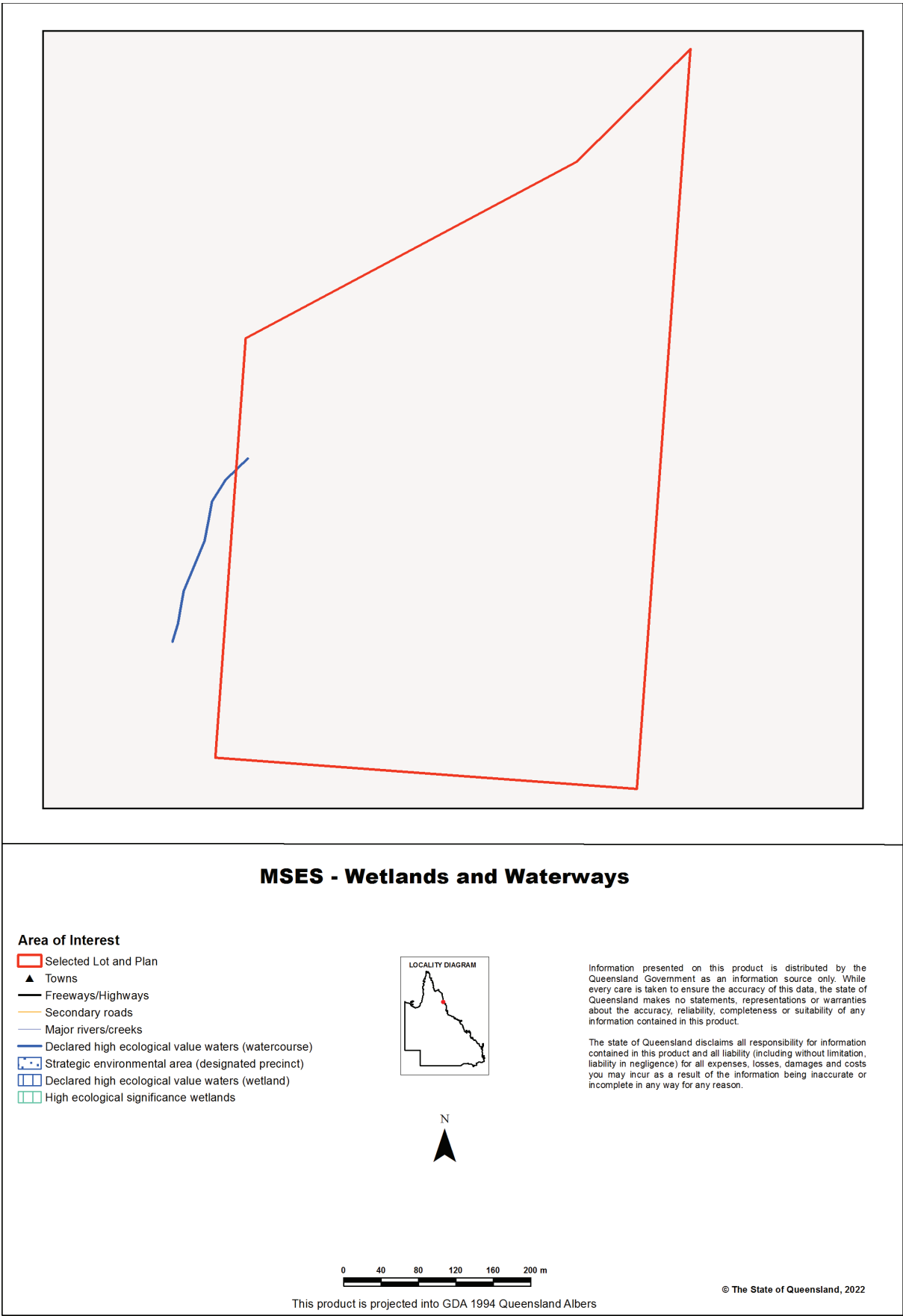
(no results)

Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

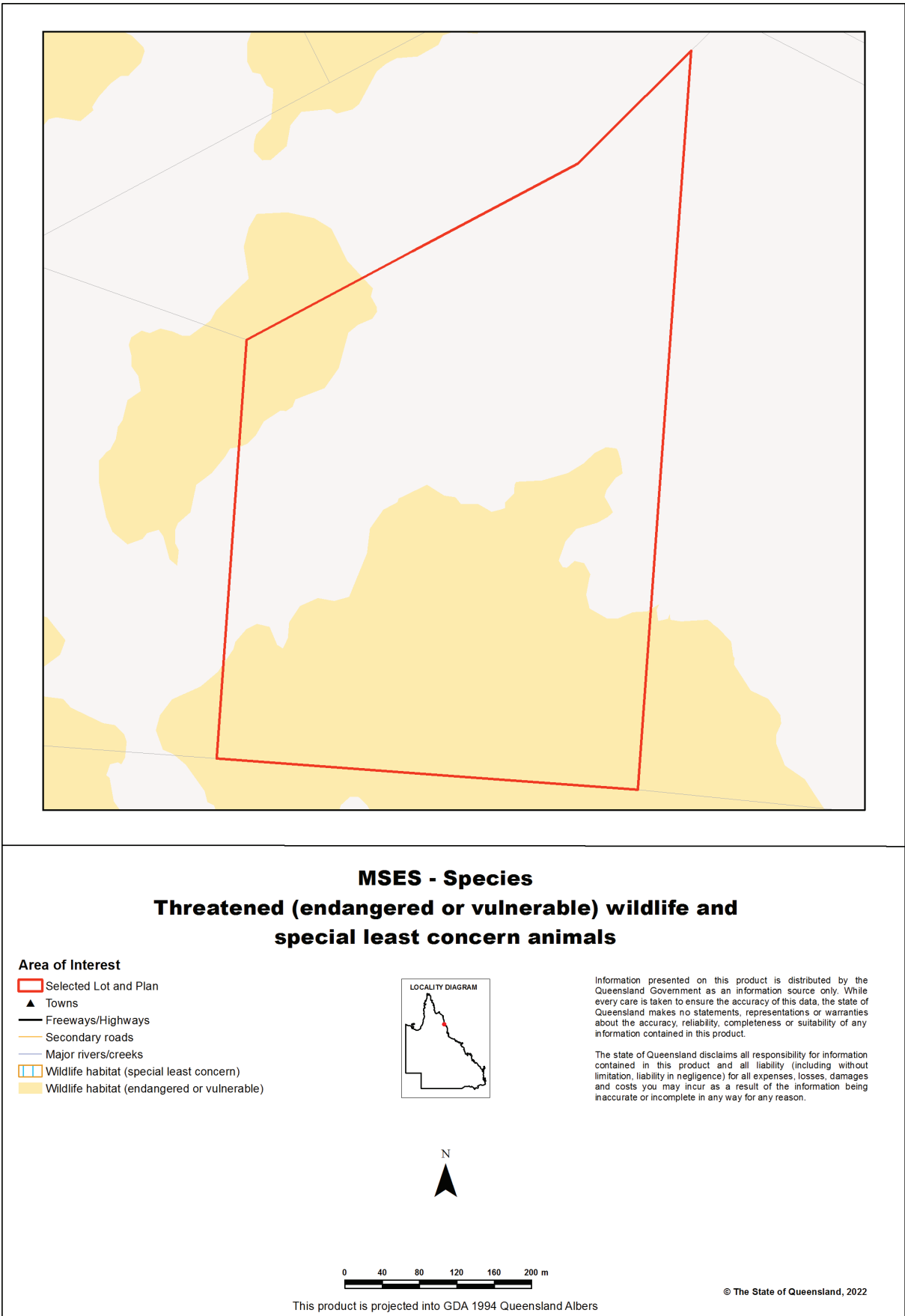
Map 1 - MSES - State Conservation Areas



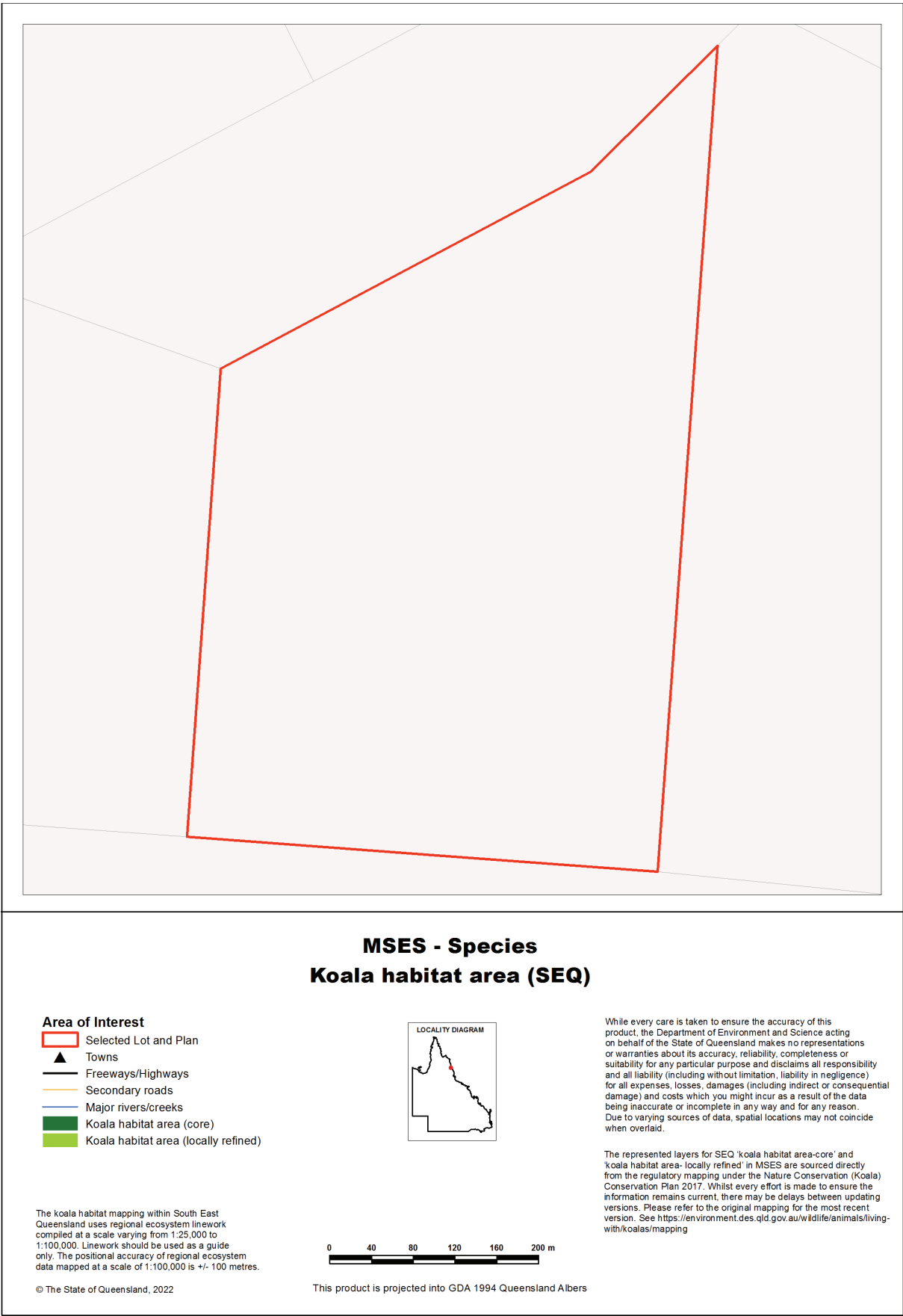
Map 2 - MSES - Wetlands and Waterways



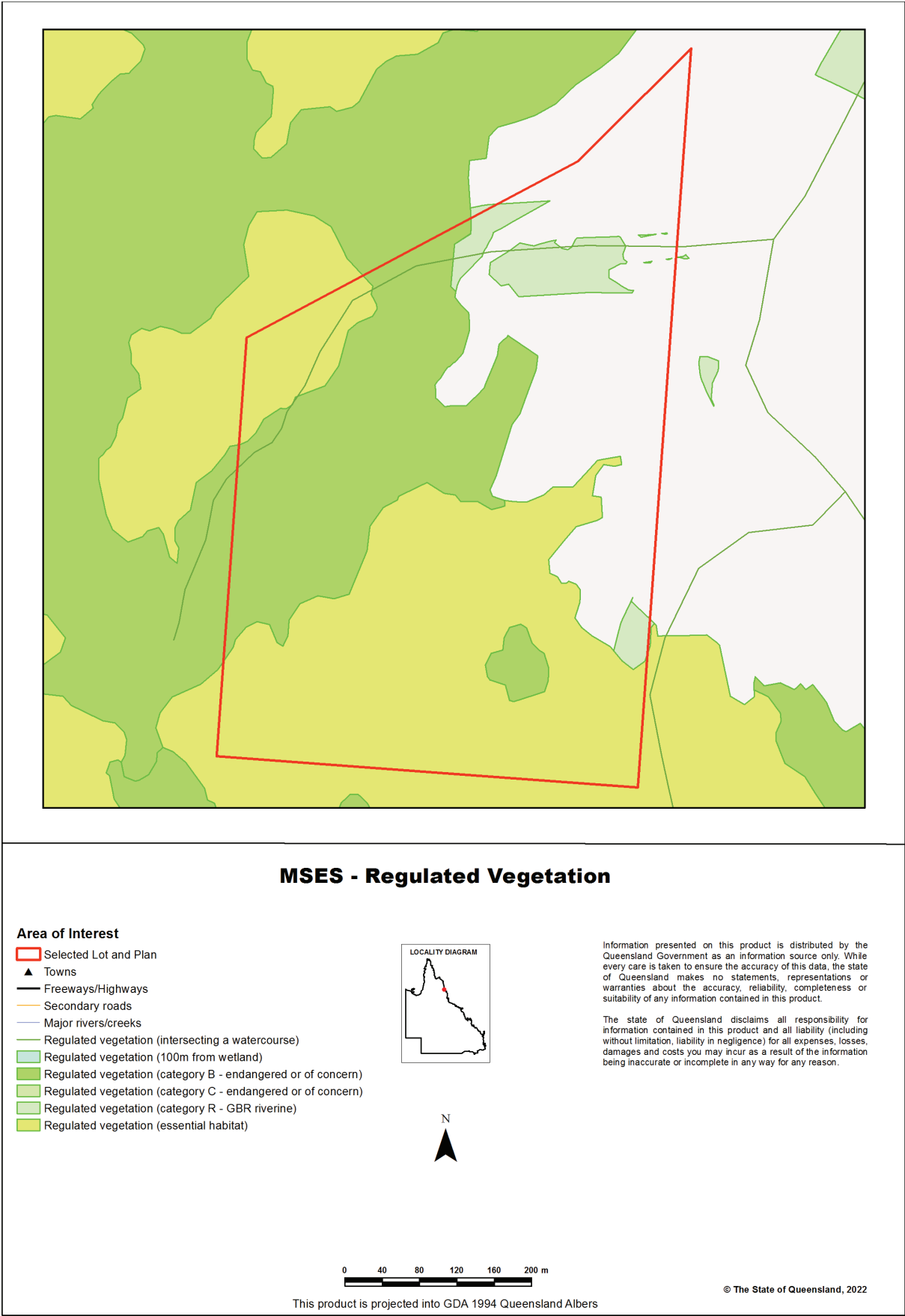
Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals



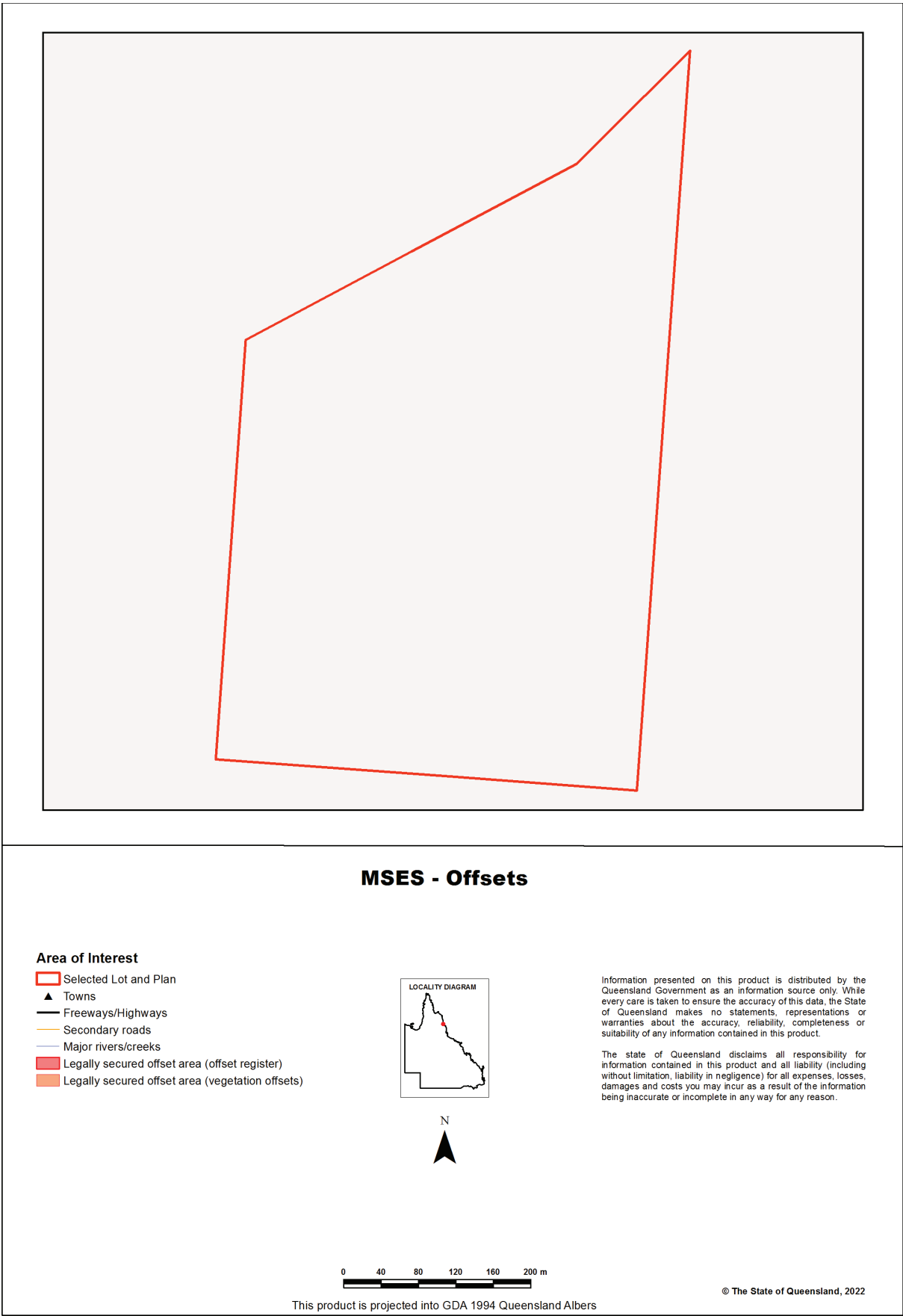
Map 3b - MSES - Species - Koala habitat area (SEQ)



Map 4 - MSES - Regulated Vegetation



Map 5 - MSES - Offset Areas



Appendices

Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). The compiled MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The Queensland Government's "Method for mapping - matters of state environmental significance for use in land use planning and development assessment" can be downloaded from:

<http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html> .

Appendix 2 - Source Data

The datasets listed below are available on request from:

<http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

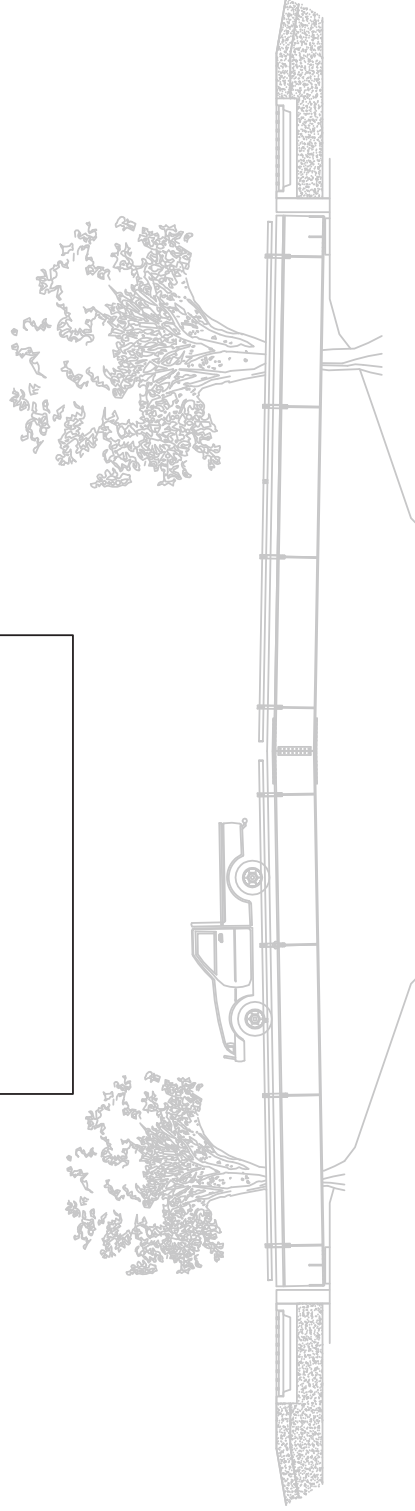
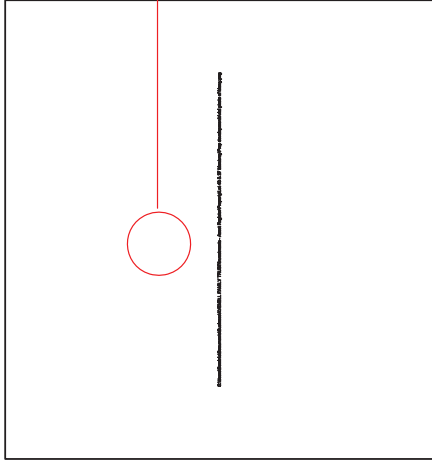
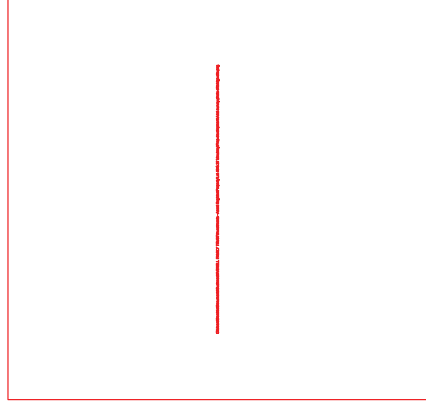
MSES layers	current QSpatial data (http://qspatial.information.qld.gov.au)
Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves	- Protected areas of Queensland - Nature Refuges - Queensland - Special Wildlife Reserves- Queensland
Marine Park-Highly Protected Zones	Moreton Bay marine park zoning 2008
Fish Habitat Areas	Queensland fish habitat areas
Strategic Environmental Areas-designated	Regional Planning Interests Act - Strategic Environmental Areas
HES wetlands	Map of Queensland Wetland Environmental Values
Wetlands in HEV waters	HEV waters: - EPP Water intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 5) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000)
Wildlife habitat (threatened and special least concern)	-WildNet database species records - habitat suitability models (various) - SEQ koala habitat areas under the Koala Conservation Plan 2019
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map
VMA Essential Habitat	Vegetation management - essential habitat map
VMA Wetlands	Vegetation management wetlands map
Legally secured offsets	Vegetation Management Act property maps of assessable vegetation. For offset register data-contact DES
Regulated Vegetation Map	Vegetation management - regulated vegetation management map

Appendix 3 - Acronyms and Abbreviations

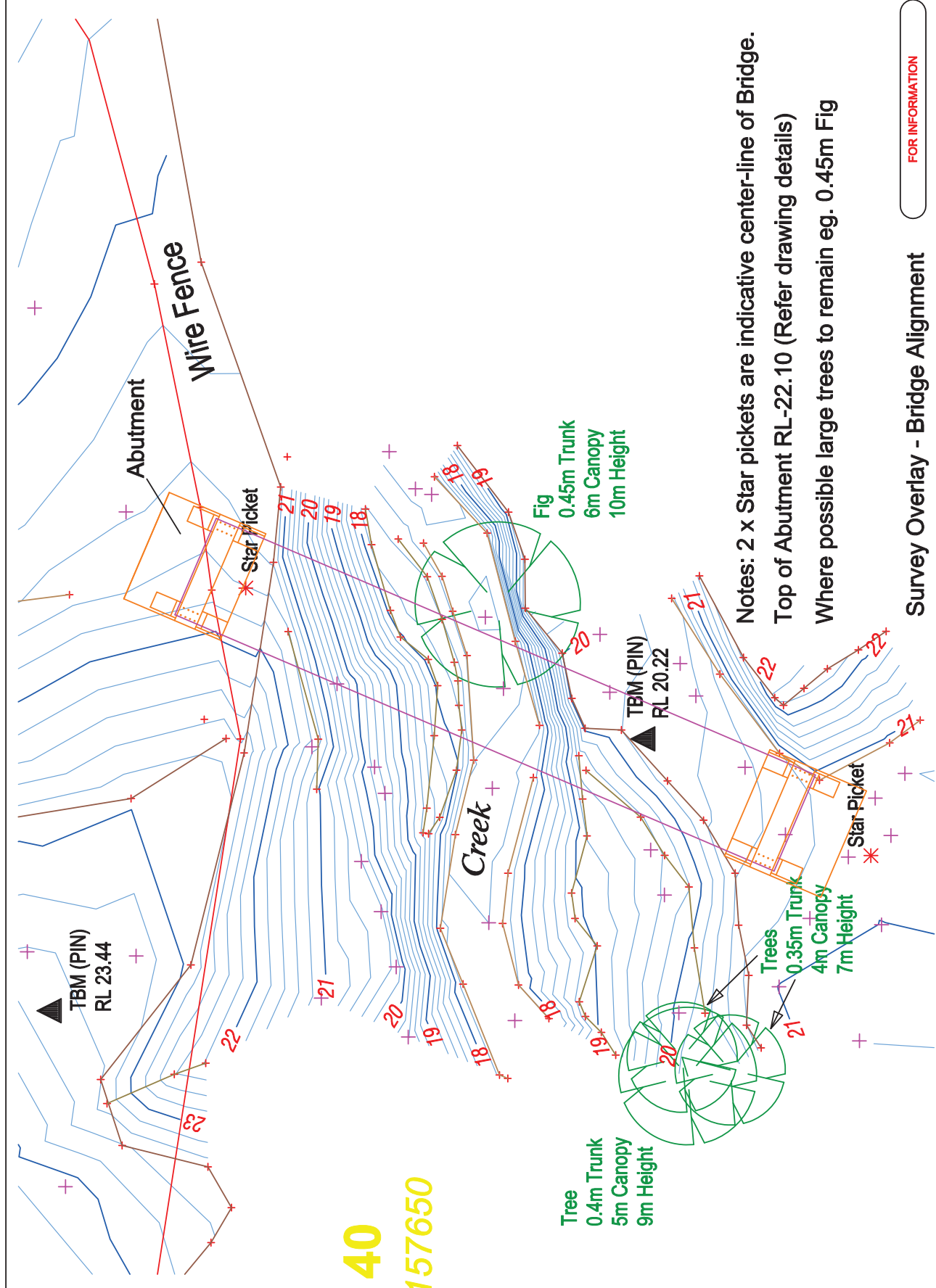
AOI	- Area of Interest
DES	- Department of Environment and Science
EP Act	- <i>Environmental Protection Act 1994</i>
EPP	- Environmental Protection Policy
GDA94	- Geocentric Datum of Australia 1994
GEM	- General Environmental Matters
GIS	- Geographic Information System
MSES	- Matters of State Environmental Significance
NCA	- <i>Nature Conservation Act 1992</i>
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- <i>Vegetation Management Act 1999</i>

Attachment 3 – Bridge plans

A diagram consisting of a vertical line and a circle. A red arrow points from the right towards the circle.



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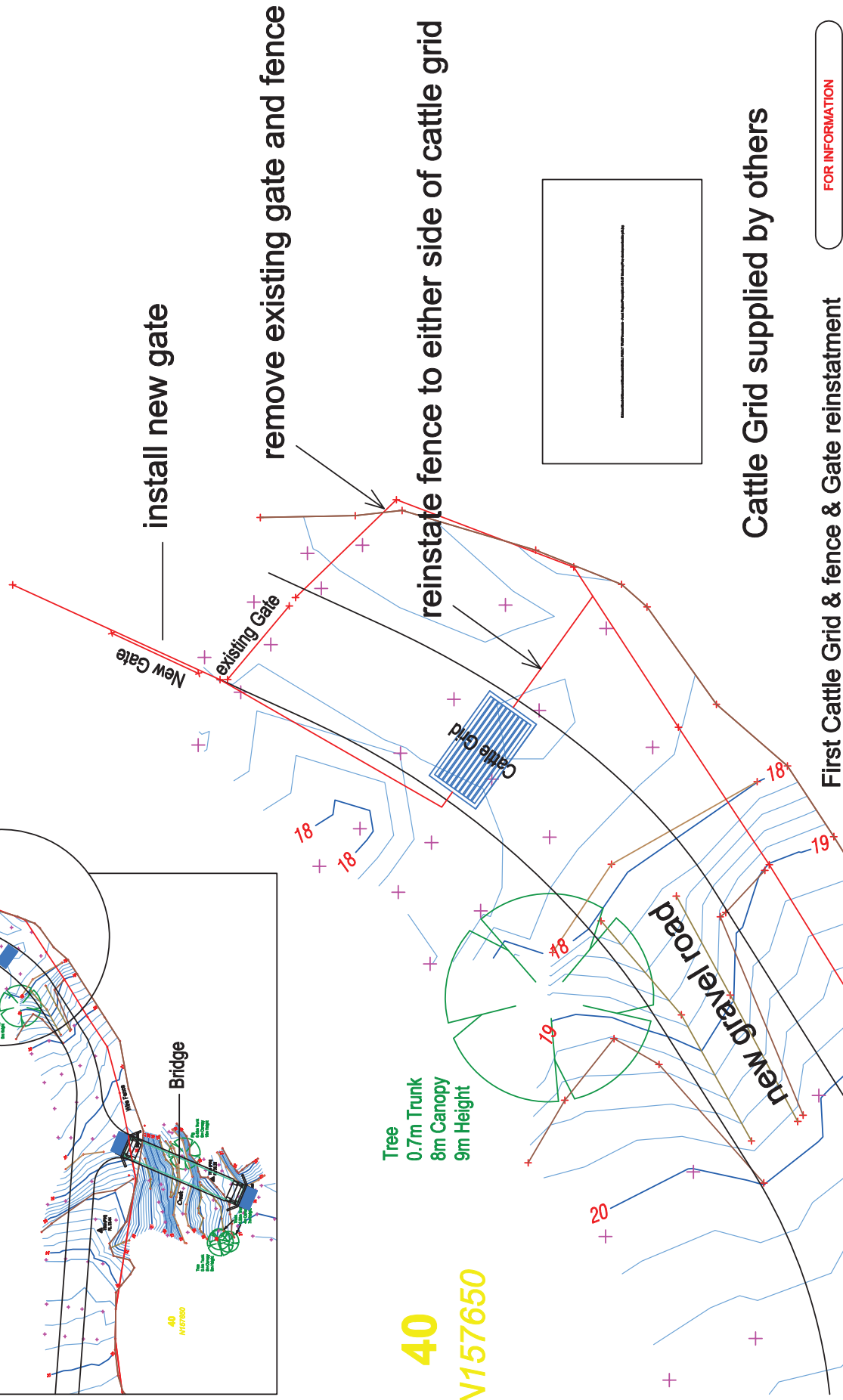
40
N157650

Notes: 2 x Star pickets are indicative center-line of Bridge.
Top of Abutment RL-22.10 (Refer drawing details)
Where possible large trees to remain eg. 0.45m Fig

Survey Overlay - Bridge Alignment

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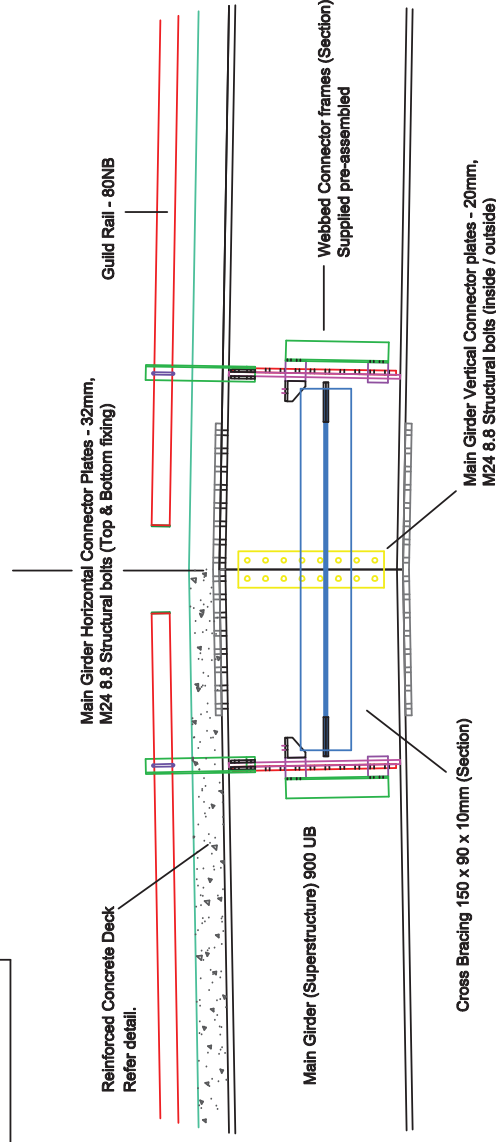
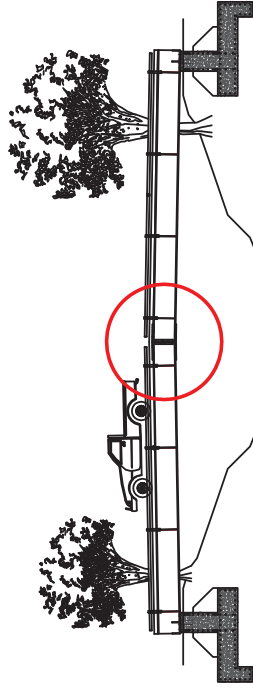


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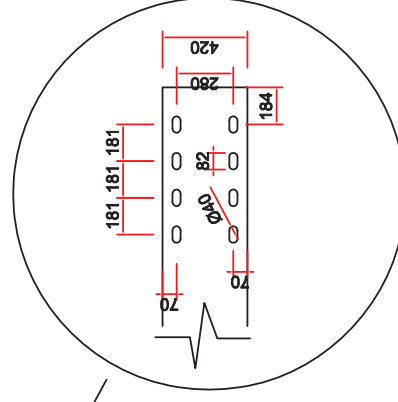
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							ANSELL	A3		




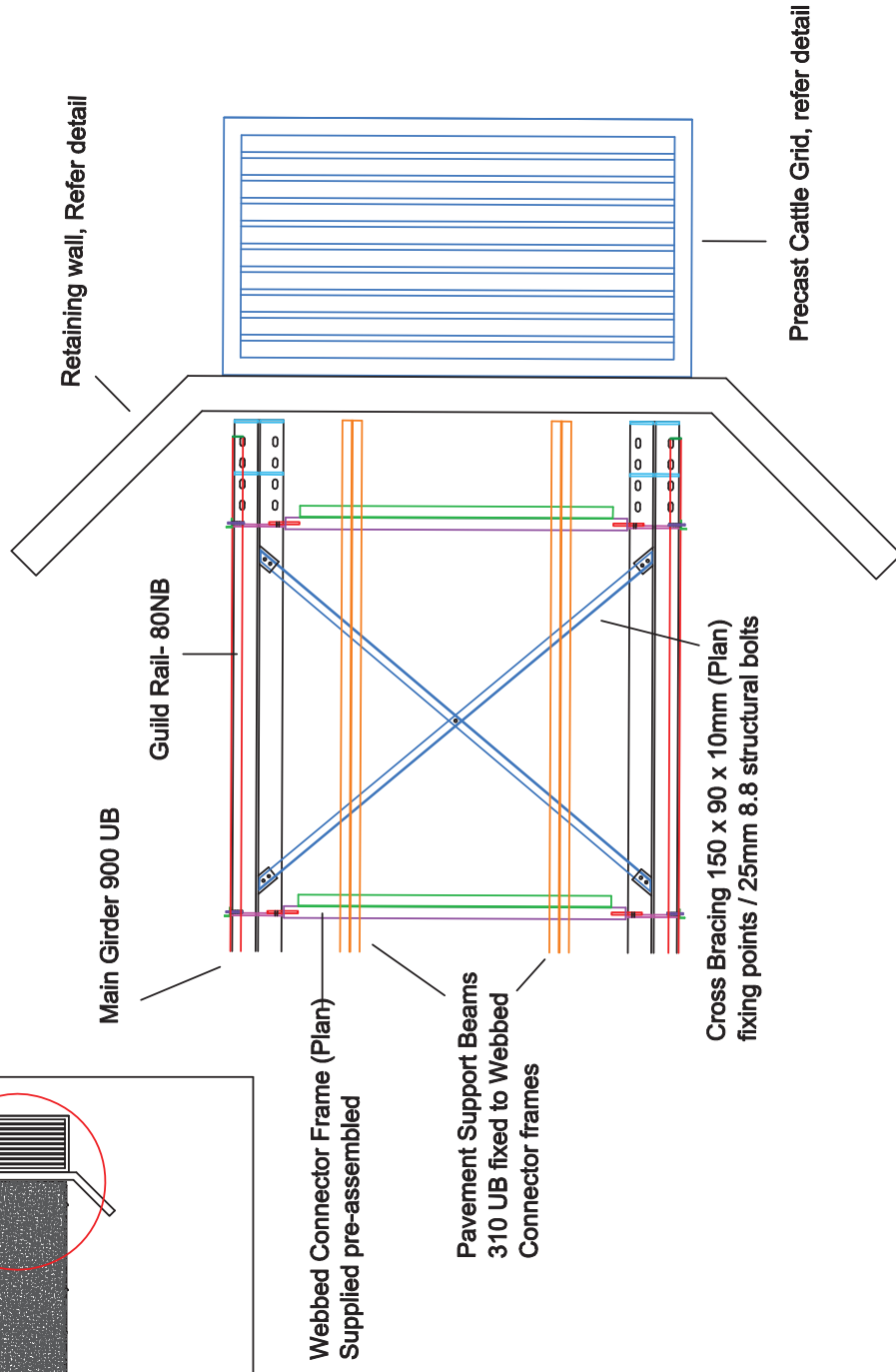
Bridge - Single Lane 22m Span (Rural) Superstructure - Girder fixing / Assembly

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Bridge - Single Lane 22m Span (Rural)
Superstructure - Plan View GA

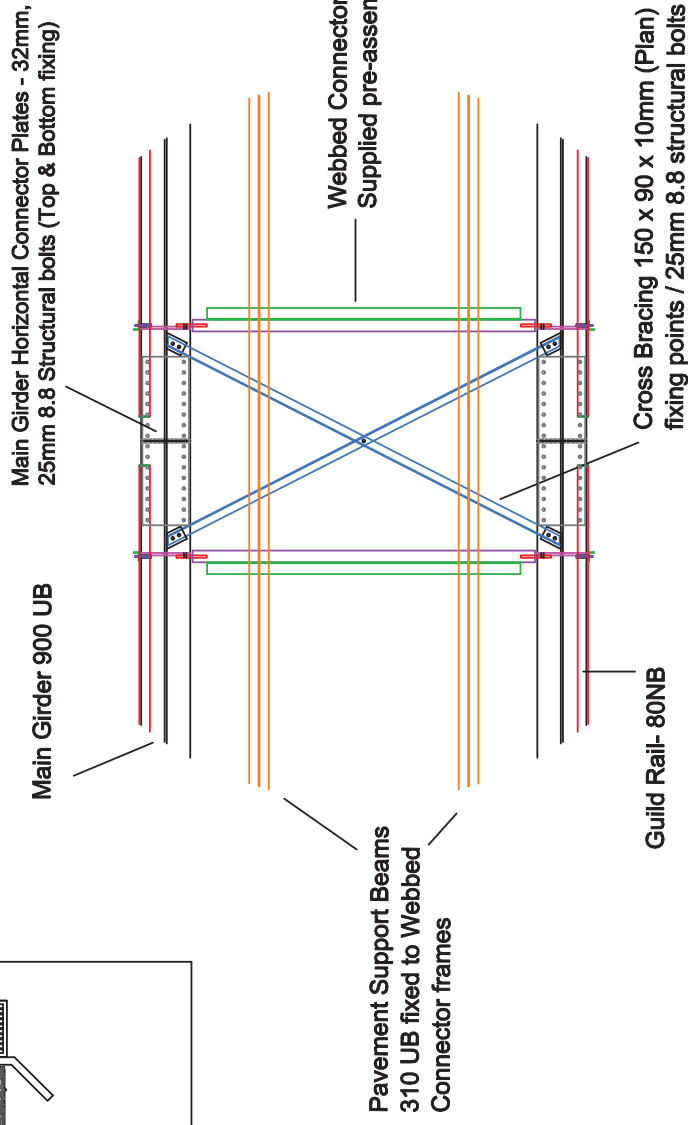
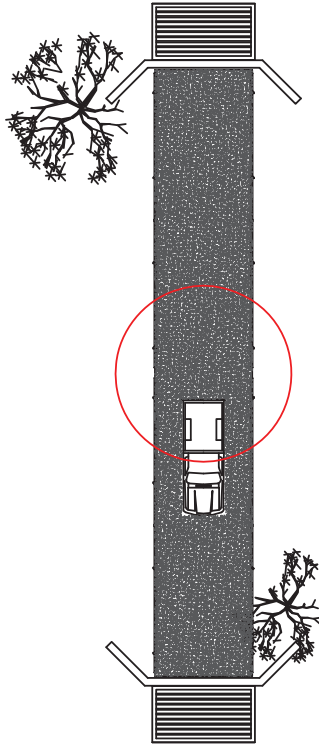
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SLEIGHT STRIPPIER - 20 AL VIEW (DETAIL)									



Bridge - Single Lane 22m Span (Rural) Superstructure - Plan View GA

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									AVENELL	
									CLIENT	



Precast Cattle Grid

Top of Abutment RL-22.10

Abutment cast in-situ 32 Mpa.

Compacted Select Fill 100 Kpa.

Natural Ground Level RL-22 (refer survey)

RB Type 2.1 @ 300mm 100 Kpa

Compacted Select Fill @ 300mm

Bridge - Single Lane 22m Span (Rural) Side Elevation - Abutment and cattle Grid

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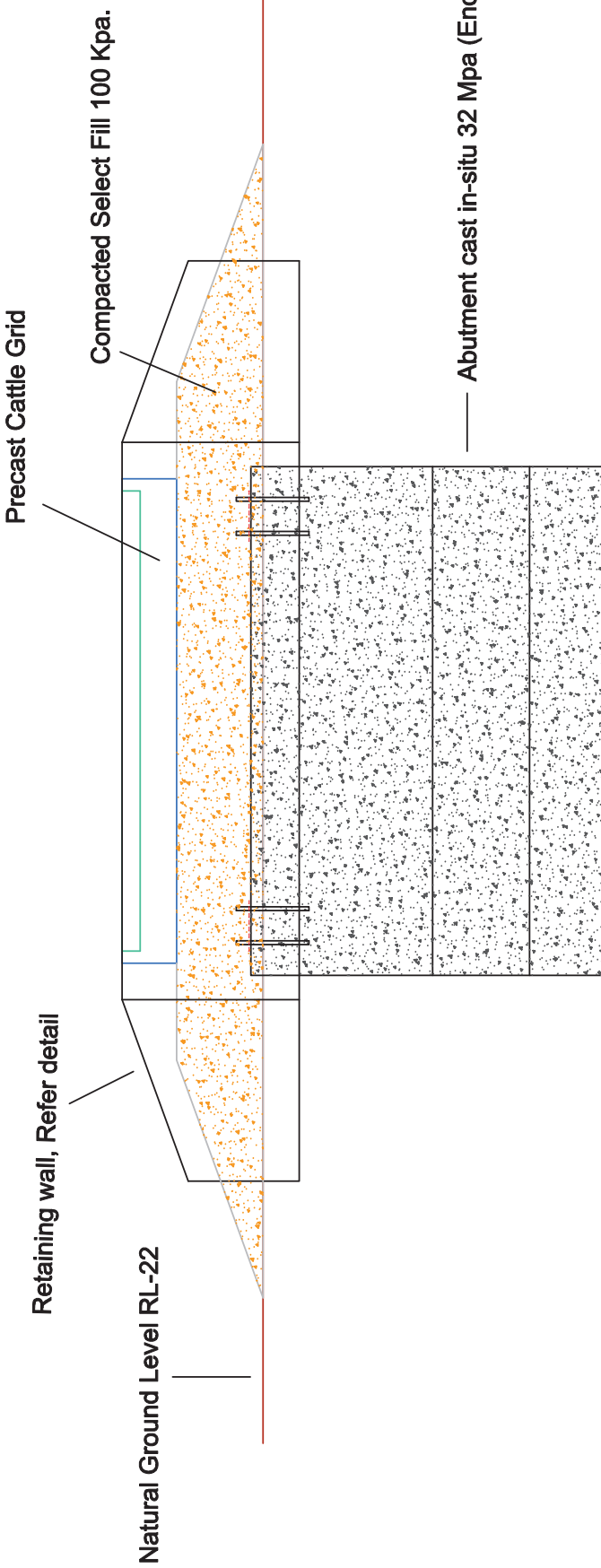
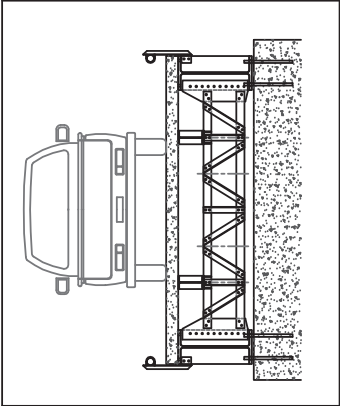
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DRAWN BY : ANELL								

Date: 15/02/2021

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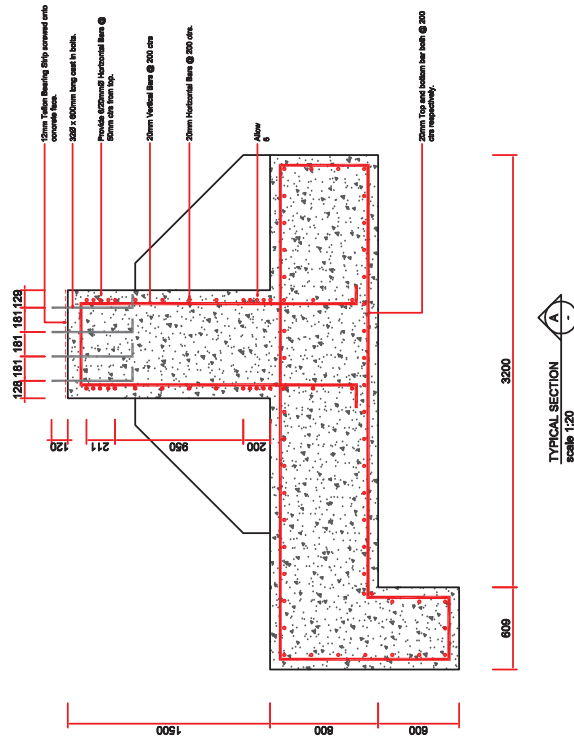
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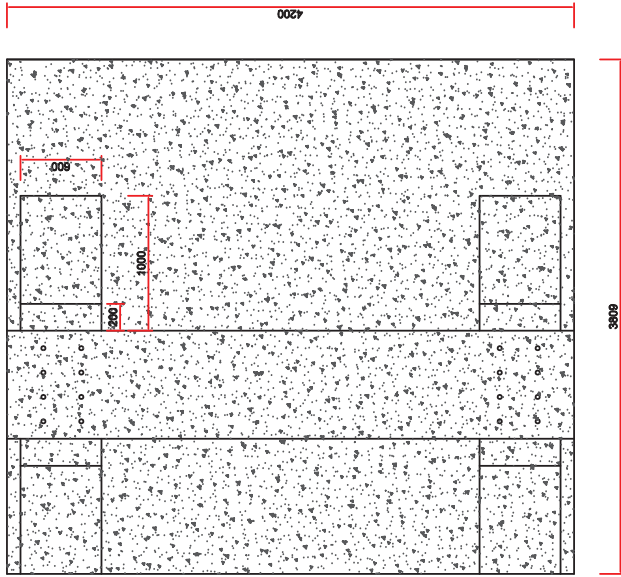
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				CLIENT							

Bridge - Single Lane 22m Span (Rural) Abutment and cattle Grid



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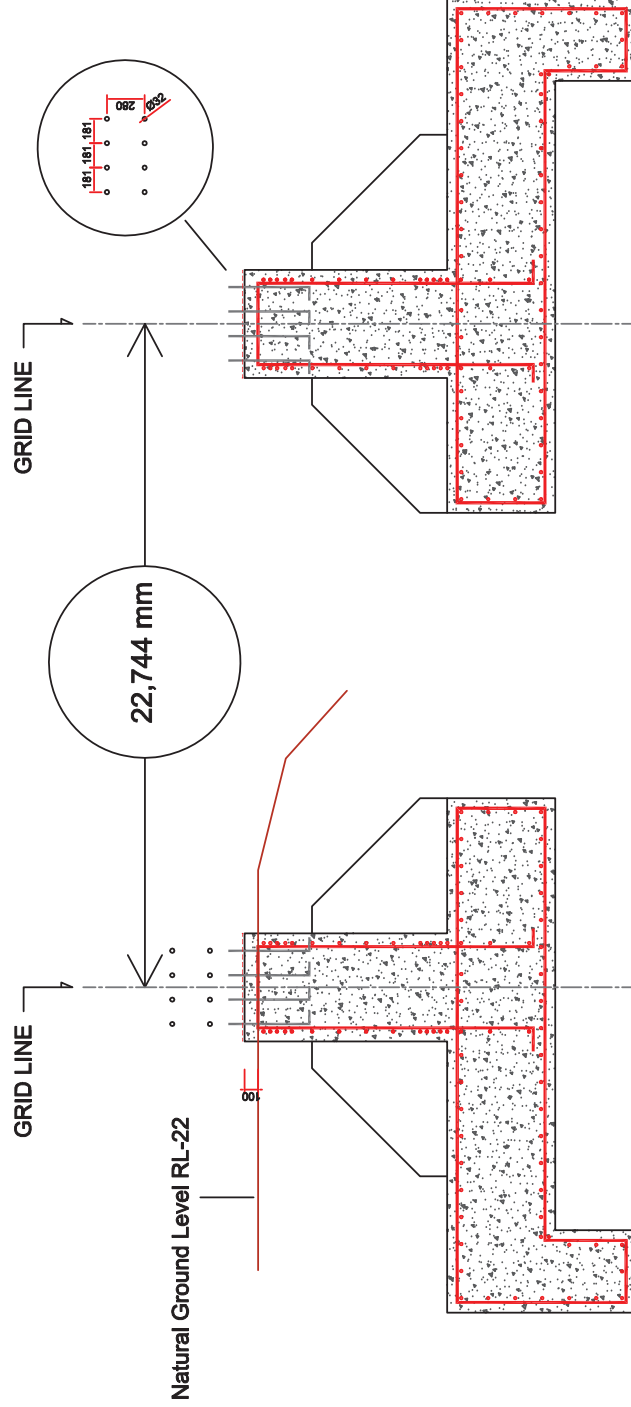
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Abutment Cast in-situ / 32 Mpa

4200

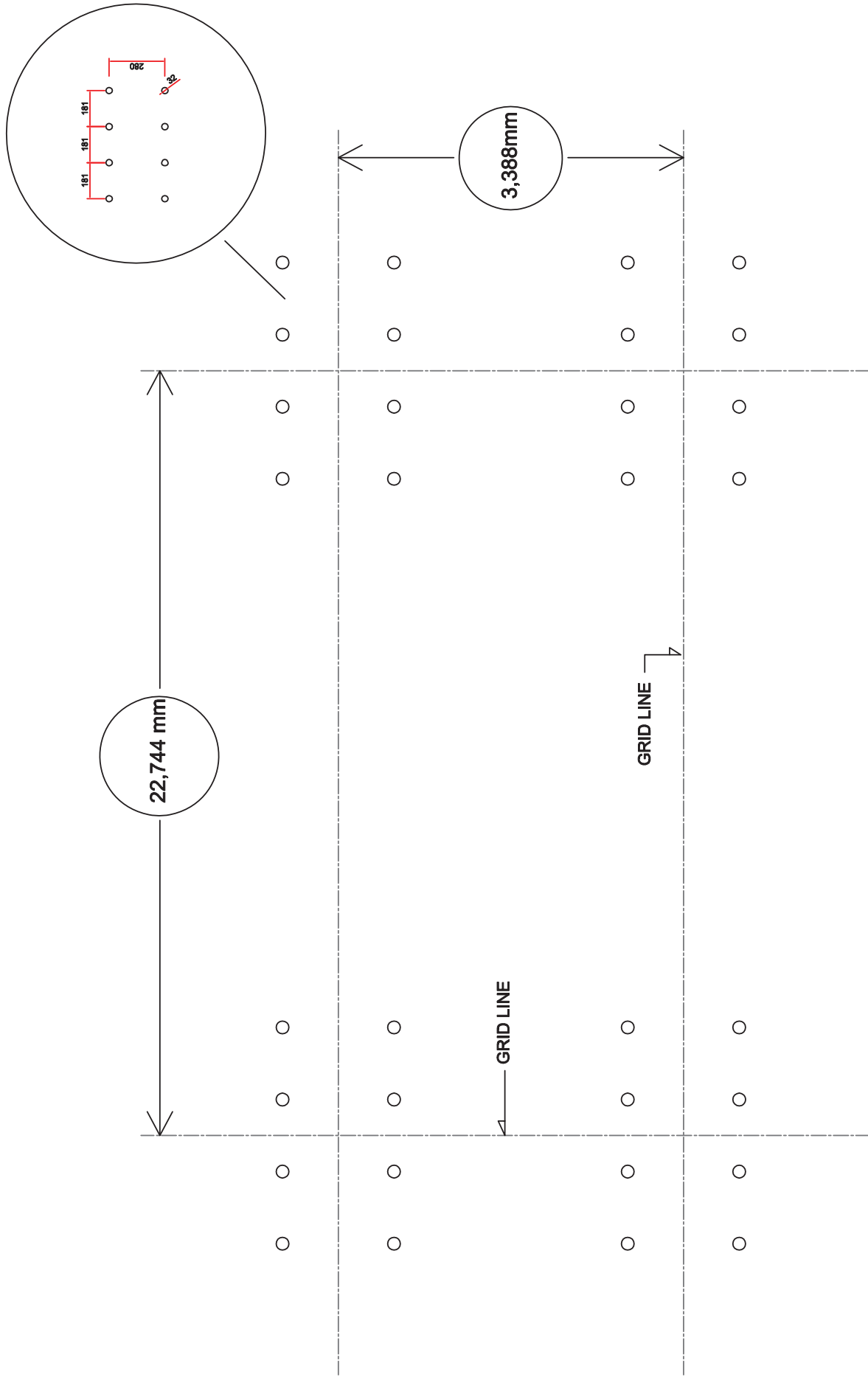
1. 20mm x 100mm Bearing Stiffness reinforced concrete
2. 20mm x 100mm Bearing Stiffness reinforced concrete
3. 20mm x 100mm Bearing Stiffness reinforced concrete

FOR INFORMATION



Bridge - Single Lane 22m Span (Rural) Hold-down Bolt Alignment (section)

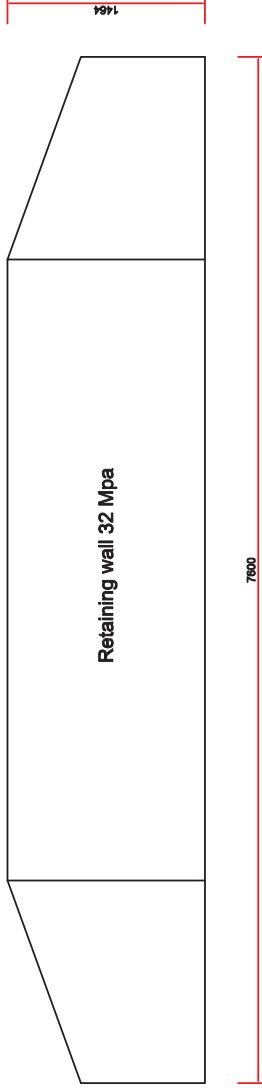
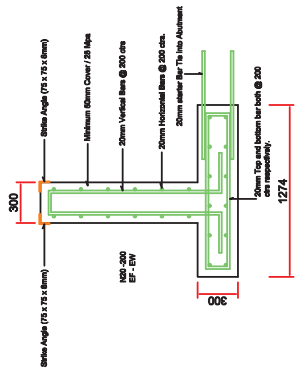
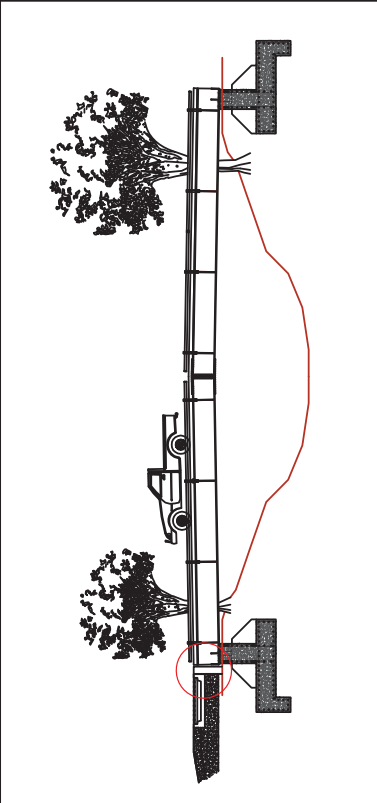
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		REV -		DATE	APPROVED	DRAWN		FCL
		00 PRELIMINARY				DESIGN		FCL
						CHECK		
						APPROVED		
						CLIENT		AVENELL
		TRAINING TITLE F:		DRAWING NO. :		SHEET NO. :		
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Bridge - Single Lane 22m Span (Rural) Hold-down Bolt Alignment (Plan)

FOR INFORMATION

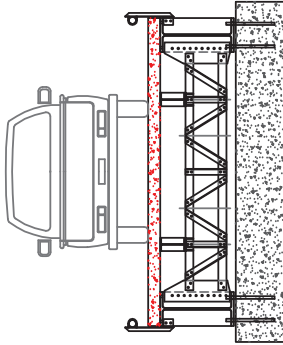
 FEROX GROUP LIMITED	P.O. BOX 5825, GONDOLOMBO, NORTHERN DISTRICT, ZIMBABWE	THIS DRAWING IS DRAWN BY FEROX GROUP LIMITED AND IS ISSUED IN THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART, NOR IS INFORMATION TO BE RELEASED TO THIRD PARTIES WITHOUT THE WRITTEN PERMISSION OF THE ABOVE COMPANY.	REVISIONS				PROJECT TITLE : LOT 40 Bridge Mowbray		Date: 15/02/2021		
			REV	—						DRAWN	FGL
			01	PRELIMINARY		DATE	APPROVED	DESIGN			FGL
								CHECK			
								APPROVED			
DRAWING TITLE: ABUTMENT DETAIL			SCALE:		SIZE:		DRAWING NO. :		SHEET NO. : S-14		
			A3		A3		MUNELL				



FOR INFORMATION

Bridge - Single Lane 22m Span (Rural) Retaining Wall Detail

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			REV	—	DATE	APPROVED	DESIGN	FOL		
			00	PRELIMINARY						
							CHECK			
							APPROVED			
DRAWING TITLE: RETAINING WALL DETAIL					CLIENT	AVENELL	SCALE:	SIZE: A3	DRAWING NO. :	SHEET NO. : S-15



150 THK
Grade 32 Mpa.

SL 82 Mesh
50 Top Cover

N12 Top & BTM
Edge Stiffener

150

3800

SL 82 Mesh
50 BTM Cover

Bondek Panels (BMT 1.0mm) secured to top of 900 UB
Pavement cast in-situ allowing for 1 degree
fall each side of pavement center

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SECTION - CONCRETE BRIDGE PAVEMENT

FOR INFORMATION

Bridge - Single Lane 22m Span (Rural) Pavement Design



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REV -
00 PRELIMINARY

DATE

APPROVED
DESIGN

DESIGN

FOR

FOR

PROJECT TITLE :

LOT 40 Bridge Mowbray

Date: 15/02/2021

DRAWING TITLE :

PAVEMENT DESIGN

CLIENT

APPROVED

CHECK

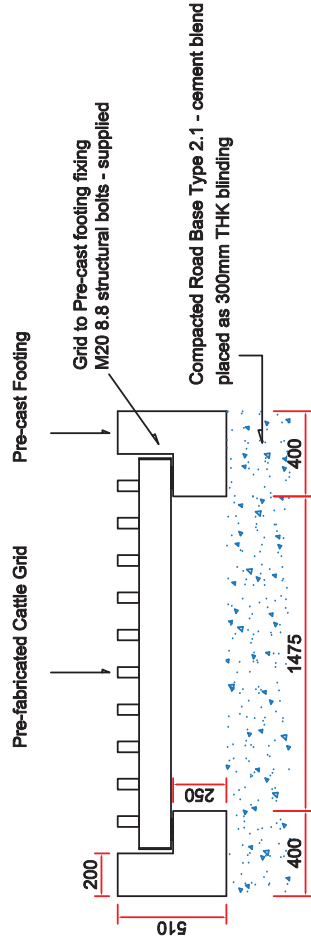
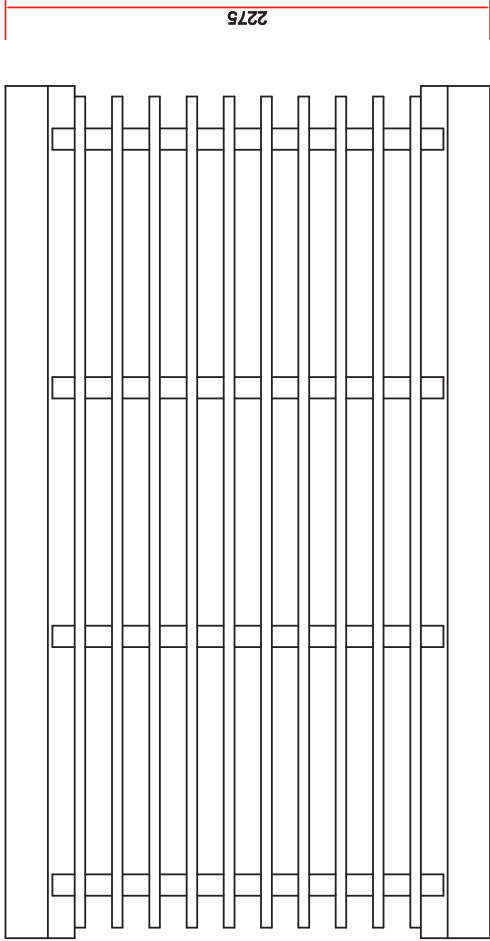
SCALE :

A3

DRAWING NO. :

SHEET NO. :

S-16

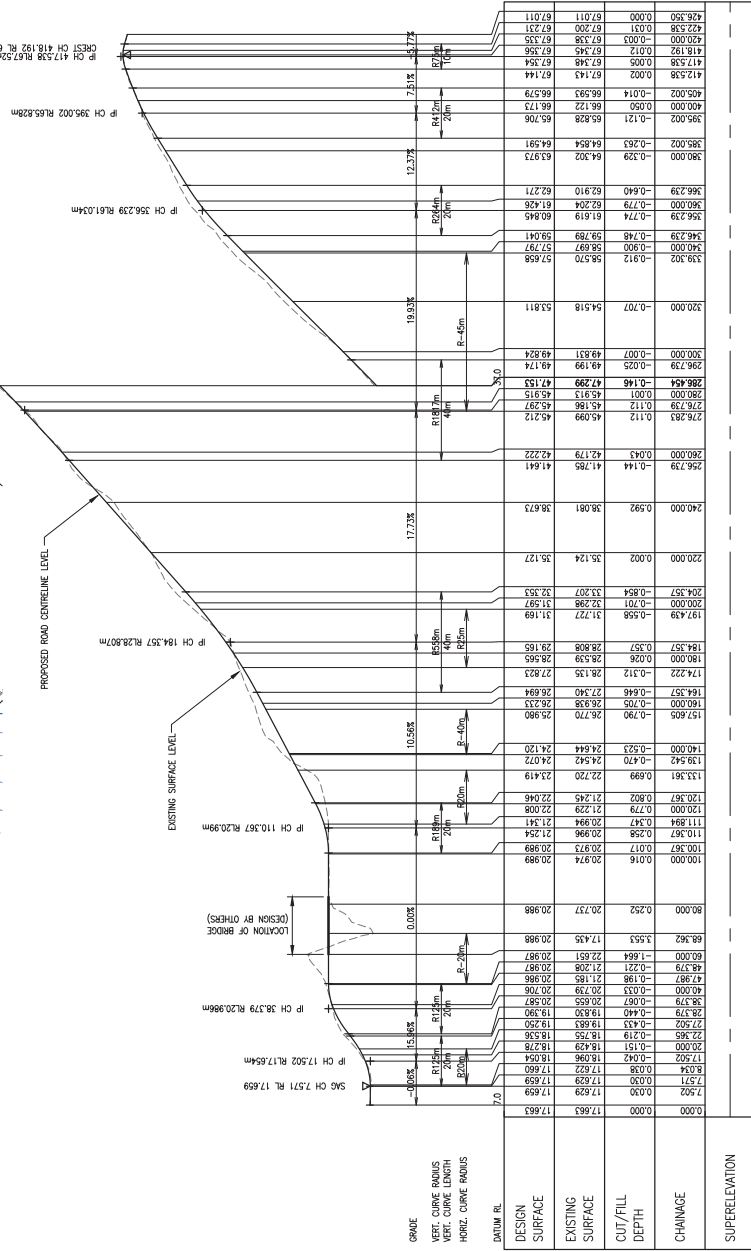
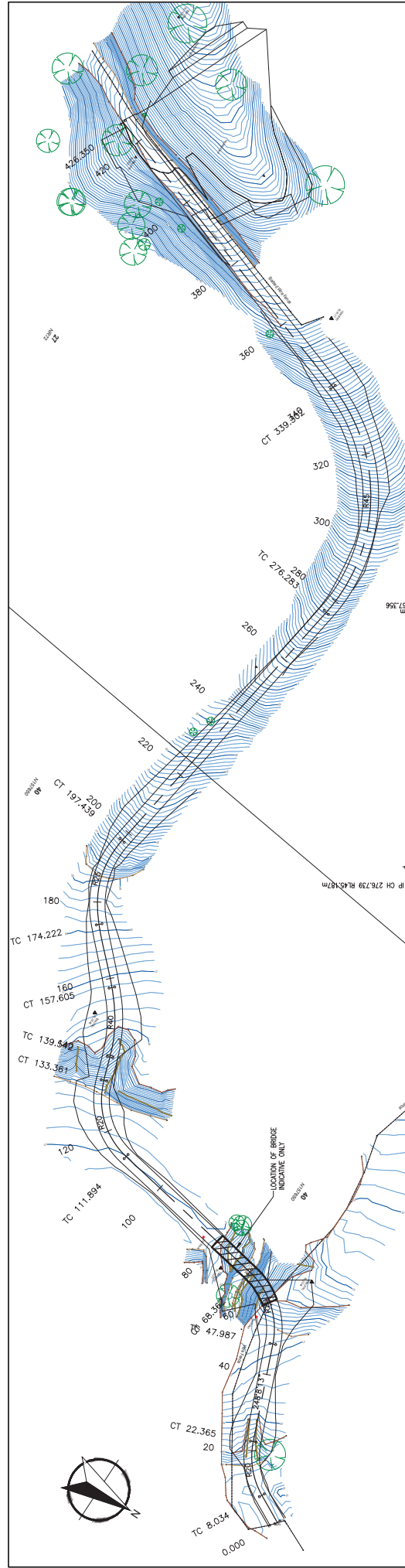


FOR INFORMATION

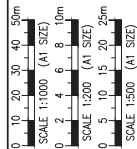
Bridge - Single Lane 22m Span (Rural) Cattle Grid Detail (Pre-fabricated Grids & footings Supplied by others)

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			REV	-		DATE	APPROVED	DRAWN	FCL		
			00	PRELIMINARY				DESIGN	FCL		
								CHECK			
								APPROVED			
			DRAWING TITLE: PAYMENT DESIGN			SCALE: A3		DRAWING NO. : S-17	SHEET NO. : S-17		

Attachment 4 – Earthworks plans



ACCESS1 LONGITUDINAL SECTION
HORIZONTAL SCALE 1:1000
VERTICAL SCALE 1:200

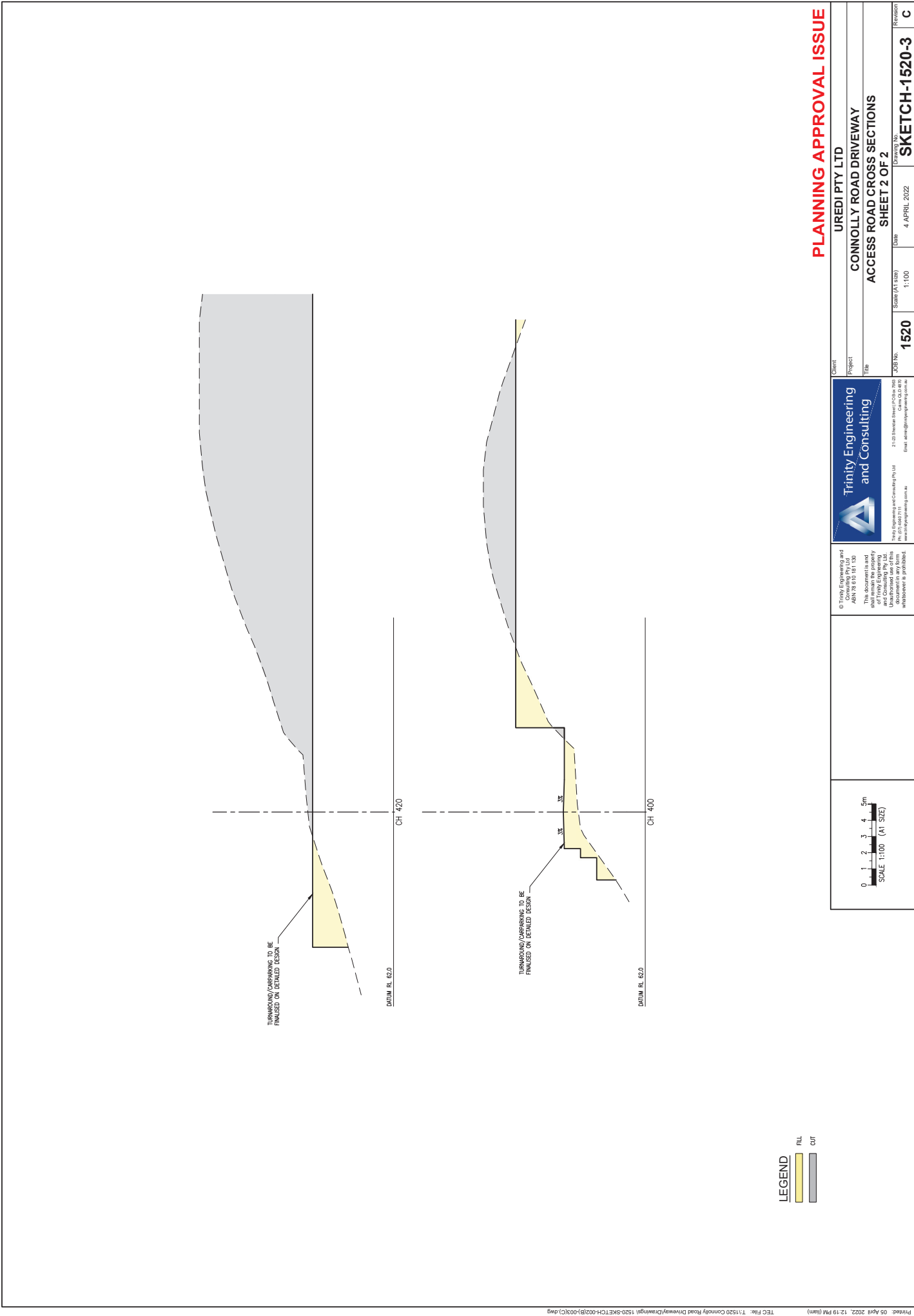


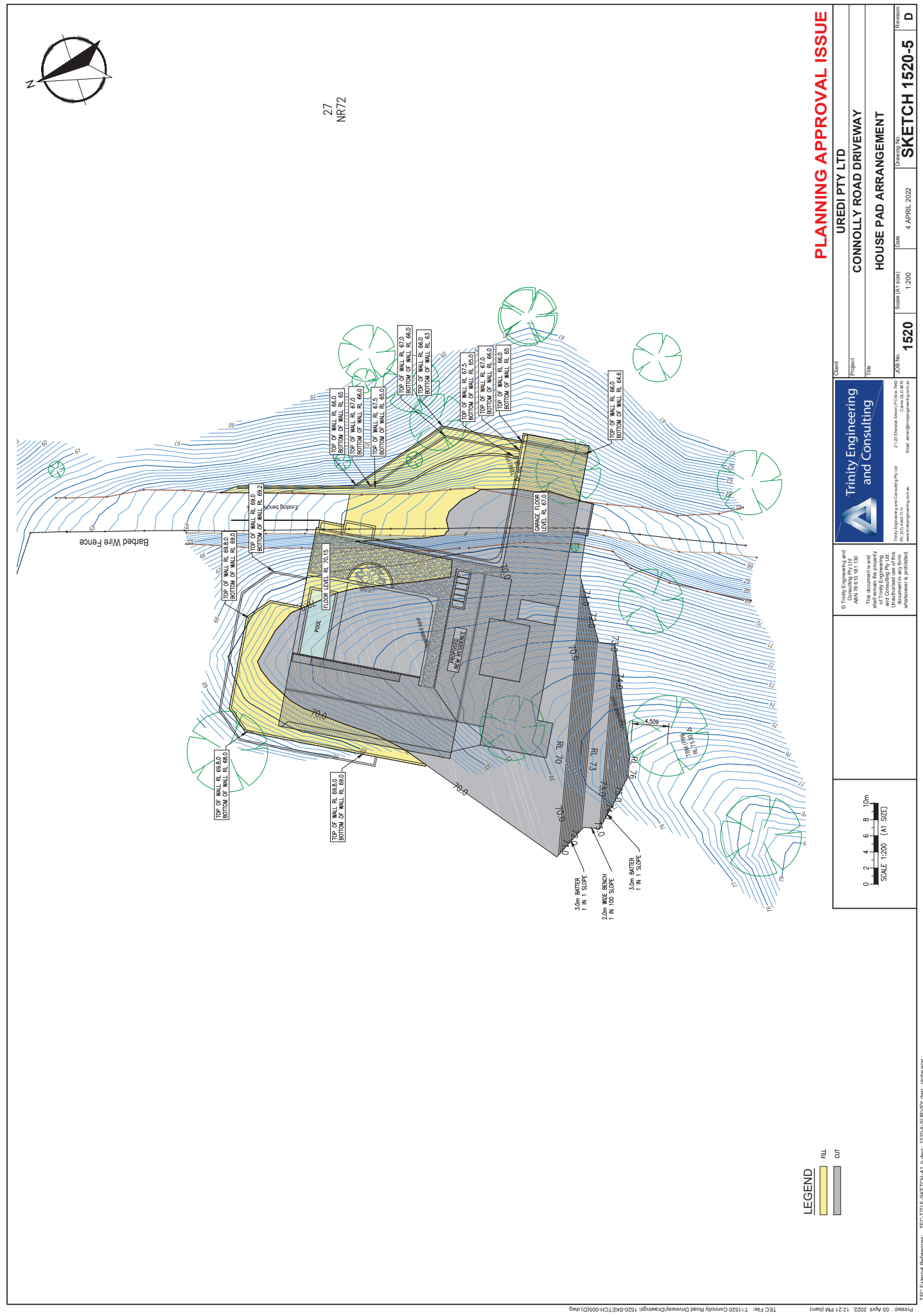
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and Consulting
2/13 Breton Street, Suite 201,
North Sydney, NSW 1585
www.trinityengineering.com.au
Email: admin@trinityengineering.com.au

Client: UREDI PTY LTD
Project: CONNOLLY ROAD DRIVEWAY
Title: ACCESS ROAD LAYOUT AND LONGITUDINAL SECTION
Scale: (A1 size)
Drawing No: 1520
AS SHOWN
Date: 5 APRIL 2022
Revision: A

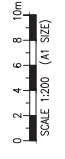
PLANNING APPROVAL ISSUE





LEGEND

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www.trinityengineering.com.au
Email: enr@trinityengineering.com.au

Client	URED PTY LTD		
Project	CONNOLLY ROAD DRIVEWAY		
Title	HOUSE PAD ARRANGEMENT		
JOB No.	1520	Scale (A1 size)	1:200
Date	4 APRIL 2022	Drawn By	SKETCH 1520-5
Revision	D		

PLANNING APPROVAL ISSUE