

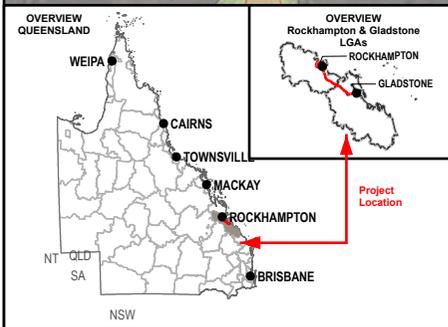
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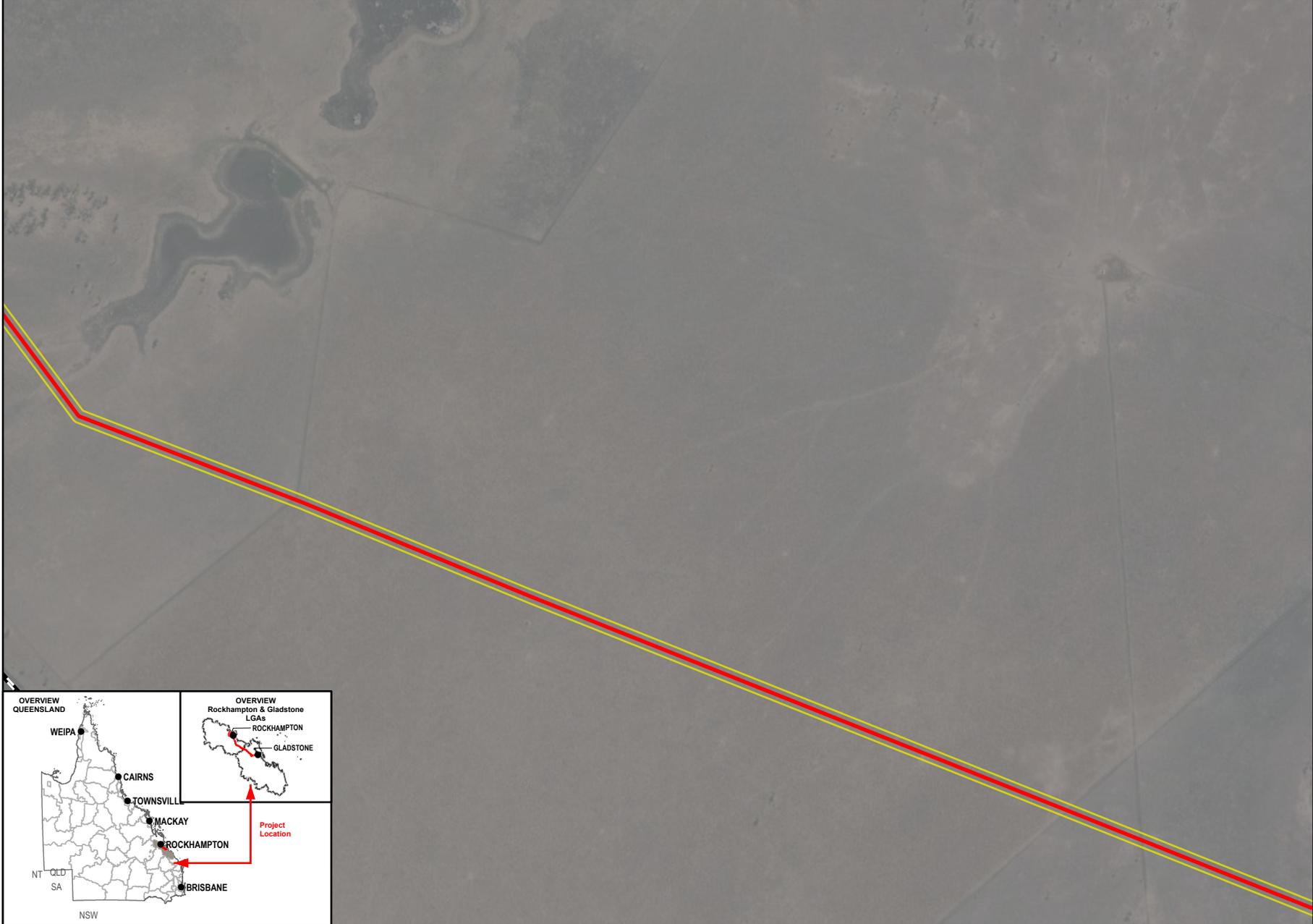
- Legend**
- Pipeline Alignment
  - Study Area
  - Railways
  - Category A or B area containing endangered
  - Category A or B area containing of concern
  - Category A or B area that is least concern
  - Category C or R area containing endangered
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**Data Sources:**

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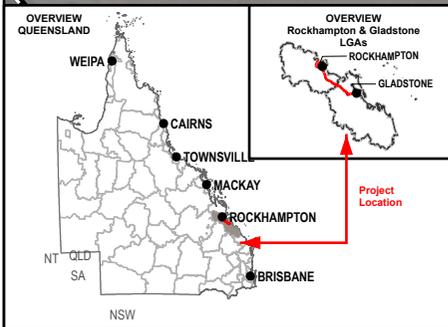
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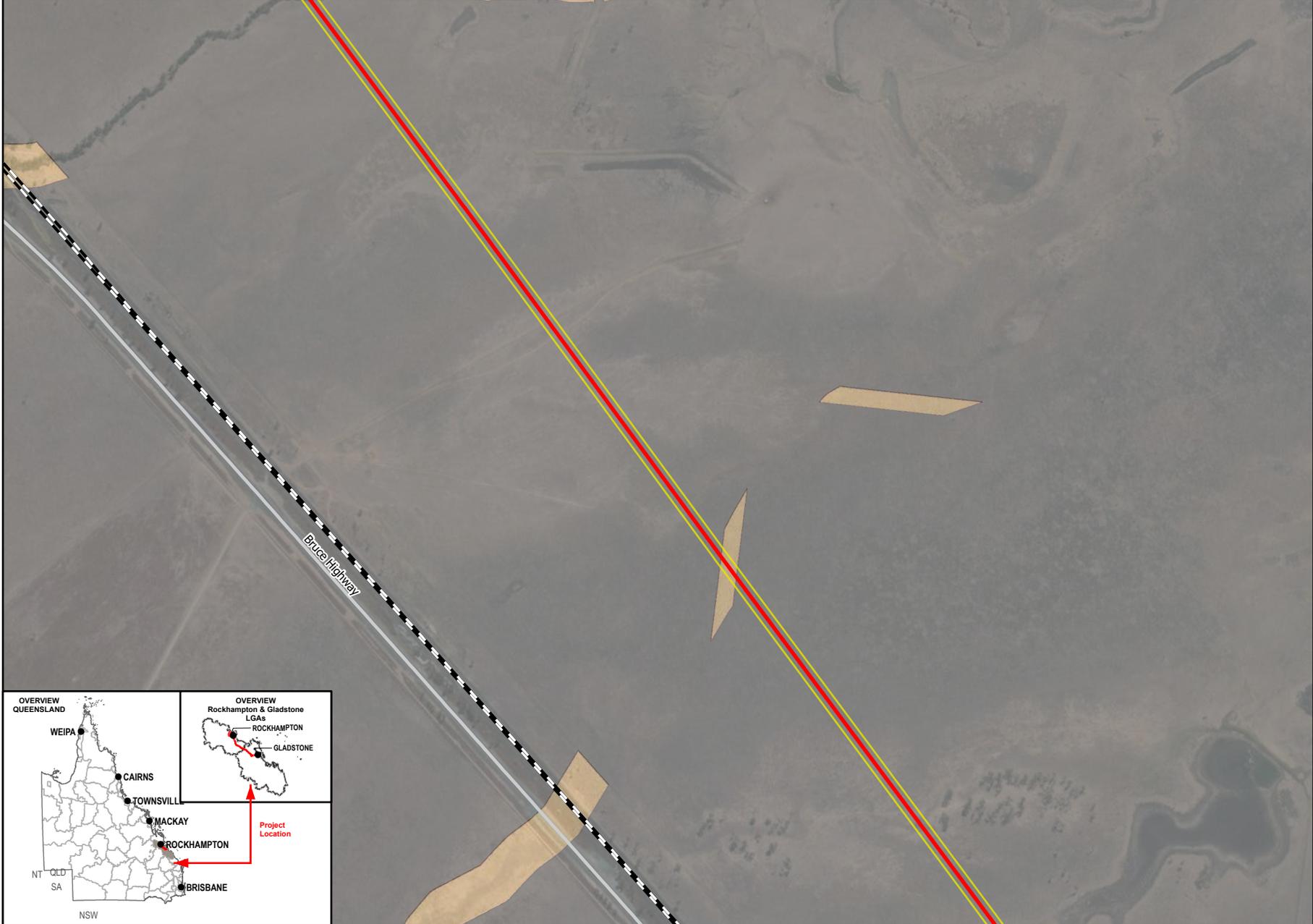
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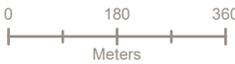
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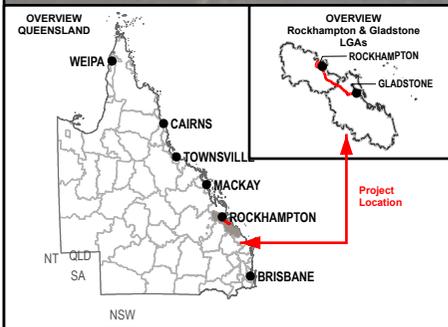
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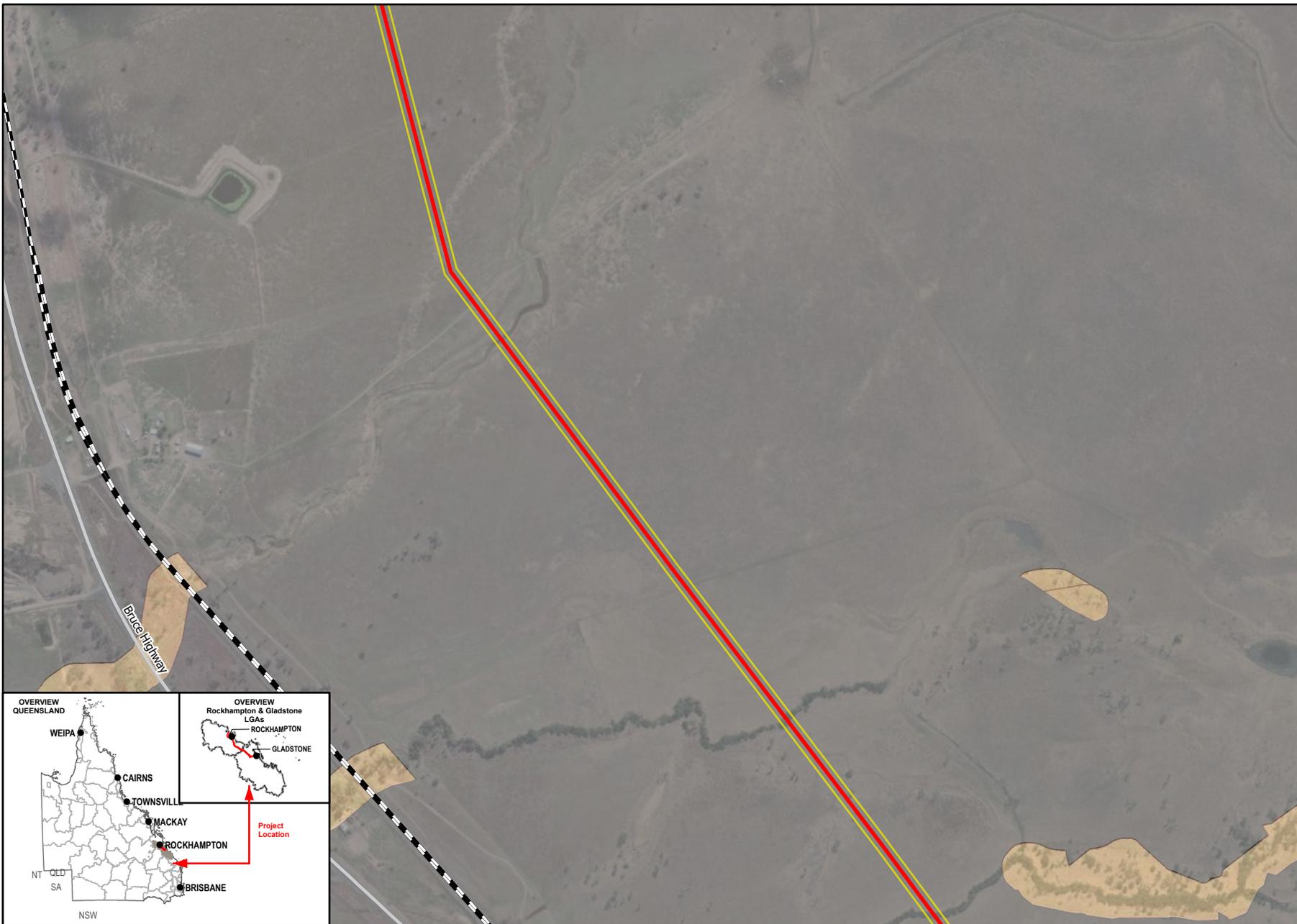
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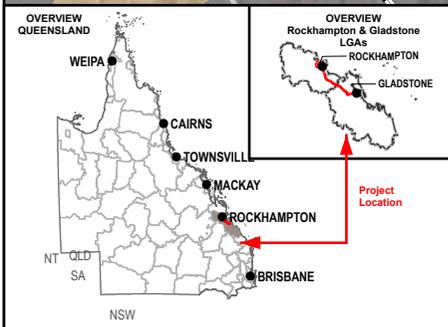
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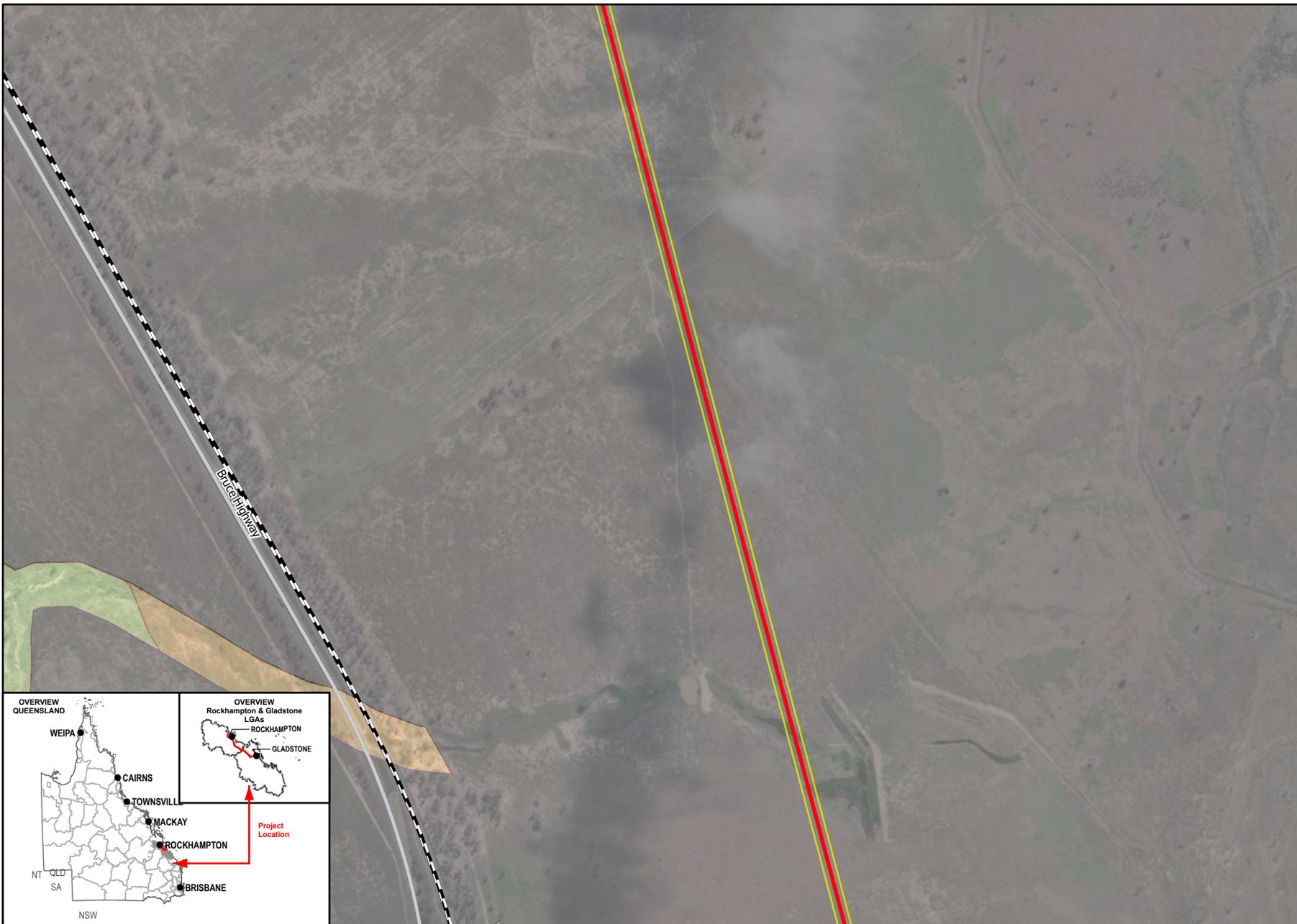
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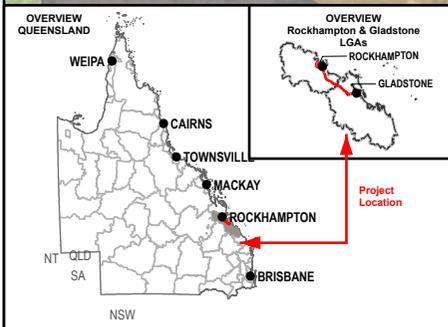
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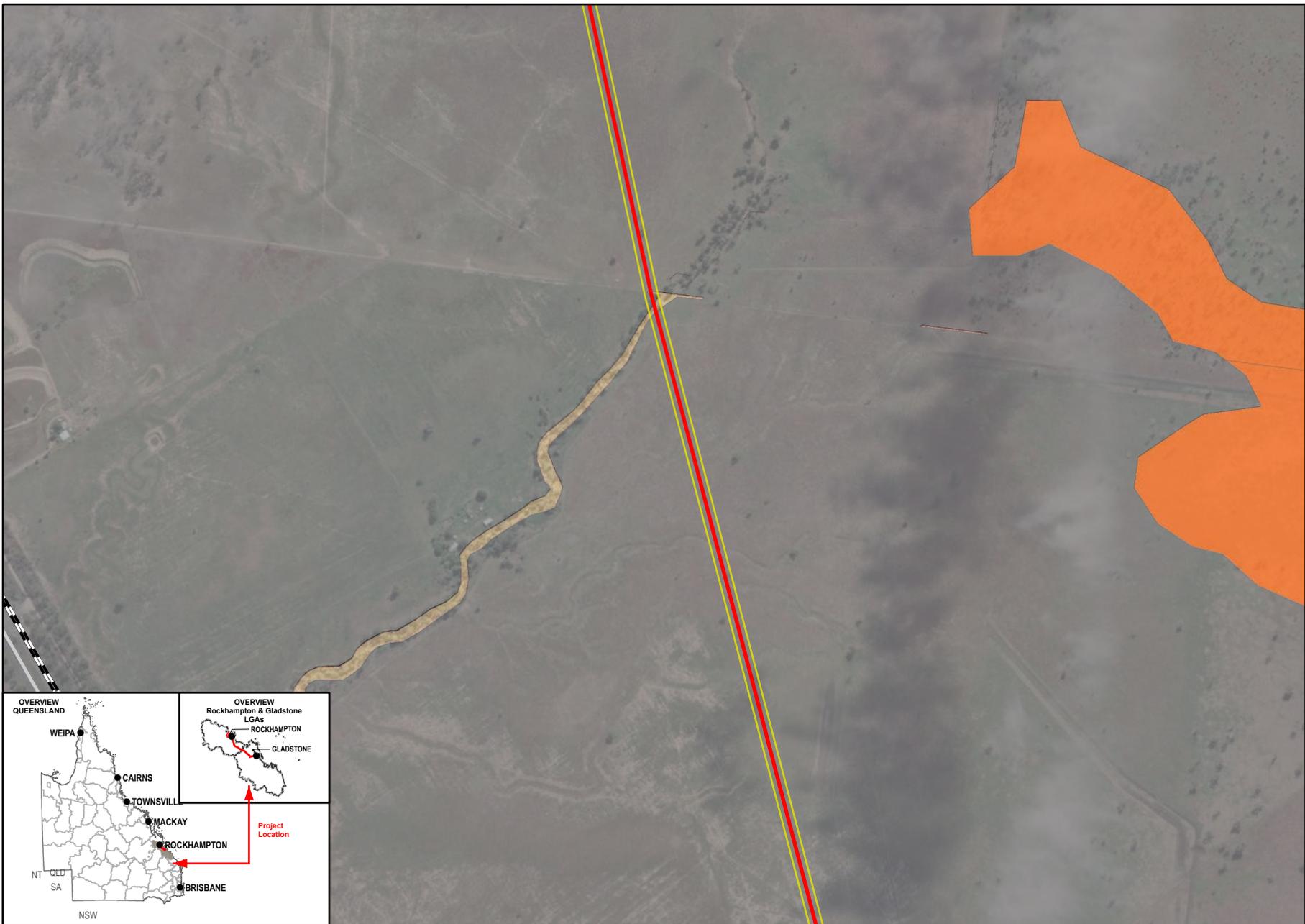
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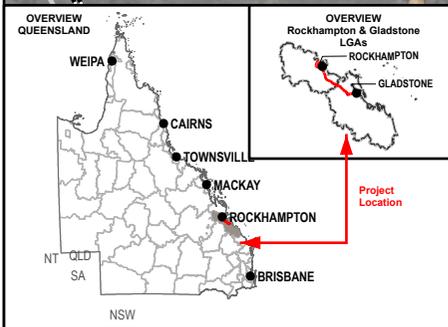
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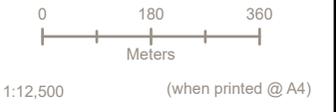
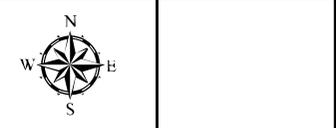
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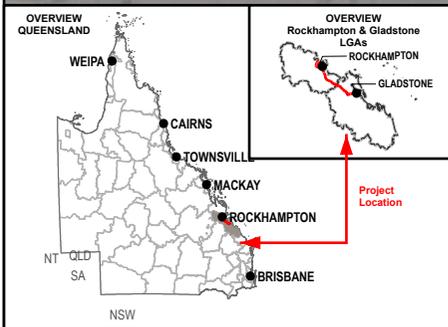


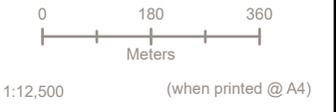
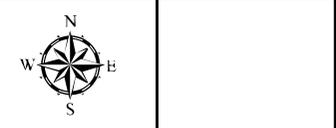
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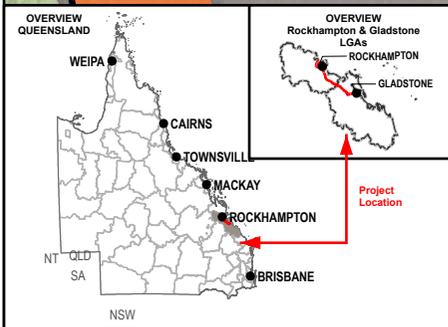


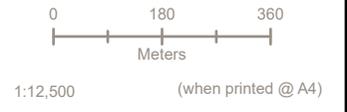


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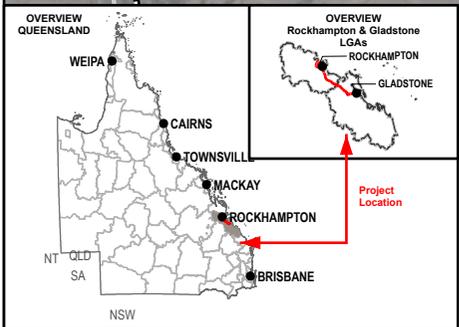


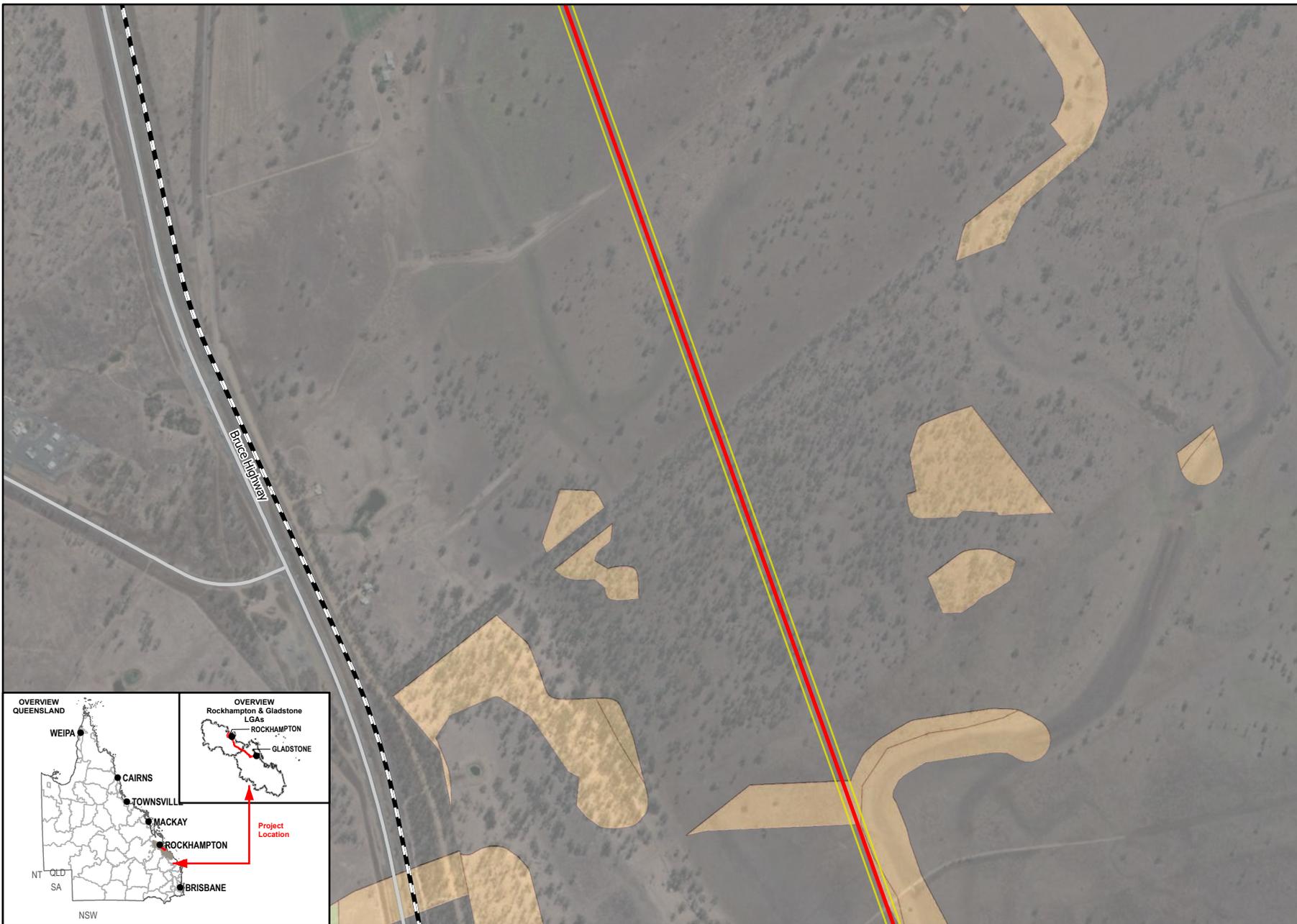
**Legend**

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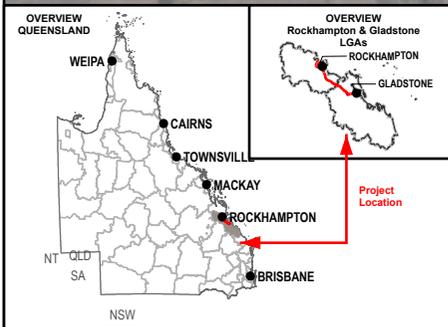
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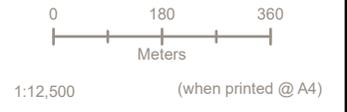
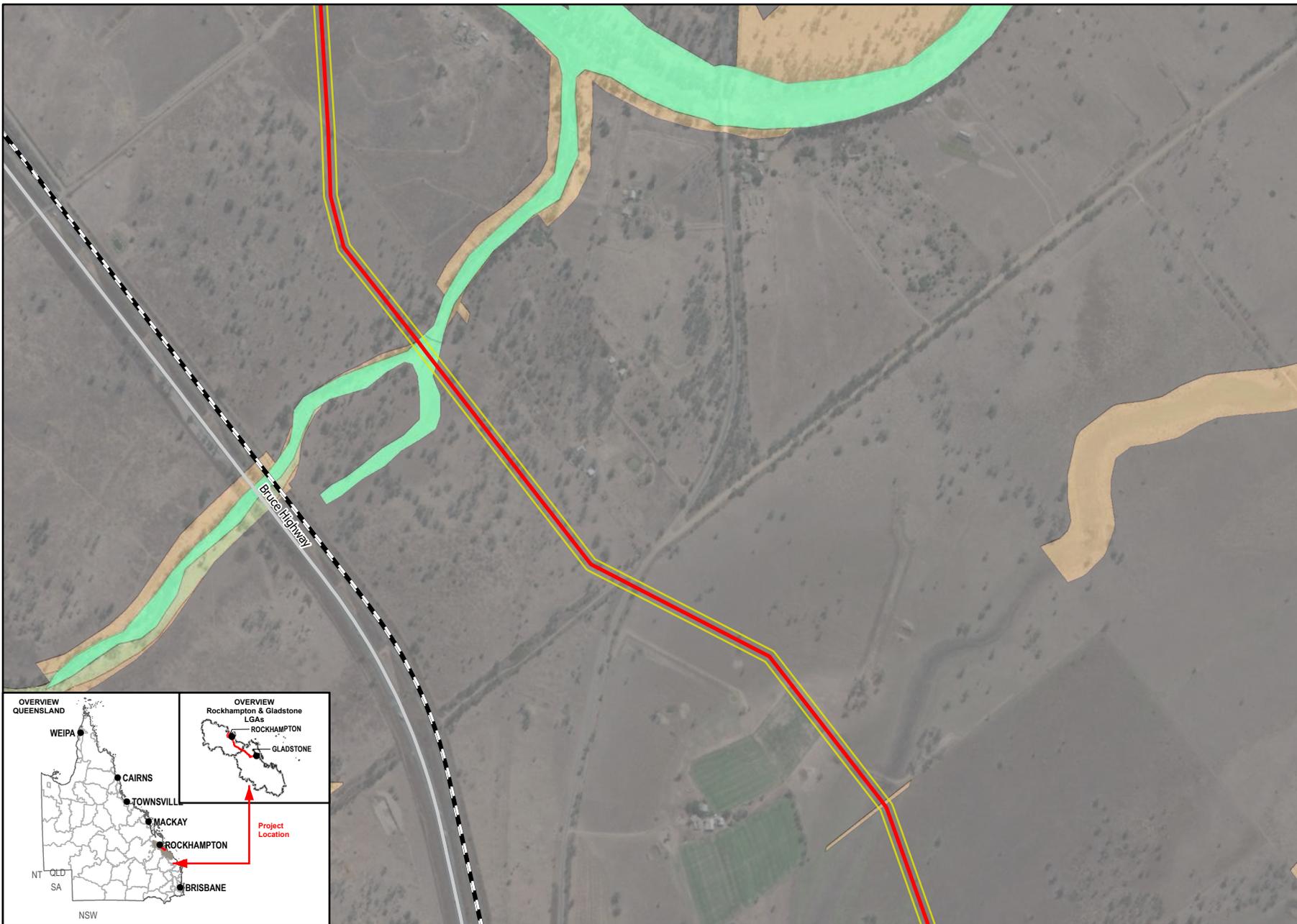
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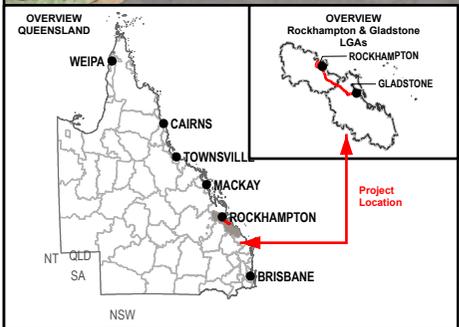


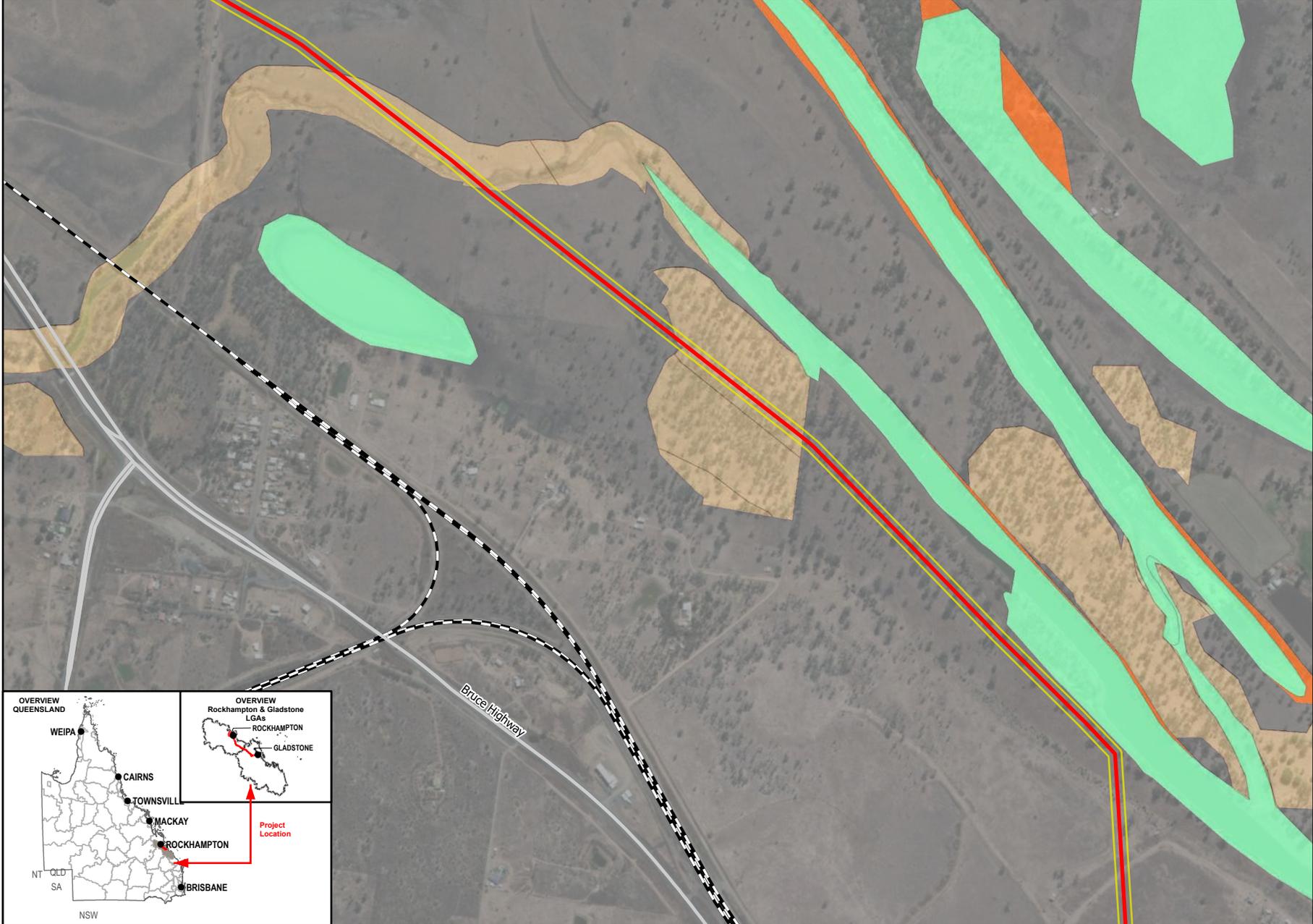
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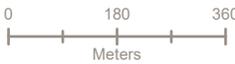









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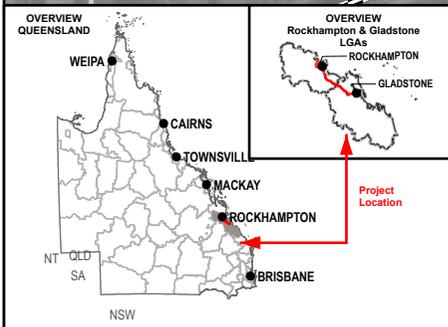
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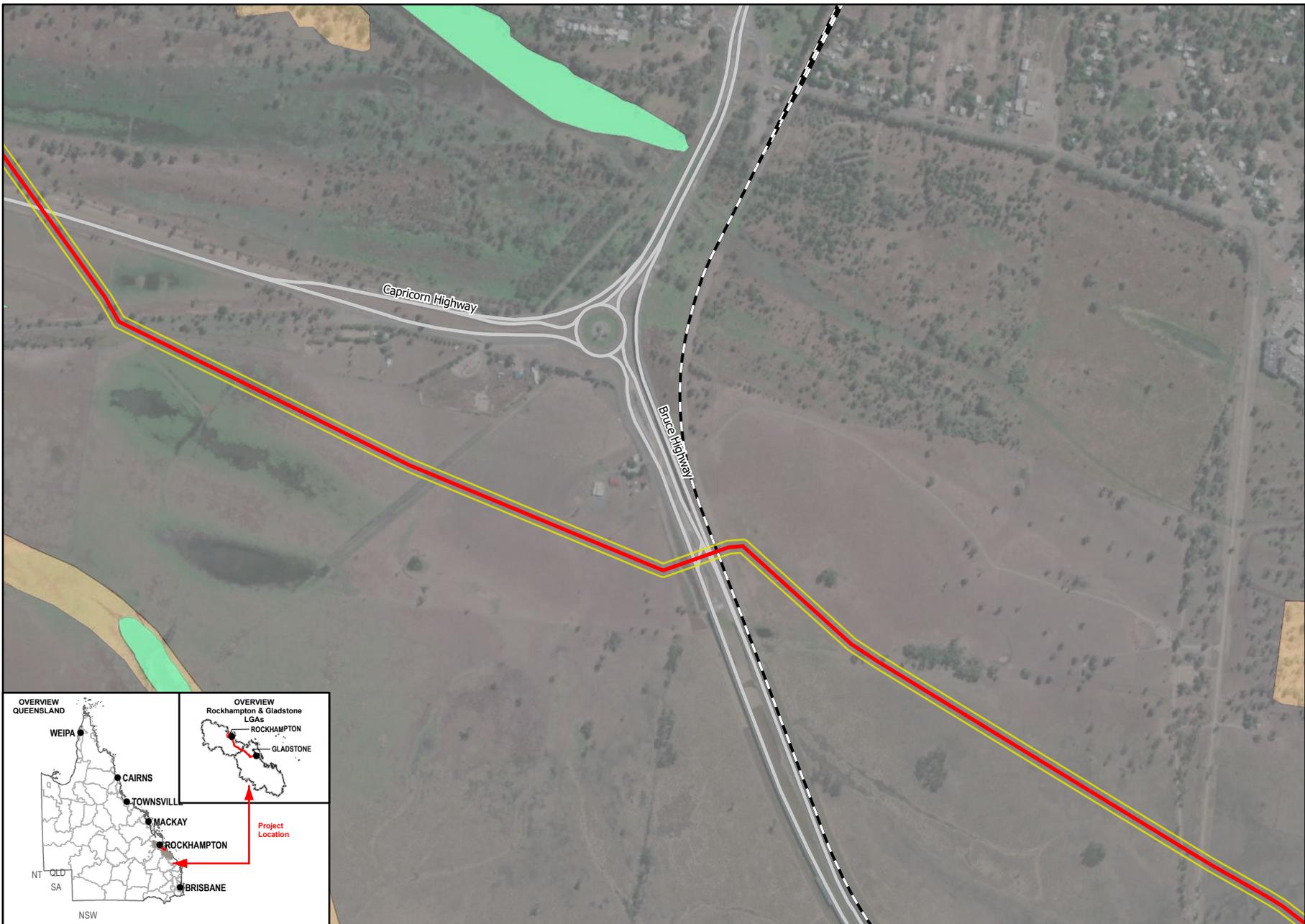
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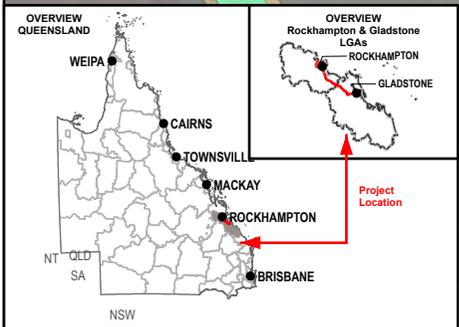
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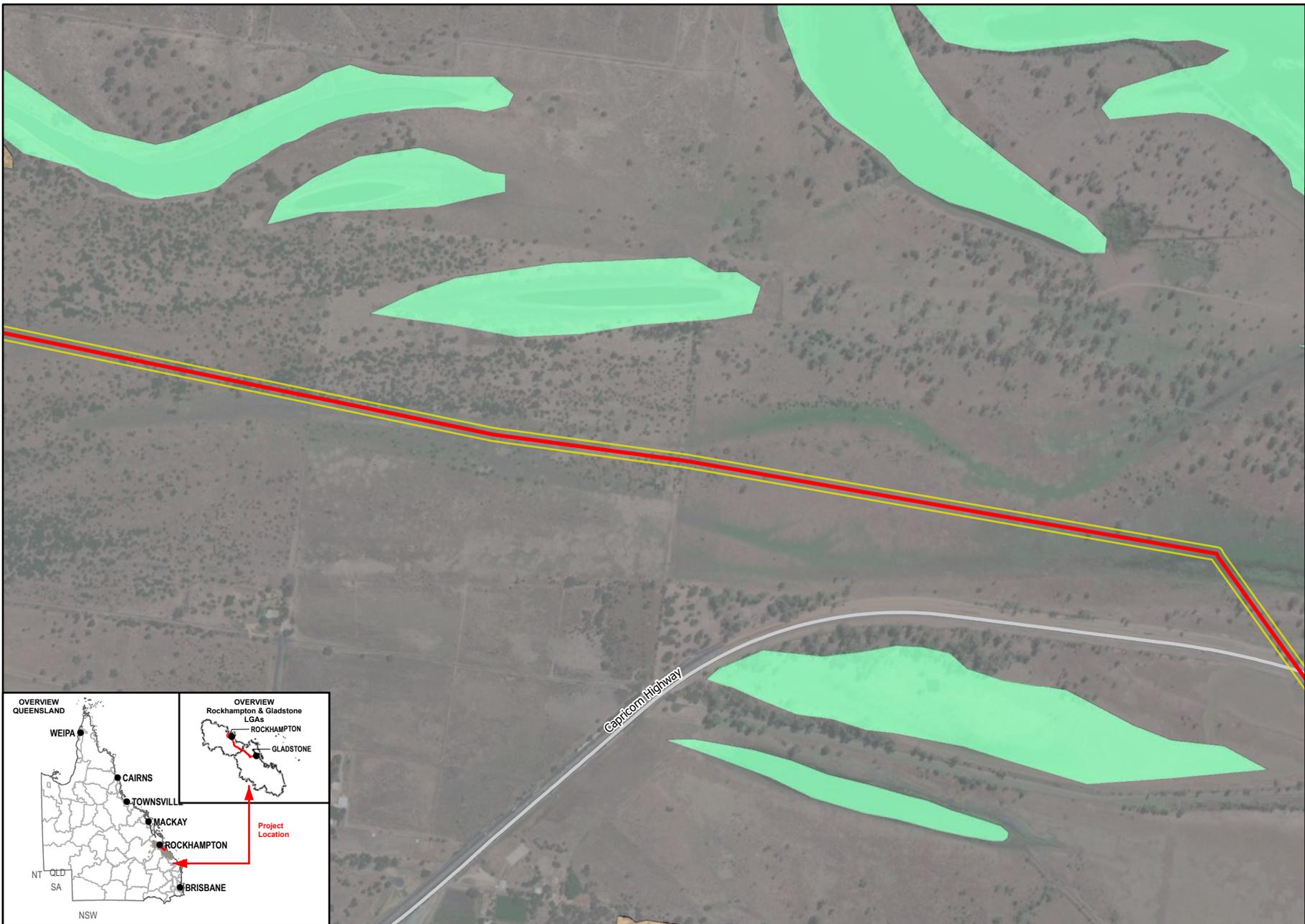
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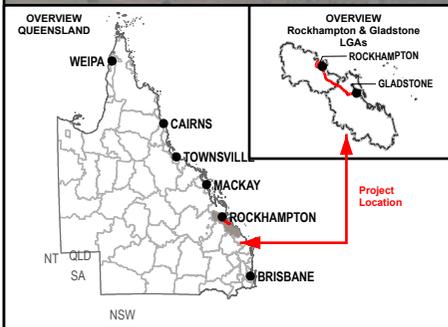
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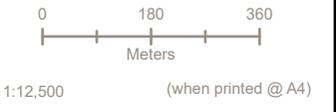
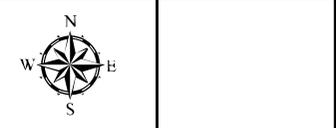
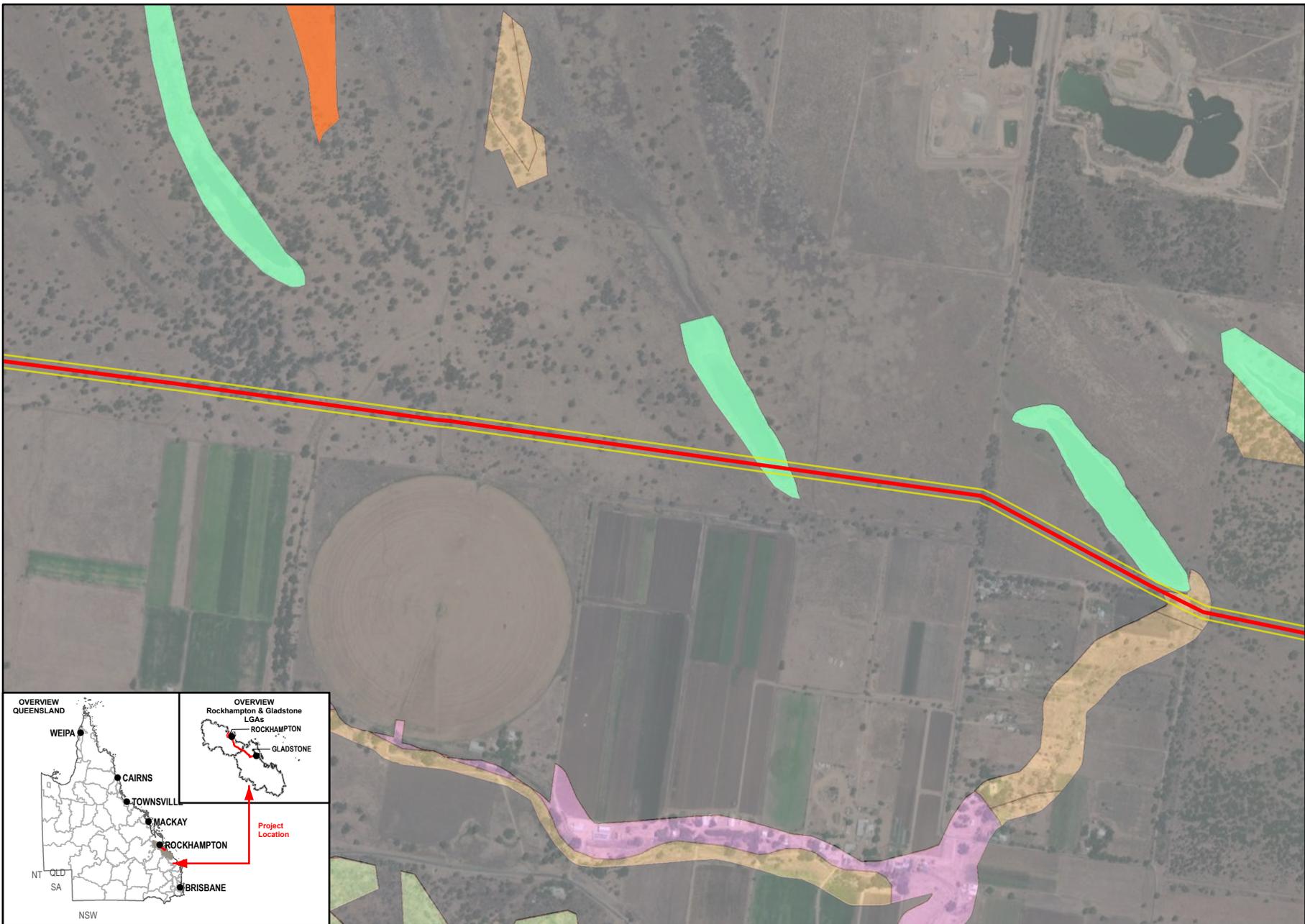
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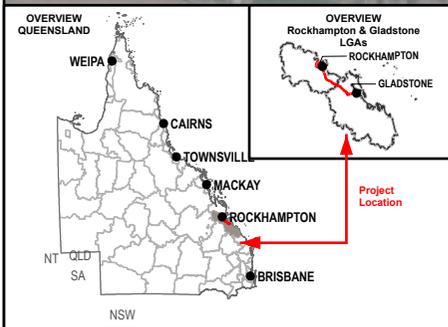
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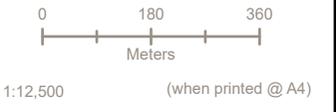
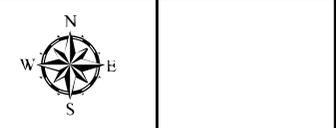
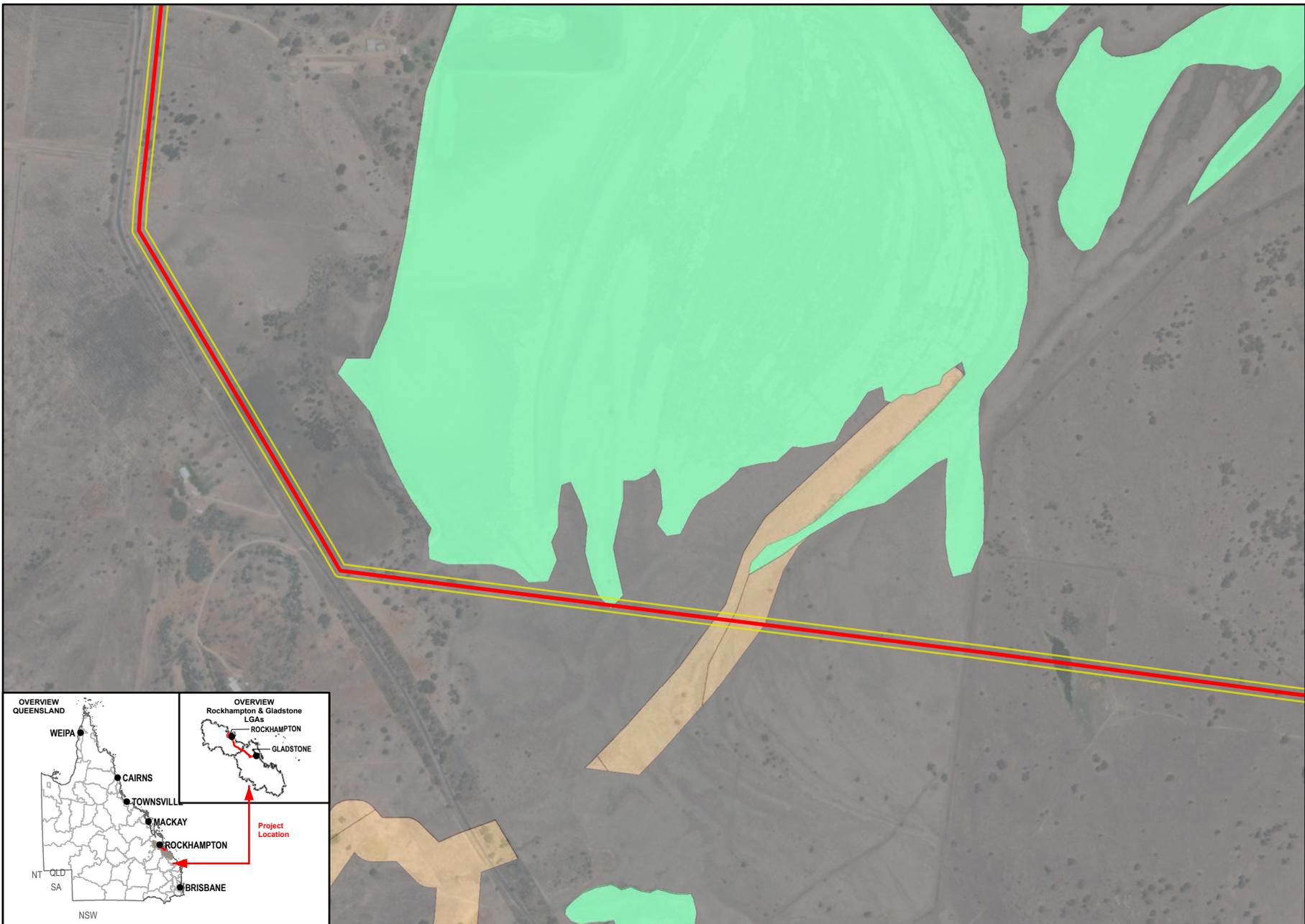


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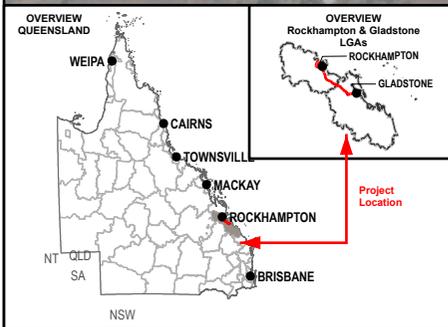


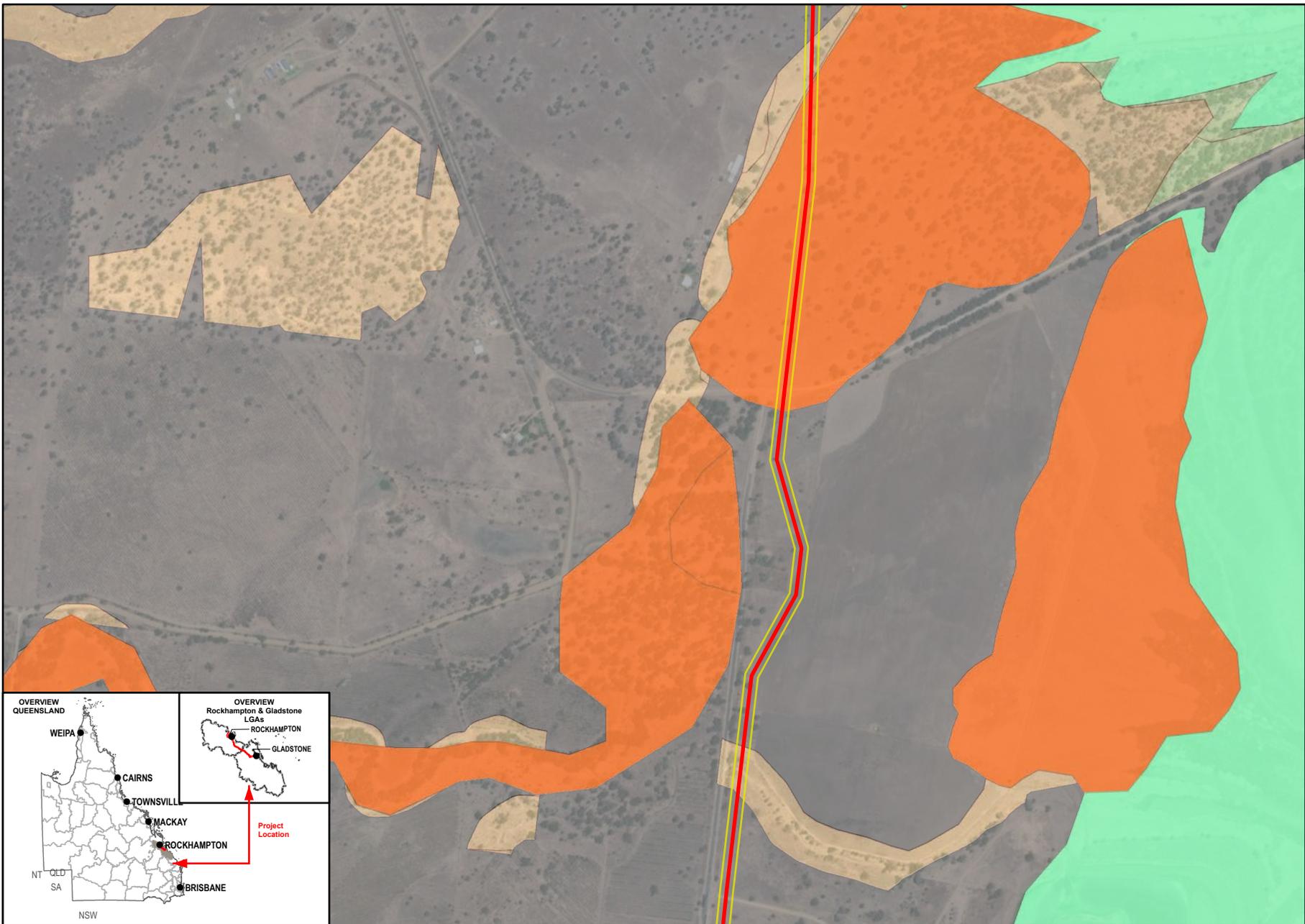
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- Pipeline Alignment
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  - Category A or B area containing endangered
  - Category A or B area containing of concern
  - Category A or B area that is least concern
  - Category C or R area containing endangered
  - Category C or R area containing of concern
  - Category C or R area that is of least concern
  - Water
  - Non-remnant

**Data Sources:**

1. Base Layers (Roads, waterway, locality, LGA etc) @ QSpatial, 2021
2. Imagery @ Esri, Maxar, GeoEye, Earthstar Geographics, CNES-Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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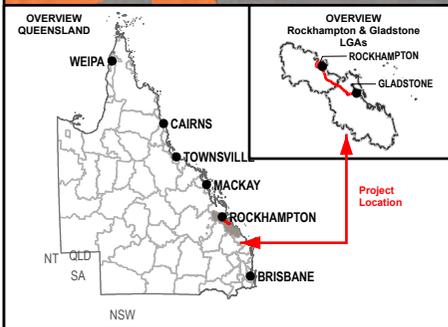
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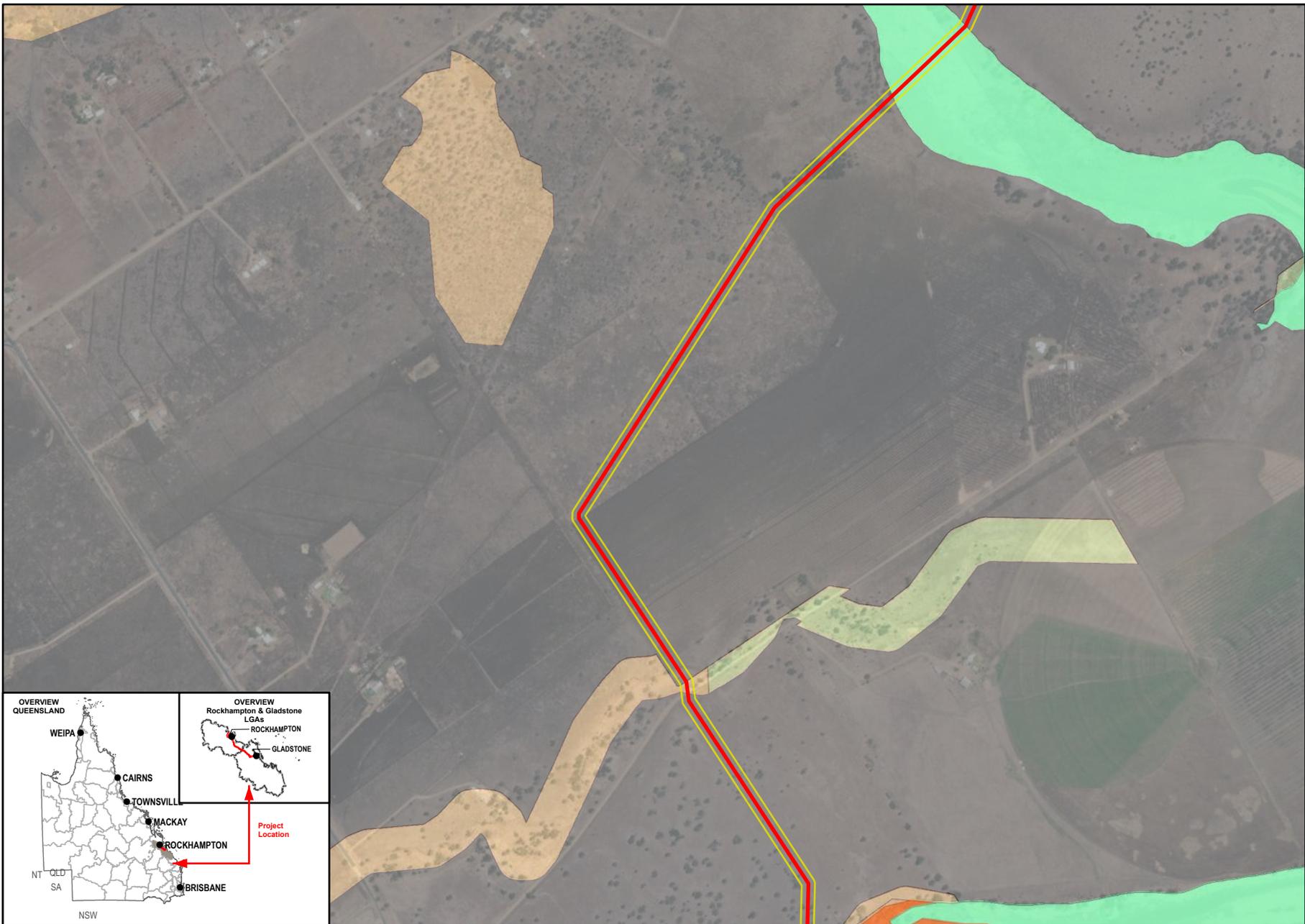
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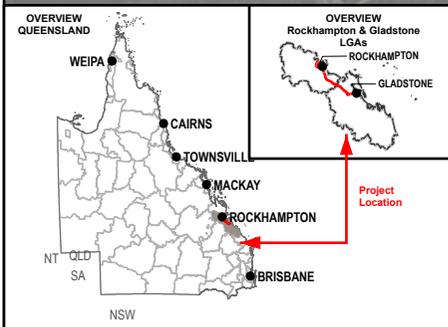
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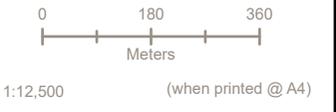
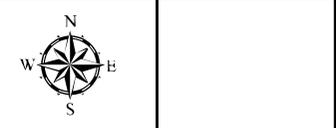
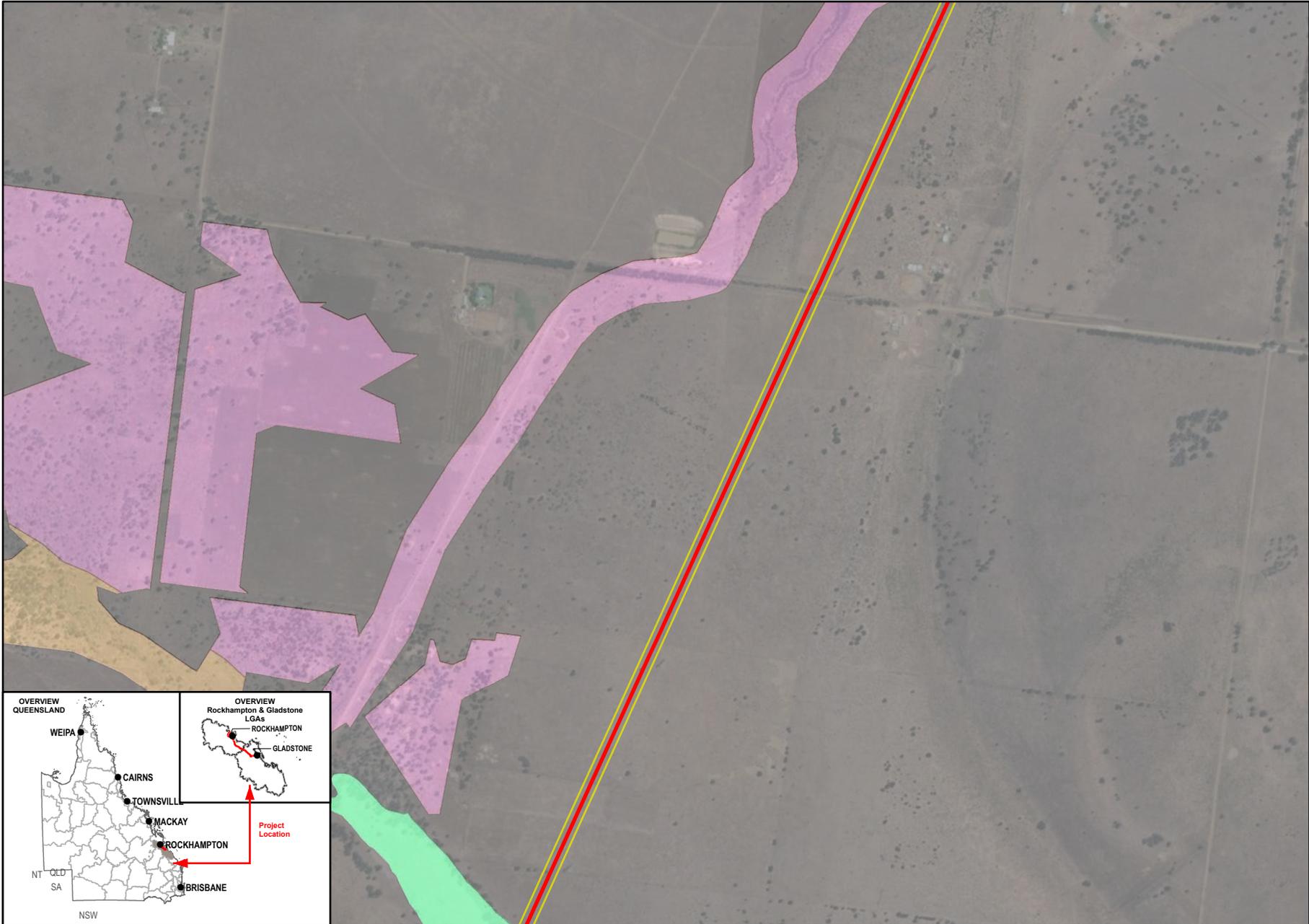
- Legend**
- Pipeline Alignment
  - Study Area
  - Category A or B area containing endangered
  - Category A or B area containing of concern
  - Category A or B area that is least concern
  - Category C or R area containing endangered
  - Category C or R area containing of concern
  - Category C or R area that is of least concern
  - Water
  - Non-remnant

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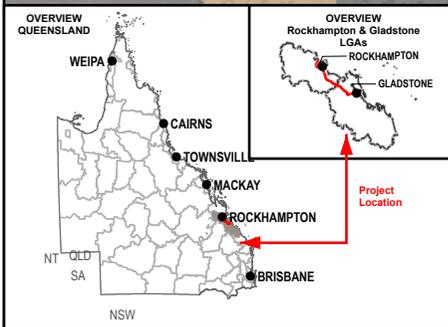


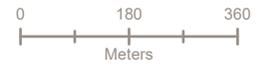
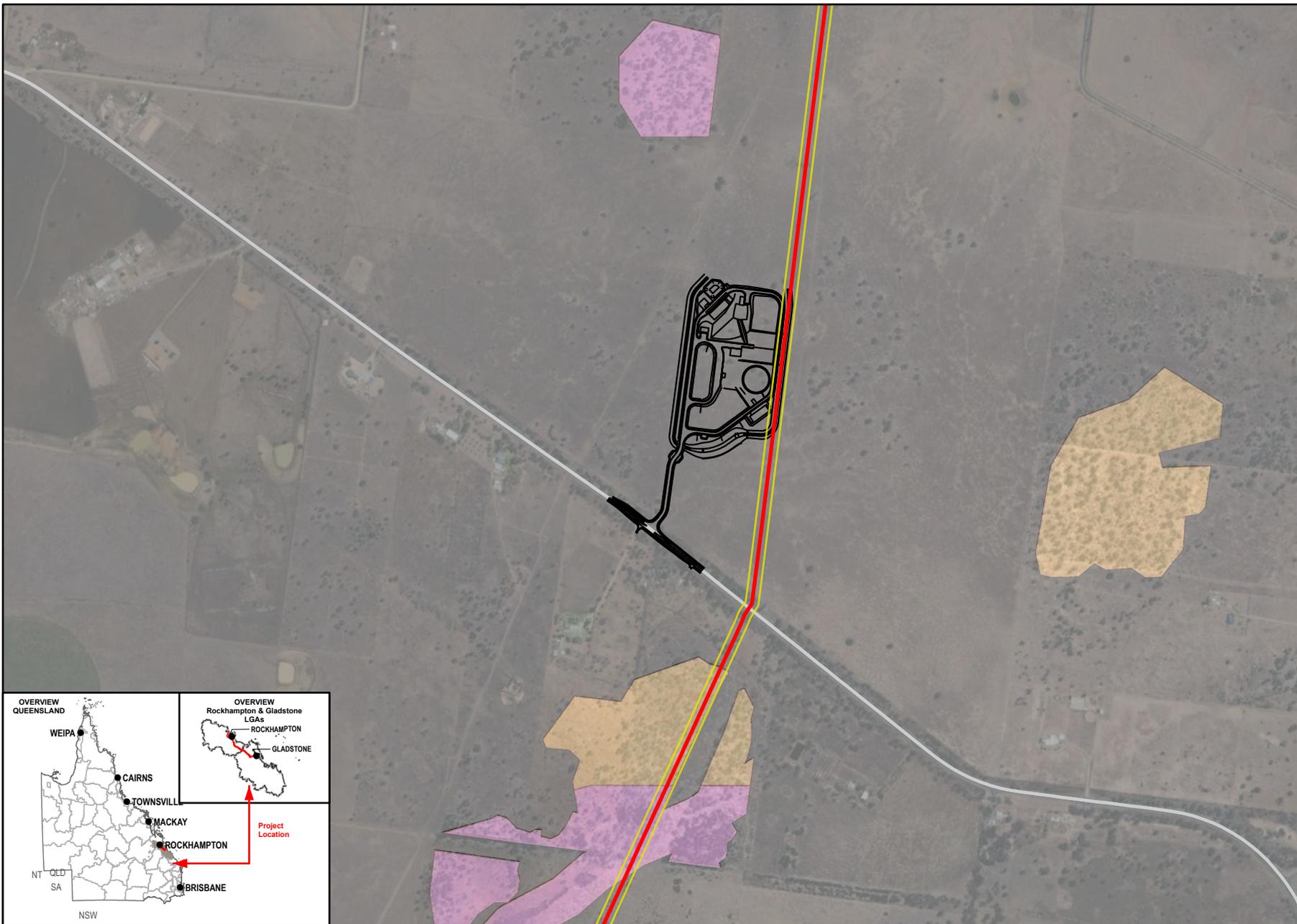


- Legend**
- Pipeline Alignment
  - Study Area
  - Category A or B area containing endangered
  - Category A or B area containing of concern
  - Category A or B area that is least concern
  - Category C or R area containing endangered
  - Category C or R area containing of concern
  - Category C or R area that is of least concern
  - Water
  - Non-remnant

**Data Sources:**  
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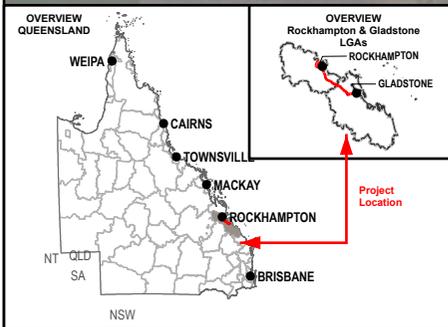
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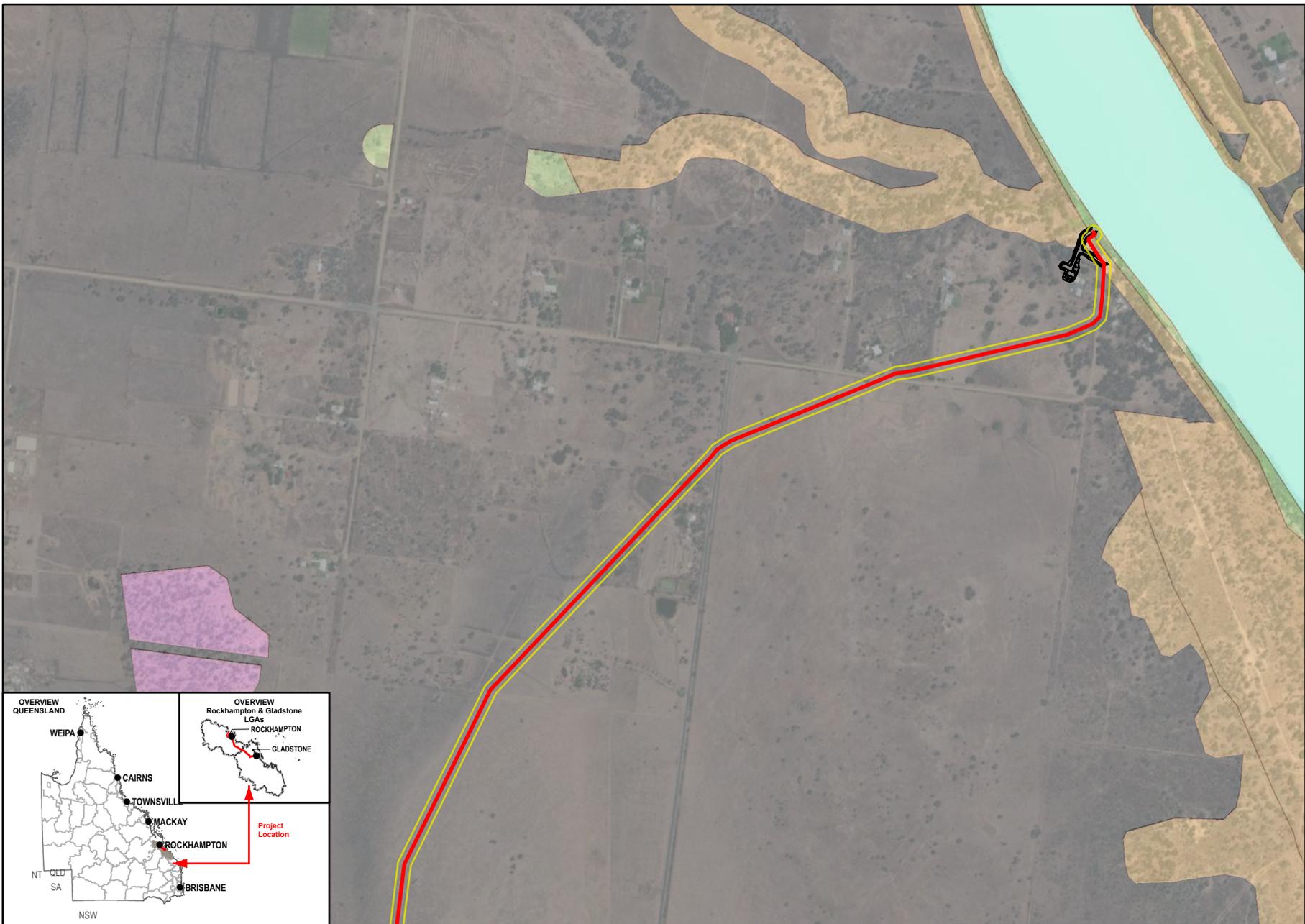
**Legend**

- Pipeline Alignment
- Study Area
- Main Roads
- Category A or B area containing endangered
- Category A or B area containing of concern
- Category A or B area that is least concern
- Category C or R area containing endangered
- Category C or R area containing of concern
- Category C or R area that is of least concern
- Water
- Non-remnant
- Alton Down WTP, Pump Station and Reservoir Layout

**Data Sources:**  
 1. Base Layers (Roads, waterway, locality, LGA etc) @ QSpatial, 2021  
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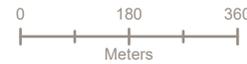
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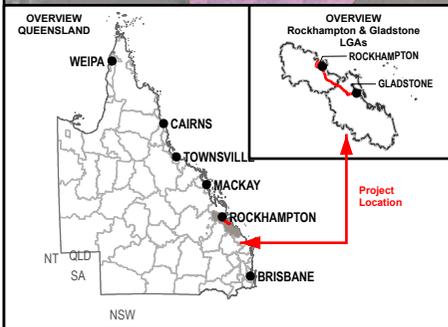
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- Legend**
- Pipeline Alignment
  - Study Area
  - Category A or B area containing endangered
  - Category A or B area containing of concern
  - Category A or B area that is least concern
  - Category C or R area containing endangered
  - Category C or R area containing of concern
  - Category C or R area that is of least concern
  - Water
  - Non-remnant
  - Fitzroy River Intake and Pump Station Layout

**Data Sources:**

1. Base Layers (Roads, waterway, locality, LGA etc) @ QSpatial, 2021
2. Imagery @ Esri, Maxar, GeoEye, Earthstar Geographics, CNES-Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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# **Appendix D**

**Protected plants flora survey report**



# Red Ash

Consulting



## Flora Survey Report

### Gladstone to Fitzroy Pipeline

### GHD Pty Ltd

### July 2022

---

#### Certification by a suitably qualified person

I certify that:

- (a) I have adhered to all statutory requirements and flora survey guideline requirements; and
- (b) In the area surveyed I have found plants (as detailed in this report) that are currently listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable or near threatened in the *Nature Conservation (Plants) Regulation 2020*; and
- (c) The flora survey report is an accurate and full account of the flora survey.

Signature:

Date:

17 July 2022

---

## Disclaimer

This report has been prepared on behalf of and for the exclusive use of GHD Pty Ltd (GHD) and the Gladstone Area Water Board (GAWB) and is subject to and issued in connection with the provisions of the agreement between Red Ash Consulting Pty Ltd and GHD (the Client). Red Ash Consulting Pty Ltd accepts no liability or responsibility for or in respect of any use of or reliance upon this report by any third party.

The purpose of this report and the associated services performed by Red Ash Consulting Pty Ltd is to provide a Flora Survey Report in accordance with the scope of services set out in the contract between Red Ash Consulting Pty Ltd and the Client. That scope of services was defined by the requests of the Client, by the time and budgetary constraints imposed by the Client, and by the availability of access to the site.

Red Ash Consulting Pty Ltd derived the data, opinions, conclusions and/or recommendations in this report primarily from visual inspections, examination of records in the public domain, interviews with individuals and previous works undertaken for the Project. The passage of time, manifestation of latent conditions or impacts of future events may require further exploration at the site and subsequent data analysis, and re-evaluation of the findings, observations and conclusions expressed in this report.

In preparing this report, Red Ash Consulting Pty Ltd has relied upon and presumed accurate certain information (or absence thereof) relative to the site provided by government officials and authorities, the Client and other identified herein. Except as otherwise stated in the report, Red Ash Consulting Pty Ltd has not attempted to verify the accuracy or completeness of any such information. Red Ash Consulting Pty Ltd assumes that all information obtained by Red Ash Consulting Pty Ltd from sources outside Red Ash Consulting Pty Ltd was correct at the time the information was issued. Red Ash Consulting Pty Ltd does not accept liability for errors or omissions in the report which resulted from errors or omissions in that information.

## Document Status

Revision Number	Date	Author	GHD Technical review
A	17 June 2022	Peter Moonie	Shelley Chadwick
0	21 July 2022	Peter Moonie	Shelley Chadwick

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# 1. Introduction

## 1.1 Background

The Gladstone Area Water Board (GAWB) has been appointed as the Delivery Management Proponent for pre-construction activities associated with the proposed Fitzroy to Gladstone Pipeline (FGP) (the project). The 116 km long pipeline extends from the Fitzroy River at Alton Downs, Rockhampton to GAWB's existing water infrastructure near Yarwun. The proposed construction corridor for the pipeline has a nominal width of 30 m. The project area is divided into the following three sections:

- Northern Section – approximately 15 km of pipeline, the intake facility of the southern bank of the Lower Fitzroy River and the pump station, and the Alton Downs Water Treatment Plant
- SGIC SDA – proposed infrastructure within the Stanwell to Gladstone Infrastructure Corridor State Development Area (SGIC SDA) comprising approximately 80 km of pipeline and the Raglan Pump Station and Reservoir
- GSDA – proposed infrastructure within the Gladstone State Development Area (GSDA) comprising approximately 21 km of pipeline and the Aldoga Reservoirs.

The project intersects several high risk flora trigger areas under the Queensland *Nature Conservation Act 1992* (NC Act). A WildNet record also exists for the near-threatened plant, *Macropteranthes leiocaulis*, within 100 m of the pipeline alignment within the SGIC SDA.

As per Section 141 of the *Nature Conservation (Plants) Regulation 2020* (NC (Plants) Reg), a flora survey in accordance with the *Flora Survey Guidelines – Protected Plants (2020)* was undertaken to determine if any extinct, extinct in the wild, critically endangered, vulnerable or near threatened flora species listed under the NC Act (herein referred to as EVNT plant species) occur within any of the associated clearing impact areas along the pipeline alignment. A targeted search for EVNT plant species was also undertaken within 100 m of the nearby *Macropteranthes leiocaulis* record adjacent to the SGIC SDA pipeline alignment.

As the proposed works do not meet the relevant exemption requirements under the NC(Plants) Reg, GHD Pty Ltd was engaged to complete a flora survey of the clearing impact area and provide advice on permitting and/or notification requirements under the protected plants framework.

## 1.2 Purpose

This report presents the findings of the flora survey undertaken from 21 - 24 February (Phase 1) and 5 April 2022 (Phase 2). It demonstrates compliance with the principles of the *Flora Survey Guidelines – Protected Plants (August 2020)* (referred to herein as the flora survey guidelines) and provides information necessary to support permitting or notification requirements under the protected plants legislative framework.

## 1.3 Key definitions

The following definitions are relevant to this report:

- Clearing footprint – the area to be cleared for construction of the pipeline (development footprint).
- Clearing impact area - the area where clearing of native vegetation will occur within the high risk trigger area, together with a surrounding 100 m buffer area to the extent that it occurs within the high risk trigger area.
- EVNT - extinct, extinct in the wild, critically endangered, vulnerable or near threatened flora species listed under the NC Act

## 1.4 Study area

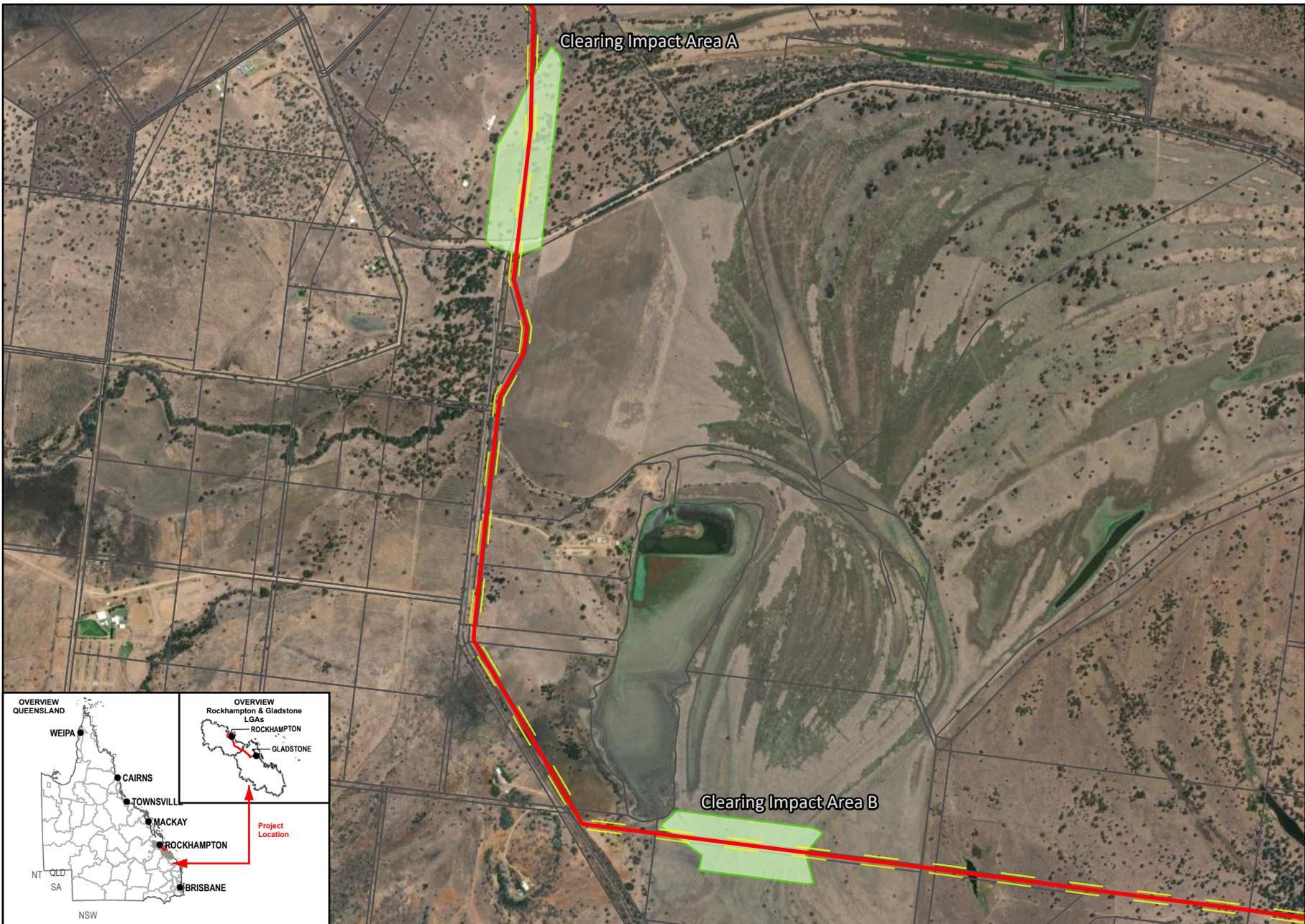
The study area encompassed six disjunct clearing impact areas (Table 1). The clearing impact areas, together with property boundaries and locations of the high risk flora trigger areas are shown in Figure 1-1 to Figure 1-3.

Table 1. Six Clearing Impact Areas within the pipeline alignments

Clearing Impact Area	Pipeline alignment
A and B	Northern Section
C and D	SGIC SDA
E and F	GSDA

## 1.5 Proposed Clearing

Clearing for the project is anticipated to commence in 2023.



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**Legend**

- Study Area
- Pipeline Alignment
- Property Boundary
- Clearing Impact Areas

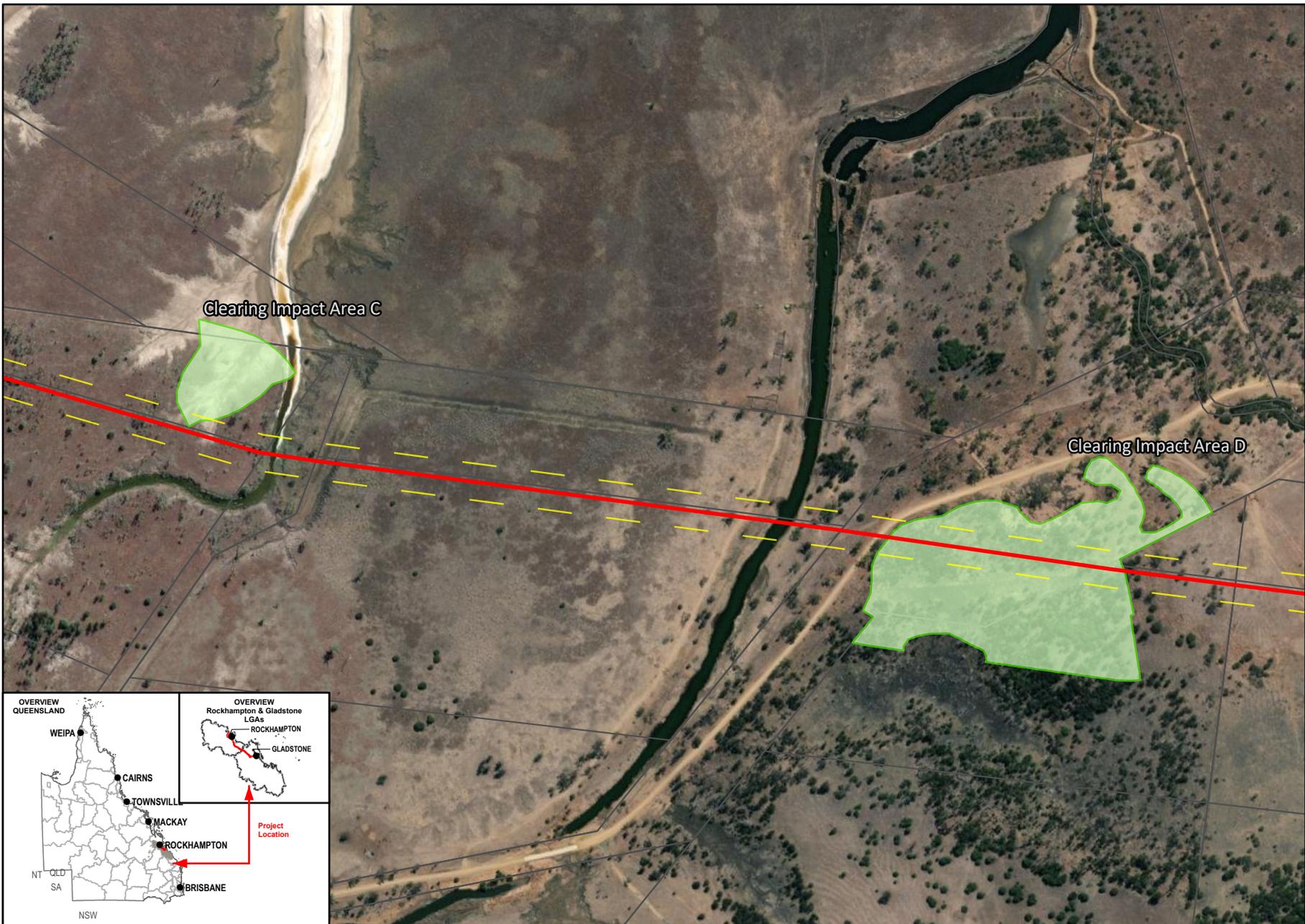
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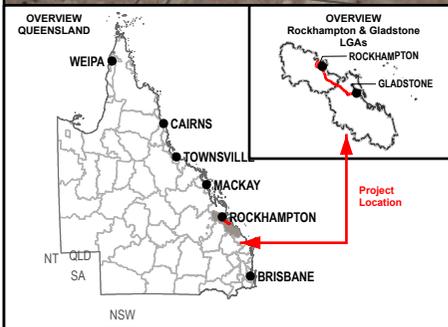
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- Study Area
  - Pipeline Alignment
  - Property Boundary
  - Clearing Impact Areas

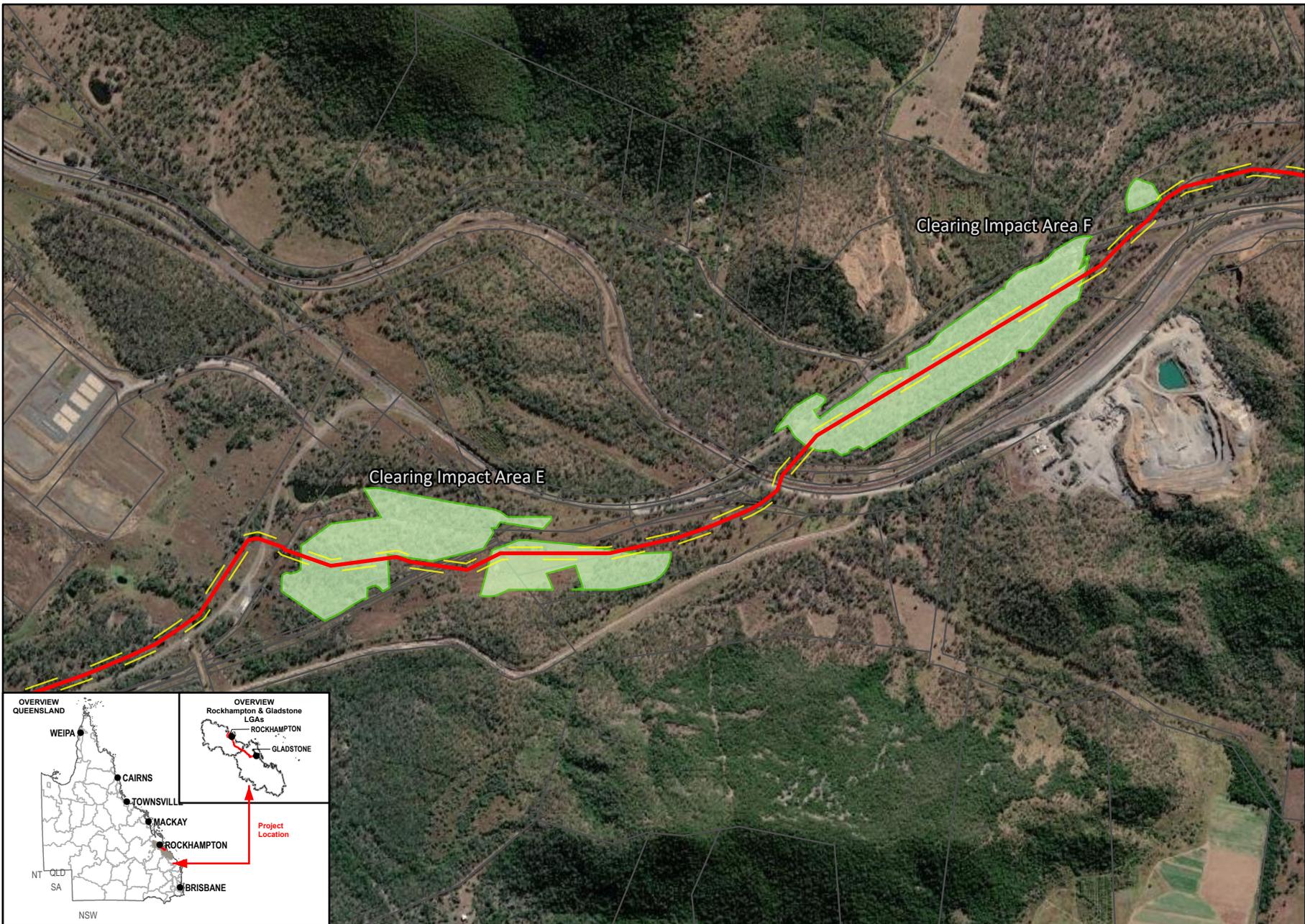
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**Legend**

- Study Area
- Pipeline Alignment
- Property Boundary
- Clearing Impact Areas

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Project Location

**Data Sources:**

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## 2. Methods

### 2.1 Desktop Assessment

Table 2 summarises the desktop searches that were undertaken for the survey. Where applicable, copies of these searches are provided in Appendix A. Searches for the Phase 1 and Phase 2 surveys were undertaken on 18 February 2022 and 11 March respectively.

Table 2. Desktop searches undertaken for the study area.

Search Tool	Administrative body	Search details
Protected Plants Flora Survey Trigger Area Map	Queensland Department of Environment and Science (DES)	The flora survey trigger area spatial layer was examined along the length of the pipeline alignment.
Protected Matters Search Tool	Commonwealth Department of Climate Change, Energy, the Environment and Water (DoCCEEW)	A search was undertaken along the length of the pipeline alignment, with a 10 km buffer applied.
Species Profile Search	DES	Search of closest spatial records of EVNT plants identified in desktop assessment.
Wildlife Online and Biomaps	DES	Wildlife Online - Point searches were undertaken at five locations along the pipeline alignment, with a 10 km buffer applied.  Biomaps - spatial search of study area.
Vegetation Management Map	Queensland Department of Resources (DoR)	The vegetation management regional ecosystem map (version 12) spatial layer was examined along the length of the pipeline alignments.
Atlas of Living Australia (ALA)	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Spatial search of study area.

The geographical information system (GIS) program QGIS was used to view and query a range of spatial resources and create the relevant maps within this report. Spatial data layers in GDA2020, were obtained from the Queensland Spatial Catalogue (State of Queensland, 2022).

### 2.2 Field Survey

A targeted search for EVNT plant species within the clearing impact areas was undertaken from 21 - 24 February and 5 April 2022 by consulting ecologists, Peter Moonie (Red Ash Consulting) and Shannon Blatchford (GHD Pty Ltd). Where an EVNT plant species was detected beyond the clearing impact area, a 100 m buffer around the plant was searched for additional individuals which may be present.

Table 3 provides a summary of how the field survey addresses the requirements of the flora survey guidelines.

Within this report, an asterisk (\*) has been used to identify a species as introduced.

Table 3. Comparison of flora survey with requirements of the flora survey guidelines

Key requirements of the <i>Flora Survey Guidelines – Protected Plants</i>	Limitations of this assessment	Justification
<p><b>Suitably qualified person</b></p> <p>Flora surveys to be co-ordinated and led by a suitably qualified person.</p>	No limitations or deviations were identified.	The flora survey was co-ordinated and led by a suitably qualified person who has appropriate qualifications and training, together with a minimum of 25 years of experience in undertaking EVNT flora surveys. Refer to Appendix B for further details.
<p><b>Survey timing</b></p> <p>The survey must be conducted at the most appropriate time of year to maximise the chance of detecting the EVNT species.</p>	No limitations were identified.	The seasonality of the flora survey was considered suitable for the detection of all EVNT plant species considered to have a moderate or high potential to occur in the clearing impact area. All such species can be identified from vegetative material throughout the year. Further comments regarding the potential for species to occur within the area surveyed are included in Appendix C.
<p><b>Study area extent</b></p> <p>The flora survey needs to assess the extent of the clearing impact area within the mapped high-risk area.</p>	No limitations were identified.	The survey encompassed the entire clearing footprint, clearing impact area and a 100 m buffer around known records. A spatial representation of survey effort expended during the on-ground survey (as recorded by the tracking function of a Garmin GPS) is provided in Figure 2-1 to Figure 2-3.
<p><b>Survey method</b></p> <p>The flora survey should adopt one of the prescribed survey methods unless an alternative is approved.</p>	No alternative survey methods were adopted.	Both the timed meander and systematic transect search methods (described in the flora survey guidelines) were utilised during the survey. Both methods were considered suitable for the detection of the EVNT plant species identified during the desktop assessment. The timed meander method was performed in farm paddocks where plant diversity was low and access, particularly through tall dense exotic grasses, was problematic. Dense tall grasses present may have concealed low growing EVNT plants; however, these areas tend to be substantially disturbed and are far less likely to contain EVNT species.
<p><b>Population survey</b></p> <p>If an EVNT plant species is recorded during the survey, a more comprehensive survey is required in order to collect data concerning the EVNT population and its habitat.</p>	Not applicable	Population surveys were not undertaken as no EVNT species were recorded during the survey.
<p><b>Plant identification</b></p> <p>Where a possible EVNT plant remains unidentified, the specimen must be lodged with the Queensland Herbarium for formal identification.</p>	No limitations were identified.	Most plant species encountered were identified in the field. Where this was not possible, specimen material was collected and later identified with the assistance of diagnostic keys and references. A specimen of a suspected <i>Macropteranthes fitzalanii</i> individual was also sent to the QLD herbarium for confirmation (ref: PT 263/22).

Key requirements of the <i>Flora Survey Guidelines – Protected Plants</i>	Limitations of this assessment	Justification
<b>WildNet reporting</b> If any EVNT plants are identified, a WildNet data entry form must be completed in accordance with the WildNet Data Entry Form Guidelines.	Not applicable	A WildNet data form was not completed for this project as specimens lodged with the Herbarium are incorporated into the WildNet database.

## 3. Desktop Assessment Results

### 3.1 EVNT plant species

The Wildlife Online search indicates that 11 EVNT plant species have been previously recorded within 10 km of the study area. Details of the closest record of each species (post 1980), and their respective status under the NC (Plants) Reg is provided in Table 4.

A likelihood of occurrence assessment for EVNT plants previously recorded or having the potential to occur within the clearing impact areas is provided in Appendix C. Of the species assessed, *Cycas megacarpa* and *Samadera bidwillii* were considered to have a high potential to occur in clearing impact areas D and E. *Cycas ophiolitica* was considered to have a moderate potential to occur in clearing impact areas A and B. All other species were considered to have low potential to occur due to a lack of suitable habitat within any of the clearing impact areas and a lack of historical records within the desktop search extent.

Table 4. EVNT plant species closest occurrence records

Scientific name	NC (Plants) Reg Status	Details of closest record (ALA (2022))
<i>Atalaya collina</i>	Endangered	Year collected - 1983 Catalogue number: BRI AQ0398489 Location: West of Spring Valley and Boyle's Roads, South-west of Mt Sugarloaf (2.7 km south of Clearing Impact Area E, Figure 1-3) Habitat: No detail provided
<i>Capparis humistrata</i>	Endangered	Year collected - 1984 Catalogue number: BRI AQ0394782 Location: Between Oombah and Goolara (7.8 km west of pump station) Habitat: No detail provided
<i>Cupaniopsis shirleyana</i>	Vulnerable	Year collected - 1981 Catalogue number: MEL 0687604A Location: Turkey Beach, east of Miriam Vale (127 km south-east of Clearing Impact Area E) Habitat: On sand near beach. Disturbed area. Note: A Wildnet record exists 1.68 km north of Clearing Impact Area B; however, this record is most likely <i>C. sp. Watalgan</i> rather than <i>C. shirleyana</i> .

Scientific name	NC (Plants) Reg Status	Details of closest record (ALA (2022))
<i>Cycas megacarpa</i>	Endangered	Year collected – 2015 Catalogue number: 39566505 Location: Location generalised but closest spatial record is shown 5.5 km west of pipeline alignment at Midgee. Habitat: No detail provided
<i>Dansiea elliptica</i>	Near threatened	Year collected - 1992 Catalogue number: BRI AQ0547608 Location: Boyles Road, 5km south south-west of Yarwun (3.4 km south of Clearing Impact Area D) Habitat: Remnant scrub
<i>Graptophyllum excelsum</i>	Near threatened	Year collected - 1997 Catalogue number: BRI AQ0572823 Location: State Forest 150, 13.5km SSW of Gladstone (13.93 km south-east of clearing Impact Area E) Habitat: Hilly terrain, valley with gravelly brown loam, chert. Tall open woodland (complex notophyll rainforest) of <i>Argyrodendron trifoliolatum</i> .
<i>Hernandia bivalvis</i>	Near threatened	Year collected - 1988 Catalogue number: BRI AQ0437245 Location: Mount Larcom Range (5.63 km north west of Clearing Impact Area E) Habitat: Rocky watercourse in dry rainforest
<i>Macropteranthes leiocaulis</i>	Near threatened	Year collected - 2015 Catalogue number: BRI AQ0950368 Location: 100 m south of the project corridor at Marble Creek (335 m west of Clearing Impact Area C) Habitat: Gallery rainforest
<i>Parsonsia larcomensis</i>	Vulnerable	Year collected - 1995 Catalogue number: BRI AQ0675500 Location: Mt Larcom south peak, 17.5km west north-west of Gladstone (4.09 km north of Clearing Impact Area D) Habitat: Very steep mountains, lithosols, skeletal soils, growing in rock, rocky soil
<i>Samadera bidwillii</i>	Vulnerable	Year collected - 1997 Catalogue number: BRI AQ0572784 Location: Mt Larcom (4.49 km north of Clearing Impact Area D) Habitat: Ridge top
<i>Zieria actites</i>	Critically Endangered	Year collected - 2011 Catalogue number: BRI AQ0818047 Location: Mt Larcom summit area; 2.5 km west south-west of Targinie (4.85 km north of Clearing Impact Area D) Habitat: Low shrubland of <i>Allocasuarina littoralis</i> , <i>Lophostemon confertus</i> , exposed trachyte rockfaces, western slopes

### 3.2 Essential habitat

According to the DoR Vegetation Management Report, the two polygons of regulated vegetation within the vicinity of Twelve Mile Road contain essential habitat for the EVNT flora species *Macropteranthes leiocaulis* (refer Appendix A).

### 3.3 Mapped Vegetation Communities

Regional Ecosystem (RE) mapping was used to guide determination of habitat areas. The mapped RE polygons (as depicted in the Vegetation Management Supporting Map) within each of the six clearing impact areas are listed in Table 5, together with the regulated vegetation category of each polygon and a description of each component RE. A copy of the mapping is included in Appendix A for reference.

Table 5. Mapped vegetation within clearing impact areas

RE polygon	Category	Description
Clearing Impact Area A		
11.3.3/ 11.3.4	B, R	11.3.3 – <i>Eucalyptus coolabah</i> woodland on alluvial plains. 11.3.4 – <i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains.
Clearing Impact Area B		
11.3.27	B	11.3.27 – Freshwater wetlands.
11.3.3/ 11.3.27	R	11.3.3 – <i>Eucalyptus coolabah</i> woodland on alluvial plains. 11.3.27 – Freshwater wetlands.
11.3.4/ 11.3.2/ 11.3.25/ 11.3.27x1b	R	11.3.4 – <i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains. 11.3.2 – <i>Eucalyptus populnea</i> woodland on alluvial plains. 11.3.25 – <i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines. 11.3.27x1b – Sedgeland to grasslands on Quaternary deposits.
Clearing Impact Area C		
11.1.2a	B	11.1.2a – Bare mud flats on Quaternary estuarine deposits, with very isolated individual stunted mangroves such as <i>Avicennia marina</i> and/or <i>Ceriops australis</i> .
Clearing Impact Area D		
11.3.26/ 11.11.16	C	11.3.26 – <i>Eucalyptus moluccana</i> or <i>E. microcarpa</i> woodland to open forest on margins of alluvial plains.
11.3.2/ 11.3.4	C, R	11.3.2 – <i>Eucalyptus populnea</i> woodland on alluvial plains. 11.3.4 – <i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains.
Clearing Impact Area E		
11.3.25	B	11.3.25 – <i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines.
11.11.4/ 11.11.15/ 11.11.4c/ 11.11.5/ 11.11.18	B	11.11.4 – <i>Eucalyptus crebra</i> woodland on old sedimentary rocks with varying degrees of metamorphism and folding. 11.11.15 – <i>Eucalyptus crebra</i> woodland to open woodland on deformed and metamorphosed sediments and interbedded volcanics. 11.11.4c – <i>Eucalyptus moluccana</i> dominated woodland on old sedimentary rocks. 11.11.5 – Microphyll vine forest +/- <i>Araucaria cunninghamii</i> on old sedimentary rocks with varying degrees of metamorphism and folding. 11.11.18 – Semi-evergreen vine thicket on old sedimentary rocks with varying degrees of metamorphism and folding.
11.3.26/ 11.3.4/ 11.11.4c	C, R	11.3.26 – <i>Eucalyptus moluccana</i> or <i>E. microcarpa</i> woodland to open forest on margins of alluvial plains. 11.3.4 – <i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains. 11.11.4c – <i>Eucalyptus moluccana</i> dominated woodland on old sedimentary rocks.

RE polygon	Category	Description
Clearing Impact Area F		
11.3.4/ 11.3.26/ 11.3.25	C	11.3.4 – <i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains. 11.3.26 – <i>Eucalyptus moluccana</i> or <i>E. microcarpa</i> woodland to open forest on margins of alluvial plains. 11.3.25 – <i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines.
11.3.25	B	11.3.25 – <i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines.

Regulated vegetation category Codes: B – remnant vegetation, C – high-value regrowth vegetation, R – regrowth vegetation within 50 metres of a watercourse in the Burdekin, Mackay, Whitsunday and Wet Tropics Great Barrier Reef catchments.

## 4. Field Survey Results

The field survey encompassed the entire clearing footprint, clearing impact area and a 100 m buffer around known records. A spatial representation of survey effort expended during the on-ground survey is provided in Figure 2-1 to Figure 2-3. Survey results are presented in the following sub-sections.

### 4.1 Habitat Types within Clearing Impact Areas

Habitat types present in the clearing impact areas in the study area are described in Table 6. Their extents are represented spatially in Figure 2-1 to Figure 2-3.

Table 6. Habitat types present in clearing impact areas

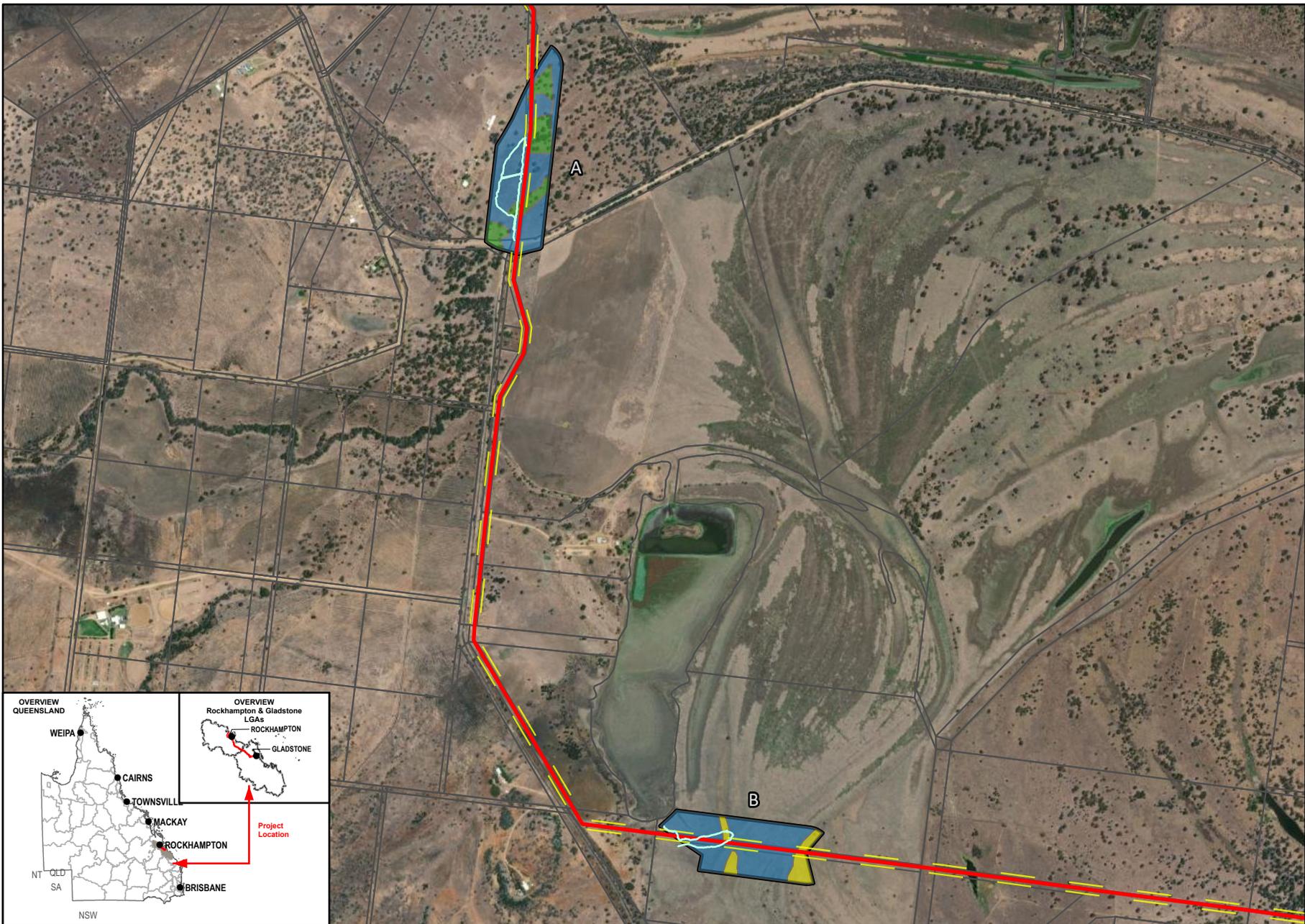
Habitat type	Description	Representative photograph
Clearing Impact Area A		
Highly disturbed (selectively cleared paddock with occasional mature trees)	Dense grassland dominated by <i>Megathyrsus maximus</i> *, <i>Urochloa mutica</i> *, <i>Dichanthium aristatum</i> *, <i>Eriochloa pseudoacrotricha</i> , <i>Echinochloa colona</i> *. Common herbs present included <i>Parthenium hysterophorus</i> *, <i>Aeschynomene indica</i> *, <i>Sesbania cannabina</i> , <i>Macroptilium lathyroides</i> *, <i>Sida</i> spp. Occasional mature <i>Eucalyptus tereticornis</i> , <i>Lysiphyllum hookeri</i> , <i>E. coolabah</i> , <i>Corymbia tessellaris</i> .	

Habitat type	Description	Representative photograph
Woodland on alluvial plain (11.3.3/11.3.4)	<p>T1 - <i>Eucalyptus tereticornis</i>, <i>E. coolabah</i> (12 – 18 m tall, 20 % cover).</p> <p>T2 - <i>Eucalyptus tereticornis</i>, <i>Lysiphyllum hookeri</i>, <i>E. coolabah</i>, <i>Corymbia tessellaris</i> (6-10 m tall, 10 % cover).</p> <p>G - <i>Eriochloa pseudoacrotricha</i>, <i>Megathyrsus maximus</i>*, <i>Urochloa mutica</i>*, <i>Parthenium hysterophorus</i>*, <i>Aeschynomene indica</i>*, <i>Sesbania cannabina</i>, <i>Macroptilium lathyroides</i>*, <i>Sida</i> spp. (0.3-1 m tall, 85% cover)</p>	
<b>Clearing Impact Area B</b>		
Highly disturbed (paddock)	<p>Dense grassland dominated by <i>Urochloa mutica</i>* with occasional herbs such as <i>Sesbania cannabina</i>, <i>Macroptilium lathyroides</i>*, <i>Abutilon incanum</i>*, <i>Parthenium hysterophorus</i>*, <i>Verbena rigida</i>*, <i>Cirsium vulgare</i>*.</p>	
Native grassland (11.3.27)	<p>Dense grassland dominated by <i>Eriochloa pseudoacrotricha</i>.</p>	
<b>Clearing Impact Area C</b>		
Samphire shrubland (11.1.2b)	<p>Samphire shrubland dominated by <i>Sporobolus virginicus</i>, <i>Tecticornia pergranulata</i> subsp. <i>queenslandica</i>, <i>Tecticornia indica</i>, <i>Sclerolaena muricata</i>, <i>Eriochloa</i> sp. <i>Chloris</i> sp. and <i>Atriplex muelleri</i>.</p>	

Habitat type	Description	Representative photograph
Grassland	Grassland dominated by <i>Aristida latifolia</i> , <i>Sporobolus</i> sp., <i>Eriochloa</i> sp., <i>Harissa martinii</i> * with emergent <i>Acacia salicina</i> and <i>Eremophila maculata</i> .	
<b>Clearing Impact Area D</b>		
Open forest on alluvial plain (11.3.1)	<p>T1 – <i>Casuarina cristata</i>, <i>Melaleuca bracteata</i>, <i>Eucalyptus populnea</i> (10-16 m tall, 70% cover).</p> <p>T2 – <i>C. cristata</i>, <i>M. bracteata</i>, <i>Diospyros geminata</i>, <i>Alectryon diversifolius</i>, <i>Denhamia oleaster</i> (2-5 m tall, 8% cover).</p> <p>S1 – <i>A. diversifolia</i>, <i>Breynia oblongifolia</i>, <i>C. cristata</i>, <i>M. bracteata</i> (0.5-2 m tall, 5% cover).</p> <p>G – <i>Eriochloa pseudoacrotricha</i>, <i>Chloris gayana</i>*, <i>Cyperus</i> spp., <i>Malvastrum americanum</i>, <i>Fimbristylis</i> sp. (0.5 m tall, 65% cover).</p>	
Open woodland on alluvial plain) 11.3.4/11.3.2	<p>T1 – <i>Eucalyptus tereticornis</i> (16-20 m tall, 7% cover).</p> <p>T2 – <i>Casuarina cristata</i>, <i>E. tereticornis</i>, <i>Eucalyptus populnea</i> (6-10 m tall, 70% cover).</p> <p>T3 – <i>C. cristata</i>, <i>Cryptostegia grandiflora</i>* (2-4 m tall, 8% cover).</p> <p>S1 – <i>C. cristata</i> (1 m tall, 2% cover)</p> <p>G – <i>Hyparrhenia rufa</i>*, <i>Eriochloa pseudoacrotricha</i>, <i>Marsilea drummondii</i>, <i>Diplachne fusca</i> (0.5 m tall, 20% cover).</p>	

Habitat type	Description	Representative photograph
Clearing Impact Area E		
<p>Woodland on metamorphic hills and rises – unit 1 (11.11.15/ 11.11.4)</p>	<p>T1 – <i>Eucalyptus crebra</i>, <i>Corymbia erythrophloia</i>, <i>C. tessellaris</i>, <i>E. tereticornis</i> (14-18 m tall, 40 % cover). T2 – T1 juveniles, <i>Acacia fasciculifera</i>, <i>Lophostemon suaveolens</i>, <i>A. disparrima</i> subsp. <i>disparrima</i> (2-8 m tall, 5 % cover). S1 - <i>A. disparrima</i> subsp. <i>disparrima</i>, <i>Vachellia bidwillii</i>, <i>A. fasciculifera</i> (1.3 m tall, 3 % cover). G – <i>Themeda triandra</i>, <i>Hyparrhenia rufa</i>*, <i>Megathyrsus maximus</i>*, <i>Bothriochloa pertusa</i>* (0.1 – 1 m tall, 85 % cover).</p>	
<p>Woodland on metamorphic hills and rises – unit 2 (11.11.4/ 11.11.15)</p>	<p>T1 – <i>Eucalyptus crebra</i>, <i>Corymbia citriodora</i>, <i>E. moluccana</i>, <i>E. exserta</i> (12-18 m tall, 25% cover). T2 – <i>E. crebra</i>, <i>C. erythrophloia</i>, (6-10 m, 8% cover). T3 - <i>E. crebra</i>, <i>C. erythrophloia</i>, <i>Petalostigma pubescens</i>, <i>Alphitonia excelsa</i> (2-4 m, 5 % cover). S1 – <i>A. excelsa</i>, <i>E. crebra</i>, <i>Denhamia cunninghamii</i> (1.6 m tall, 5 % cover). G – Mid-dense <i>Themeda triandra</i>, <i>Sida hackettiana</i>, <i>Bothriochloa pertusa</i>*, <i>Stylosanthes scabra</i>*</p>	
<p>Woodland on lower slopes and plains (11.3.4/ 11.11.4)</p>	<p>T1 – <i>Eucalyptus tereticornis</i>, <i>E. crebra</i>, <i>C. tessellaris</i>, <i>E. moluccana</i> (16 m tall, 25 % cover). T2 – T1 juveniles, <i>A. disparrima</i> subsp. <i>disparrima</i>, <i>Petalostigma pubescens</i>, <i>Corymbia intermedia</i> (2-8 m tall, 10 % cover). S1 – <i>Lantana camara</i>*, T1 juveniles (1 m tall, 3 % cover). G – <i>Cymbopogon refractus</i>, <i>Melinis repens</i>*, <i>Aristida</i> sp. <i>Cyanthillium cinereum</i> <i>Hyparrhenia rufa</i>*, <i>Megathyrsus maximus</i>* (0.1 – 0.7 m tall, 60%).</p>	
<p>Highly disturbed (sparse regrowth)</p>	<p>Very sparse regrowth of <i>Eucalyptus tereticornis</i>, <i>E. crebra</i>, and <i>Acacia</i> spp. over dense <i>Hyparrhenia rufa</i>*, <i>Megathyrsus maximus</i>*, <i>Bothriochloa pertusa</i>*</p>	

Habitat type	Description	Representative photograph
Clearing Impact Area F		
<p>Woodland fringing watercourse (11.3.25)</p>	<p>T1 – <i>Eucalyptus tereticornis</i>, <i>Corymbia tessellaris</i>, <i>C. intermedia</i> (20-26 m tall, 40 % cover).</p> <p>T2 – <i>Melaleuca quinquenervia</i>, <i>M. fluviatilis</i>, <i>Acacia disparrima</i> subsp. <i>disparrima</i>, <i>Lophostemon suaveolens</i>, <i>Euroschinus falcatus</i> (10-15 m tall, 20 % cover).</p> <p>T3 – <i>Cupaniopsis anacardioides</i>, <i>Timonius timon</i>, <i>Mallotus philippensis</i>, <i>Syzygium australe</i> (2-5 m tall, 10 % cover).</p> <p>S1 – <i>Ficus opposita</i>, <i>Senna pendula</i> var. <i>glabrata</i>*, <i>A. disparrima</i> subsp. <i>disparrima</i>, <i>M. quinquenervia</i>, <i>Clerodendrum floribundum</i>, <i>Acacia fasciculifera</i> (1.5 m tall, 2% cover).</p> <p>G – <i>Megathyrsus maximus</i>*, <i>Cyperus involucratus</i>*, <i>Lomandra hystrix</i> (0.3 – 1.5 m tall, 70%).</p>	
<p>Woodland on alluvial plains and open depressions (11.3.4/11.3.25)</p>	<p>T1 – <i>Eucalyptus tereticornis</i>, <i>Corymbia tessellaris</i>, <i>E. crebra</i> (25 m tall, 25 % cover).</p> <p>T2 – <i>E. tereticornis</i>, <i>C. tessellaris</i>, <i>E. crebra</i>, <i>Lophostemon suaveolens</i> (12 m tall, 20 % cover).</p> <p>T3 – <i>Planchonia careya</i>, <i>Acacia fasciculifera</i>, <i>A. disparrima</i> subsp. <i>disparrima</i>, <i>Ficus opposita</i> (4 m tall, 15 % cover).</p> <p>G – <i>Hyparrhenia rufa</i>*, <i>Megathyrsus maximus</i>* (0.1 – 1 m tall, 60%).</p>	



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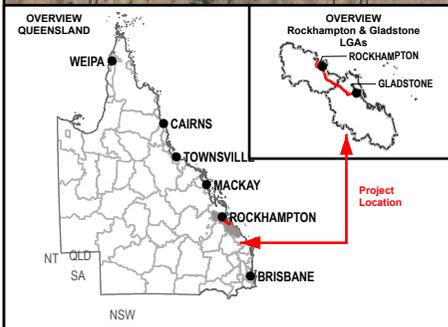
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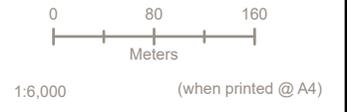
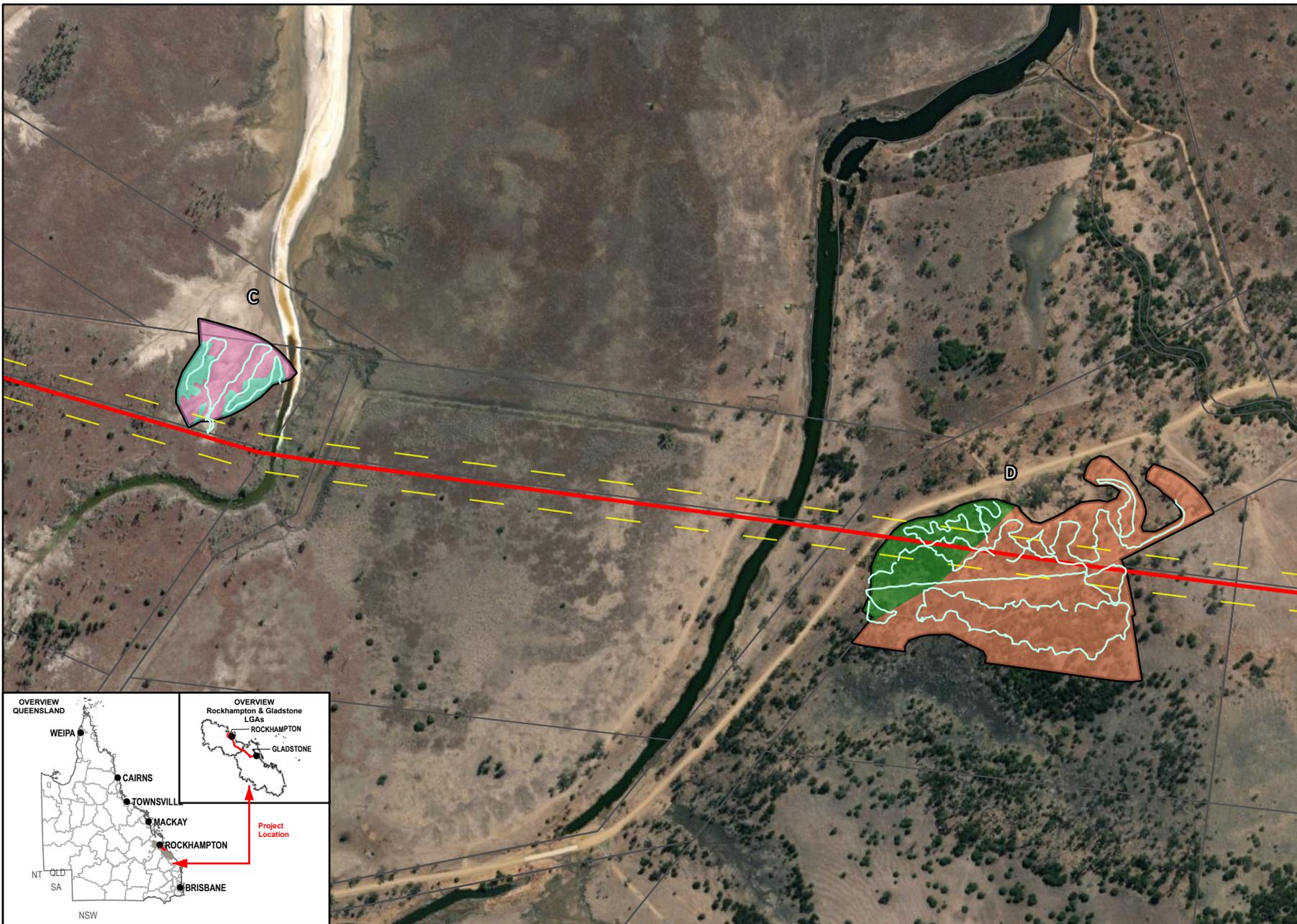
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- Study Area
  - Pipeline Alignment
  - Flora survey tracks
  - Property Boundary
  - Clearing Impact Area - Northern Section
- Flora survey habitat types - Northern Section**
- Highly disturbed
  - Native grassland
  - Woodland on alluvial plain

**Data Sources:**

1. Base Layers (Roads, waterway, locality, LGA etc) @ QSpatial, 2021
2. Imagery @ Esri, Maxar, GeoEye, Earthstar Geographics, CNES-Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

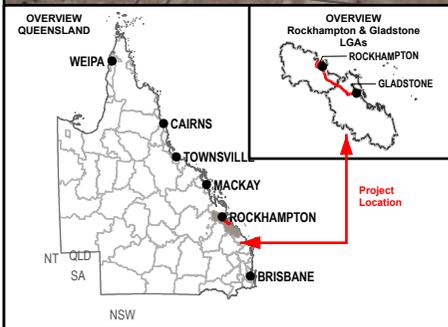
**SMEC Disclaimer:**  
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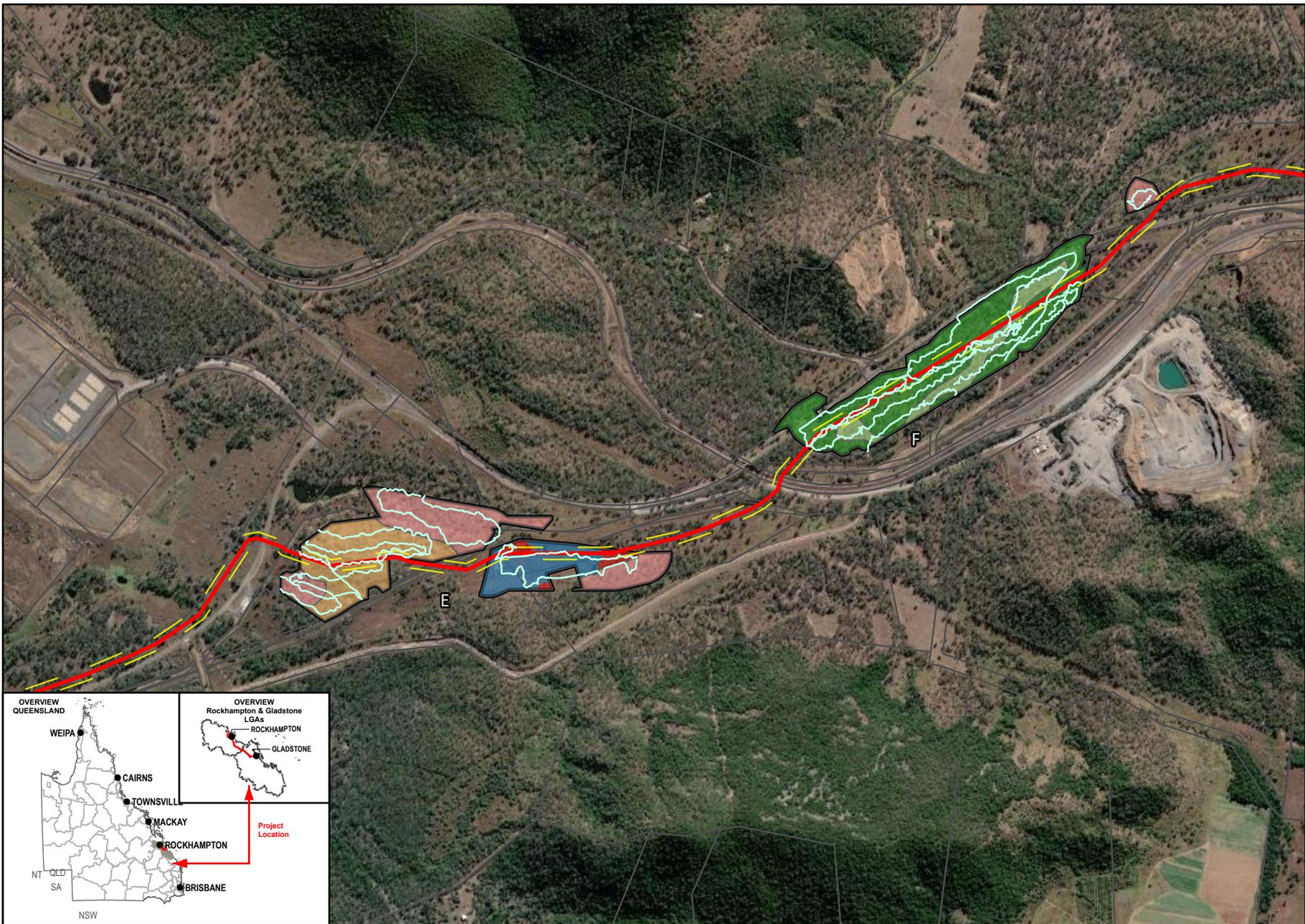
**Legend**

- Study Area
  - Pipeline Alignment
  - Flora survey tracks
  - Property Boundary
  - Clearing Impact Area - SGIC SDA
- Flora survey habitat types - SGIC**
- Grassland
  - Open forest on alluvial plain
  - Open woodland on alluvial plain
  - Samphire shrubland



**Data Sources:**  
 1. Base Layers (Roads, waterway, locality, LGA etc) @ QSpatial, 2021  
 2. Imagery @ Esri, Maxar, GeoEye, Earthstar Geographics, CNES-Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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- Legend**
- Study Area
  - Pipeline Alignment
  - Flora survey tracks
  - Property Boundary
  - Clearing Impact Area - GSDA
- Flora survey habitat types - GSDA**
- Highly disturbed
  - Woodland fringing watercourse
  - Woodland on alluvial plains and open depressions
  - Woodland on lower slopes and plains
  - Woodland on metamorphic hills and rises Unit 1
  - Woodland on metamorphic hills and rises Unit 2

**Data Sources:**

1. Base Layers (Roads, waterway, locality, LGA etc) @ QSpatial, 2021
2. Imagery @ Esri, Maxar, GeoEye, Earthstar Geographics, CNES-Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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## 4.2 EVNT Flora Species Recorded

No EVNT flora species were recorded within the study area during the field assessment. A voucher specimen of the plant identified by the Queensland Herbarium in 2015 as *Macropteranthes leiocaulis* at Marble Creek (- 23.6833, 150.7581) (BRI AQ0950368) was lodged with the herbarium on 11 May 2022 as its morphological features and supporting habitat appeared more closely aligned to *Macropteranthes fitzalanii*. The herbarium confirmed the specimen's identity as *Macropteranthes fitzalanii* on 30 May 2022 (Herbarium reference: ME:PT 263/22). A high level of confidence is assigned to this identification as a fruiting specimen was supplied for identification purposes. It appears that the name *Macropteranthes leiocaulis* was misapplied to this plant in 2015. Of note, the conservation status of *M. fitzalanii* under the NC Act was reclassified from near threatened to least concern in 2014.

## 5. Permitting/Notification Requirements

As no EVNT flora species were recorded during the survey, this report is to be submitted to DES to notify the department that the proposed clearing is exempt under the NC(Plants) Reg. The following timeframes are applicable to this project:

- The report must be provided at least one (1) week before commencement of clearing, and no later than 12 months after the flora survey was undertaken (as per the DES Code of Practice for the take and use of protected plants under an exemption).
- Clearing is to occur within 3 years after the day the flora survey was complete (NC(Plants)Reg Section 48).

## 6. References

Department of Environment and Heritage Protection (2020). Flora Survey Guidelines – Protected Plants. State of Queensland. Brisbane.

Department of Environment and Science (2022). Species Profile Search. Available at: <https://apps.des.qld.gov.au/species-search>. Accessed on 18 February and 11 March 2022.

Queensland Department of Natural Resources (DNR) (2000). Species Management Manual. Forest and Fauna Conservation and Ecology Section, Queensland Department of Natural Resources.

The State of Queensland (2021). Queensland Spatial Catalogue. Department of Natural Resources and Mines. Available from [www.data.qld.gov.au](http://www.data.qld.gov.au). Accessed on 18 February and 11 March 2022.

# Appendix A – Desktop Searches



# 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: 08/02/22 18:37:06

[Summary](#)

[Details](#)

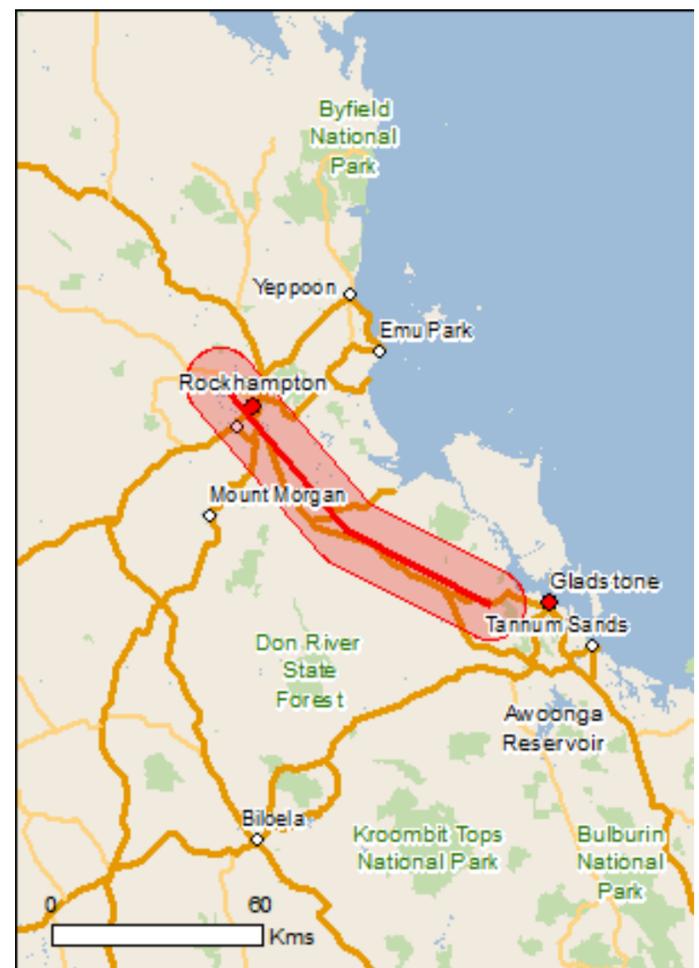
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

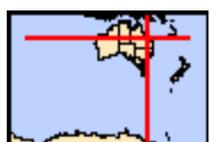
[Acknowledgements](#)



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[Coordinates](#)

[Buffer: 10.0Km](#)



# 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](#).

<a href="#">World Heritage Properties:</a>	1
<a href="#">National Heritage Places:</a>	1
<a href="#">Wetlands of International Importance:</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	9
<a href="#">Listed Threatened Species:</a>	62
<a href="#">Listed Migratory Species:</a>	59

## 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.

<a href="#">Commonwealth Land:</a>	3
<a href="#">Commonwealth Heritage Places:</a>	1
<a href="#">Listed Marine Species:</a>	101
<a href="#">Whales and Other Cetaceans:</a>	12
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	6
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	42
<a href="#">Nationally Important Wetlands:</a>	3
<a href="#">Key Ecological Features (Marine)</a>	None

# Details

## Matters of National Environmental Significance

### World Heritage Properties [\[ Resource Information \]](#)

Name	State	Status
<a href="#">Great Barrier Reef</a>	QLD	Declared property

### National Heritage Properties [\[ Resource Information \]](#)

Name	State	Status
Natural		
<a href="#">Great Barrier Reef</a>	QLD	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
<a href="#">Brigalow (Acacia harpophylla dominant and co-dominant)</a>	Endangered	Community known to occur within area
<a href="#">Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community</a>	Endangered	Community may occur within area
<a href="#">Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland</a>	Endangered	Community likely to occur within area
<a href="#">Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions</a>	Endangered	Community may occur within area
<a href="#">Lowland Rainforest of Subtropical Australia</a>	Critically Endangered	Community likely to occur within area
<a href="#">Poplar Box Grassy Woodland on Alluvial Plains</a>	Endangered	Community likely to occur within area
<a href="#">Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions</a>	Endangered	Community likely to occur within area
<a href="#">Subtropical and Temperate Coastal Saltmarsh</a>	Vulnerable	Community likely to occur within area
<a href="#">Weeping Myall Woodlands</a>	Endangered	Community likely to occur within area

### Listed Threatened Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
Birds		
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area

Name	Status	Type of Presence
<a href="#">Cyclopsitta diophthalma coxeni</a> Coxen's Fig-Parrot [59714]	Endangered	Species or species habitat may occur within area
<a href="#">Epthianura crocea macgregori</a> Capricorn Yellow Chat, Yellow Chat (Dawson) [67090]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Erythrorchis radiatus</a> Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Fregetta grallaria grallaria</a> White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Geophaps scripta scripta</a> Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Limosa lapponica baueri</a> Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Neochmia ruficauda ruficauda</a> Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Pachyptila turtur subantarctica</a> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Poephila cincta cincta</a> Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
<a href="#">Pterodroma neglecta neglecta</a> Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Turnix melanogaster</a> Black-breasted Button-quail [923]	Vulnerable	Species or species habitat known to occur within area

## Mammals

Name	Status	Type of Presence
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Dasyurus hallucatus</a> Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area
<a href="#">Macroderma gigas</a> Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Nyctophilus corbeni</a> Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
<a href="#">Petauroides volans</a> Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
<a href="#">Xeromys myoides</a> Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat known to occur within area
<b>Plants</b>		
<a href="#">Atalaya collina</a> Yarwun Whitewood [55417]	Endangered	Species or species habitat known to occur within area
<a href="#">Bosistoa transversa</a> Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Bulbophyllum globuliforme</a> Miniature Moss-orchid, Hoop Pine Orchid [6649]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Cossinia australiana</a> Cossinia [3066]	Endangered	Species or species habitat likely to occur within area
<a href="#">Cupaniopsis shirleyana</a> Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Cycas megacarpa</a> [55794]	Endangered	Species or species habitat known to occur within area
<a href="#">Cycas ophiolitica</a> [55797]	Endangered	Species or species habitat known to occur within area
<a href="#">Dichanthium setosum</a> bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
<a href="#">Eucalyptus raveretiana</a> Black Ironbox [16344]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Macadamia integrifolia</a> Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Marsdenia brevifolia</a> [64585]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Parsonsia larcomensis</a> Mt Larcom Silk Pod [64587]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Phaius australis</a> Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
<a href="#">Samadera bidwillii</a> Quassia [29708]	Vulnerable	Species or species habitat known to occur within area
<b>Reptiles</b>		
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Delma torquata</a> Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
<a href="#">Denisonia maculata</a> Ornamental Snake [1193]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Egernia rugosa</a> Yakka Skink [1420]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Elseya albagula</a> Southern Snapping Turtle, White-throated Snapping Turtle [81648]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Furina dunmali</a> Dunmall's Snake [59254]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Rheodytes leukops</a> Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
<b>Sharks</b>		
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Pristis zijsron</a> Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	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
<b>Migratory Marine Birds</b>		
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat known to occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Calonectris leucomelas</a> Streaked Shearwater [1077]		Species or species habitat may occur within area
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Sternula albifrons</a> Little Tern [82849]		Species or species habitat may occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<b>Migratory Marine Species</b>		
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area
<a href="#">Carcharhinus longimanus</a> Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or

Name	Threatened	Type of Presence
<a href="#">Crocodylus porosus</a> Salt-water Crocodile, Estuarine Crocodile [1774]		related behaviour known to occur within area  Species or species habitat likely to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Dugong dugon</a> Dugong [28]		Species or species habitat known to occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Lamna nasus</a> Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Manta alfredi</a> Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
<a href="#">Manta birostris</a> Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Orcaella heinsohni</a> Australian Snubfin Dolphin [81322]		Species or species habitat likely to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area
<a href="#">Pristis zijsron</a> Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
<a href="#">Sousa chinensis</a> Indo-Pacific Humpback Dolphin [50]		Breeding known to occur within area
<b>Migratory Terrestrial Species</b>		
<a href="#">Cuculus optatus</a> Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
<a href="#">Monarcha trivirgatus</a> Spectacled Monarch [610]		Species or species habitat known to occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<b>Migratory Wetlands Species</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]		Roosting known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Roosting known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area
<a href="#">Limnodromus semipalmatus</a> Asian Dowitcher [843]		Species or species habitat may occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area

Name	Threatened	Type of Presence
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area
<a href="#">Pluvialis squatarola</a> Grey Plover [865]		Roosting known to occur within area
<a href="#">Tringa brevipes</a> Grey-tailed Tattler [851]		Roosting known to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]		Roosting known to occur within area

## Other Matters Protected by the EPBC Act

### Commonwealth Land [\[ Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Defence - LOGISTIC SUPPORT DEPOT - ROCKHAMPTON
Defence - ROCKHAMPTON AIRFIELD
Defence - ROCKHAMPTON TRAINING DEPOT

### Commonwealth Heritage Places [\[ Resource Information \]](#)

Name	State	Status
Historic		
<a href="#">ABC Radio Studios</a>	QLD	Listed place

### 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		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat known to occur within area
<a href="#">Anseranas semipalmata</a> Magpie Goose [978]		Species or species habitat may occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]		Breeding likely to occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]		Roosting known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Roosting known to occur within area

Name	Threatened	Type of Presence
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Calonectris leucomelas</a> Streaked Shearwater [1077]		Species or species habitat may occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Charadrius ruficapillus</a> Red-capped Plover [881]		Roosting known to occur within area
<a href="#">Chrysococcyx osculans</a> Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
<a href="#">Fregata ariel</a> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
<a href="#">Fregata minor</a> Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
<a href="#">Heteroscelus brevipes</a> Grey-tailed Tattler [59311]		Roosting known to occur within area
<a href="#">Himantopus himantopus</a> Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Limnodromus semipalmatus</a> Asian Dowitcher [843]		Species or species habitat may occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat likely to occur within area
<a href="#">Monarcha trivirgatus</a> Spectacled Monarch [610]		Species or species habitat known to occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area
<a href="#">Pachyptila turtur</a> Fairy Prion [1066]		Species or species habitat likely to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area
<a href="#">Pluvialis squatarola</a> Grey Plover [865]		Roosting known to occur within area
<a href="#">Recurvirostra novaehollandiae</a> Red-necked Avocet [871]		Roosting known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<a href="#">Rostratula benghalensis (sensu lato)</a> Painted Snipe [889]	Endangered*	Species or species habitat known to occur within area
<a href="#">Sterna albifrons</a> Little Tern [813]		Species or species habitat may occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]		Roosting known to occur within area

Fish

Name	Threatened	Type of Presence
<a href="#">Acentronura tentaculata</a> Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
<a href="#">Campichthys tryoni</a> Tryon's Pipefish [66193]		Species or species habitat may occur within area
<a href="#">Choeroichthys brachysoma</a> Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
<a href="#">Corythoichthys amplexus</a> Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
<a href="#">Corythoichthys flavofasciatus</a> Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
<a href="#">Corythoichthys haematopterus</a> Reef-top Pipefish [66201]		Species or species habitat may occur within area
<a href="#">Corythoichthys intestinalis</a> Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
<a href="#">Corythoichthys ocellatus</a> Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area
<a href="#">Corythoichthys paxtoni</a> Paxton's Pipefish [66204]		Species or species habitat may occur within area
<a href="#">Corythoichthys schultzi</a> Schultz's Pipefish [66205]		Species or species habitat may occur within area
<a href="#">Doryrhamphus excisus</a> Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
<a href="#">Festucalex cinctus</a> Girdled Pipefish [66214]		Species or species habitat may occur within area
<a href="#">Filicampus tigris</a> Tiger Pipefish [66217]		Species or species habitat may occur within area
<a href="#">Halicampus dunckeri</a> Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
<a href="#">Halicampus grayi</a> Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
<a href="#">Halicampus nitidus</a> Glittering Pipefish [66224]		Species or species habitat may occur within area
<a href="#">Halicampus spinirostris</a> Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
<a href="#">Hippichthys cyanospilos</a> Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
<a href="#">Hippichthys heptagonus</a> Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area
<a href="#">Hippichthys penicillus</a> Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
<a href="#">Hippocampus bargibanti</a> Pygmy Seahorse [66721]		Species or species habitat may occur within area
<a href="#">Hippocampus kuda</a> Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
<a href="#">Hippocampus planifrons</a> Flat-face Seahorse [66238]		Species or species habitat may occur within area
<a href="#">Hippocampus zebra</a> Zebra Seahorse [66241]		Species or species habitat may occur within area
<a href="#">Lissocampus runa</a> Javelin Pipefish [66251]		Species or species habitat may occur within area
<a href="#">Micrognathus andersonii</a> Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area
<a href="#">Micrognathus brevis</a> thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area
<a href="#">Nannocampus pictus</a> Painted Pipefish, Reef Pipefish [66263]		Species or species habitat may occur within area
<a href="#">Solegnathus hardwickii</a> Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
<a href="#">Solenostomus cyanopterus</a> Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
<a href="#">Solenostomus paradoxus</a> Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area
<a href="#">Syngnathoides biaculeatus</a> Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
<a href="#">Trachyrhamphus bicoarctatus</a> Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
<b>Mammals</b>		
<a href="#">Dugong dugon</a> Dugong [28]		Species or species habitat known to occur within area
<b>Reptiles</b>		
<a href="#">Acalyptophis peronii</a> Horned Seasnake [1114]		Species or species habitat may occur within area
<a href="#">Aipysurus duboisii</a> Dubois' Seasnake [1116]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
<a href="#">Aipysurus eydouxii</a> Spine-tailed Seasnake [1117]		Species or species habitat may occur within area
<a href="#">Aipysurus laevis</a> Olive Seasnake [1120]		Species or species habitat may occur within area
<a href="#">Astrotia stokesii</a> Stokes' Seasnake [1122]		Species or species habitat may occur within area
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Crocodylus porosus</a> Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Disteira kingii</a> Spectacled Seasnake [1123]		Species or species habitat may occur within area
<a href="#">Disteira major</a> Olive-headed Seasnake [1124]		Species or species habitat may occur within area
<a href="#">Emydocephalus annulatus</a> Turtle-headed Seasnake [1125]		Species or species habitat may occur within area
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Hydrophis elegans</a> Elegant Seasnake [1104]		Species or species habitat may occur within area
<a href="#">Lapemis hardwickii</a> Spine-bellied Seasnake [1113]		Species or species habitat may occur within area
<a href="#">Laticauda colubrina</a> a sea krait [1092]		Species or species habitat may occur within area
<a href="#">Laticauda laticaudata</a> a sea krait [1093]		Species or species habitat may occur within area
<a href="#">Lepidochelys olivacea</a> Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Pelamis platurus</a> Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans		[ Resource Information ]
Name	Status	Type of Presence
<b>Mammals</b>		
<a href="#">Balaenoptera acutorostrata</a> Minke Whale [33]		Species or species habitat may occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat may occur within area
<a href="#">Delphinus delphis</a> Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
<a href="#">Grampus griseus</a> Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Orcaella brevirostris</a> Irrawaddy Dolphin [45]		Species or species habitat likely to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area
<a href="#">Sousa chinensis</a> Indo-Pacific Humpback Dolphin [50]		Breeding known to occur within area
<a href="#">Stenella attenuata</a> Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
<a href="#">Tursiops aduncus</a> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
<a href="#">Tursiops truncatus s. str.</a> Bottlenose Dolphin [68417]		Species or species habitat may occur within area

## Extra Information

State and Territory Reserves		[ Resource Information ]
Name	State	
Calliope	QLD	
Long Island Bend	QLD	
Mount Archer	QLD	
Pindari	QLD	
Rockhampton Pistol Club	QLD	
Rundle Range	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 Resources Audit, 2001.

Name	Status	Type of Presence
<b>Birds</b>		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		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
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
<b>Frogs</b>		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
<b>Mammals</b>		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		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
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur

Name	Status	Type of Presence
Oryctolagus cuniculus Rabbit, European Rabbit [128]		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
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
<b>Plants</b>		
Acacia nilotica subsp. indica Prickly Acacia [6196]		Species or species habitat may occur within area
Andropogon gayanus Gamba Grass [66895]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus africanus Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area
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
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		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]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species

Name	Status	Type of Presence
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		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
Prosopis spp. Mesquite, Algaroba [68407]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		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
Vachellia nilotica Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul [84351]		Species or species habitat likely to occur within area

### Reptiles

Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat may occur within area

### Nationally Important Wetlands

[ Resource Information ]

Name	State
<a href="#">Fitzroy River Delta</a>	QLD
<a href="#">Fitzroy River Floodplain</a>	QLD
<a href="#">Port Curtis</a>	QLD

# 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

-23.8486 151.1024,-23.6784 150.7369,-23.333 150.4122

# Acknowledgements

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

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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# Queensland Government

## WildNet species list

Search Criteria: Species List for a Specified Point  
Species: Plants (including other non-animals such as fungi and protists)  
Type: All  
Queensland status: Rare and threatened species  
Records: All  
Date: All  
Latitude: -23.3315  
Longitude: 150.4129  
Distance: 10  
Email: peter@redashconsulting.com.au  
Date submitted: Friday 11 Feb 2022 11:21:31  
Date extracted: Friday 11 Feb 2022 11:30:02

The number of records retrieved = 1

### **Disclaimer**

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Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.

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Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Capparaceae	<i>Capparis humistrata</i>			E		1/1

#### CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.

The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.

The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).

This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.



# Queensland Government

## WildNet species list

Search Criteria: Species List for a Specified Point  
Species: Plants (including other non-animals such as fungi and protists)  
Type: All  
Queensland status: Rare and threatened species  
Records: All  
Date: All  
Latitude: -23.8504  
Longitude: 151.0873  
Distance: 10  
Email: peter@redashconsulting.com.au  
Date submitted: Friday 11 Feb 2022 11:23:56  
Date extracted: Friday 11 Feb 2022 11:30:10

The number of records retrieved = 10

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Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Acanthaceae	<i>Graptophyllum excelsum</i>			NT		3
plants	land plants	Apocynaceae	<i>Parsonsia larcomensis</i>			V	V	7/7
plants	land plants	Combretaceae	<i>Dansiea elliptica</i>			NT		6/4
plants	land plants	Combretaceae	<i>Macropteranthes leiocaulis</i>			NT		4/2
plants	land plants	Cycadaceae	<i>Cycas megacarpa</i>			E	E	6/4
plants	land plants	Hernandiaceae	<i>Hernandia bivalvis</i>	cudgerie		NT		6/3
plants	land plants	Rutaceae	<i>Zieria actites</i>	Mt Larcom stink bush		CR		6/6
plants	land plants	Sapindaceae	<i>Atalaya collina</i>			E	E	12/11
plants	land plants	Sapindaceae	<i>Cupaniopsis shirleyana</i>	wedge-leaf tuckeroo		V	V	3/1
plants	land plants	Simaroubaceae	<i>Samadera bidwillii</i>			V	V	4/4

#### CODES

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This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.



## **Vegetation management report**

For Lot: 84 Plan: DS185

10/03/2022

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

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# Recent changes

## Updated mapping

Updated vegetation mapping was released on 8 September 2021 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their protected plant and koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;
- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 84 Plan: DS185, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
84	DS185	Freehold	1,054,710
A	SP226062	Easement	262,100

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 84 Plan: DS185, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Rockhampton Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Marlborough Plains

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval.

Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 84 Plan: DS185

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 105.53ha**

Vegetation category	Area (ha)
Category B	0.9
Category C	12.2
Category R	< 0.1
Category X	92.4

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

**Reference number**

2012/004185

2009/004329



## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.1.2	Least concern	B	0.90	Samphire forbland on marine clay plains	Very sparse
11.11.16	Of concern	C	2.33	Eucalyptus cambageana, Acacia harpophylla open forest to woodland on old sedimentary rocks with varying degrees of metamorphism and folding. Lowlands	Mid-dense
11.11.16	Of concern	R	less than 0.01	Eucalyptus cambageana, Acacia harpophylla open forest to woodland on old sedimentary rocks with varying degrees of metamorphism and folding. Lowlands	Mid-dense
11.3.1	Endangered	C	0.15	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.1	Endangered	R	less than 0.01	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Mid-dense
11.3.2	Of concern	C	5.57	Eucalyptus populnea woodland on alluvial plains	Sparse
11.3.2	Of concern	R	0.02	Eucalyptus populnea woodland on alluvial plains	Sparse
11.3.25	Least concern	C	0.15	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.25	Least concern	R	less than 0.01	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Sparse
11.3.26	Least concern	C	0.29	Eucalyptus moluccana or E. microcarpa woodland to open forest on margins of alluvial plains	Sparse
11.3.26	Least concern	R	less than 0.01	Eucalyptus moluccana or E. microcarpa woodland to open forest on margins of alluvial plains	Sparse
11.3.4	Of concern	C	3.72	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
11.3.4	Of concern	R	0.01	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
non-rem	None	X	92.39	None	None

Please note:

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

2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

### 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

### 3.4 Wetlands

There are no vegetation management wetlands present on this property.

### 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

#### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1785	Geophaps scripta scripta	squatter pigeon (southern subspecies)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.
1878	Calidris ferruginea	curlew sandpiper	CE	Foraging on intertidal mudflat in sheltered estuaries, bays, inlets and lagoons; non-tidal swamps and inland ephemeral and permanent lakes, dams or waterholes. Roost on shingle/sand/shell beaches, saltmarsh, mangrove and close to wetlands.	Sea level to 100m.	Sand and mud substrates.	Associated with coastlines and coastal and inland wetlands.
7667	Macropteranth es leiocaulis	None	NT	deciduous vine thicket; semi-evergreen vine thicket; brigalow-semi-evergreen vine thicket; softwood scrub; Araucarian microphyll or simple microphyll vine forest; brigalow/belah scrub	0 to 400 m	duplex soil with sandy clay loam surface or loam to clay loam or heavy clay soil	gentle to steep hill slope, steep ridge line, plain, alluvial flat, watercourse

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
22459	Ephianura crocea macgregori	yellow chat (Dawson)	E	Swampy grassland (salt couch Sporobolus virginicus, water couch, reeds Schoenoplectus littoralis) and saline herbland (samphire Halosarcia) on marine plain with a network of braided drainage lines.	Sea level to 100m.	None	Marine plains.

Label	Regional Ecosystem (mandatory unless otherwise specified)
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.18, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.5, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.9-10.25, 12.9-10.26, 12.9-10.28, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10
1878	2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.1.6, 7.1.1, 7.1.2, 7.1.3, 8.1.1, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 11.1.4, 12.1.2, 12.1.3.
7667	11.3.1, 11.3.11, 11.4.1, 11.5.15, 11.11.5, 11.11.14, 11.11.18, 11.12.4, 12.11.4, 12.11.12, 12.12.13
22459	8.1.2, 8.1.3, 8.1.4, 8.3.4, 11.1.1, 11.1.2, 11.1.3, 11.3.24, 11.3.27, 12.1.2

### 3.6 Area Management Plan(s)

Nil

### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Coastal

\*See also Map 4.3

### 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 84 Plan: DS185.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

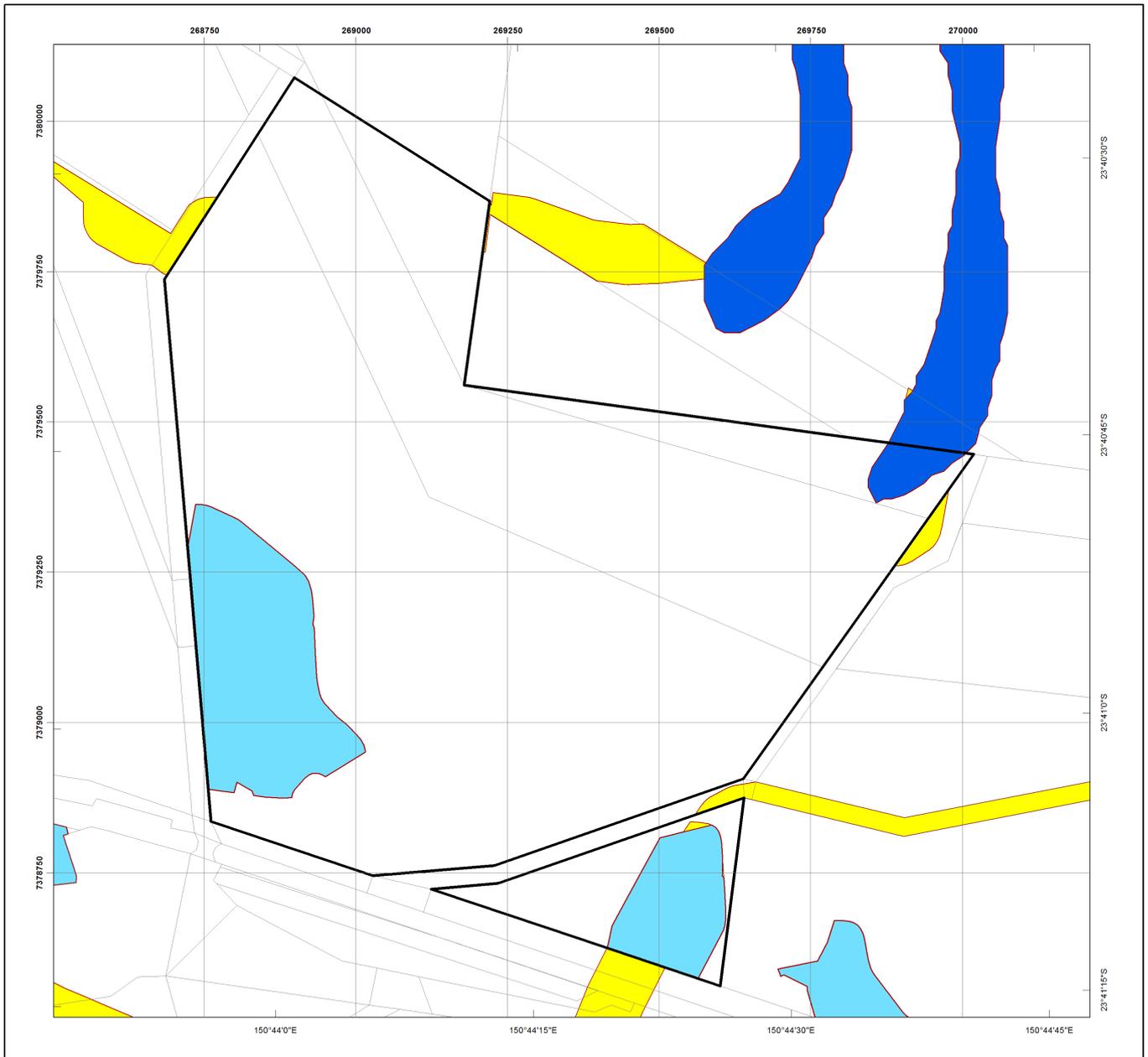
### **Coastal/non-coastal map**

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

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

The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

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



This product is projected into:  
GDA 1994 MGA Zone 56

### Disclaimer:

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

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

Land parcel boundaries are provided as locational aid only.

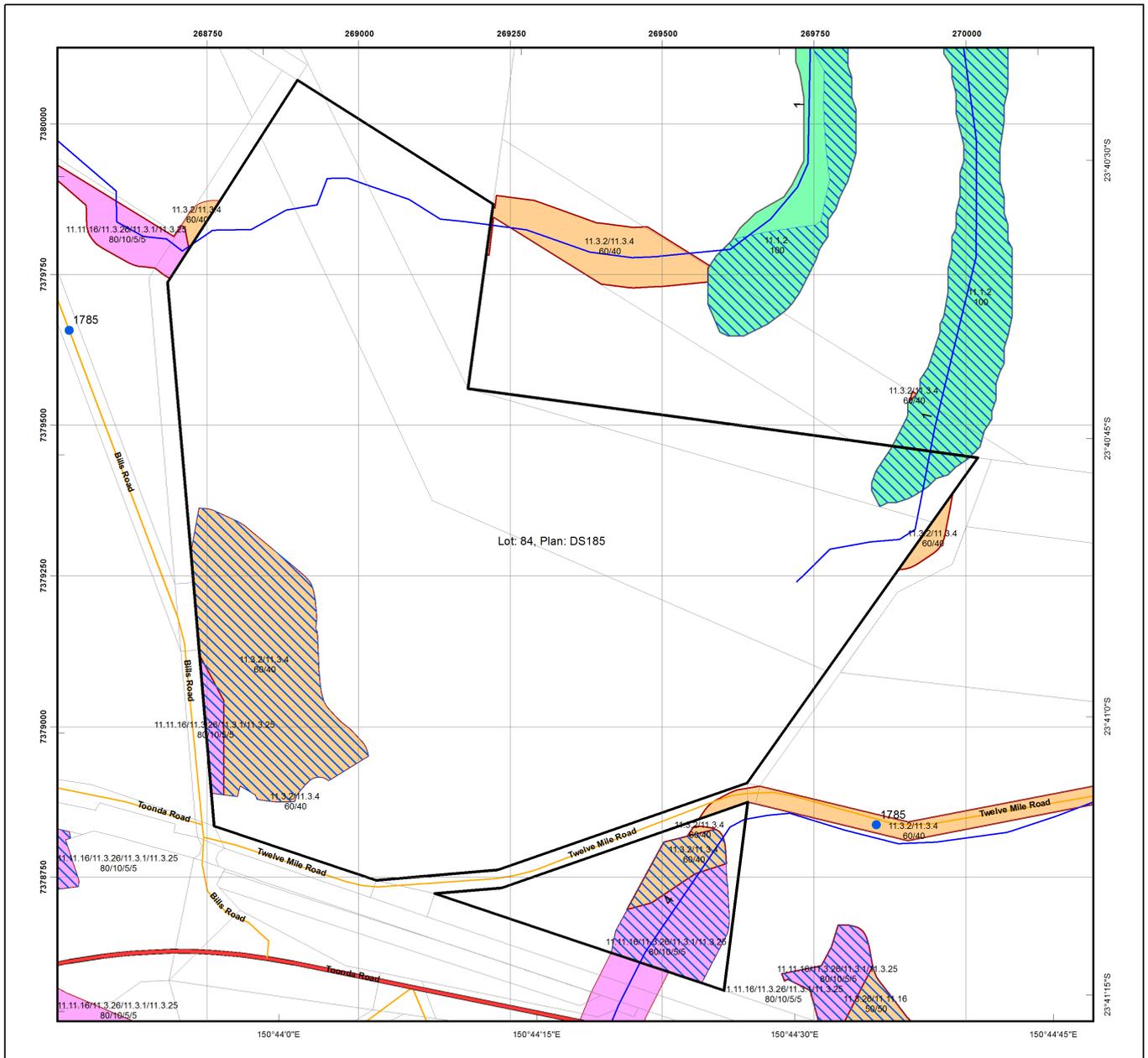
This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.



Queensland Government

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## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

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



0 60 120 180 240 300 m

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

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

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

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

Land parcel boundaries are provided as locational aid only.

# 4.3 Coastal/non-coastal map



## Coastal/Non Coastal Map

### Legend

-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



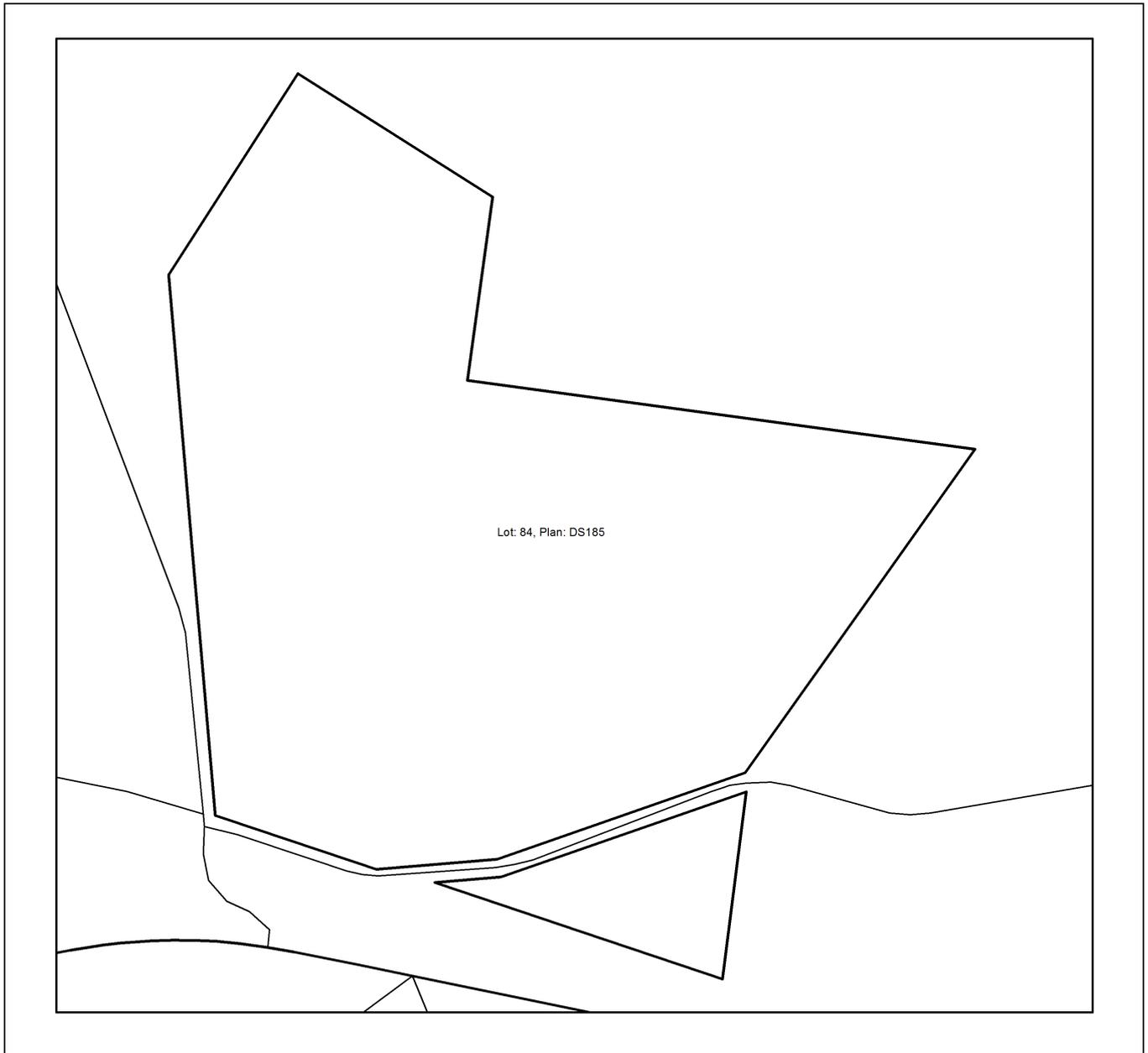
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Land parcel boundaries shown are provided as a locational aid only.



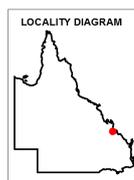
# 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



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

### Legend

-  Selected Lot and Plan
-  Towns
-  Rivers and creeks
-  Freeways / motorways; Highways
-  Secondary roads; Streets
- Agricultural land class A or B
-  A
-  B
-  Not class A or B



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## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for endangered, vulnerable or near threatened (EVNT) plants. These are areas where EVNT plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any EVNT plants that may be present in the clearing impact area.

If the flora survey identifies that EVNT plants are not present within the clearing impact area or clearing within 100m of EVNT plants can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that EVNT plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that EVNT plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>

## 5.5 Protected plants flora survey trigger map

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

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

### Species information

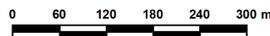
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



### Protected Plants Flora Survey Trigger Map

#### Legend

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



This product is projected into:  
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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](mailto:palm@des.qld.gov.au)

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

The koala (*Phascolarctos cinereus*) is listed in Queensland as vulnerable by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

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

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

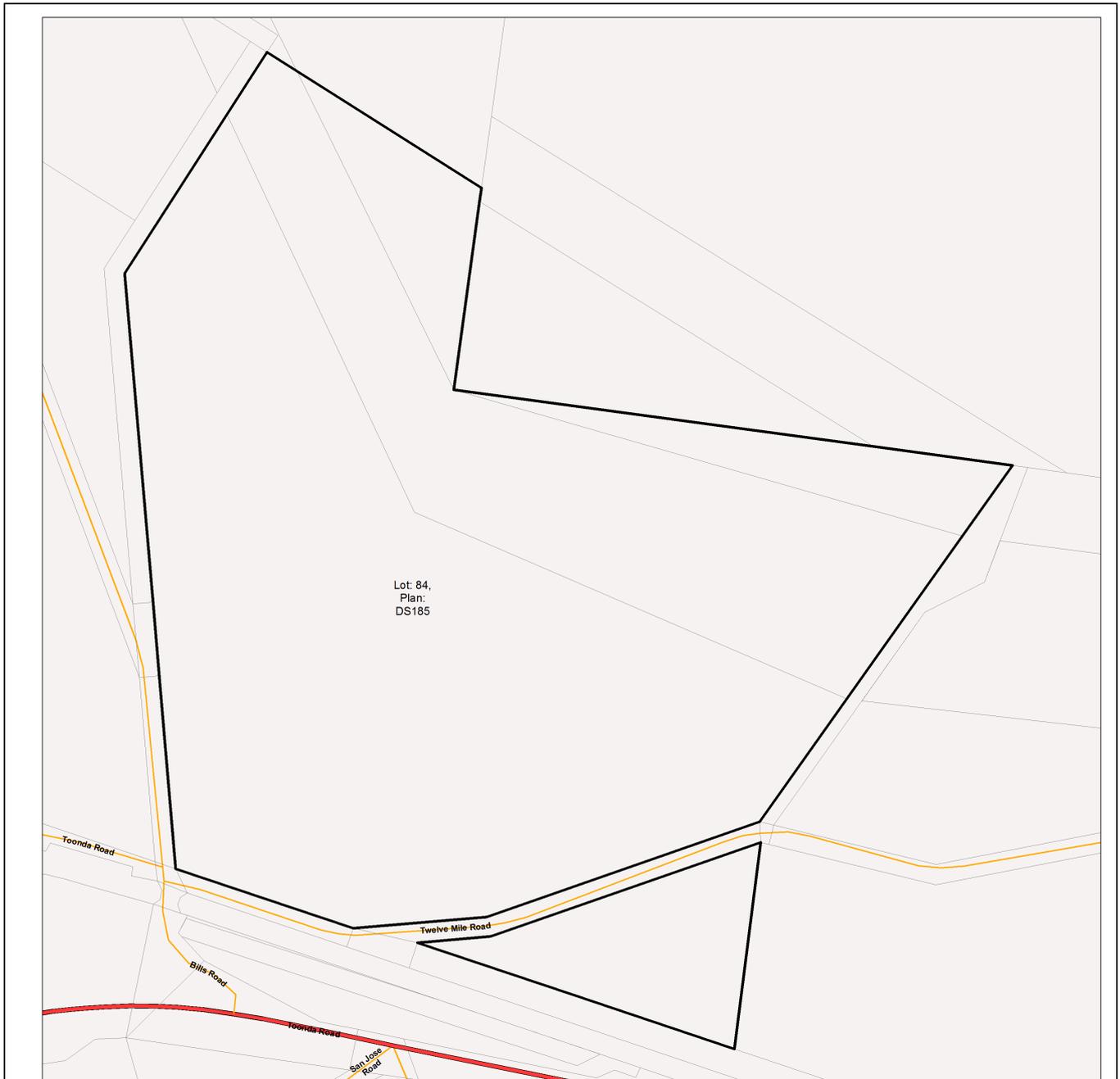
**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

## 7. Koala protection framework details for Lot: 84 Plan: DS185

### 7.1 Koala districts

Koala District C

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

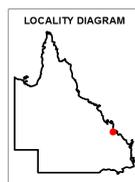


### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

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

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



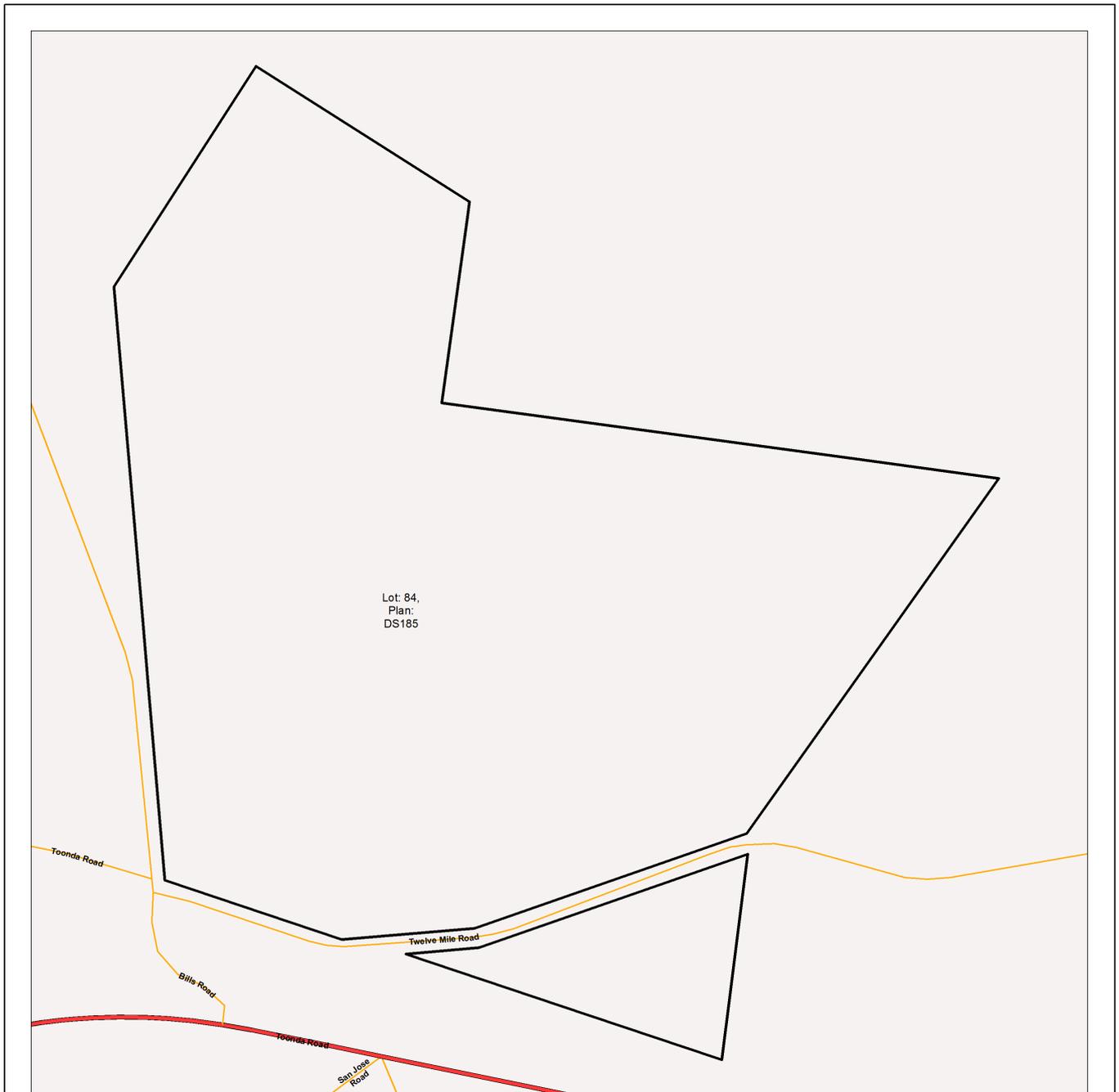
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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

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

## 7.3 Koala habitat regional ecosystems for core koala habitat areas



### Koala habitat regional ecosystems for core koala habitat areas

#### Legend

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



N



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

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## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>



## **Vegetation management report**

For Lot: 29 Plan: DS37

10/03/2022

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# Recent changes

## Updated mapping

Updated vegetation mapping was released on 8 September 2021 and includes the most recent Queensland Herbarium scientific updates to the Regulated Vegetation Management Map, regional ecosystems, wetland, high-value regrowth and essential habitat mapping.

The Department of Environment and Science have also updated their protected plant and koala protection mapping to align with the Queensland Herbarium scientific updates.

## Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

**Property details** - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s) and catchment(s);

**Vegetation management framework** - an explanation of the application of the framework and contact details for the Department of Resources who administer the framework;

**Vegetation management framework details for the specified Lot on Plan** including:

- the vegetation management categories on the property;
- the vegetation management regional ecosystems on the property;
- vegetation management watercourses or drainage features on the property;
- vegetation management wetlands on the property;
- vegetation management essential habitat on the property;
- whether any area management plans are associated with the property;
- whether the property is coastal or non-coastal; and
- whether the property is mapped as Agricultural Land Class A or B;

**Protected plant framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework, including:

- high risk areas on the protected plant flora survey trigger map for the property;

**Koala protection framework** - an explanation of the application of the framework and contact details for the Department of Environment and Science who administer the framework; and

**Koala protection framework details for the specified Lot on Plan** including:

- the koala district the property is located in;
- koala priority areas on the property;
- core and locally refined koala habitat areas on the property;
- whether the lot is located in an identified koala broad-hectare area; and
- koala habitat regional ecosystems on the property for core koala habitat areas.

This information will assist you to determine your options for managing vegetation under:

- the vegetation management framework, which may include:

- exempt clearing work;
- accepted development vegetation clearing code;
- an area management plan;
- a development approval;

- the protected plant framework, which may include:

- the need to undertake a flora survey;
- exempt clearing;
- a protected plant clearing permit;

- the koala protection framework, which may include:

- exempted development;
- a development approval;
- the need to undertake clearing sequentially and in the presence of a koala spotter.

## Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 8 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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# 1. Property details

## 1.1 Tenure and title area

All of the lot, plan, tenure and title area information associated with property Lot: 29 Plan: DS37, are listed in Table 1.

**Table 1: Lot, plan, tenure and title area information for the property**

Lot	Plan	Tenure	Property title area (sq metres)
29	DS37	Freehold	573,520
C	SP226062	Easement	89,940

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

## 1.2 Property location

Table 2 provides a summary of the locations for property Lot: 29 Plan: DS37, in relation to natural and administrative boundaries.

**Table 2: Property location details**

Local Government(s)
Rockhampton Regional

Bioregion(s)	Subregion(s)
Brigalow Belt	Marlborough Plains

Catchment(s)
Fitzroy

## 2. Vegetation management framework (administered by the Department of Resources)

The *Vegetation Management Act 1999* (VMA), the *Vegetation Management Regulation 2012*, the *Planning Act 2016* and the *Planning Regulation 2017*, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the *Vegetation Management Regulation 2012*; and
- a mangrove.

### 2.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify the Department of Resources or obtain an approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 4.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval under the vegetation management framework. For all other land tenures, contact the Department of Resources before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/exemptions>.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact the Department of Resources prior to clearing in any of these areas.

### 2.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/codes>

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify the Department of Resources before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at

<https://apps.dnrm.qld.gov.au/vegetation/>

## 2.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

On 8 March 2020, AMPs ended for fodder harvesting, managing thickened vegetation and managing encroachment. New notifications cannot be made for these AMPs. You will need to consider options for fodder harvesting, managing thickened vegetation or encroachment under a relevant accepted development vegetation clearing code or apply for a development approval.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an Area Management Plan applies to your property for which you can make a new notification, it will be listed in Section 3.6 of this report. Before clearing under one of these AMPs, you must first notify the Department of Resources and then follow the conditions and requirements listed in the AMP.

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/area-management-plans>

## 2.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval.

Information on how to apply for a development approval is available at

<https://www.qld.gov.au/environment/land/management/vegetation/clearing-approvals/development>

## 2.5. Contact information for the Department of Resources

For further information on the vegetation management framework:

**Phone** 135VEG (135 834)

**Email** [vegetation@resources.qld.gov.au](mailto:vegetation@resources.qld.gov.au)

**Visit** <https://www.resources.qld.gov.au/?contact=vegetation> to submit an online enquiry.

### 3. Vegetation management framework for Lot: 29 Plan: DS37

#### 3.1 Vegetation categories

The vegetation categories on your property are shown on the regulated vegetation management map in section 4.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

**Table 3: Vegetation categories for subject property. Total area: 57.31ha**

Vegetation category	Area (ha)
Category C	9.6
Category X	47.7

**Table 4: Description of vegetation categories**

Category	Colour on Map	Description	Requirements / options under the vegetation management framework
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact the Department of Resources to confirm any requirements in a Category A area.
B	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.
C	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact the Department of Resources to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.

#### Property Map of Assessable Vegetation (PMAV)

The following Property Map of Assessable Vegetation (PMAVs) may be present on this property:

**Reference number**

2012/004185

## 3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 4.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at <https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/descriptions/>

**Table 5: Regional ecosystems present on subject property**

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
11.11.16	Of concern	C	4.81	Eucalyptus cambageana, Acacia harpophylla open forest to woodland on old sedimentary rocks with varying degrees of metamorphism and folding. Lowlands	Mid-dense
11.3.2	Of concern	C	less than 0.01	Eucalyptus populnea woodland on alluvial plains	Sparse
11.3.26	Least concern	C	4.81	Eucalyptus moluccana or E. microcarpa woodland to open forest on margins of alluvial plains	Sparse
11.3.4	Of concern	C	less than 0.01	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Sparse
non-rem	None	X	47.69	None	None

Please note:

1. All area and area derived figures included in this table have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.
2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work;
- accepted development vegetation clearing codes;
- performance outcomes in State Code 16 of the State Development Assessment Provisions (SDAP).

## 3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 4.2.

## 3.4 Wetlands

There are no vegetation management wetlands present on this property.

## 3.5 Essential habitat

Under the VMA, essential habitat for protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA) as critically endangered, endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 4.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map -

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

### Category A and/or Category B and/or Category C

**Table 6: Essential habitat in Category A and/or Category B and/or Category C**

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
1785	Geophaps scripta scripta	squatter pigeon (southern subspecies)	V	Dry eucalypt woodland (including poplar box, spotted gum, yellow box, acacia and callitris), with sparse short grass, often on sandy areas near to permanent water; grassy eucalypt woodlands. Nest on ground near or under grass tussock, log or low bush.	None	None	Gravelly ridges, traprock and river flats.
1878	Calidris ferruginea	curlew sandpiper	CE	Foraging on intertidal mudflat in sheltered estuaries, bays, inlets and lagoons; non-tidal swamps and inland ephemeral and permanent lakes, dams or waterholes. Roost on shingle/sand/shell beaches, saltmarsh, mangrove and close to wetlands.	Sea level to 100m.	Sand and mud substrates.	Associated with coastlines and coastal and inland wetlands.
7667	Macropteranth es leiocaulis	None	NT	deciduous vine thicket; semi-evergreen vine thicket; brigalow-semi-evergreen vine thicket; softwood scrub; Araucarian microphyll or simple microphyll vine forest; brigalow/belah scrub	0 to 400 m	duplex soil with sandy clay loam surface or loam to clay loam or heavy clay soil	gentle to steep hill slope, steep ridge line, plain, alluvial flat, watercourse
22459	Ephianura crocea macgregori	yellow chat (Dawson)	E	Swampy grassland (salt couch Sporobolus virginicus, water couch, reeds Schoenoplectus litoralis) and saline herbland (samphire Halosarcia) on marine plain with a network of braided drainage lines.	Sea level to 100m.	None	Marine plains.

Label	Regional Ecosystem (mandatory unless otherwise specified)
1785	8.2.1, 8.2.7, 8.2.8, 8.2.12, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.13, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.9.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.12.6, 8.12.7, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.9, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.18, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.23, 9.4.1, 9.4.2, 9.4.3, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.16, 9.7.1, 9.7.2, 9.7.3, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.4, 9.8.5, 9.8.6, 9.8.9, 9.8.10, 9.8.11, 9.10.1, 9.10.3, 9.10.6, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.11, 9.11.12, 9.11.13, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.23, 9.11.26, 9.11.28, 9.11.29, 9.11.31, 9.11.32, 9.12.1, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.26, 9.12.28, 9.12.30, 9.12.31, 9.12.33, 9.12.35, 9.12.37, 9.12.39, 10.3.1, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.19, 10.3.20, 10.3.27, 10.3.28, 10.3.30, 10.3.31, 10.4.3, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.2, 10.7.3, 10.7.5, 10.7.11, 10.7.12, 10.9.1, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.6, 11.3.7, 11.3.8, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.23, 11.3.25, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.35, 11.3.36, 11.3.37, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.5, 11.4.8, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.4, 11.7.6, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.9, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.2, 11.9.3, 11.9.7, 11.9.9, 11.9.14, 11.10.1, 11.10.4, 11.10.6, 11.10.7, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.15, 11.11.16, 11.11.19, 11.11.20, 11.12.1, 11.12.2, 11.12.3, 11.12.5, 11.12.6, 11.12.7, 11.12.8, 11.12.9, 11.12.10, 11.12.11, 11.12.12, 11.12.13, 11.12.14, 11.12.17, 11.12.20, 12.2.5, 12.2.6, 12.2.7, 12.2.10, 12.2.11, 12.3.3, 12.3.6, 12.3.10, 12.3.12, 12.3.14, 12.3.18, 12.3.19, 12.5.1, 12.5.2, 12.5.4, 12.5.5, 12.5.7, 12.5.8, 12.5.11, 12.5.12, 12.7.1, 12.7.2, 12.8.14, 12.8.16, 12.8.17, 12.8.19, 12.9-10.5, 12.9-10.7, 12.9-10.8, 12.9-10.12, 12.9-10.13, 12.9-10.25, 12.9-10.26, 12.9-10.28, 12.11.5, 12.11.7, 12.11.8, 12.11.14, 12.11.15, 12.11.20, 12.11.21, 12.11.22, 12.11.24, 12.11.25, 12.11.26, 12.11.27, 12.11.28, 12.12.7, 12.12.8, 12.12.9, 12.12.12, 12.12.14, 12.12.21, 12.12.22, 12.12.23, 12.12.24, 12.12.25, 12.12.27, 13.3.1, 13.3.4, 13.3.7, 13.11.1, 13.11.3, 13.11.4, 13.11.8, 13.12.2, 13.12.3, 13.12.5, 13.12.8, 13.12.9, 13.12.10
1878	2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.1.6, 7.1.1, 7.1.2, 7.1.3, 8.1.1, 8.1.2, 8.1.3, 8.1.4, 11.1.1, 11.1.2, 11.1.3, 11.1.4, 12.1.2, 12.1.3.
7667	11.3.1, 11.3.11, 11.4.1, 11.5.15, 11.11.5, 11.11.14, 11.11.18, 11.12.4, 12.11.4, 12.11.12, 12.12.13
22459	8.1.2, 8.1.3, 8.1.4, 8.3.4, 11.1.1, 11.1.2, 11.1.3, 11.3.24, 11.3.27, 12.1.2

### 3.6 Area Management Plan(s)

Nil

### 3.7 Coastal or non-coastal

For the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP), this property is regarded as\*

Coastal

\*See also Map 4.3

### 3.8 Agricultural Land Class A or B

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

**Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?**

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See Map 4.4 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 29 Plan: DS37.

## 4. Vegetation management framework maps

Vegetation management maps included in this report may also be requested individually at:

<https://www.resources.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form>

### **Regulated vegetation management map**

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new [property maps of assessable vegetation \(PMAV\)](#).

### **Vegetation management supporting map**

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

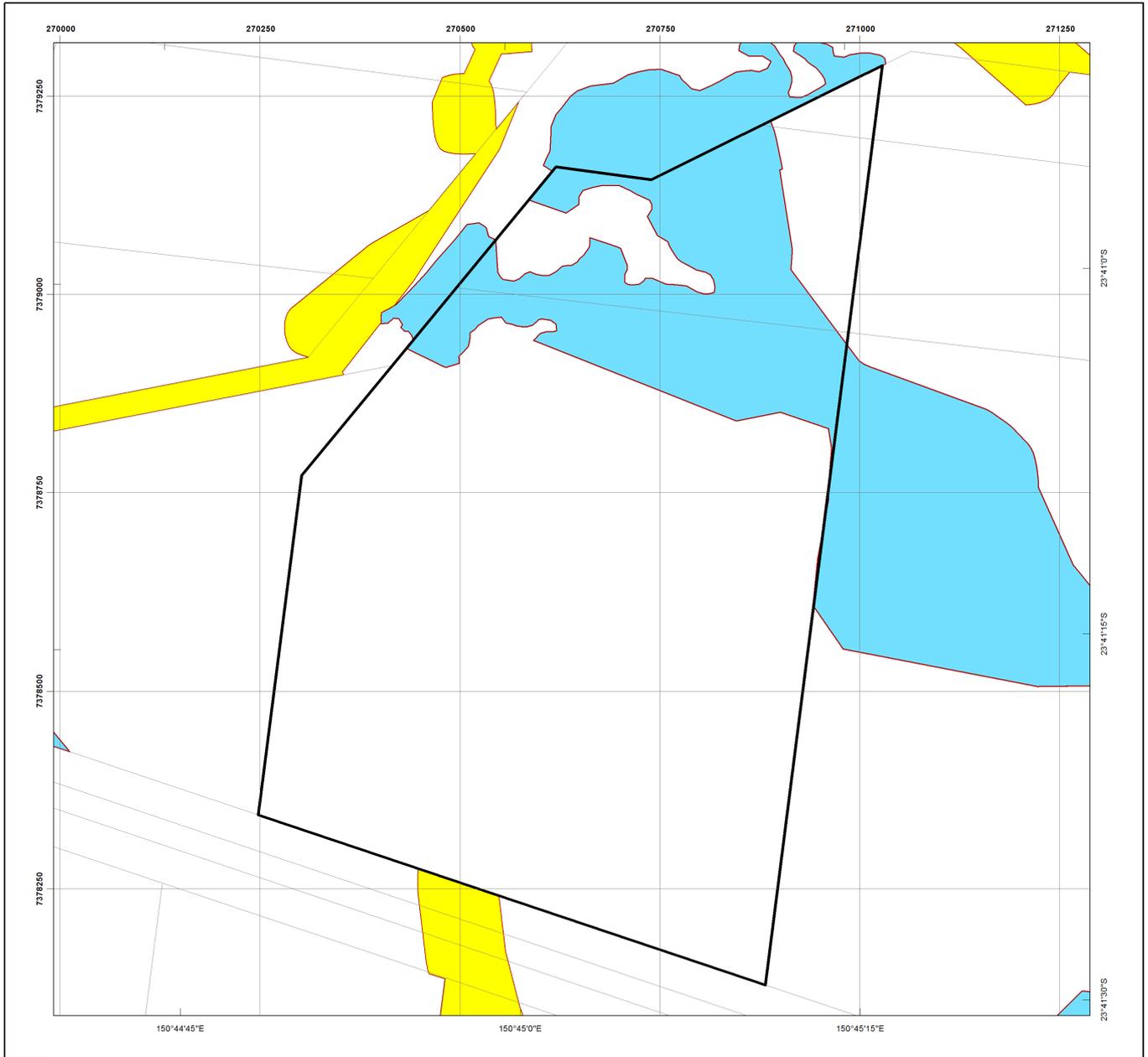
### **Coastal/non-coastal map**

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and State Code 16 of the State Development Assessment Provisions (SDAP).

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

The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

# 4.1 Regulated vegetation management map



## Regulated Vegetation Management Map

### Legend

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



This product is projected into:  
GDA 1994 MGA Zone 56

### Disclaimer:

While every care is taken to ensure the accuracy of this product, the Department of Resources 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 you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

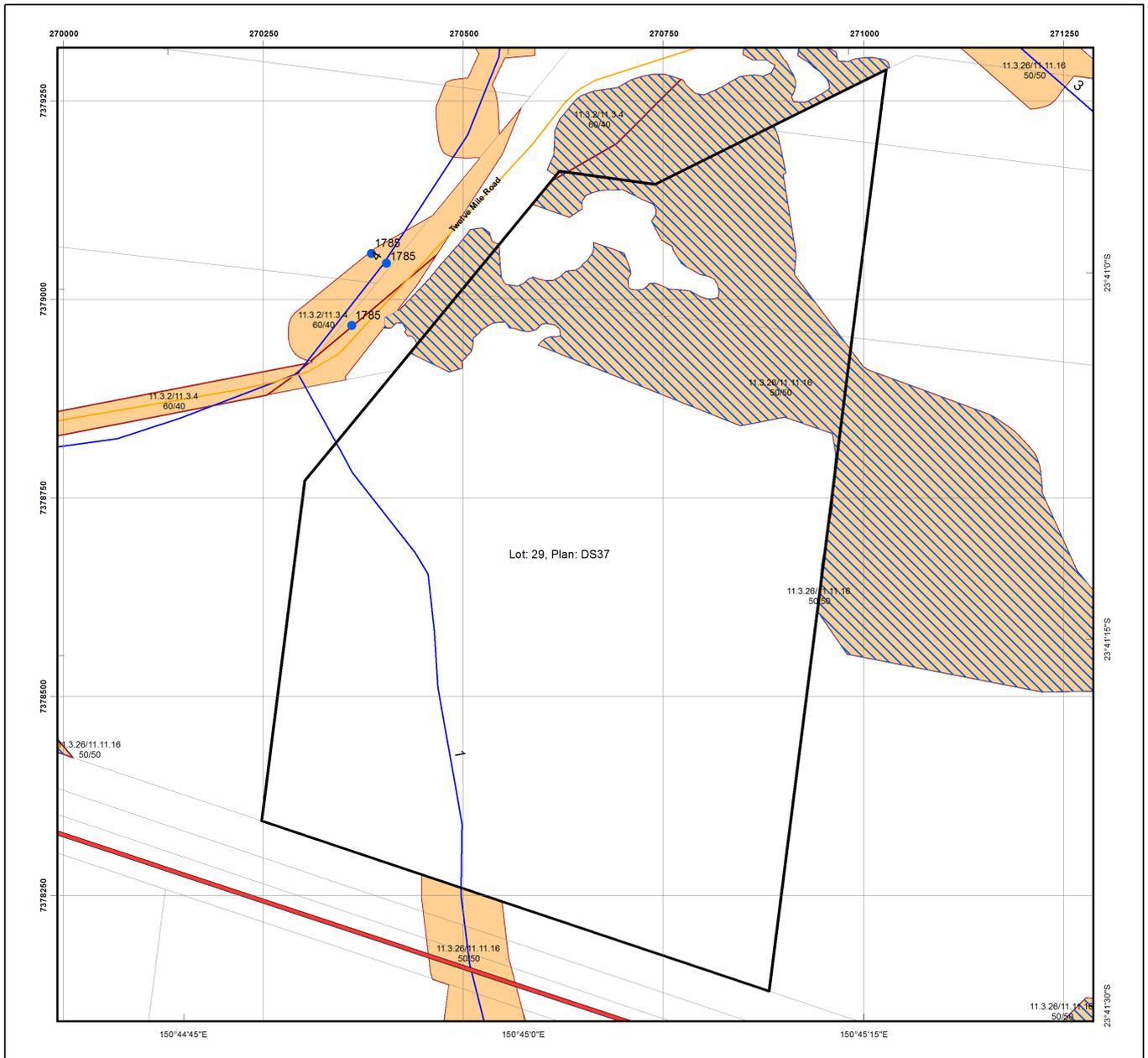
Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: [www.resources.qld.gov.au](http://www.resources.qld.gov.au) or contact the Department of Resources.

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

Land parcel boundaries are provided as locational aid only.

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

## 4.2 Vegetation management supporting map



### Vegetation Management Supporting Map

#### Legend

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



0 50 100 150 200 250 m

This product is projected into:  
GDA 1994 MGA Zone 56

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

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

#### Disclaimer:

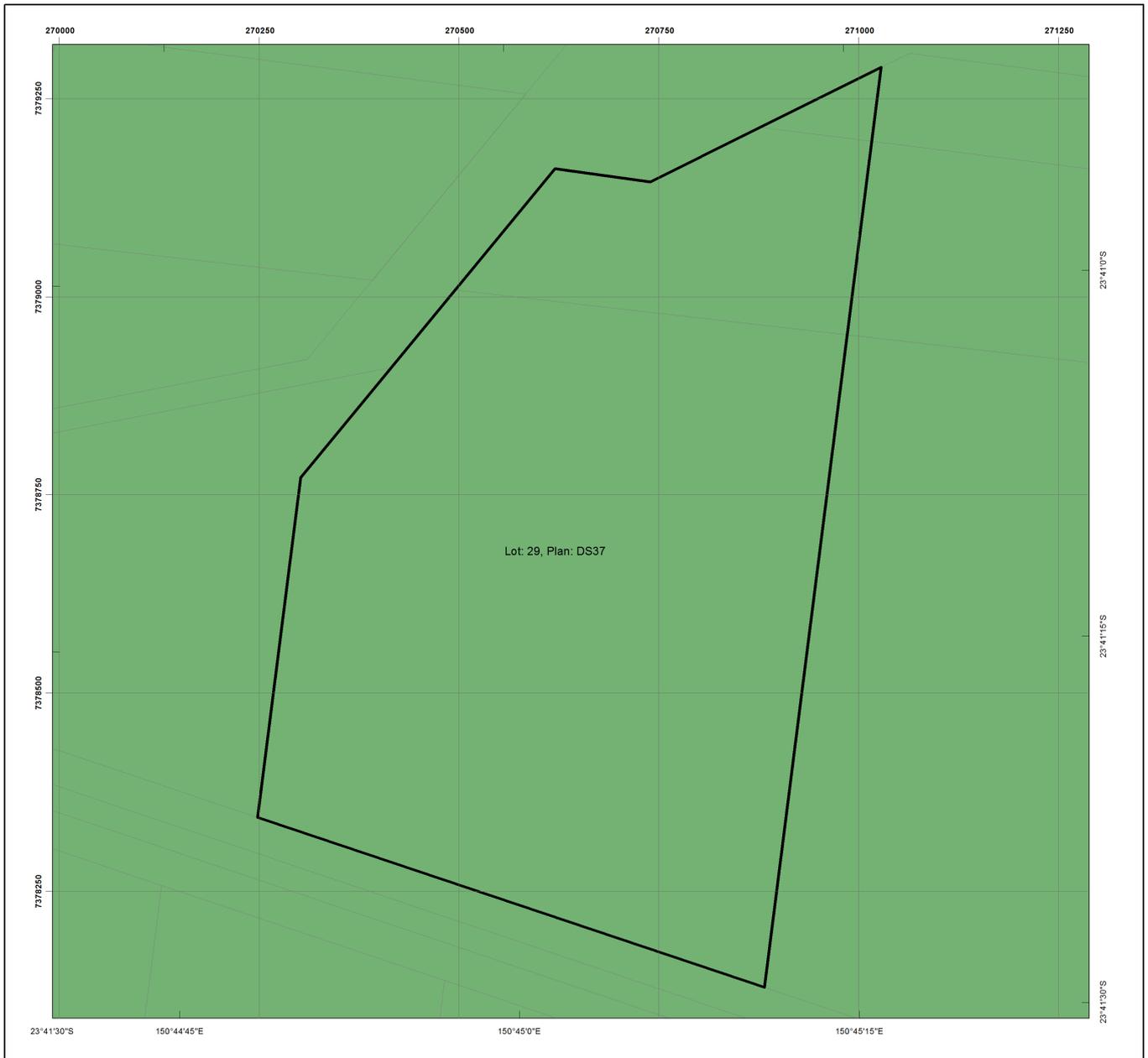
While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

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

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

Land parcel boundaries are provided as locational aid only.

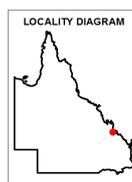
## 4.3 Coastal/non-coastal map



### Coastal/Non Coastal Map

#### Legend

-  Selected Lot and Plan
-  Coastal
-  Non Coastal
-  Other land parcel boundaries



This product is projected into:  
GDA 1994 MGA Zone 56

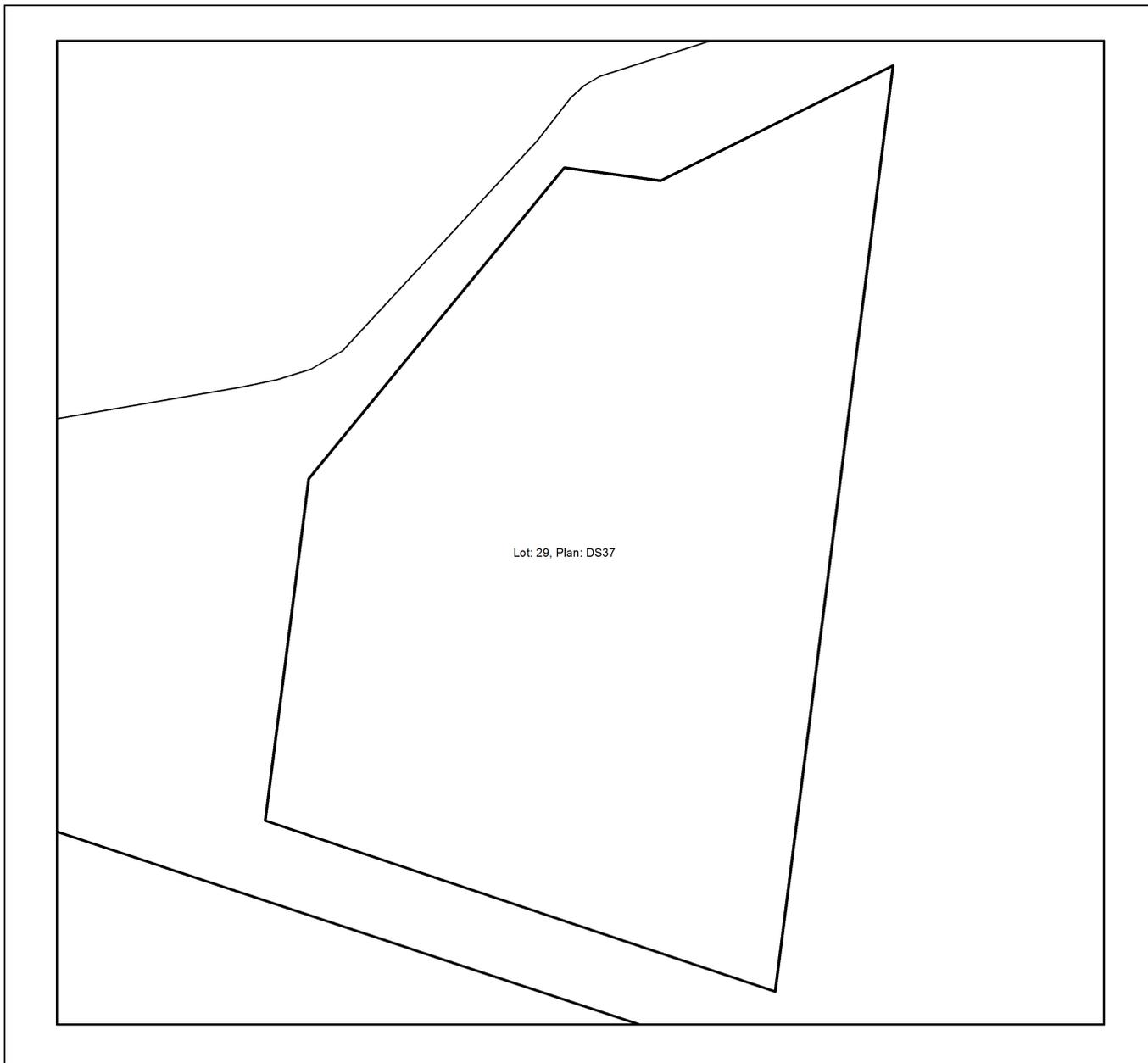
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# 4.4 Agricultural Land Class A or B as per State Planning Policy: State Interest for Agriculture



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

### Legend

-  Selected Lot and Plan
-  Towns
-  Rivers and creeks
-  Freeways / motorways; Highways
-  Secondary roads; Streets
- Agricultural land class A or B
-  A
-  B
-  Not class A or B



This product is projected into GDA 1994 MGA Zone 56

#### Disclaimer

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## 5. Protected plants framework (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the [Nature Conservation Act 1992](#) (NCA). The NCA regulates the clearing of protected plants 'in the wild' (see [Operational policy: When a protected plant in Queensland is considered to be 'in the wild'](#)) that are listed as critically endangered, endangered, vulnerable or near threatened under the Act.

Please note that the protected plant clearing framework applies irrespective of the classification of the vegetation under the *Vegetation Management Act 1999* and any approval or exemptions given under another Act, for example, the *Vegetation Management Act 1999* or *Planning Regulation 2017*.

### 5.1 Clearing in high risk areas on the flora survey trigger map

The flora survey trigger map identifies high-risk areas for endangered, vulnerable or near threatened (EVNT) plants. These are areas where EVNT plants are known to exist or are likely to exist based on the habitat present. The flora survey trigger map for this property is provided in section 5.5.

If you are proposing to clear an area shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken by a suitably qualified person in accordance with the [Flora survey guidelines](#). The main objective of a flora survey is to locate any EVNT plants that may be present in the clearing impact area.

If the flora survey identifies that EVNT plants are not present within the clearing impact area or clearing within 100m of EVNT plants can be avoided, the clearing activity is exempt from a permit. An [exempt clearing notification form](#) must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing.

If the flora survey identifies that EVNT plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the [clearing permit application form](#).

### 5.2 Clearing outside high risk areas on the flora survey trigger map

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that EVNT plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

### 5.3 Exemptions

Many activities are 'exempt' under the protected plant clearing framework, which means that clearing of native plants that are in the wild can be undertaken for these activities with no need for a flora survey or a protected plant clearing permit. The Information sheet - General exemptions for the take of protected plants provides some of these exemptions.

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) under the *Vegetation Management Act 1999* (i.e. listed in Schedule 21 of the Planning Regulations 2017) while some are different.

### 5.4 Contact information for DES

For further information on the protected plants framework:

**Phone** 1300 130 372 (and select option four)

**Email** [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au)

**Visit** <https://www.qld.gov.au/environment/plants-animals/plants/protected-plants>

## 5.5 Protected plants flora survey trigger map

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

### Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

### Species information

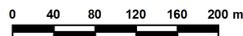
Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the [Queensland Spatial Catalogue](#), the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the [clearing of protected plants](#) for more information.



## Protected Plants Flora Survey Trigger Map

### Legend

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



This product is projected into:  
GDA 1994 MGA Zone 56

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

Land parcel boundaries are provided as locational aid only.

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

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

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

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

The koala (*Phascolarctos cinereus*) is listed in Queensland as vulnerable by the Queensland Government under *Nature Conservation Act 1992* and by the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999*.

The Queensland Government's koala protection framework is comprised of the *Nature Conservation Act 1992*, the Nature Conservation (Animals) Regulation 2020, the Nature Conservation (Koala) Conservation Plan 2017, the *Planning Act 2016* and the Planning Regulation 2017.

### 6.1 Koala mapping

#### 6.1.1 Koala districts

The parts of Queensland where koalas are known to occur has been divided into three koala districts - koala district A, koala district B and koala district C. Each koala district is made up of areas with comparable koala populations (e.g. density, extent and significance of threatening processes affecting the population) which require similar management regimes.

Section 7.1 identifies which koala district your property is located in.

#### 6.1.2 Koala habitat areas

Koala habitat areas are areas of vegetation that have been determined to contain koala habitat that is essential for the conservation of a viable koala population in the wild based on the combination of habitat suitability and biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water). In order to protect this important koala habitat, clearing controls have been introduced into the Planning Regulation 2017 for development in koala habitat areas.

Please note that koala habitat areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley, Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

There are two different categories of koala habitat area (core koala habitat area and locally refined koala habitat), which have been determined using two different methodologies. These methodologies are described in the document [Spatial modelling in South East Queensland](#).

Section 7.2 shows any koala habitat area that exists on your property.

Under the Nature Conservation (Koala) Conservation Plan 2017, an owner of land (or a person acting on the owner's behalf with written consent) can request to make, amend or revoke a koala habitat area determination if they believe, on reasonable grounds, that the existing determination for all or part of their property is incorrect.

More information on requests to make, amend or revoke a koala habitat area determination can be found in the document [Guideline - Requests to make, amend or revoke a koala habitat area determination](#).

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

Changes to the koala habitat area map which occur between annual updates because of a request to make, amend or revoke a koala habitat area determination can be viewed on the register of approved requests to make, amend or revoke a koala habitat area available at: <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/koalamaps>. The register includes the lot on plan for the change, the date the decision was made and the map issued to the landholder that shows areas determined to be koala habitat areas.

#### 6.1.3 Koala priority areas

Koala priority areas are large, connected areas that have been determined to have the highest likelihood of achieving conservation outcomes for koalas based on the combination of habitat suitability, biophysical variables with known relationships to koala habitat (e.g. landcover, soil, terrain, climate and ground water) and a koala conservation cost benefit analysis.

Conservation efforts will be prioritised in these areas to ensure the conservation of viable koala populations in the wild including a focus on management (e.g. habitat protection, habitat restoration and threat mitigation) and monitoring. This includes a prohibition on clearing in koala habitat areas that are in koala priority areas under the Planning Regulation 2017 (subject to some exemptions).

Please note that koala priority areas only exist in koala district A which is the South East Queensland "Shaping SEQ" Regional Plan area. These areas include the local government areas of Brisbane, Gold Coast, Logan, Lockyer Valley,

Ipswich, Moreton Bay, Noosa, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba (urban extent).

Section 7.2 identifies if your property is in a koala priority area.

#### 6.1.4 Identified koala broad-hectare areas

There are seven identified koala broad-hectare areas in SEQ. These are areas of koala habitat that are located in areas committed to meet development targets in the SEQ Regional Plan to accommodate SEQ's growing population including bring-forward Greenfield sites under the Queensland Housing Affordability Strategy and declared master planned areas under the repealed *Sustainable Planning Act 2009* and the repealed *Integrated Planning Act 1997*.

Specific assessment benchmarks apply to development applications for development proposed in identified koala broad-hectare areas to ensure koala conservation measures are incorporated into the proposed development.

Section 7.2 identifies if your property is in an identified koala broad-hectare area.

## 6.2 Koala habitat planning controls

On 7 February 2020, the Queensland Government introduced new planning controls to the Planning Regulation 2017 to strengthen the protection of koala habitat in South East Queensland (i.e. koala district A).

More information on these planning controls can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

As a high-level summary, the koala habitat planning controls make:

- development that involves interfering with koala habitat (defined below) in an area that is both a koala priority area and a koala habitat area, prohibited development (i.e. development for which a development application cannot be made);
- development that involves interfering with koala habitat (defined below) in an area that is a koala habitat area but is not a koala priority area, assessable development (i.e. development for which development approval is required); and
- development that is for extractive industries where the development involves interfering with koala habitat (defined below) in an area that is both a koala habitat area and a key resource area, assessable development (i.e. development for which development approval is required).

**Interfering with koala habitat means:**

- 1) Removing, cutting down, ringbarking, pushing over, poisoning or destroying in anyway, including by burning, flooding or draining native vegetation in a koala habitat area; but
- 2) Does not include destroying standing vegetation by stock or lopping a tree.

However, these planning controls do not apply if the development is exempted development as defined in Schedule 24 of the [Planning Regulation 2017](#). More information on exempted development can be found here:

<https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping/legislation-policy>.

There are also assessment benchmarks that apply to development applications for:

- building works, operational works, material change of use or reconfiguration of a lot where:
  - the local government planning scheme makes the development assessable;
  - the premises includes an area that is both a koala priority area and a koala habitat area; and
  - the development does not involve interfering with koala habitat (defined above); and
- development in identified koala broad-hectare areas.

The [Guideline - Assessment Benchmarks in relation to Koala Habitat in South East Queensland assessment benchmarks](#) outlines these assessment benchmarks, the intent of these assessment benchmarks and advice on how proposed development may meet these assessment benchmarks.

## 6.3 Koala Conservation Plan clearing requirements

Section 10 and 11 of the [Nature Conservation \(Koala\) Conservation Plan 2017](#) prescribes requirements that must be met when clearing koala habitat in koala district A and koala district B.

These clearing requirements are independent to the koala habitat planning controls introduced into the Planning Regulation 2017, which means they must be complied with irrespective of any approvals or exemptions offered under other legislation.

Unlike the clearing controls prescribed in the Planning Regulation 2017 that are to protect koala habitat, the clearing requirements prescribed in the Nature Conservation (Koala) Conservation Plan 2017 are in place to prevent the injury or death of koalas when koala habitat is being cleared.

## 6.4 Contact information for DES

For further information on the koala protection framework:

**Phone** 13 QGOV (13 74 68)

**Email** [koala.assessment@des.qld.gov.au](mailto:koala.assessment@des.qld.gov.au)

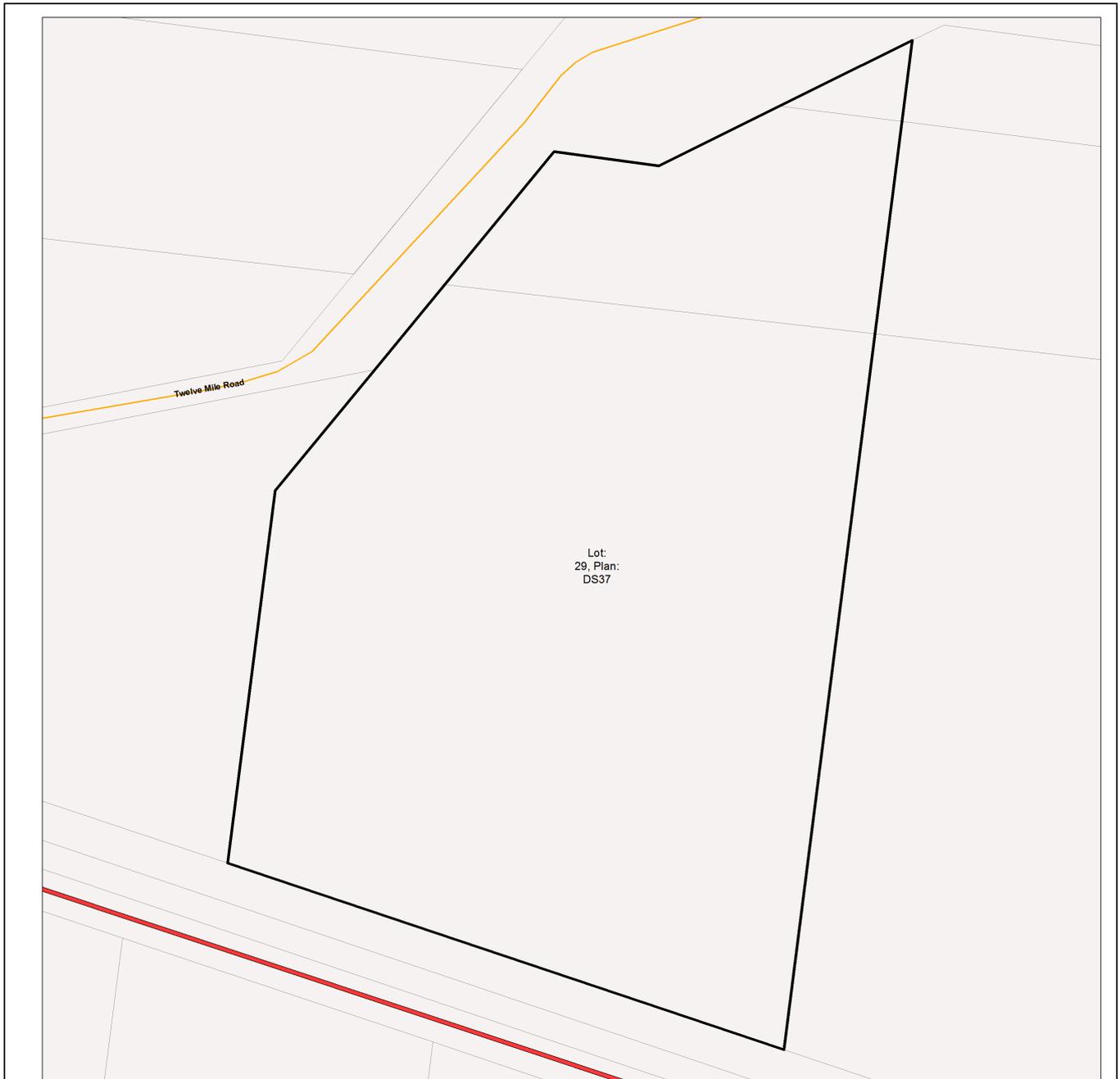
**Visit** <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

## 7. Koala protection framework details for Lot: 29 Plan: DS37

### 7.1 Koala districts

Koala District C

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

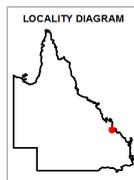


### Koala priority area, koala habitat area and identified koala broad-hectare area map

#### Legend

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

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



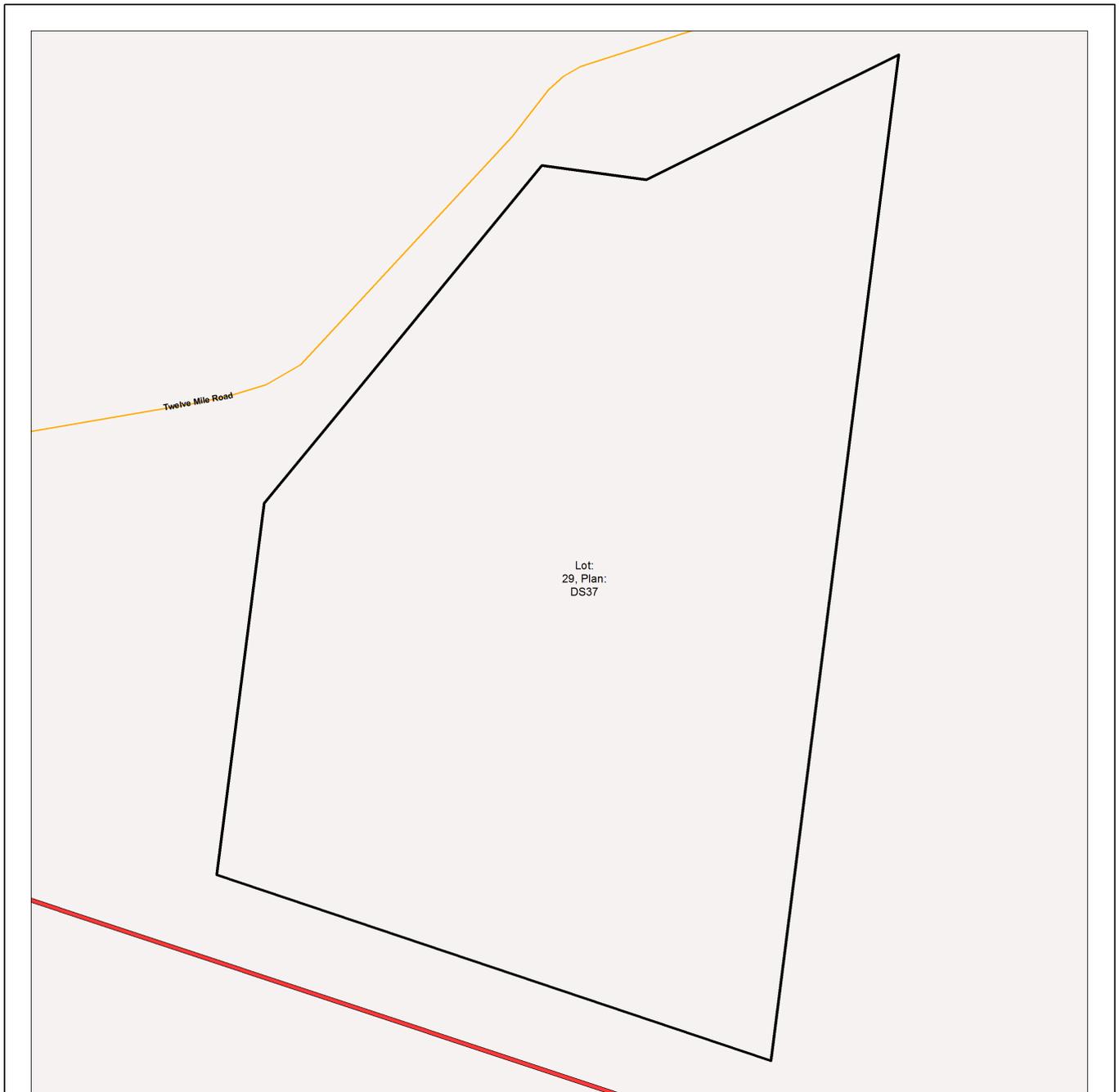
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The koala conservation plan maps will be updated at least annually to include any koala habitat areas that have been made, amended or revoked.

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

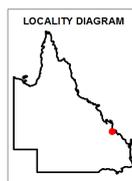
## 7.3 Koala habitat regional ecosystems for core koala habitat areas



### Koala habitat regional ecosystems for core koala habitat areas

#### Legend

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



N



0 60 120 180 240 300 m



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

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## 8. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
<ul style="list-style-type: none"> <li>• Interference with overland flow</li> <li>• Earthworks, significant disturbance</li> </ul>	<i>Water Act 2000</i> <i>Soil Conservation Act 1986</i>	Department of Regional Development, Manufacturing and Water (Queensland Government) Department of Resources (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.rdmw.qld.gov.au">www.rdmw.qld.gov.au</a> <a href="http://www.resources.qld.gov.au">www.resources.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Indigenous Cultural Heritage</li> </ul>	<i>Aboriginal Cultural Heritage Act 2003</i> <i>Torres Strait Islander Cultural Heritage Act 2003</i>	Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships	Ph: 13 QGOV (13 74 68) <a href="http://www.datsip.qld.gov.au">www.datsip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Mining and environmentally relevant activities</li> <li>• Infrastructure development (coastal)</li> <li>• Heritage issues</li> </ul>	<i>Environmental Protection Act 1994</i> <i>Coastal Protection and Management Act 1995</i> <i>Queensland Heritage Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Protected plants and protected areas</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 1300 130 372 (option 4) <a href="mailto:palm@des.qld.gov.au">palm@des.qld.gov.au</a> <a href="http://www.des.qld.gov.au">www.des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Koala mapping and regulations</li> </ul>	<i>Nature Conservation Act 1992</i>	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="mailto:Koala.assessment@des.qld.gov.au">Koala.assessment@des.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Interference with fish passage in a watercourse, mangroves</li> <li>• Forestry activities on State land tenures</li> </ul>	<i>Fisheries Act 1994</i> <i>Forestry Act 1959</i>	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.daf.qld.gov.au">www.daf.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Matters of National Environmental Significance including listed threatened species and ecological communities</li> </ul>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Department of Agriculture, Water and the Environment (Australian Government)	Ph: 1800 803 772 <a href="http://www.environment.gov.au">www.environment.gov.au</a>
<ul style="list-style-type: none"> <li>• Development and planning processes</li> </ul>	<i>Planning Act 2016</i> <i>State Development and Public Works Organisation Act 1971</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) <a href="http://www.dsdmip.qld.gov.au">www.dsdmip.qld.gov.au</a>
<ul style="list-style-type: none"> <li>• Local government requirements</li> </ul>	<i>Local Government Act 2009</i> <i>Planning Act 2016</i>	Department of State Development, Infrastructure, Local Government and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office
<ul style="list-style-type: none"> <li>• Harvesting timber in the Wet Tropics of Qld World Heritage area</li> </ul>	<i>Wet Tropics World Heritage Protection and Management Act 1993</i>	Wet Tropics Management Authority	Ph: (07) 4241 0500 <a href="http://www.wettropics.gov.au">www.wettropics.gov.au</a>

## Appendix B – Certification of Suitably Qualified Person

An assessment against the grading system outlined within Section 4.2.1 of the *Flora Survey Guidelines – Protected Plants* is provided herein. The assessment confirms that Peter Moonie is a suitably qualified person, as more than 100 points have been allocated across both components of the grading system. A curriculum vitae has been previously provided to DES for numerous permit applications.

Component	Points allocated by Guideline	Points achieved by Peter Moonie
<b>Component 1: Qualification knowledge and ability</b>		
A relevant qualification from a recognised institution (e.g. University, TAFE) that results in a thorough knowledge of plant identification and flora surveys.	30 - General training; OR 40 - Australian focussed training; OR 50 - Queensland focussed training	50 – Peter has completed a BSc majoring in ecology at Griffith University
Regional ecosystem training by a recognised and qualified institution, such as the Queensland Herbarium.	5	5 - Peter has completed regional ecosystem and bio-condition assessment training at the Queensland Herbarium
Member of a recognised group / certificate program relevant to ecology/botany, where skills/knowledge are demonstrated to be granted membership. E.g. Certified Environmental Practitioner (CEnvP) Program	5	-
Lead author of articles/papers published in peer reviewed journals in relation to Qld flora surveys, Qld plant identification, or Qld EVNT plants.	10	-
Pre-existing Commonwealth Government accreditation for flora surveys under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	30	30 – Peter’s EPBC Act accreditation reference number is 2012/00558
<b>Component 2: Field experience</b>		
Experience within the last 2 years and a total of at least 5 years at leading flora surveys in a field-based environment at a rate of no less than 5 comprehensive botanical surveys that focus on locating and identifying EVNT plants, per year.	40 - General flora surveys; OR 50 – Australian flora surveys; OR 60 - Queensland flora surveys	60 – Peter has been leading comprehensive botanical surveys that focus on locating and identifying EVNT plants in Queensland for the past 6 years and in Australia for the past 18 years.
Number of plant specimens you have collected that have been retained/incorporated into the Queensland Herbarium collection.	5 points per 5 specimens	5 – Unsure of exact total number, but at least 5 specimens have been incorporated into the collection
<b>Total points (100 points required by Guideline)</b>		<b>150</b>

## Appendix C – Likelihood of Occurrence and Impacts Assessment

\* Unless otherwise referenced, the species information used within this assessment is based on the Species Profile Search information (DES, 2022)

# Status is listed as EPBC Act / NC Act as follows:

- CE – critically endangered
- CR – critically endangered
- E – endangered
- V – vulnerable
- NT – near threatened

Occurrence categories:

- High – previously recorded within 10 km of study area and suitable habitat is present
- Moderate – suitable habitat present, within known distribution but not recorded within 10 km of study area
- Low – no suitable habitat present, and not previously recorded within 10 km of study area.

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
<i>Atalaya collina</i>	E/E	Recorded in the Mt. Sugarloaf area near Gladstone and near Nagoorin in central-eastern Queensland.	Flowers in November. Mature fruits observed in December (DoCCEEW, 2022).	Found in disturbed semi-evergreen vine thicket or dry rainforest on brownish-black clay loams overlying clay subsoils.	<p>GSDA – Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>SGIC - Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>Northern section – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p>
<i>Bosistoa transversa</i>	V/V	Found from the Nightcap Range north of Lismore in north-east NSW to Mount Larcom (near Gladstone).	Flowers from January to May.	Occurs in lowland subtropical rainforest up to 300 m above sea level.	<p>GSDA – Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p>

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
					<p>SGIC - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey.</p> <p>Low potential to occur.</p> <p>Northern section – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey.</p> <p>Low potential to occur.</p>
<i>Bulbophyllum globuliforme</i>	V/NT	Occurs from near Paluma, north-east Queensland and south to the McPherson Range on the Queensland/New South Wales border (DOCCEEW, 2022).	Flowers May to November.	Host-specific species, only growing on the hoop pine ( <i>Araucaria cunninghamii</i> ), where it colonises the upper branches of mature trees (DOCCEEW, 2022).	<p>GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey.</p> <p>Low potential to occur.</p> <p>SGIC - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey.</p> <p>Low potential to occur.</p> <p>Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey.</p> <p>Low potential to occur.</p>
<i>Capparis humistrata</i>	E/E	Occurs between Marlborough and Bouldercombe. Also found near Dingo in central Queensland.	Flowers recorded in March, May and December. Fruiting recorded in November and December.	Found in eucalypt woodland with a shrubby understorey, on stony hard ridges and serpentinite soil. Also grows on the margins of brigalow forest on sandy soil.	<p>GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey.</p> <p>Low potential to occur.</p> <p>SGIC – Not recorded within 10 km of study area (Wildlife Online). No suitable habitat within study area. Not recorded during survey.</p> <p>Low potential to occur.</p> <p>Northern section - Recorded within 10 km of study area (Wildlife Online) and no suitable</p>

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
					habitat within study area. Not recorded during survey. Low potential to occur.
<i>Cossinia australiana</i>		Rockhampton to Kingaroy	Flowers October to January. Fruiting recorded in February.	Araucarian microphyll vine forest and relict semi-evergreen vine thicket on a variety of soils, including red volcanic soil and black loam.	GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  SGIC - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.
<i>Cupaniopsis shirleyana</i>	V/V	Restricted to southeast Queensland, from Brisbane, north to Bundaberg.	Flowers from April to June.	Occurs in dry rainforest vegetation types, including vine thicket communities on hillsides, stream beds and along riverbanks at altitudes up to 550 m above sea level.	GSDA – Records within 10 km of study area but records appear to be reassigned as <i>C. watalgan</i> . Not recorded during survey. Low potential to occur.  SGIC – Not recorded within within 10 km of study area. Not recorded during survey. Low potential to occur.  Northern section - Not recorded within 10 km of study area (Wildlife Online). Not recorded during survey. Low potential to occur.
<i>Cycas megacarpa</i>	E/E	Bouldercombe in the north, to near Woolooga in the south.	Fruiting cones are produced between the months of May and February. Seeds become ripe from March onwards.	Found in woodland, open woodland and open forests, often in conjunction with a grassy understory. Also found in or on the edge of rainforest habitats.	GSDA – Recorded within 10 km of study area (Wildlife Online) and suitable habitat present within study area. Not recorded during survey. <b>High potential to occur.</b>

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
					<p>SGIC - Recorded within 10 km of study area (Wildlife Online) but no suitable habitat present within study area. Not recorded during survey. Low potential to occur.</p> <p>Northern section – Not recorded within 10 km of study area (Wildlife Online). Not recorded during survey. Low potential to occur.</p>
<i>Cycas ophiolitica</i>	E/E	Endemic to Queensland, occurring from Marlborough to Rockhampton in central-eastern Queensland.	Seed becomes ripe from March onwards, when it drops from the plant.	Grows on hills and slopes in sparse, grassy open forest at altitude ranges from 80–400 m above sea level. Has been found on red clay soils; shallow, stony, infertile soils developed on sandstone and serpentinite; on mudstone and on alluvial loams.	<p>GSDA – Not recorded within 10 km. Not within recorded distribution. Not recorded during survey. Low potential to occur.</p> <p>SGIC - Not within 10 km of study area (Wildlife Online) and not within the species distribution. Not recorded during survey. Low potential to occur.</p> <p>Northern section – Not recorded within 10 km of study area (Wildlife Online) but within its distribution and marginal habitat present. Not recorded during survey. <b>Moderate potential to occur.</b></p>
<i>Dansiea elliptica</i>	-/NT	Two disjunct centres of distribution, namely the wet tropics and central Queensland.	Flowering recorded in January and May.	Grows in lowland dry rainforest and vine thicket (notophyll vine forests, semi evergreen vine thickets).	<p>GSDA – Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>SGIC – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>Northern section – Not recorded within 10 km of study area (Wildlife Online) and no suitable</p>

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
					habitat within study area. Not recorded during survey. Low potential to occur.
<i>Dichanthium setosum</i>	V / -	Inland NSW and Queensland.	Flowers in Summer and becomes dormant in late Autumn.	Found on heavy basaltic black soils and red-brown loams with clay subsoil. Associated species include <i>Eucalyptus albens</i> , <i>E. melanophloia</i> , <i>E. melliodora</i> , <i>E. viminalis</i> . often in moderately disturbed areas such as cleared woodland, grassy roadside remnants and highly disturbed pasture.	GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  SGIC - Not recorded within 10 km of study area (Wildlife Online) and only marginal habitat within study area. Not recorded during survey. Low potential to occur.  Northern section - Not recorded within 10 km of study area (Wildlife Online) and only marginal habitat within study area. Not recorded during survey. Low potential to occur.
<i>Eucalyptus raveretiana</i>		South of Charters Towers to south of Rockhampton and areas 100 km west of the city.	Flowers from December to March.	Found along watercourses and occasionally on river flats. It occurs in open forest or woodland communities. Preference for moderately fertile soil and adequate sub-soil moisture.	GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  SGIC - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.
<i>Graptophyllum excelsum</i>	-/NT	Coastal regions from northern to southern Queensland.	Flowers most of the year. Fruits recorded January, July and November.	Mainly occurs in semi-evergreen vine thickets. Associated species include <i>Macropteranthes sp.</i> , <i>Gyrocarpus americanus</i> , <i>Lysiphyllum hookeri</i> , <i>Acacia fasciculifera</i> , <i>Brachychiton australis</i> ,	GSDA – Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey.

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
				<i>Polyscias elegans</i> , <i>Archidendropsis thozetiana</i> , <i>Gossia bidwillii</i> , <i>Alstonia constricta</i> , <i>Alyxia ruscifolia</i> and <i>Alchornea ilicifolia</i>	Low potential to occur.  SGIC – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  Northern section – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.
<i>Hernandia bivalvis</i>	-/NT	Recorded from Dryander Creek (near Proserpine) south to Mt Tamborine (north east of Beaudesert).	Flowers October to December. Fruits January to April.	Mostly occurs in rainforest on rock pavements and outcrops with shallow soils. Most records are from either vine thicket or microphyll vine forest in altitudes up to 620 m.	GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  SGIC - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.
<i>Livistona drudei</i>	-/V	Coastal areas, Proserpine to El Arish	Flowers August to March. Fruiting occurs December to June.	Found in melaleuca swamp-forest and fringes of gallery- or tropical-rainforest bordering on eucalypt forest. It grows in areas with boulders, on stream banks on flat coastal plains.	GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  SGIC – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
					Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.
<i>Macadamia integrifolia</i>	V/V	Northern NSW to SE Queensland.	Flowers January to November. Fruits November to April.	Remnant rainforest, preferring partially open areas such as rainforest edges.	GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  SGIC - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.  Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.
<i>Macropteranthes leiocaulis</i>	-/NT	Binjour Plateau (NW of Gayndah) to Mingela Bluff (SW of Townsville) (Harden et. al., 2016)	Flowers December to January. Fruits January to February (DNR, 2000).	Mainly occurs in deciduous vine thickets, semi-evergreen vine thickets and araucarian microphyll vine forests on red euchozems or sandstone talus. Also from forest/woodland habitats (DNR, 2000).	GSDA – Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey. Low potential to occur.  SGIC - Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey. Misidentification of the species at Marble Creek (-23.6833, 150.7581) Low potential to occur.  Northern section – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
<i>Marsdenia brevifolia</i>		North and central Queensland, near Townsville, Springsure and north of Rockhampton	Flowering November to February with fruits January to June.	Occurs in woodlands, dominated by <i>Corymbia erythrophloia</i> and <i>Eucalyptus crebra</i> with dense <i>Themeda triandra</i> understorey on basalt. The species can occur on rock outcrops, black soils, granite soils or dark massive acid agglomerate soils.	<p>GSDA – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>SGIC - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p>
<i>Parsonsia larcomensis</i>	V/V	Restricted to the Rockhampton - Mount Perry area.	Flowers January to June. Fruiting August to September.	Found from 350 to 750 m elevation. It grows in open heathland and shrubland at or near the summits of mountain peaks on cliffs or outcrops of acid volcanic rocks and serpentinites. Also found in complex notophyll vine forest and riverine rainforest on granite.	<p>GSDA – Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>SGIC – Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p>
<i>Phaius australis</i>		Occurs north of the Evans Head area in northern New South Wales to the Barron River in northeast Queensland.	Flowers September to November.	Found in coastal wet heath/sedgeland wetlands, swampy grassland or swampy forest, swamp-forest margins, swamp sclerophyll forest, swampy rainforest or fringing open forest.	<p>GSDA – Not recorded within 10 km of study area (Wildlife Online) and minimal suitable habitat within study area. Not recorded during survey. Low potential to occur.</p>

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
					<p>SGIC - Not recorded within 10 km of study area (Wildlife Online) and minimal suitable habitat within study area. Not recorded during survey. Low potential to occur.</p> <p>Northern section - Not recorded within 10 km of study area (Wildlife Online) and minimal suitable habitat within study area. Not recorded during survey. Low potential to occur.</p>
<i>Samadera bidwillii</i>	V/V	Known to occur in several localities between Scawfell Island, near Mackay, and Goomborian, north of Gympie.	Flowers from November to March.	Occurs in lowland rainforest or on rainforest margins. Also found in open forests and woodlands. Associated with permanent and temporary watercourses. Occurs on lithosols, skeletal soils, loam soils, sands, silts and sands with clay subsoils.	<p>GSDA – Recorded within 10 km of study area (Wildlife Online) and suitable habitat present within study area. Not recorded during survey. <b>High potential to occur.</b></p> <p>SGIC – Not recorded within 10 km of study area (Wildlife Online) Not recorded during survey. Low potential to occur.</p> <p>Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area. Not recorded during survey. Low potential to occur.</p>
<i>Zieria actites</i>	-/CR	Endemic to Mt Larcom.	Flowers, fruit and seed collected from September to May.	Occurs in open woodland/shrubland in crevices and clefts on exposed outcrops and cliff lines on quartz alunite at approximately 630m asl.	<p>GSDA – Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area (endemic to Mt Larcom). Not recorded during survey. Low potential to occur.</p> <p>SGIC - Recorded within 10 km of study area (Wildlife Online) but no suitable habitat within study area (endemic to Mt Larcom). Not recorded during survey. Low potential to occur.</p>

Species	Status <sup>#</sup>	Distribution*	Season	Habitat requirements*	Likelihood of occurrence in clearing impact areas
					Northern section - Not recorded within 10 km of study area (Wildlife Online) and no suitable habitat within study area (endemic to Mt Larcom). Not recorded during survey. Low potential to occur.

Queensland Department of Natural Resources (DNR) (2000). Species Management Manual. Forest and Fauna Conservation and Ecology Section, Queensland Department of Natural Resources.

# **Appendix E**

**Likelihood of occurrence**

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
Threatened flora species						
<i>Atalaya collina</i>	E	E	Recorded in the Mt. Sugarloaf area near Gladstone and near Nagoorin in central-eastern Queensland. Flowers in November. Mature fruits observed in December (DCCEEW 2022). Found in disturbed semi-evergreen vine thicket or dry rainforest on brownish-black clay loams overlying clay subsoils.	Unlikely to occur	May occur	Unlikely to occur
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within study area. Not recorded during field survey.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent. Minimal suitable habitat within study area. Not recorded during the field survey.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat within survey area. Not recorded during the field survey.		
<i>Bosistoa transversa</i>	V	V	Found from the Nightcap Range north of Lismore in north-east NSW to Mount Larcom (near Gladstone). Flowers from January to May. Occurs in lowland subtropical rainforest up to 300 m above sea level (DES 2022c).	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during survey.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat within survey area. Not recorded during the field survey.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
<i>Bulbophyllum globuliforme</i>	NT	V	Occurs from near Paluma, north-east Queensland and south to the McPherson Range on the Queensland/New South Wales border (DAWE, 2022). Flowers May to November. Host-specific species, only growing on the hoop pine ( <i>Araucaria cunninghamii</i> ), where it colonises the upper branches of mature trees (DAWE, 2022).	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
	E	E		Unlikely to occur	Unlikely to occur	May occur

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Capparis humistrata</i>			<p>Occurs between Marlborough and Bouldercombe. Also found near Dingo in central Queensland.</p> <p>Flowers recorded in March, May and December. Fruiting recorded in November and December.</p> <p>Found in eucalypt woodland with a shrubby understorey, on stony hard ridges and serpentinite soil. Also grows on the margins of brigalow forest on sandy soil (DES 2022c).</p>	<p>GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>Northern Section: The species has been historically recorded within the desktop search extent. Marginal habitat within the study area. Not recorded during the field survey.</p>		
<i>Cossinia australiana</i>	E	E	<p>Rockhampton to Kingaroy</p> <p>Flowers October to January. Fruiting recorded in February.</p> <p>Araucarian microphyll vine forest and relict semi-evergreen vine thicket on a variety of soils, including red volcanic soil and black loam (DES 2022c).</p>	Unlikely to occur	Unlikely to occur	Unlikely to occur
				<p>GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
<i>Cupaniopsis shirleyana</i>	V	V	<p>Restricted to southeast Queensland, from Brisbane, north to Bundaberg.</p> <p>Flowers from April to June.</p> <p>Occurs in dry rainforest vegetation types, including vine thicket communities on hillsides, stream beds and along riverbanks at altitudes up to 550 m above sea level (DES 2022c).</p>	Unlikely to occur	Unlikely to occur	Unlikely to occur
				<p>GSDA: The species has been historically recorded within the desktop search extent; however, species records appear to be reassigned as <i>Cupaniopsis</i> sp. (Watalgan A.R. Bean 8611). Not recorded during the field survey.</p>		
				<p>SGIC SDA: The species has been historically recorded within the desktop search extent; however, species records appear to be reassigned as <i>Cupaniopsis</i> sp. (Watalgan A.R. Bean 8611). Not recorded during the field survey.</p>		
				<p>Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
<i>Cycas megacarpa</i>	E	E	Bouldercombe in the north, to near Woolooga in the south.	Likely to occur	May occur	May occur

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			<p>Fruiting cones are produced between the months of May. And February. Seeds become ripe from March onwards.</p> <p>Found in woodland, open woodland and open forests, often in conjunction with a grassy understory. Also found in or on the edge of rainforest habitats (DES 2022c).</p>	<p>GSDA: The species has been historically recorded within the desktop search extent and suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>SGIC SDA: The species has been historically recorded within the desktop search extent; however, marginal habitat within the study area. Not recorded during the field survey.</p>		
				<p>Northern Section: The species has been historically recorded within the desktop search extent and suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
<i>Cycas ophiolitica</i>	E	E	<p>Endemic to Queensland, occurring from Marlborough to Rockhampton in central-eastern Queensland.</p> <p>Seed becomes ripe from March onwards, when it drops from the plant.</p> <p>Grows on hills and slopes in sparse, grassy open forest at altitude ranges from 80–400 m above sea level. Has been found on red clay soils; shallow, stony, infertile soils developed on sandstone and serpentinite; on mudstone and on alluvial loams.</p>	Unlikely to occur	May occur	May occur
				<p>GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>SGIC SDA: The species has been historically recorded within the desktop search extent and suitable habitat occurs within the study area. Not recorded during the field survey.</p>		
				<p>Northern Section: The species has not been historically recorded within the desktop search extent; however, suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
<i>Dansiea elliptica</i>	NT	NL	<p>Two disjunct centres of distribution, namely the wet tropics and central Queensland.</p> <p>Flowering recorded in January and May.</p> <p>Grows in lowland dry rainforest and vine thicket (notophyll vine forests, semi evergreen vine thickets).</p>	Unlikely to occur	Unlikely to occur	Unlikely to occur
				<p>GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		
				<p>Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.</p>		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Decaspermum struckoiligum</i>	CE	E	<p>Endemic to Bouldercombe Gorge area, east of Mount Morgan.</p> <p>Flowering recorded October and November. Fruits from November to February.</p> <p>Grows in semi-evergreen vine thickets at elevations up to 300 m (DES 2022c).</p>	N/A	Unlikely to occur	N/A
<i>Dichanthium setosum</i>	LC	V	<p>Inland NSW and Queensland.</p> <p>Flowers in summer and becomes dormant in late autumn. Found on heavy basaltic black soils and red-brown loams with clay subsoil. Associated species include <i>Eucalyptus albens</i>, <i>E. melanophloia</i>, <i>E. melliodora</i>, <i>E. viminalis</i>. Often in moderately disturbed areas such as cleared woodland, grassy roadside remnants and highly disturbed pasture (DES 2022c).</p>	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				Northern Section: The species has not been historically recorded within the desktop search extent; however, only marginal habitat was recorded within the study area. Not recorded during the field survey.		
<i>Eucalyptus raveretiana</i>	V	LC	<p>South of Charters Towers to south of Rockhampton and areas 100 km west of the city.</p> <p>Flowers from December to March.</p> <p>Found along watercourses and occasionally on river flats. It occurs in open forest or woodland communities. Preference for moderately fertile soil and adequate sub-soil moisture (DES 2022c).</p>	Unlikely to occur	May occur	May occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has been historically recorded within the desktop search extent and potentially suitable habitat was recorded within the study area. Not recorded during the field survey.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable habitat was recorded within the study area. Not recorded during the field survey.		
<i>Graptophyllum excelsum</i>	NT	NL	<p>Coastal regions from northern to southern Queensland.</p> <p>Flowers most of the year. Fruits recorded January, July and November.</p> <p>Mainly occurs in semi-evergreen vine thickets. Associated species include <i>Macropteranthes</i> sp., <i>Gyrocarpus</i></p>	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			<i>americanus</i> , <i>Lysiphyllum hookeri</i> , <i>Acacia fasciculifera</i> , <i>Brachychiton australis</i> , <i>Polyscias elegans</i> , <i>Archidendropsis thozetiana</i> , <i>Gossia bidwillii</i> , <i>Alstonia constricta</i> , <i>Alyxia ruscifolia</i> and <i>Alchornea ilicifolia</i> (DES 2022c).	SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
<i>Hernandia bivalvis</i>	NT	NL	Recorded from Dryander Creek (near Proserpine) south to Mt Tamborine (northeast of Beaudesert). Flowers October to December. Fruits January to April. Mostly occurs in rainforest on rock pavements and outcrops with shallow soils. Most records are from either vine thicket or microphyll vine forest in altitudes up to 620 m (DES 2022c).	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
<i>Macadamia integrifolia</i>	V	V	Northern NSW to southeast Queensland. Flowers January to November. Fruits November to April. Remnant rainforest, preferring partially open areas such as rainforest edges (DES 2022c).	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
<i>Macropteranthes leiocaulis</i>	NT	NL	Binjour Plateau (NW of Gayndah) to Mingela Bluff (SW of Townsville) (Harden <i>et. Al.</i> 2016) Flowers December to January. Fruits January to February (DNR 2000). Mainly occurs in deciduous vine thickets, semi-evergreen vine thickets and araucarian microphyll vine forests on red euchozems or sandstone talus. Also from forest/woodland habitats (DNR 2000).	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey. Misidentification of the species at Marble Creek (- 23.6833, 150.7581).		
<i>Marsdenia brevifolia</i>	V	V	North and central Queensland, near Townsville, Springsure and north of Rockhampton. Flowering November to February with fruits January to June.	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			Occurs in woodlands, dominated by <i>Corymbia erythrophloia</i> and <i>Eucalyptus crebra</i> with dense <i>Themeda triandra</i> understorey on basalt. The species can occur on rock outcrops, black soils, granite soils or dark massive acid agglomerate soils (DES 2022c).	SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				Northern Section The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		
<i>Parsonsia larcomensis</i>	V	V	Restricted to the Rockhampton-- Mount Perry area. Flowers January to June. Fruiting August to September. Found from 350 to 750 m elevation. It grows in open heathland and shrubland at or near the summits of mountain peaks on cliffs or outcrops of acid volcanic rocks and serpentinites. Also found in complex notophyll vine forest and riverine rainforest on granite (DES 2022c).	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
<i>Phaius australis</i>	E	E	Occurs north of the Evans Head area in northern New South Wales to the Barron River in northeast Queensland. Flowers September to November. Found in coastal wet heath/sedgeland wetlands, swampy grassland or swampy forest, swamp-forest margins, swamp sclerophyll forest, swampy rainforest or fringing open forest.	Unlikely to occur	N/A	Unlikely to occur
				GSDA: The species has not been recorded within the desktop search extent; however, minimal suitable habitat was recorded within study area. Not recorded during the field survey.		
				Northern Section: The species has not been recorded within the desktop search extent; however, minimal suitable habitat was recorded within study area. Not recorded during the field survey.		
<i>Samadera bidwillii</i>	V	V	Known to occur in several localities between Scawfell Island, near Mackay, and Goomborian, north of Gympie. Flowers from November to March. Occurs in lowland rainforest or on rainforest margins. Also found in open forests and woodlands. Associated with permanent and temporary watercourses. Occurs on lithosols, skeletal soils, loam soils, sands, silts and sands with clay subsoils (DES 2022c).	Likely to occur	Likely to occur	Unlikely to occur
				GSDA: The species has been historically recorded within the desktop search extent and suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has been historically recorded within the desktop search extent and suitable habitat was recorded within the study area. Not recorded during the field survey.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area. Not recorded during the field survey.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Zieria actites</i>	CE	NL	Endemic to Mt Larcom. Flowers, fruit and seed collected from September to May. Occurs in open woodland/shrubland in crevices and clefts on exposed outcrops and cliff lines on quartz alunite at approximately 630m asl (DES 2022c).	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area. Not recorded during the field survey.		
Threatened bird species						
<i>Botaurus poiciloptilus</i> Australasian bittern	E	E	Distribution: In Queensland, the species occurs as far north as Yeppoon and west to Wyandra. Habitat: The species occurs mainly in freshwater wetlands and, rarely, in estuaries or tidal wetlands. It favours wetlands with tall dense vegetation with shallow water. It favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and reeds (TSSC 2019).	N/A	May occur	Unlikely to occur
				SGIC SDA: The species has not been historically recorded within the desktop search extent. Suitable habitat, including seasonal wetlands and permanent waterbodies (i.e. billabongs and dams), occur within the study area; however, these habitats are largely dominated by introduced pastoral species.		
				Northern Section: The species has not been historically recorded within the desktop search extent. The Lower Gracemere Lagoon is identified as potentially suitable habitat for the species; however, the species are less often to inhabit inland waterbodies.		
<i>Calidris canutus</i> Red knot	E	E, Mig	Distribution: Occurs along the coastlines of Australia (DCCEEW 2022). Does not breed in Australia (DCCEEW 2022). Migrates from breeding grounds in north-east Siberia to Australia, arriving in August (DCCEEW 2022). Habitat: During the non-breeding season, the red knot mainly inhabits intertidal mudflats, sandflats, and sandy beaches of sheltered coasts. It sometimes on sandy ocean beaches or shallow pools on exposed rock platforms (DCCEEW 2022).	Unlikely to occur	May occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat occurs within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent. Although tidal habitats were recorded within the study area, the SGIC SDA pipeline alignment is proposed to intersect the most upper reaches of tidal creeks, which are not considered as optimal habitat for the species.		
<i>Calidris ferruginea</i> Curlew sandpiper	CE	CE, Mig	Distribution: Mainly occurs along the coastlines of Australia (DCCEEW 2022). They occur in smaller numbers across inland waters in Queensland (DCCEEW 2022). Breeds only in Siberia. Leaves breeding grounds in July and August.	May occur	Likely to occur	May occur
				GSDA: The species has 34 records within the desktop search extent. The GSDA alignment is located immediately adjacent to a modified floodplain, which may provide suitable foraging		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			<p>Arrives in Australia in late August and early September. Flocks stopover in northern Australia before moving on to southeastern Australia. Majority of birds arrive in September. Return migration commences in March (DCCEEW 2022).</p> <p>Habitat: Known to inhabit sheltered intertidal mudflats, and ephemeral and permanent lakes and dams (DCCEEW 2022). Roosts on dry beaches, spits and islets (DCCEEW 2022).</p>	<p>habitat when the area is inundated with water. However, the species are less often to inhabit inland waterbodies.</p> <p>SGIC SDA: The species has 13 records within the desktop search extent, one recorded approximately 2 km west of the SGIC SDA pipeline alignment near Marmor. Suitable habitat including tidal areas, ephemeral and permanent waterways and waterbodies, were recorded within the study area.</p> <p>Northern Section: The species has seven records within the desktop search extent. The Lower Gracemere Lagoon is identified as potentially suitable habitat for the species; however, the species are less often to inhabit inland waterbodies.</p>		
<i>Calidris tenuirostris</i> Great knot	CE	CE, Mig	<p>Distribution: Sheltered coastal habitats around Australia (DCCEEW 2022). Breeds in north-eastern Siberia and Russia. Moves south after breeding to Australia, with migration starting in June. Large flocks arrive in late August through to early September. The majority of the population stays in northern Australia, although some birds move further south. Departure to the breeding grounds commences in March (DCCEEW 2022).</p> <p>Habitat: Known to inhabit large intertidal mudflats, sandy beaches and occasionally on exposed reefs and rock platforms (DCCEEW 2022). Roosts in large congregations in open areas (DCCEEW 2022).</p>	Unlikely to occur	N/A	N/A
<i>Calyptorhynchus lathamii</i> Glossy black-cockatoo	V	E	<p>Habitat: The species occurs in coastal woodlands, open inland woodlands or timbered watercourses where casuarinas occur. Also occur in open sclerophyll forest with a stratum of <i>Allocasuarina</i> beneath <i>Eucalyptus</i>, <i>Corymbia</i> or <i>Angophora</i> (Glossy Black Conservancy 2010).</p>	Confirmed present	N/A	N/A
<i>Charadrius leschenaultii</i> Greater sand plover	V	V, Mig	<p>Distribution: Occurs in coastal regions throughout Australia but is most concentrated in the north (DCCEEW 2022). Breeds in central Asia. Migrates from breeding grounds in July. Passes through south-east Asia into northern Australia, arriving late July (DCCEEW 2022). Follows coastline flyways when moving within Australia. Movement back to breeding grounds commences in late February (DCCEEW 2022).</p> <p>Habitat: Forages on open intertidal flats of sheltered embayments, lagoons or estuaries (DCCEEW 2022).</p>	Unlikely to occur	May occur	N/A
				<p>GSDA: The species has four records within the desktop search extent, all of which are located along the coastline. No coastal habitats occur within the study area.</p> <p>SGIC SDA: The species has not been historically recorded within the desktop search extent. Although tidal habitats were recorded within the study area, the SGIC SDA pipeline alignment is proposed to intersect the most upper reaches of tidal creeks, which are not considered as optimal habitat for the species.</p>		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Charadrius mongolus</i> Lesser sand plover	E	E, Mig	<p>Distribution: Occurs in coastal regions of all states, but mainly through north and east Australia (DCCEEW 2022). The species migrates from breeding grounds, north-east and central Asia, to northern Australia in August and disperses along the coastlines to southern areas. Commences the return journey to breeding grounds in April (DCCEEW 2022).</p> <p>Habitat: Forages along shorelines and intertidal flats and occasionally on coral reefs and river margins (DCCEEW 2022).</p>	Unlikely to occur	May occur	N/A
<i>Cyclopsitta diophthalma coxeni</i> Coxen's fig-parrot	E	E	<p>Distribution: Distribution is poorly known (DCCEEW 2022). Based on species records, the distribution extends from south-eastern Queensland to north-eastern New South Wales (DCCEEW 2022).</p> <p>Habitat: Occurs in rainforest habitats including subtropical rainforest, dry rainforest, littoral and developing littoral rainforest, and vine forest (DCCEEW 2022). Species habitat has been largely cleared following the arrival of Europeans. The remaining population is now thought to be concentrated into fragmented remnants of drier and more hilly habitats (DCCEEW 2022).</p>	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. The nearest record is approximately 90 km south of the study area. No potentially suitable habitat was recorded within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no potentially suitable habitat was recorded within the study area.		
				Northern Portion: The species has not been historically recorded within the desktop search extent and no suitable habitat occurs within the study area.		
<i>Epthianura crocea macgregori</i> Yellow chat (Dawson)	E	CE	<p>Distribution: Restricted to coastal areas of central Queensland (DCCEEW 2022).</p> <p>Habitat: Inhabits freshwater and saline wetlands on marine plains and occurs in habitats that contain rush and grass vegetation between 0.4 m to 2 m tall along drainage lines and in open habitats for foraging (DCCEEW 2022). The species nests and raises their young in saltwater couch grasslands and samphire shrublands (DCCEEW 2022)</p>	Unlikely to occur	Confirmed present	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
				SGIC SDA: Four individuals were confirmed present during the Arup (2008) field surveys. Species were recorded from two locations along Twelve Mile Creek.		
				Northern Section: The species has one record within the desktop search extent, recorded in 2010. No potentially suitable wetland habitats occur within the study area. The Lower Gracemere Lagoon occurs within the study area; however, it is not located on marine plains.		
<i>Erythrotriorchis radiatus</i> Red goshawk	E	V	Distribution: Patchy, widespread distribution across coastal and sub-coastal regions of northern and eastern Australia (DCCEEW 2022).	Unlikely to occur	Unlikely to occur	Unlikely to occur
GSDA: The species has not been historically recorded within the desktop search extent, the closest record occurs 18.5 km south-east of the study area and was recorded in 2016. Potentially						

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			Habitat: Occurs in a range of habitats, often at ecotones, including coastal and sub-coastal tall open forests, tropical savannahs crossed by wooded or forested watercourses, woodlands, edges of rainforests and gallery forests along watercourses, and wetlands that include <i>Melaleuca</i> and <i>Casuarina</i> species (DCCEEW 2022). The species typically nests in tall trees within 1 km of permanent water and occurs in habitats that support a high abundance of bird species (DCCEEW 2022).	<p>suitable habitat is present within the study area. Based on the suitability of habitat, the species has potential to occur. However, it has experienced a recent, rapid northward contraction, and is now rarely encountered south of southern Cape York in Queensland (Garnett and Baker 2020). On this basis, the species is unlikely to occur within the GSDA pipeline alignment.</p> <p>SGIC SDA: The species has two records within the desktop search extent, both recorded in 1955. Potentially suitable habitat is present within the study area. Based on the suitability of habitat, the species has potential to occur. However, it has experienced a recent, rapid northward contraction, and is now rarely encountered south of southern Cape York in Queensland (Garnett and Baker, 2020). On this basis, the species is unlikely to occur within the SGIC SDA pipeline alignment.</p> <p>Northern Section: The species has two records within the desktop search extent, both recorded in 1955. Potentially suitable habitat is present within the study area. Based on the suitability of habitat, the species has potential to occur. However, it has experienced a recent, rapid northward contraction, and is now rarely encountered south of southern Cape York in Queensland (Garnett and Baker, 2020). On this basis, the species is unlikely to occur within the Northern Section pipeline alignment.</p>		
<i>Esacus magnirostris</i> Beach stone-curlew	V	NL	<p>Distribution: North coast of Australian and associated islands from Western Australia to New South Wales (Birdlife Australia 2022)</p> <p>Habitat: The beach stone-curlew forages on large intertidal mudflats, sandflats, sandbanks and sandpits exposed by low tide for crabs and other marine invertebrates. The species is also known to frequent river mouths, offshore sandbars associated with coral atolls, reefs and rock platforms, and coastal lagoons (Birdlife Australia 2022).</p>	Unlikely to occur	N/A	N/A
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area, the species is associated with marine environments.		
<i>Falco hypoleucos</i> Grey falcon	V	V	<p>Distribution: The species is noted as being absent from east of the Great Dividing Range and is mainly found in regions where the annual rainfall is less than 500 mm and is essentially confined to arid and semi-arid regions (TSSC 2020).</p> <p>Habitat: An elusive species that occurs in arid to semi-arid environments in timbered lowland plains, shrublands, grasslands and open woodlands but have been observed</p>	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. The species' distribution does not encompass the GSDA pipeline alignment as the project is located east of the Great Dividing Range where the species is noted to be absent. Additionally, BoM Monthly Rainfall statistics for the Gladstone Radar (Station ID: 039123) report that the average annual rainfall for the Gladstone region is above 500		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			hunting in open areas. They preference habitat with tree-lined watercourses for nesting (TSSC 2020).	mm rainfall per year (mean 882.8 mm) based on data collected during the last 63 years (1958 – 2021) (BoM 2022).		
				SGIC SDA: The species has one record within the desktop search extent, recorded in 1975. The species' distribution does not encompass the SGIC SDA pipeline alignment as the project is located east of the Great Dividing Range where the species is noted to be absent. Additionally, BoM Monthly Rainfall statistics for the Gladstone Radar (Station ID: 039123) and Gracemere – Lucas St (Station ID: 039049) report that the average annual rainfall for the Gladstone and Rockhampton region is above 500 mm rainfall per year (mean 882.8 mm) (BoM 2022; BoM 2022a).		
				Northern Section: The species has not been historically recorded within the desktop search extent. The species' distribution does not encompass the Northern Section pipeline alignment as the project is located east of the Great Dividing Range where the species is noted to be absent. Additionally, BoM Monthly Rainfall statistics for the Gracemere – Lucas St (Station ID: 039049) report that the average annual rainfall for the Rockhampton region is above 500 mm rainfall per year (mean 820.3 mm) based on data collected during the last 131 years (1890 – 2021) (BoM 2022a).		
<i>Fregetta grallaria grallaria</i> White-bellied storm-petrel	V	LC	Distribution: Occurs in the tropical and subtropical waters of the Pacific, Indian and Atlantic Oceans, and is known to occur off the coast of eastern Australia (DCCEEW 2022). Habitat: Breeds in colonies on small islets and rocks in the Lord Howe Island (north-east of Sydney) and Kermadec Island complexes (north-east of New Zealand) (DCCEEW 2022).	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
<i>Geophaps scripta scripta</i> Squatter pigeon (southern)	V	V	Distribution: Extends south from Cape York Peninsula to the Border Rivers region in northern New South Wales, and from the east coast to Hughenden, Longreach and Charleville, Queensland (DCCEEW 2022). Habitat: Occurs in open-forests to sparse, open-woodlands and scrub that are dominated by <i>Eucalyptus</i> , <i>Corymbia</i> and <i>Acacia</i> or <i>Callitris</i> species, remnant and regrowth within 3 km of water (DCCEEW 2022).	Confirmed present	Confirmed present	Likely to occur
				GSDA: Two individuals were confirmed present within the study area during the field surveys.		
				SGIC SDA: 14 individuals were confirmed present within the study area during the field surveys.		
				Northern Section: The species has 194 records within the desktop search extent, the most recent recorded in 2019. The species was confirmed present during the 2007 field surveys		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
				undertaken by Arup (Arup, 2008). Suitable habitat was recorded within the study area.		
<i>Grantiella picta</i> Painted honeyeater	V	V	Distribution: Sparsely distributed from south-eastern Australia to north-western Queensland and eastern Northern Territory (DoE 2015b).  Habitat: Diet mainly consists of mistletoe fruits, as well as nectar from flowering mistletoes and eucalypts (DoE 2015b). Inhabits mistletoes in eucalypt forests/woodlands, riparian woodlands, acacia-dominated woodlands, <i>Melaleuca</i> sp., <i>Casuarina</i> sp., <i>Casuarina</i> sp., <i>Callitris</i> sp. and trees on farmlands or gardens (DoE 2015b)	N/A	N/A	Unlikely to occur
<i>Hirundapus caudacutus</i> White-throated needletail	V	V, Mig	Distribution: Widespread throughout eastern and south-eastern Australia. It has been recorded along all coastal regions of QLD and NSW (DCCEEW 2022).  Habitat: Almost exclusively aerial, it does prefer wooded, inland areas and heathland. In coastal areas they have been seen flying over mudflats and beaches (DCCEEW 2022).	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has four records within the desktop search extent, the most recent recorded in 1999. The species has potential to forage aerially across the study area.		
				SGIC SDA: The species has two records within the desktop search extent, the most recent recorded in 1997. The species has potential to forage aerially across the study area.		
				Northern Section: The species has three records within the desktop search extent, the most recent recorded in 2018. The species has potential to forage aerially across the study area.		
<i>Limosa lapponica baueri</i> Western Alaskan bar-tailed godwit	V	V	Distribution: Recorded in all coastal areas of all Australian states. Species is widespread along the east and south-east coasts of Queensland, New South Wales and Victoria (DCCEEW 2022).  Habitat: A large wading bird, inhabiting coastal habitats and brackish wetlands, but is rarely observed inland. Forages in sheltered intertidal areas and roosts on sandy beaches, sandbars and spits (DCCEEW 2022).	Unlikely to occur	May occur	May occur
				GSDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat for the species occurs within the study area.		
				SGIC SDA: The species has six records within the desktop search extent. The closest record occurs approximately 2 km west of the SGIC SDA pipeline alignment. Suitable habitat, including tidal areas and seasonal wetlands, were recorded within the study area; however, the species is		
				Northern Section: The species has four records within the desktop search extent, the most recent recorded in 1995 approximately 900 m east of the Northern Section pipeline alignment. Although the species is rarely observed in inland habitats, the species has been recorded within the large wetland immediately adjacent to the Northern Section alignment. The pipeline alignment does not traverse this wetland habitat.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Lophochroa leadbeateri</i> Major Mitchell's cockatoo	V	NL	Distribution: Located across the arid and semi-arid inland of south-western Queensland (OEH 2022a). Habitat: Inhabits a wide range of vegetated and open inland habitats, in close proximity to water (OEH 2022b).	N/A	Unlikely to occur	Unlikely to occur
				SGIC SDA: The species has one recorded within the desktop search extent. The species is known to inhabit inland habitats.		
				Northern Section: The species has one record within the desktop search extent. The species is known to inhabit inland habitats.		
<i>Macronectes giganteus</i> Southern giant petrel	E	E, Mig	Distribution: Widespread throughout the Southern Ocean (DCCEEW 2022). Habitat: Species is widespread but generally found in low densities across landmasses in Antarctic waters in summer and is thought to move to areas north of 50°S in winter. Breeding occurs on several islands in the Southern Ocean and Australian Antarctic Territory (DCCEEW 2022).	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
<i>Neochmia ruficauda ruficauda</i> Star finch (eastern, southern)	E	E	Distribution: The species occurs in low numbers in central Queensland (DCCEEW 2022). Habitat: Mainly inhabits grasslands and grassy woodlands in close proximity to permanent freshwater (DCCEEW 2022). Species are closely associated to habitats that consist certain tree species, including <i>Eucalyptus coolabah</i> , <i>E. tereticornis</i> , <i>E. tessellaris</i> , <i>Melaleuca leucadendra</i> , <i>E. camaldulensis</i> and <i>Casuarina cunninghamii</i> (DCCEEW 2022).	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The subspecies has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
				SGIC SDA: The subspecies has one record within the desktop search extent, recorded in 1958. Although potentially suitable habitat for the subspecies was recorded within the study area, the total population of the subspecies is estimated to consist of 50 or less breeding birds, which is considered to be of low reliability (DCCEEW 2022).		
				Northern Section: The subspecies has five records within the desktop search extent, the most recent recorded in 1991 approximately 1.6 km east of the Northern Section alignment. Although potentially suitable habitat for the subspecies was recorded within the study area, the total population of the subspecies is estimated to consist of 50 or less breeding birds, which is considered to be of low reliability (DCCEEW 2022).		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Ninox strenua</i> Powerful owl	V	NL	<p>Distribution: Mainly occurs on the coastal side of the Great Dividing Range from Mackey to south-western Victoria (OEH 2022b).</p> <p>Habitat: The species occurs in a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest. Prefers large tracts of forest or woodland but can occur in fragmented landscapes (Kavanagh and Stanton 2002).</p>	Likely to occur	Likely to occur	N/A
<i>Numenius madagascariensis</i> Eastern curlew	E	CE	<p>Distribution: Distributed along the coast in all states of Australia. The species is rarely recorded inland.</p> <p>Habitat: Associated with sheltered coasts, especially estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass (DCCEEW 2022). This species forages on soft, sheltered, intertidal sand- or mudflats, often near mangroves, on saltflats, saltmarshes, rockpools, coastal reefs and ocean beaches near the tideline (DCCEEW 2022).</p>	Unlikely to occur	May occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
				SGIC SDA: The species has nine records within the desktop search extent. Although tidal habitats were recorded within the study area, the SGIC SDA pipeline alignment is proposed to intersect the most upper reaches of tidal creeks, which are not considered as optimal habitat for the species.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
<i>Pachyptila turtur subantarctica</i> Fairy prion (southern)	LC	V	<p>Distribution: Breeding occurs on New Zealand offshore islands (DCCEEW 2022). Little information is available on migration pathways; however, this subspecies could travel north to subtropical waters during winter understood (DCCEEW 2022).</p> <p>Habitat: It forages over continental shelves and the continental slope and may feed in deep coastal waters (DCCEEW 2022).</p>	Unlikely to occur	Unlikely to occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
<i>Poephila cincta cincta</i>	E	E	<p>Distribution: The southern subspecies is known to occur in the Townsville-Charters Towers region and in scattered sites in central Queensland (DCCEEW 2022). The</p>	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The subspecies has not been historically recorded within the desktop search extent. The GSDA largely occurs outside of		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
Black-throated finch (southern)			<p>subspecies remains locally common at only a few sites near Townsville and Charters Towers (DCCEEW 2022).</p> <p>Habitat: Occurs mainly in grassy, open woodlands and forests, typically dominated by <i>Eucalyptus</i>, <i>Corymbia</i> and <i>Melaleuca</i>, and occasionally in tussock grasslands or other habitats, often along or near watercourses, or in the vicinity of water (DCCEEW 2022).</p>	<p>the subspecies' mapped distribution (DCCEEW 2022). Limited foraging habitat was recorded within the study area.</p>	<p>SGIC SDA: The subspecies has four records within the desktop search extent, the most recent recorded in 1984. Potentially suitable foraging habitat was recorded within the study area.</p>	<p>Northern Section: The subspecies has not been historically recorded within the desktop search extent. Potentially suitable foraging habitat was recorded within the study area, adjacent to water.</p>
<i>Pterodroma neglecta neglecta</i> Kermadec petrel (western)	V	LC	<p>Distribution: Breeds on islands, islets and atolls in the southern Pacific Ocean. Within Australia, the species nests at Ball's Pyramid (off the coast of Port Macquarie) and Phillip Island, Victoria. This species occasionally reaches the eastern coast of the Australian mainland (DCCEEW 2022).</p> <p>Habitat: Pelagic petrel of the Pacific Ocean (DCCEEW 2022).</p>	<p>Unlikely to occur</p>	<p>Unlikely to occur</p>	<p>N/A</p>
				<p>GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.</p>	<p>SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.</p>	
<i>Rostratula australis</i> Australian painted snipe	E	E	<p>Distribution: Recorded at wetlands from all states of Australia; however, the species is more common in eastern Australia (DCCEEW 2022).</p> <p>Habitat: Typically inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps, claypans and waterlogged grasslands (DCCEEW 2022).</p>	<p>May occur</p>	<p>Likely to occur</p>	<p>Likely to occur</p>
				<p>GSDA: The species has not been historically recorded within the desktop search extent. The GSDA alignment is located immediately adjacent to a modified floodplain, which may provide suitable foraging habitat when inundated with water.</p>	<p>SGIC SDA: The species has six records within the desktop search extent, the most recent recorded in 2013. Potentially suitable wetland habitats were recorded within the study area.</p>	<p>Northern Section: The species has four records within the desktop search extent, the most recent recorded in 2013. Potentially suitable wetland habitats were recorded within the study area.</p>
<i>Thalassarche impavida</i> Campbell albatross	SL	V, Mig	<p>Distribution: Known to forage over the continental shelf off New South Wales, Victoria and Tasmania (DCCEEW 2022).</p> <p>Habitat: The species forages pelagic waters to shelf-break waters, specialising in the latter (DCCEEW 2022). The only known breeding area for this species is Campbell Island off</p>	<p>Unlikely to occur</p>	<p>Unlikely to occur</p>	<p>Unlikely to occur</p>
				<p>GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.</p>		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			the southern coast of New Zealand. Post-breeding, the birds may move north to enter Australia's temperate shelf water (DCCEEW 2022).	SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area, the species is associated with marine environments.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
<i>Turnix melanogaster</i> Black-breasted button-quail	V	V	Distribution: Distributed across south-eastern Queensland, from Byfield in the north to the Border Ranges rainforests in the south, typically east of the Great Dividing Range (TSSC 2015).  Habitat: This species is typically found in the leaf litter and vine thickets of drier rainforests; scrubby eucalypt, she-oak and <i>Acacia</i> woodlands; and thickets of lantana on rainforest fringes (TSSC 2015).	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
Threatened mammal species						
<i>Chalinolobus dwyeri</i> Large-eared pied bat	V	V	Distribution: Distribution is poorly known. Known to occur from Shoalwater Bay, north of Rockhampton, through to the vicinity of Ulladulla, New South Wales (DCCEEW 2022).  Habitat: Species requires a combination of sandstone cliffs/escarpments to provide roosting habitat that is adjacent to higher fertility sites, particularly box gum woodlands or river/rainforest corridors which are used for foraging (DCCEEW 2022). No maternity roost sites are known in Queensland (DCCEEW 2022).	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
<i>Dasyurus hallucatus</i> Northern quoll	LC	E	Distribution: Known to occur from Rockhampton to Weipa in Queensland and extends west to central Queensland near Carnarvon National Park (DCCEEW 2022).  Habitat: Occurs in a range of habitats, including open dry sclerophyll forest and woodland, riparian woodland, low dry vine thicket, the margins of notophyll vine-forest, mangroves, sugarcane farms and in urban areas. They are	May occur	May occur	May occur
				GSDA: The species has not been historically recorded within the desktop search extent; however, suitable habitat and ground-level microhabitats (e.g. hollow ground logs) were recorded within the study area.		
				SGIC SDA: The species has seven records within the desktop search extent, the most recent recorded in 2021. Suitable habitat		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			most abundant in hilly or rocky areas close to permanent water (DCCEEW 2022). Quolls are likely to disappear in areas where less than 50-70% woodland remains within a 4 km radius. (DCCEEW 2022).	was recorded within the study area; however, ground-level microhabitats (e.g. hollow ground logs) were limited.		
				Northern Section: The species has one historical record from 2021, approximately 10 km south-east of the southern end of the Northern Section. Suitable habitat was recorded within the study area; however, ground-level microhabitats (e.g. hollow ground logs) were limited.		
<i>Dugong dugon</i> Dugong	Mig	V	Distribution: Known to occur throughout northern Australia, and within Queensland as far south as Moreton Bay (DCCEEW 2022h). Habitat: The species is known to congregate and inhabit accessible sea grass meadows within wide shallow bays, wide mangrove channels, and in the lee of large inshore islands (DCCEEW 2022h).	N/A	Unlikely to occur	N/A
				SGIC SDA: Previous occurrence records for the species have occurred at the mouth of the Fitzroy River (ALA 2022), however habitat conditions within the waterways of the SGIC SDA, including turbid waters, no evidence of seagrass meadows and location of the alignment in particular sites 2 and 4 within the upper tidal reaches, are not suitable for the species.		
<i>Macroderma gigas</i> Ghost bat	E	V	Distribution: Species range is discontinuous, with colonies occurring in the Pilbara, Kimberley, northern Northern Territory, the Gulf of Carpentaria, coastal and near coastal eastern Queensland from Cape York to near Rockhampton. Habitat: This species is known to occur in rainforest areas, vine shrub, open woodlands and arid zone (TSSC 2016), and roosts in caves, rock crevices and old mine shafts (TSSC 2016; Bat Call WA 2021).	May occur	May occur	May occur
				GSDA: The species has one historical record from 1985, approximately 10 km north of the study area. Preferred roosting habitat for this species was not recorded within the study area. Although suitable foraging habitat is present within the study area, the species is known to forage on average 1.9 km and typically less than 5 km from diurnal roosts (TSSC 2016; Bat Call WA 2021).		
				SGIC SDA: One individual has been historically recorded within the desktop search extent in 2006. Preferred roosting habitat for this species was not recorded within the study area. Although suitable foraging habitat is present within the study area, the species is known to forage on average 1.9 km and typically less than 5 km from diurnal roosts (TSSC 2016; Bat Call WA 2021).		
				Northern Section: The species has been historically recorded within the desktop search extent, with one historical record from 2006. Preferred roosting habitat for this species was not recorded within the study area. Although suitable foraging habitat is present within the study area, the species is known to forage on average 1.9 km and typically less than 5 km from diurnal roosts (TSSC 2016; Bat Call WA 2021).		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Nyctophilus corbeni</i> Corben's long-eared bat	V	V	<p>Distribution: Found in southern central Queensland, central western New South Wales, northwestern Victoria and eastern South Australia. Most records occur inland of the Great Dividing Range (TSSC 2015).</p> <p>Habitat: Inhabits a variety of inland woodland vegetation types, including box/ironbark/cypress pine woodlands, buloke woodlands, brigalow woodlands, belah woodlands, smooth-barked apple woodlands, river red gum woodlands and black box woodlands (TSSC 2015). The species roosts solitarily in dead trees or dead limbs of live trees (TSSC 2015).</p>	May occur	May occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent; however, potentially suitable roosting and foraging habitat was recorded within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent; however, potentially suitable roosting and foraging habitat was recorded within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent and no suitable habitat was recorded within the study area.		
<i>Orcaella heinsohni</i> Australian snubfin dolphin	NL	V	<p>Distribution: Known to occur throughout northern Australia, and within Queensland as far south on the east coast as Brisbane River (DCCEEW 2022d).</p> <p>Habitat: The species inhabits inshore coastal environments and estuarine creeks, and not likely to venture far up waterways (DCCEEW 2022d).</p>	N/A	May occur	N/A
				SDIC SDA: The species are known to occur within the coastal region of the SGIC SDA and may occur within the estuarine creeks including Raglan Creek at site 2 and Inkerman Creek at site 4.		
<i>Ornithorhynchus anatinus</i> Platypus	SL	-	<p>Distribution: Platypus are found in eastern Australia from far north Queensland to Tasmania. In Queensland, the species inhabits rivers east of the Great Dividing Range, and some western-flowing streams (DES 2021a).</p> <p>Habitat: Platypus habitat includes freshwater creeks, slow-moving rivers, lakes joined by rivers, and built water storages such as farm dams. The species does not occur in estuarine or marine waters. Preferred habitat for the species is defined as areas that have steep, well vegetated banks (Grant and Temple-Smith 1998). Platypi occupy a wide range of aquatic habitats, are somewhat tolerant of degraded systems, and show notable adaptability (Grant and Temple-Smith 1998). Burrows are built in riverbanks, just above water level and often among a tangle of tree roots (DES 2021a).</p>	May occur	Likely to occur	Likely to occur
				GSDA: The species has not been historically recorded within the desktop search extent; however, the distribution of the platypus encompasses the GSDA and potentially suitable habitat occurs within Larcom Creek.		
				SGIC SDA: The species has not previously been recorded within the waterways within the area. However, Twelve Mile Creek at site 3, Bob's Creek at site 5, and Gavial Creek at site 6 contain sub-optimal habitat.		
				Northern Section: The species has been historically recorded within the desktop search extent. The platypus is known to occur throughout upper, mid, and lower reaches of the Fitzroy River and throughout the basin. Site 23 provides suitable habitat and burrowing opportunities for platypi and is therefore likely to occur at this site. At sites 22, 25, 31, and 32, the species is unlikely to occur due to a lack of available surface water.		
<i>Petauroides volans</i> Greater glider (southern and central)	V	E	<p>Distribution: Restricted to eastern Australia, occurring from the Windsor Tableland in north Queensland through to central Victoria (DCCEEW 2022).</p>	Likely to occur	Likely to occur	Unlikely to occur
				GSDA: The species has been historically recorded within the desktop search extent. The nearest record occurs approximately 100 m from the GSDA alignment. Tall, mature woodland		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			Habitat: Largely restricted to eucalypt forests and woodlands, and typically favours habitats containing relatively old trees with an abundance of large tree hollows (diameter > 10 cm) (DCCEEW 2022a). Species requires a diversity of suitable foraging trees. Species forages on eucalypt leaves and occasionally flowers (DCCEEW 2022a). The species has been most frequently recorded feeding on trees including <i>Corymbia citriodora</i> , <i>C. intermedia</i> , <i>Eucalyptus fibrosa</i> , <i>E. moluccana</i> and <i>E. portuensis</i> , with <i>C. citriodora</i> and <i>E. tereticornis</i> being important species in greater glider habitat (Eyre <i>et al.</i> 2022). Species has a relatively small home range, typically 1-4 ha (DCCEEW 2022a). Studies revealed that the occupation of a small (< 3 ha) home range is consistent throughout the species Australian geographic range (Eyre <i>et al.</i> 2022).	retaining suitable foraging and denning habitat was recorded within the study area.		
				SGIC SDA: The species has 14 records within the desktop search extent, the most recent recorded in 2011. Mature open woodland retaining suitable foraging and denning habitat was recorded within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent. Suitable foraging habitat was recorded within the study area; however, denning sites are limited and large gaps between vegetated areas persist within the area.		
<i>Petaurus australis australis</i> Yellow-bellied glider (south-eastern)	V	V	Distribution: Patchy, widespread distribution from south-east Queensland to far south-east South Australia (DCCEEW 2022).  Habitat: Occurs in eucalypt-dominated forests and woodlands, with a preference for mature old-growth forests that provide suitable hollow habitat for foraging and shelter. The species occurs in both wet and dry sclerophyll forests. Smooth barked eucalypts are important due to the foraging substrates they provide (DCCEEW 2022).	Likely to occur	Likely to occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent. The nearest record occurs approximately 100 m from the GSDA alignment. Tall, mature woodland retaining suitable denning habitat was recorded within the study area.		
				SGIC SDA: The species has 10 records within the desktop search extent, the most recent recorded in 2014. Mature open woodland retaining suitable foraging and denning habitat was recorded within the study area.		
<i>Phascolarctos cinereus</i> Koala	E	E	Distribution: In the region, the species occurs throughout the Brigalow Belt North bioregion (DCCEEW 2022).  Habitat: Koalas occur in sub-humid <i>Eucalyptus</i> dominated forests and woodlands in riparian and non-riparian environments, and some <i>Acacia</i> dominated forests and woodlands in non-riparian environments (DCCEEW 2022).	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent. Suitable foraging habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent. Suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent. Suitable foraging habitat was recorded within the study area.		
	LC	V		Likely to occur	Likely to occur	May occur

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Pteropus poliocephalus</i> Grey-headed flying-fox			Distribution: Occurs along coastal areas from Ingham in Queensland, to Adelaide in South Australia (DAWE 2021). Habitat: Species occurs in rainforests, open forests, closed and open woodlands, <i>Melaleuca</i> swamps and <i>Banksia</i> woodlands (DCCEEW 2022). Species forage on the blossoms from eucalypt trees and related genera (DCCEEW 2022; DAWE 2021). Roost sites range from rainforest patches, stand of <i>Melaleuca</i> , mangroves and riparian vegetation, in both continuous forest and small vegetation patches (DCCEEW 2022).	GSDA: The species has been historically recorded within the desktop search extent. Suitable foraging habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent. Suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent; however, only three records were identified within the desktop search extent (10 km) and the most recent record was recorded in 1995. Limited suitable foraging habitat was recorded within the study area.		
<i>Sousa sahalensis</i> Australian Humpback Dolphin	Mig	V	Distribution: Known to occur throughout northern Australia, and within Queensland as far south as the New South Wales border (DCCEEW 2022e). Habitat: The species inhabits inlets, estuaries, major tidal rivers, shallow bays, inshore reefs and archipelagos (DCCEEW 2022e).	N/A	May occur	N/A
				SDIC SDA: The species are known to occur within the coastal region of the SGIC SDA and may occur within the estuarine creeks including Raglan Creek at site 2 and Inkerman Creek at site 4.		
<i>Tapozous australis</i> Coastal sheath-tail bat	NT	NL	Distribution: Along the north-east Queensland coast from Shoalwater Bay to Cape York, extending no more than a few kilometres inland (Queensland Government 2021). Habitat: The species inhabits sand dune scrub, mangroves, melaleuca swamps, coastal heathlands, open eucalypt forest and grasslands. The species forages within one kilometre of the ocean (Queensland Government 2021).	May occur	N/A	N/A
				GSDA: The species has been historically recorded within the desktop search extent. The most southern end of the GSDA is approximately 1 km from the coast. Potentially suitable foraging habitat is located within these areas that are situated a few kilometres from the coastline. However, no potentially suitable roosting habitat occurs within the study area.		
<i>Xeromys myoides</i> Water mouse	V	V	Distribution: Occurs across an extensive range in coastal and near coastal south-east and south-central Queensland (DCCEEW 2022). Habitat: The species occurs in semi-aquatic and estuarine environments including mangroves and associated saltmarshes, sedgeland, clay pans, heathlands and freshwater wetlands (DCCEEW 2022).	Unlikely to occur	May occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent however the distribution of the species includes the SGIC SDA. Suitable habitat was recorded within estuarine environments. No evidence of presence such as nests, rodent tracks or prey middens were observed within suitable habitat within the study area.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
Threatened reptile species						
<i>Acanthophis antarcticus</i> Common death adder	V	NL	Distribution: From central Queensland through New South Wales to the southern parts of South Australia and Western Australia (DoE 2022). Habitat: Occurs in a wide range of well-drained habitats, including rainforests and wet sclerophyll forests, woodlands, shrublands, grasslands and coastal heathlands (DoE 2022). Species prefers sites retaining dense leaf litter (DoE 2022).	N/A	May occur	Unlikely to occur
				SGIC SDA: One individual has been historically recorded within the desktop search extent in 1995. Limited suitable habitat within the study area.		
				Northern Section: One individual has been historically recorded within the desktop search extent in 1995. Limited suitable habitat within the study area. No dense leaf litter was recorded within the study area.		
<i>Caretta caretta</i> Loggerhead Turtle	E, Mig	E	Distribution: The species can be found in waters in sub-tropical and temperate regions throughout the world and are capable of migration large distances of over thousands of kilometres between foraging and breeding grounds. Habitat: The species can inhabit a range habitat types, including open ocean habitat, pelagic feeding grounds, nearshore waters, and shallow coastal habitats and known to feed in a wide range of tidal and subtidal habitats (Limpus <i>et al.</i> 2013a)	N/A	May occur	N/A
				SDIC SDA: The species are known to occur within the coastal and marine waters, however no known occurrences of the species occurs within the estuarine waters of the SGIC SDA. The species are known to feed within tidal and subtidal areas and may occur within any waterways within the SGIC SDA.		
<i>Chelonia mydas</i> Green Turtle	V, Mig	V	Distribution: The species can be found in waters in sub-tropical and temperate regions throughout the world and are capable of migration large distances of over thousands of kilometres between foraging and breeding grounds. Habitat: The species can inhabit a range habitat types, including open ocean habitat, pelagic feeding grounds, nearshore waters, shallow coastal habitats and into estuarine waters. Nesting occurs on offshore barrier reef islands.	N/A	Confirmed present	N/A
				SGIC SDA: The species is previously known to occur within the estuarine waters between Rockhampton and Gladstone. A confirmed sighting of the species occurred during the survey at site 4 on Inkerman Creek. Similar habitat occurs on Raglan Creek at site 2 and is likely to occur at this site.		
<i>Crocodylus porosus</i> Estuarine crocodile	V	Mig, Mar	Distribution: Within Queensland, the distribution of the estuarine crocodiles generally extends from Gladstone in the south through to the Cape York Peninsula in the north and across to the border with the Northern Territory in the west. Habitat: The species is found in a wide range of habitats including rivers, estuaries, creeks, swamps, lagoons and billabongs. The species usually inhabits the lower estuarine sections of rivers and creeks, within Queensland the	Unlikely to occur	Likely to occur	Likely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. Sub-optimal habitat was recorded within the study area, and several barriers for migration downstream of this location. The species is therefore unlikely to occur within Larcom Creek.		
				SGIC SDA: The species has been historically recorded within the desktop search extent. The species is known to occur throughout mid and lower reaches of the Fitzroy River and the Fitzroy River Delta. Optimal habitat occurs within sites 2 and 4		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			<p>species is usually restricted to coastal waterways and floodplain wetlands (DCCEEW 2022).</p> <p>Preferred nesting habitat for the species includes elevated, isolated freshwater swamps that are not subject to tidal waters, whilst floating rafts of vegetation also provides suitable habitat for nesting (DCCEEW 2022). Nesting usually occurs within 10 m of permanent water above the water mark to prevent inundation of the nest by floodwaters (DES 2022b).</p>	<p>and is likely to occur at these sites. Sub-optimal habitat occurs at site 3, 6, and 30 and the species may occur at these sites.</p> <p>Northern Section: The species has been historically recorded within the desktop search extent. The species is known to occur throughout mid and lower reaches of the Fitzroy River. Optimal habitat occurs within Site 23 on the Fitzroy River and therefore the species is likely to occur at this location. The absence of surface water in close proximity to the locations at sites 22, 25, 31, and 32 provides habitat that is unsuitable to support the presence of estuarine crocodiles or provide nesting habitat. The species is unlikely to occur at these locations.</p>		
<i>Delma torquata</i> Collared delma	V	V	<p>Distribution: Species occurs within the southeast Queensland, Condamine, Burnett Mary and Fitzroy (Queensland) Natural Resource Management regions (DEWHA 2008).</p> <p>Habitat: Inhabits eucalypt dominated woodlands and open forests, in RE 11.3.2, 11.9.10, 11.10.1 and 11.10.4. The species occurs in habitats retaining rocks, logs, bark and other coarse woody debris, and mats of leaf litter (DCCEEW 2022).</p>	May occur	May occur	Unlikely to occur
				<p>GSDA: The species has not been historically recorded within the desktop search extent. Limited suitable habitat for the species was recorded within the study area.</p> <p>SGIC SDA: One individual has been historically recorded within the desktop search extent in 1974. Limited suitable habitat for the species was recorded within the study area.</p> <p>Northern Section: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.</p>		
<i>Denisonia maculata</i> Ornamental snake	V	V	<p>Distribution: From the Brigalow Belt North and parts of the Brigalow Belt South biogeographical regions within the drainage system of the Fitzroy and Dawson River (DCCEEW 2022).</p> <p>Habitat: The preferred habitat is within or adjacent to habitat that is favoured by frogs. The species is known to prefer woodlands and open forests associated with moist areas, particularly gilgai mounds and depressions in RE Land Zone 4, but also lake margins and wetlands (DCCEEW 2022).</p>	Unlikely to occur	Confirmed present	May occur
				<p>GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.</p> <p>SGIC SDA: Two individuals were confirmed present within the study area during the Arup (2008) field surveys.</p> <p>Northern Section: The species has been historically recorded within the study area. Limited suitable habitat was recorded within the study area. One seasonal waterbody retaining suitable microhabitat features including logs, woody debris and soil cracks were recorded within the study area. Spotlighting and nocturnal searches were undertaken at this waterbody. No individuals were recorded; however, frogs were abundant.</p>		
<i>Dermochelys coriacea</i> Leatherback turtle	E, Mig	E	<p>Distribution: The species can be found in waters in sub-tropical and temperate regions throughout the world and are capable of migration large distances of over thousands of</p>	N/A	Unlikely to occur	N/A
				<p>SDIC SDA: The species are known to occur within the coastal and marine waters. Open water pelagic species unlikely to occur</p>		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			<p>kilometres between foraging and breeding grounds. Very rarely encountered within the vicinity of Port Curtis and Port Alma (Limpus <i>et al.</i> 2013b).</p> <p>Habitat: The species can inhabit a range habitat types, including open ocean habitat, pelagic feeding grounds, nearshore waters, and shallow coastal habitats. Species are an open ocean pelagic species (Limpus <i>et al.</i> 2013b).</p>	in the upper tidal creeks within the alignment and are unlikely to occur within any waterways within the SGIC SDA.		
<i>Egernia rugosa</i> Yakka skink	V	V	<p>Distribution: Discontinuous, patchy distribution from the Queensland/New South Wales border to Cape York Peninsula, covering portions of the Brigalow Belt, Mulga Lands, South-east Queensland, Einasleigh Uplands, Wet Tropics and Cape York Peninsula Biogeographic Regions (Commonwealth of Australia 2011b; DCCEEW 2022).</p> <p>Habitat: The species typically occurs in open dry sclerophyll forest, woodland and scrub, especially within the Mulga Land and Brigalow Belt South Bioregion. Species is typically found under partly buried rocks, logs, tree stumps, root cavities and abandoned burrows (DCCEEW 2022).</p>	Unlikely to occur	May occur	May occur
				GSDA: The species has not been historically recorded within the desktop search extent. Limited suitable habitat was recorded within the study area.		
				SGIC SDA: The species has five records within the desktop search extent, the most recent recorded in 2003. Preferred woodland habitats recorded within the study area included poplar box and brigalow. Where these woodland types occurred, the landscape was heavily grazed by cattle and retained limited suitable ground-level microhabitats.		
				Northern Section: Three individuals have been historically recorded within the desktop search extent. The most recent record was recorded in 1989. Patches of poplar box ( <i>Eucalyptus populnea</i> ) was recorded within the study area. Where poplar box occurred, the landscape was heavily grazed by cattle and retained limited suitable ground-level microhabitats.		
<i>Eelseya albagula</i> White-throated snapping turtle	CE	CE	<p>Distribution: The white-throated snapping turtle is endemic to the Fitzroy, Burnett and Mary River catchments. The species is not thought to occur within farm dams, ephemeral swamplands or brackish waters but does occur in impounded pools at lower densities (Limpus <i>et al.</i> 2011; Hamann <i>et al.</i> 2007). The white-throated snapping turtle is also known to inhabit impounded pools with individuals recorded within the Fitzroy Barrage, Eden Bann Weir, Theodore Weir, Glebe Weir and Callide Dam. (Limpus <i>et al.</i> 2011b).</p> <p>Habitat: This species primarily inhabits permanent flowing reaches of streams with a sand/gravel substrate and an abundance of refugia (i.e. rock crevices, submerged logs, macrophytes beds) (Hamann <i>et al.</i> 2007). During the day, the white-throated snapping turtle is generally found in deep pools (&gt;6 m) either up- or downstream from a riffle zone,</p>	Unlikely to occur	Unlikely to occur	Likely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and outside of the known distribution.		
				SGIC SDA: The species has been historically recorded within the desktop search extent. The white-throated snapping turtle has been previously recorded in Raglan Creek however the species does not persist in estuarine waters and therefore s is unlikely to occur within the SGIC SDA pipeline alignment.		
				Northern Section: The species has been historically recorded within the desktop search extent. The white-throated snapping turtle is known to occur throughout upper, mid, and lower reaches of the Fitzroy River and throughout the basin, including in the reach at site 23. Site 23 is unlikely to support nesting. At sites 22, 25, 31, and 32, the species is unlikely to occur due to a lack of available surface water.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			whereas at night the turtle moves into the shallow riffle zones (Gordos <i>et al.</i> 2007; Hamann <i>et al.</i> 2007).			
<i>Eretmochelys imbricata</i> Hawksbill turtle	V, Mig	E	Distribution: The species can be found in waters in sub-tropical and temperate regions throughout the world and are capable of migration large distances of over thousands of kilometres between foraging and breeding grounds. Habitat: The species can inhabit a range habitat types, including open ocean habitat, pelagic feeding grounds, nearshore waters, and shallow coastal habitats. Hawksbill diet consists of sea grasses, algae, soft corals and shellfish.	N/A	Unlikely to occur	N/A
<i>Furina dunmalli</i> Dunmall's snake	V	V	Distribution: Found on the low to mid elevation from Yeppoon in the north to Oakey, Glenmorgan and Inglewood in the south in Queensland (Cogger <i>et al.</i> 1993). Habitat: The species inhabits brigalow ( <i>Acacia harpophylla</i> ), cypress ( <i>Cyprress</i> sp.) and bullock ( <i>Casuarina cristata</i> ) forest and woodland on cracking black clay and clay loam soils. The species is also known to occur in habitats retaining spotted gum and ( <i>Corymbia citriodora</i> ) and ironbark ( <i>Eucalyptus crebra</i> ) on sandstone (Commonwealth of Australia 2011b)	Unlikely to occur	May occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No woodland habitats retaining brigalow, cypress or bullock were recorded within the study area. Tree species including <i>C. citriodora</i> and <i>E. crebra</i> were observed within the study area; however, these species were recorded on metamorphic rocks or alluvial flats, retaining limited ground-level microhabitats such as fallen timber, leaf litter and cracking soils.		
				SGIC SDA: One individual has been historically recorded within the desktop search extent in 1971. Woodland habitats retaining brigalow were recorded within the study area; however, ground-level microhabitats were absent. Vegetated areas within the study area retained very little ground-level features such as fallen timber, leaf litter and cracking soils.		
				Northern Section: The species has not been historically recorded in the desktop search extent. A small area retaining brigalow regrowth was recorded within the study area; however, ground-level microhabitats were absent. Vegetated areas within the study area retained very little ground-level features such as fallen timber, leaf litter and cracking soils.		
<i>Hemiaspis damelii</i> Grey snake	E	NL	Distribution: From central inland New South Wales, north to coastal areas near Rockhampton in Queensland (Rowland 2012). Habitat: The species inhabits brigalow ( <i>Acacia harpophylla</i> ) and belah ( <i>Casuarina cristata</i> ) woodlands on heavier, cracking clay soils, in association with waterbodies or in areas retaining gilgais (Rowland 2012). The species almost	N/A	Likely to occur	May occur
				SGIC SDA: The species has 22 records within the desktop search extent, the most recent recorded in 2015. Woodland habitats retaining brigalow were recorded within the study area; however, ground-level microhabitats were sparse. Vegetated areas within the study area retained very little ground-level features such as fallen timber, leaf litter and cracking soils.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			exclusively feeds on frogs and shelters under rocks, logs and debris, and in soil cracks or abandoned burrows in moist/seasonally inundated habitats (Rowland 2012).	Northern Section: The species has been historically recorded within the desktop search extent. Limited suitable habitat was recorded within the study area. One seasonal waterbody retaining suitable microhabitat features including logs, woody debris and soil cracks were recorded within the study area. Spotlighting and nocturnal searches were undertaken at this waterbody. No individuals were recorded; however, frogs were abundant.		
<i>Lepidochelys olivacea</i> Olive Ridley turtle	E, Mig	E	Distribution: The species can be found in waters in sub-tropical and temperate regions throughout the world and are capable of migration large distances of over thousands of kilometres between foraging and breeding grounds. Habitat: The species can inhabit a range habitat types, including open ocean habitat, pelagic feeding grounds, nearshore waters, and shallow coastal habitats.	N/A	Unlikely to occur	N/A
<i>Natator depressus</i> Flatback Turtle	V, Mig	V	Distribution: The species can be found in waters in sub-tropical and temperate regions throughout the world and are capable of migration large distances of over thousands of kilometres between foraging and breeding grounds. Habitat: The species can inhabit a range habitat types, including open ocean habitat, pelagic feeding grounds, nearshore waters, and shallow coastal habitats. Species known to feed upon sea pens, soft corals and sea cucumbers (Limpus <i>et al.</i> 2013c)	N/A	Unlikely to occur	N/A
<i>Rheodytes leukops</i> Fitzroy River turtle	V	V	Distribution: Endemic to south-eastern Queensland and restricted to the Fitzroy River and its tributaries (ALA 2022). Habitat: This species inhabits clear flowing rivers with shallow riffles, deep pools and gravel, sand, or rocky substrate. They are benthic feeders with a diet consisting off aquatic plants, insects, and macro-invertebrates, with a habitat preference to ribbon weed beds (ALA 2022).	Unlikely to occur	Unlikely to occur	Likely to occur
				GSDA: The species has not been historically recorded within the desktop search extent and outside of the known distribution.		
				SGIC SDA: The species is only known to occur throughout the Fitzroy River. All waterways within the SGIC SDA have no previous occurrence records for the species and are outside of the known range, therefore is unlikely to occur.		
				Northern Section: The species has been historically Fitzroy River turtle is known to occur throughout upper, mid, and lower reaches of the Fitzroy River and throughout the basin including the reach at Site 23. Site 23 is unlikely to support aggregated nesting, however isolated nesting may occur. At sites 22, 25, 31, and 32, the species is unlikely to occur due to a lack of available surface water.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
Threatened shark species						
<i>Anoxypristis cuspidata</i> Narrow sawfish	V, Mig	NL	Distribution: Known to occur throughout northern Australia, and within Queensland as far south as MacKay (Florida Museum 2022). No previous occurrence records for the species occur within the study area (ALA 2022) Habitat: The species inhabits shallow coastal environments and estuarine waters but does not occur into freshwaters.	N/A	Unlikely to occur	N/A
<i>Pristis zijsron</i> Green sawfish	V, Mig	NL	Distribution: Known to occur throughout northern Australia, and within its most current distribution in Queensland is as far south as the Whitsundays (COA 2015). Habitat: The species inhabits inshore coastal environments and estuarine creeks but does not occur into freshwaters (COA 2015).	N/A	Unlikely to occur	N/A
Threatened insect species						
<i>Jalmenus eubulus</i> Pale imperial hairstreak	V	NL	Distribution: In Queensland, the species is restricted to the seasonally sub-humid central and southern areas of the state (Eastwood <i>et al.</i> 2008). Habitat: Prefers mature habitat dominated by brigalow ( <i>Acacia harpophylla</i> ) and bulloak ( <i>Casuarina cristata</i> ) on clay soils on flat to gently undulating plains, usually with scattered emergent eucalypts (Eastwood <i>et al.</i> 2008).	Unlikely to occur	May occur	N/A
				GSDA: One individual was historically recorded within the desktop search extent in 1981. No woodland habitats retaining brigalow or bulloak were recorded within the study area.		
				SGIC SDA: The species has two records within the desktop search extent, the most recent recorded in 1995. Suitable habitat was recorded within remnant brigalow woodland within the study area; however, given the species was recorded in 1995 and the species is restricted to the seasonally sub-humid central and southern areas of Queensland, the species likelihood of occurring within the study area is considered low.		
Migratory species						
<i>Actitis hypoleucos</i> Common sandpiper	SL	Mig	Found along all coastlines of Australia and in many areas inland, the common sandpiper is widespread in small numbers. The population when in Australia is concentrated in northern and western Australia (DCCEEW 2022).	Unlikely to occur	May occur	May occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent. However, potentially suitable foraging habitat was recorded within tidal and non-tidal habitats within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent. However, potentially suitable		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
				foraging habitat was recorded along Fitzroy River and at Lower Gracemere Lagoon.		
<i>Apus pacificus</i> Fork-tailed swift	SL	Mig	In Australia, the species mostly occur over inland plains but sometimes above foothills or in coastal areas, cliffs and beaches and also over islands and sometimes well out to sea. The species can also occur over settled areas, including towns, urban areas and cities. The species has been recorded mostly occur over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. They are also found at treeless grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-dunes. The sometimes occur above rainforests, wet sclerophyll forest or open forest or plantations of pines (DCCEEW 2022).	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent. The species has potential to forage aerially across the study area.		
				SGIC SDA: The species has two records within the desktop search extent. The species has potential to forage aerially across the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent. The species has potential to forage aerially across the study area.		
<i>Arenaria interpres</i> Ruddy turnstone	SL	Mig	This species is widespread within Australia during its non-breeding period of the year It is found in most coastal regions, with occasional records of inland populations. It strongly prefers rocky shores or beaches where there are large deposits of rotting seaweed (DCCEEW 2022).	Unlikely to occur	May occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area. However, the species preferred habitats (i.e. rocky shores and beaches) were not recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent.		
<i>Calidris acuminata</i> Sharp-tailed sandpiper	SL	Mig	Most of the population migrates to Australia, mostly to the south-east and are widespread in both inland and coastal locations and in both freshwater and saline habitats. Many inland records are of birds on passage. In Queensland, they are recorded in most regions, being widespread along much of the coast and are very sparsely scattered inland (DCCEEW 2022).	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded within the study area (i.e. modified floodplains when inundated with water).		
				SGIC SDA: The species has 43 records within the desktop search extent and potentially suitable foraging habitat, such as freshwater and saline habitats were recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Calidris alba</i> Sanderling	SL	Mig	The species occurs in coastal areas around Australia mostly on open sandy beaches exposed to open sea-swell. Scattered records occur in mid-east and south-east Queensland from Townsville and Alva Beach, south to Fraser Island, and around Moreton Bay and Point Danger, including on offshore islands. Rarely, they are recorded in near-coastal wetlands, such as lagoons, hypersaline lakes, saltponds and samphire flats. There are rare inland records from sandy shores of ephemeral brackish lakes and brackish river-pools (DCCEEW 2022).	Unlikely to occur	N/A	N/A
<i>Calidris falcinellus</i> Broad-billed sandpiper	SL	Mig	The species is most common in north coast of Australia. In Queensland the species has been recorded at Mackay and surrounding regions. The species is a non-breeding visitor to Australia where it occurs in sheltered coasts including estuarine mudflats, saltmarshes, freshwater lagoons. The species has been recorded in creeks, swamps and lakes near the coast with rare inland records (DCCEEW 2022).	Unlikely to occur	Likely to occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
<i>Calidris melanotos</i> Pectoral sandpiper	SL	Mig	Prefers shallow fresh to saline wetlands. The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands. The species is usually found in coastal or near coastal habitat but occasionally found further inland. It prefers wetlands that have open fringing mudflats and low, emergent or fringing vegetation (DCCEEW 2022).	May occur	May occur	May occur
				GSDA: The species has not been historically recorded within the desktop search extent; however, potentially suitable foraging habitat for the species was recorded within the study area (i.e. modified floodplains when inundated with water).		
				SGIC SDA: The species has not been historically recorded within the desktop search extent; however, potentially suitable foraging habitat was recorded within the study area.		
<i>Calidris ruficollis</i> Red-necked stint	SL	Mig	The species is distributed along most of the Australian coastline where they occur in coastal areas, including in sheltered inlets, bays, lagoons and estuaries with intertidal mudflats. They also occur in saltworks and sewage farms; saltmarsh; ephemeral or permanent shallow wetlands near the coast or inland, including lagoons, lakes, swamps,	May occur	Likely to occur	May occur
				GSDA: The species has been historically recorded within the desktop search extent. Potentially suitable foraging habitat was recorded within the study area (i.e. modified floodplains when inundated with water); however, the species are known to occasionally occur within inundated grasslands.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			riverbanks, waterholes, bore drains, dams, soaks and pools in salt flats. They sometimes use flooded paddocks or damp grasslands. They have occasionally been recorded on dry gibber plains, with little or no perennial vegetation (DCCEEW 2022).	SGIC SDA: The species has six records within the desktop search extent and potentially suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent; however, potentially suitable habitat was recorded within the study area.		
<i>Calonectris leucomelas</i> Streaked shearwater	SL	Mig	Streaked shearwaters breed on islands off the southern Russian, east China, Korea and Taiwan. In the non-breeding season, they migrate to waters off New Guinea and around northern Australia.	N/A	N/A	Unlikely to occur
				Northern Section: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
<i>Charadrius dubius</i> Little ringed plover	SL	Mig	A low number of records of this species occur in across coastal Australia, preferencing habitat with mudflats to forage in (ALA 2022).	N/A	May occur	Unlikely to occur
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, limited potentially suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
<i>Chlidonias leucopterus</i> White-winged black tern	SL	Mig	In Australia, this species is widespread along the northern, central-eastern and south-western coasts of Australia, but has scattered records of populations along southern Australia (DCCEEW 2022). They inhabit coastal, saline, brackish and freshwater wetlands, but rarely occur in inland wetlands (DCCEEW 2022).	Unlikely	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent; however, no potentially suitable foraging habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Cuculus optatus</i> Oriental cuckoo	SL	Mig	The species inhabits coastal regions across northern and eastern Australia, as well as offshore islands. Species utilises a range of vegetated habitats, including monsoon	Likely to occur	Likely to occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent and suitable habitat occurs within the study area.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			rainforests, wet sclerophyll forests, open woodlands and along the edges of forests (Australian Wildlife 2022).	SGIC SDA: The species has been historically recorded within the desktop search extent and potentially suitable vegetated habitats were recorded within the study area.		
<i>Gallinago hardwickii</i> Latham's snipe	SL	Mig	The species inhabits permanent and ephemeral freshwater wetlands with low, dense vegetation (DAWE 2020). Species sometimes occurs in habitats that have saline or brackish water, such as saltmarshes, mangrove creeks, around bays and beaches (DCCEEW 2022).	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat for the species was recorded within the study area (i.e. modified floodplains when inundated with water).		
				SGIC SDA: The species has 45 records within the desktop search extent and suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Gallinago megala</i> Swinhoe's snipe	SL	Mig	The species is a non-breeding visitor to Australia. Few definite records exist for Swinho's Snipe in Australia. In Queensland specimens have been taken at Normanton. The species has also been sighted at Mount Isa. The species's preferred habitat specific to Australia includes the dense clumps of grass and rushes round the edges of fresh and brackish wetlands. This includes swamps, billabongs, river pools, small streams and sewage ponds. They are also found in drying claypans and inundated plains pitted with crab holes (DCCEEW 2022).	May occur	N/A	N/A
				GSDA: The species has not been historically recorded within the desktop search extent; however, potentially suitable foraging habitat for the species was recorded within the study area (i.e. modified floodplains when inundated with water).		
<i>Gallinago stenura</i> Pin-tailed snipe	SL	Mig	The species is a non-breeding visitor to Australia. Within Australia, the distribution of the species is not well understood. In Queensland there are confirmed records from the Top End. During the non-breeding period the species occurs most often in or at the edges of shallow freshwater swamps, ponds and lakes with emergent, sparse to dense cover of grass/sedge or other vegetation. The species is also found in drier, more open wetlands such as claypans in more arid parts of species' range. It is also commonly seen at sewage ponds; not normally in saline or inter-tidal wetlands (DCCEEW 2022).	May occur	N/A	N/A
				GSDA: The species has not been historically recorded within the desktop search extent; however, potentially suitable foraging habitat for the species was recorded within the study area (i.e. modified floodplains when inundated with water).		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Gelochelidon nilotica</i> Gull-billed tern	SL	Mig	In Australia, this species is widely distributed across coastal and inland mainland Australia, with records in each state, inhabiting coastal shores as well as inland freshwater wetlands, lakes and marshes (ALA 2022)	May occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent; however, suitable habitat for the species is limited.		
				SGIC SDA: The species has 19 records within the desktop search extent and potentially suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded along Fitzroy River.		
<i>Hydroprogne caspia</i> Caspian tern	SL	Mig	The Caspian tern is mostly found in sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins are preferred. They also occur on near-coastal or inland terrestrial wetlands that are either fresh or saline, especially lakes (including ephemeral lakes), waterholes, reservoirs, rivers and creeks. They also use artificial wetlands, including reservoirs, sewage ponds and saltworks. Large numbers may shelter along the coast, behind coastal sand-dunes or coastal lakes during rough weather and have been recorded inland after storms (DCCEEW 2022).	N/A	Likely to occur	Likely to occur
				SGIC SDA: The species has 41 records within the desktop search extent and potentially suitable foraging habitat (i.e. fresh and saline wetlands) was record within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded along Fitzroy River.		
<i>Limnodromus semipalmatus</i> Asian dowitcher	SL	Mig	In Australia, a low number of records of this species have been recorded across northern and eastern Australian coastlines, favouring coastal waters and mudflats for foraging (ALA 2022).	Unlikely to occur	May occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent; however, limited suitable habitat was recorded within the study area.		
<i>Limosa lapponica</i> Bar-tailed godwit	SL	Mig	The species has been recorded in coastal areas of all Australian states. The species is a non-breeding visitor to Australia where it occurs in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries and bays. The species is rarely found on inland wetlands (DCCEEW 2022).	Unlikely to occur	May occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has not been historically recorded within the desktop search extent; however, limited suitable habitat was recorded within the study area.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
				Northern Section: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
<i>Limosa limosa</i> Black-tailed godwit	SL	Mig	In Australia, this species has been recorded in coastal areas of all Australian states, as well as in inland freshwater environments with habitat ranging from coastal bays, estuaries and sandflats to inland wetlands, lagoons and grasslands (ALA 2022).	Unlikely to occur	Likely to occur	Likely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has 23 records within the desktop search extent and potentially suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Monarcha melanopsis</i> Black-faced monarch	SL	Mig	Species inhabits rainforest ecosystems that include semi-deciduous vine thickets, complex notophyll vine-forests, tropical rainforests, subtropical rainforests, mesophyll thicket/shrubland, warm and cool temperate rainforest, and dry rainforest (DCCEEW 2022).	Unlikely to occur	Unlikely to occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent; however, no suitable habitat was recorded within the study area.		
<i>Monarcha trivirgatus</i> Spectacled monarch	SL	Mig	The species prefers thick understory habitats in rainforests, wet sclerophyll forests and mangroves (Birdlife Australia 2022).	Unlikely to occur	Likely to occur	Unlikely to occur
				GSDA: The species has been historically recorded within the study area; No rainforest habitats occur within the study area; however, no suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent. Potentially suitable habitat (i.e. mangroves) was recorded within the study area.		
				Northern Section: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Myiagra cyanoleuca</i> Satin flycatcher	SL	Mig	The species occurs in heavily vegetated gullies in eucalypt-dominated forests and taller woodlands, typically near wetlands and watercourses (DCCEEW 2022).	Likely to occur	Likely to occur	May occur
				GSDA: The species has been historically recorded within the desktop search extent and suitable foraging habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent and potentially suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent; however, marginally suitable habitat was recorded within the Northern Section study area		
<i>Numenius minutus</i> Little curlew	SL	Mig	The species is a non-breeding visitor to Australia where the species generally spends the season in northern Australia from Port Hedland, Western Australia to the Queensland coast. There are records of the species from inland Australia, and widespread but scattered records on the east coast. The species occurs in dry grassland and sedgeland including dry floodplains and black soil plains with scattered shallow freshwater pools or seasonally inundated areas, open woodlands with a grassy or burnt understory, dry saltmarshes, mudflats or sandflats etc (DCCEEW 2022).	Unlikely to occur	Likely to occur	Likely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Numenius phaeopus</i> Whimbrel	SL	Mig	The whimbrel is often found on the intertidal mudflats of sheltered coasts. It is also found in harbours, lagoons, estuaries and river deltas, often those with mangroves, but also open, unvegetated mudflats. It is occasionally found on sandy or rocky beaches, on coral or rocky islets, or on intertidal reefs and platforms. It has been infrequently recorded using saline or brackish lakes near coastal areas. It also used saltflats with saltmarsh, or saline grasslands with standing water left after high springtides, and in similar habitats in sewage farms and salt fields (DoE 2015).	Unlikely to occur	May occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, limited suitable foraging habitat was recorded within the study area.		
<i>Pandion haliaetus</i> Osprey	SL	Mig	The species occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers. They require	Unlikely to occur	Likely to occur	Likely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			extensive areas of open fresh, brackish or saline water for foraging (DCCEEW 2022).	SGIC SDA: The species has been historically recorded within the desktop search extent and potentially suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded along Fitzroy River.		
<i>Plegadis falcinellus</i> Glossy ibis	SL	Mig	The Glossy Ibi" preferred habitat for foraging and breeding are freshwater marshes at the edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation. The species is occasionally found in coastal locations such as estuaries, deltas, saltmarshes and coastal lagoons. Within Australia, the largest contiguous areas of prime habitat is inland and northern floodplains (DCCEEW 2022)	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat for the species was recorded within the study area (i.e. modified floodplains when inundated with water).		
				SGIC SDA: The species has 69 records within the desktop search extent and potentially suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Pluvialis fulva</i> Pacific golden plover	SL	Mig	The species is widespread in coastal regions, with some inland records in all states across Australia. During non-breeding ground in Australia, the species occurs in coastal habitats including beaches, mudflats, sandflats, estuaries and lagoons. The species occasionally occurs in inland wetlands such as lakes, billabongs, pools, swamps, especially those with muddy margins and submerged or emergent vegetation, grassed paddocks, crops or recently burnt areas (DCCEEW 2022).	May occur	Likely to occur	May occur
				GSDA: The species has been historically recorded within the desktop search extent. Potentially suitable foraging habitat was recorded within the study area (i.e. modified floodplains when inundated with water); however, the species is less often recorded in terrestrial habitats.		
				SGIC SDA: The species has been historically recorded within the desktop search extent and potentially suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent. Potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon; however, the species is less often recorded in terrestrial habitats.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Pluvialis squatarola</i> Grey plover	SL	Mig	The species has been recorded in all Australian states where it is most prevalent on the western and southern coastlines. The species is a non-breeding visitor to Australia where it occurs almost entirely in coastal areas including sheltered embayments, estuaries and lagoons, mudflats, sandflats. The species has been recorded in terrestrial wetlands including near-coastal lakes, swamps (DCCEEW 2022).	May occur	N/A	N/A
				GSDA: The species has been historically recorded within the desktop search extent. Potentially suitable foraging habitat was recorded within the study area (i.e. modified floodplains when inundated with water); however, the species is less often recorded in terrestrial habitats.		
<i>Rhipidura rufifrons</i> Rufous fantail	SL	Mig	Species inhabits wet sclerophyll forests, often in gullies dominated by eucalypts and usually within a dense shrubby understorey that often includes ferns (DCCEEW 2022).	May occur	May occur	May occur
				GSDA: The species has been historically recorded within the desktop search extent; however, limited suitable habitat was recorded within the study area. Potentially suitable habitat occurs within dense fringing riparian vegetation.		
				SGIC SDA: The species has 16 records within the desktop search extent; however, limited suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent; however, limited suitable habitat was recorded within the study area. Potentially suitable habitat occurs within dense fringing riparian vegetation.		
<i>Sterna hirundo</i> Common tern	SL	Mig	This species is a non-breeding visitor to Australia and is found across the majority of coastal Australia, occupying sandy shores, coastal islands and inlets (ALA 2022).	Unlikely to occur	N/A	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
<i>Sternula albifrons</i> Little tern	SL	Mig	The species is widespread across coastal Australia. The species inhabits sheltered coastal environments including lagoons, estuaries, river mouths, deltas, lakes, bays etc especially those with exposed sandbanks, sand-spits and exposed ocean beaches (DCCEEW 2022).	Unlikely to occur	May occur	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, limited suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
<i>Sula leucogaster</i> Brown booby	SL	Mig	In Australia, this species is found across the northern and eastern coastline, occupying coastal habitat, near shore waters and inshore islands from northern Western Australia to southern New South Wales (ALA 2022).	Unlikely to occur	N/A	N/A
<i>Thalasseus bergii</i> Crested tern	SL	Mig	This species is widespread across the coastal regions of Australia, occurring in all coastal states and territories, inhabiting coastal bays, lakes, large rivers and inlets (ALA, 2022).	Unlikely to occur	May occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, limited suitable foraging habitat was recorded within the study area.		
<i>Tringa brevipes</i> Grey-tailed tattler	SL	Mig	In Queensland, the species is found along the entire coast. Inland records include Burdekin Weir, Charters Towers and Mount Isa; however, these are rare with the species preferring coastal habitats (DCCEEW 2022). The species inhabits sheltered coasts with reefs, rock platforms, intertidal mudflats, embayments, estuaries, coastal lagoons especially fringed with mangroves. In near coastal areas they can be found around lakes, ponds, riverbanks and rock pools (DCCEEW 2022).	Unlikely to occur	N/A	Unlikely to occur
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Tringa incana</i> Wandering tattler	SL	Mig	In Australia, this species occupies the eastern coastline from Northern Queensland to Victoria, preferencing coastal habitat with rocky shores or inshore reefs to forage on aquatic vertebrates (ALA 2022).	Unlikely to occur	May occur	N/A
				GSDA: The species has not been historically recorded within the desktop search extent. No suitable habitat was recorded within the study area.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, no suitable foraging habitat was recorded within the study area.		
<i>Tringa nebularia</i> Common greenshank	SL	Mig	The species is a non-breeding visitor to Australia where it has been recorded in most coastal regions in Queensland. The species is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. These include sheltered coastal habitats with mudflats, saltmarsh, mangroves or seagrass. The species also occurs in terrestrial wetlands including lakes, swamps, dams, rivers, creeks, billabongs, the edges of the wetlands are generally	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent. Suitable foraging habitat was recorded along Larcom Creek.		
				SGIC SDA: The species has 20 records within the desktop search extent and potentially suitable foraging habitat was recorded within the study area.		

Scientific name	Status		Habitat requirements	Likelihood of occurrence		
	NC Act	EPBC Act		GSDA	SGIC SDA	NS
			of mud, clay or sand and may be bare or with vegetation (DCCEEW 2022).	Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Tringa stagnatilis</i> Marsh sandpiper	SL	Mig	The species inhabits permanent and ephemeral wetlands, including swamps and billabongs (DAWE 2020). Species generally forages in shallow water and on bare soft mud edges of wetlands (DCCEEW 2022).	Likely to occur	Likely to occur	Likely to occur
				GSDA: The species has been historically recorded within the desktop search extent. Suitable foraging habitat was recorded within the study area (i.e. Larcom Creek and modified floodplains when inundated within water).		
				SGIC SDA: The species has 60 records within the desktop search extent and potentially suitable foraging habitat was recorded within the study area.		
				Northern Section: The species has been historically recorded within the desktop search extent and potentially suitable foraging habitat was recorded at Lower Gracemere Lagoon.		
<i>Xenus cinereus</i> Terek sandpiper	SL	Mig	The species is widespread across coastal northern and eastern Australia. The Terek sandpiper is a non-breeding visitor to Australia where it inhabits intertidal mudflats, estuaries, embayments, harbours or lagoons and occasionally on sandy beaches and rocky areas (DCCEEW 2022).	May occur	May occur	N/A
				GSDA: The species has been historically recorded within the desktop search extent. Potentially suitable foraging habitat was recorded within the study area (i.e. modified floodplains when inundated with water); however, the species very occasionally use inundated grasslands.		
				SGIC SDA: The species has been historically recorded within the desktop search extent; however, limited suitable foraging habitat was recorded within the study area.		
Key: CE/CR – critically endangered; E – endangered; V – vulnerable; NT – near threatened; Mig – migratory; Mar – Marine; SL – special least concern; LC – least concern; NL – not listed; N/A – not applicable						

# **Appendix F**

**Criteria used to map habitat for  
conservation significant fauna species**

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
<p><i>Calidris canutus</i> Curlew sandpiper</p>	<p>Curlew sandpiper habitat has been defined based on the formal habitat definition in the Commonwealth listing advice for the species (DoE 2015a).</p> <p>During the non-breeding period and breeding season for non-breeding birds, the species occurs within suitable habitats along the coast and inland Australia (DoE 2015a). In Australia, the species occurs on intertidal mudflats in sheltered coastal areas, including estuaries, and non-tidal swamps, including lakes and lagoons near the coast (DoE 2015a). The species forages mainly on invertebrates, including worms, molluscs, crustaceans, and insects in tidal and non-tidal habitats, such as mudflats, sandy shores, flooded paddocks and inundated saltflats (DoE 2015a). The curlew sandpiper roosts around coastal or near-coastal lagoons and other wetlands on open substrates. The species has been recorded roosting in mangroves (DoE 2015a).</p> <p>The breeding range of the curlew sandpiper is restricted to the Arctic of northern Siberia. The species departs breeding grounds in July and August, stops over in northern Australia and then continues the direct route to south-east Australia in late August and September. The species return to breeding grounds begins in March (DoE 2015a).</p>	<p>Suitable habitat for the species was observed in areas where the pipeline alignment intersects tidal (i.e. mangroves, saltmarshes and mudflats) and non-tidal habitats (i.e. seasonal wetlands).</p> <p>Mapping of curlew sandpiper habitat has been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery. The following habitat types were mapped as predicted habitat for the curlew sandpiper:</p> <ul style="list-style-type: none"> <li>– Estuarine environments; and</li> <li>– Freshwater waterbodies and seasonal wetlands.</li> </ul>
<p><i>Calyptorhynchus lathamii</i> Glossy black-cockatoo</p>	<p>Glossy black-cockatoo habitat has been defined based on the formal definition outlined in the essential habitat factors listed by Queensland DoR (2022b).</p> <p>Essential habitat factors for the glossy black-cockatoo as detailed by the Queensland DoR include: Lowland and highland eucalypt forest and woodland, including riparian, <i>Callitris</i> and brigalow scrub areas, with <i>Casuarina</i> (<i>C. glauca</i>, <i>C. cristata</i>)/<i>Allocasuarina</i> spp. (<i>A. torulosa</i>, <i>A. littoralis</i>). Nest in large vertical hollow (1-2 m deep, 25-50 cm diameter) up to 28 m above ground in tall slightly isolated tree usually near principal food source (<i>Allocasuarina/Casuarina</i>).</p>	<p>Suitable foraging and nesting habitat is restricted in the south-east extent of the GSDA pipeline alignment. Narrow strips of <i>Casuarina cunninghamiana</i> were recorded along riparian woodland areas, providing potentially suitable foraging habitat for the species. Hollow-bearing trees were moderately low within woodland areas in proximity to suitable foraging habitat, providing potential suitable nesting habitat for the species.</p> <p>Mapping of glossy black-cockatoo habitat has been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery. The following habitat types were mapped as predicted habitat for the glossy black-cockatoo:</p> <ul style="list-style-type: none"> <li>– Mature eucalypt woodland; and</li> <li>– Fringing riparian vegetation.</li> </ul>
<p><i>Crocodylus porosus</i> Estuarine crocodile</p>	<p>The species is found in a wide range of habitats including rivers, estuaries, creeks, swamps, lagoons and billabongs. The species usually inhabits the lower estuarine sections of rivers and creeks, within Queensland the species is usually restricted to coastal waterways and floodplain wetlands (DCCEE 2022).</p> <p>Preferred nesting habitat for the species includes elevated, isolated freshwater swamps that are not subject to tidal waters, whilst floating rafts of vegetation also provides suitable habitat for nesting (DCCEE 2022). Nesting usually occurs within 10 m of permanent water above the water mark to prevent inundation of the nest by floodwaters (DES 2022b).</p>	<p>Due to the species' aquatic and migratory nature, the species has no strict reliance on defined foraging habitats. Foraging habitat has not been mapped on that basis.</p>
<p><i>Denisonia maculata</i></p>	<p>Ornamental snake habitat has been defined based on the formal habitat definition in the</p>	<p>Suitable habitat for the ornamental snake was recorded in vegetated areas retaining <i>Eucalyptus</i></p>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
Ornamental snake	<p>Commonwealth listing advice for the species (DAWE 2022; DoE 2014).</p> <p>The ornamental snake's preferred habitat is within, or close to, habitat that is favoured by its prey—frogs. The species is known to prefer woodlands and open forests associated with moist areas, particularly gilgai (melon-hole) mounds and depressions in Queensland Regional Ecosystem Land Zone 4, but also lake margins and wetlands (Brigalow Belt Reptiles Workshop 2010). Gilgai formations are found where deep-cracking alluvial soils with high clay contents occur (Brigalow Belt Reptiles Workshop 2010). Ornamental snake habitat is likely to be found in Brigalow (<i>Acacia harpophylla</i>), Gidgee (<i>Acacia cambagei</i>), Blackwood (<i>Acacia argyrodendron</i>) or Coolibah (<i>Eucalyptus coolabah</i>)-dominated vegetation communities, or pure grassland associated with gilgais (Brigalow Belt Reptiles Workshop 2010). Whilst the species shows a preference for moist areas, and there are records from riparian areas, the species' presumed preference for riparian habitat is questionable (Brigalow Belt Reptiles Workshop 2010). The most common Queensland Regional Ecosystems (RE) in which the species has been recorded is RE 11.4.3. Other common RE types where the species has been recorded are (Brigalow Belt Reptiles Workshop 2010):</p> <p>11.4.3 Open forest dominated by Brigalow and/or Belah clay soils not associated with current alluvium.</p> <p>11.4.6 Gidgee woodland clay soils not associated with current alluvium.</p> <p>11.4.8 Woodland to open forest dominated by Dawson Gum (<i>Eucalyptus cambageana</i>) and Brigalow or, sometimes in the north of the species' range, Blackwood/Black Gidgee. Yapunyah (<i>E. thozetiana</i>) is sometimes present on shallower clay soils not associated with current alluvium.</p> <p>11.4.9 Open forest, occasionally woodland, dominated by Brigalow on clay soils not associated with current alluvium. A low tree mid-storey of yellow-wood (<i>Terminalia oblongata</i>) and False Sandalwood (<i>Eremophila mitchellii</i>) is usually present. Belah sometimes dominates in place of Brigalow in the overstorey and Bauhinia (<i>Lysiphyllum cunninghamii</i>) sometimes co-dominates.</p> <p>Other Queensland Regional Ecosystems where the species has been recorded are:</p> <p>11.3.3 Coolibah woodland adjacent to a large, treeless, ephemeral wetland on alluvium (river and creek flats).</p> <p>11.5.16 Brigalow and/or Belah open-forest in depressions in Cainozoic old loamy and sandy plains. Associated with gilgai with one-metre local relief and 5–6 m in diameter.</p> <p>Habitat critical to the survival of the species</p> <p>There is no formal definition of habitat critical to the survival of the ornamental snake. The definition outlined in the Significant impact guidelines 1.1 (DoE 2013a) has been applied.</p>	<p><i>coolabah</i> and brigalow woodlands retaining seasonally inundated habitats (i.e. gilgais) within the SGIC SDA study area. Suitable ground-level microhabitats, such as ground logs, were recorded within <i>E. coolabah</i> woodlands. The Arup (2008) field surveys recorded two individuals within <i>E. coolabah</i> woodlands near Casuarina Road, Midgee. Suitable ground-level microhabitats such as cracking clays, ground logs, woody debris and rocks were low within remnant brigalow areas; however, these ground-level microhabitats are very sparse to absent within regrowth brigalow areas, and are heavily altered by intensive cultivation, and cattle grazing and trampling.</p> <p>Mapping of ornamental snake habitat has been based on DoR and field verified RE communities, species records, habitat assessments and high-resolution aerial imagery. Vegetated areas retaining <i>E. coolabah</i> woodland near Casuarina Road, Midgee, and Brigalow (<i>Acacia harpophylla</i>) woodland, was mapped as predicted habitat for the ornamental snake.</p>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
<p><i>Elseya albagula</i> White-throated snapping turtle</p>	<p>Habitat that is critical to the survival of the White-throated snapping turtle is defined as per <i>The National Recovery Plan for the White-throated Snapping Turtle (Elseya albagula)</i> (Commonwealth of Australia 2020) as:</p> <ul style="list-style-type: none"> <li>– Parts of riverine systems with permanent water, including pools, within the species' distribution that contain shelter and refuges (e.g. bank overhangs, overhanging riparian vegetation, macrophyte beds, moderate to high densities of submerged boulders and/or log jams).</li> <li>– All currently known and new aggregated nesting sites (all nesting sites should be considered to be part of an aggregation unless it can be demonstrated otherwise).</li> </ul>	<p>Due to the species' aquatic nature, the species has no strict reliance on defined foraging habitats. Foraging habitat has not been mapped on that basis.</p>
<p><i>Epthianura crocea macgregori</i> Yellow chat (Dawson)</p>	<p>Yellow chat (Dawson) habitat has been defined based on the formal habitat definition in the Commonwealth listing advice for the species (DCCEEW 2022) and <i>Yellow chat (Capricorn subspecies) Epthianura crocea macgregori recovery plan</i> (Houston and Melzer 2008).</p> <p>It is distributed in coastal areas of central Queensland, with two separate breeding populations being located on the Torrila Plain and the Fitzroy River Delta (DoE 2022). The yellow chat (Dawson) inhabits marine wetlands that are subjected to extensive seasonal inundation. They often occupy marine plains that have a network of shallow drainage channels with a large variety of vegetation (DoE 2022). Nests are often found close to the ground in grasses and/or rushes while supporting a small cup shape. These often consist of 2 or 3 eggs (DoE 2022). The diet consists of insects, including moths, damselflies, caterpillars, mosquito larvae as well as other invertebrates such as spiders. These will often be targeted from surface of shallow water, stems of rushes, grasses and occasionally low shrubs (DoE 2022).</p>	<p>Suitable habitat for the species was recorded in vegetated marine plains near Inkerman Creek and Twelve Mile Creek and sedgeland to grasslands on Quaternary plains.</p> <p>Mapping of yellow chat (Dawson) habitat has been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery. Suitable habitat within the following RE communities has been mapped as predicted habitat for the yellow chat (Dawson):</p> <ul style="list-style-type: none"> <li>– 11.1.1 <i>Sporobolus virginicus</i> grassland on marine clay plains</li> <li>– 11.1.2 Samphire forbland on marine clay plains</li> <li>– 11.3.27 Freshwater wetlands.</li> </ul>
<p><i>Geophaps scripta scripta</i> Squatter pigeon (southern)</p>	<p>Squatter pigeon (southern) habitat has been defined based on the formal habitat definition in the Commonwealth listing advice for the species (DCCEEW 2022).</p> <p>Habitat is generally defined as open-forests to sparse, open-woodlands and scrub that are (DCCEEW 2022; Squatter Pigeon Workshop 2011):</p> <ul style="list-style-type: none"> <li>– Mostly dominated in the overstorey by <i>Eucalyptus</i>, <i>Corymbia</i>, <i>Acacia</i> or <i>Callitris</i> species</li> <li>– Remnant, regrowth or partly modified vegetation communities, and</li> <li>– Within 3 km of water bodies or courses.</li> </ul> <p><b>Breeding habitat:</b> Occurs on stony rises occurring on sandy or gravelly soils, within 1 km of a suitable, permanent waterbody (Squatter Pigeon Workshop 2011).</p> <p><b>Foraging habitat:</b> Any remnant or regrowth open-forest to sparse, open-woodland or scrub dominated by <i>Eucalyptus</i>, <i>Corymbia</i>, <i>Acacia</i> or <i>Callitris</i> species, on sandy or gravelly soils, within 3</p>	<p>Mapping of squatter pigeon (southern) habitat was based on remnant and regrowth RE communities that are identified by the Queensland (DoR) essential habitat mapping framework as essential habitat factors for the squatter pigeon (southern) as a basis for mapping. This was differentiated into breeding and foraging habitat based on the categories below.</p> <p><b>Breeding habitat:</b> Remnant and regrowth open forest to woodland in the following REs that occur on suitable (stony) Land Zones and occur within 1 km of permanent waterbody. The Commonwealth listing advice nominates only Land Zone 5 and 7 as suitable breeding habitat. As no Land Zone 5 or 7 occurs within proximity of the local records, Land Zone 11 REs have been included due to their suitable stony substrate:</p> <ul style="list-style-type: none"> <li>– 11.11.4 <i>Eucalyptus crebra</i> woodland on old sedimentary rocks with vary degrees of metamorphism and folding. Coastal ranges</li> </ul>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
	<p>km of a suitable, permanent or seasonal waterbody (Squatter Pigeon Workshop 2011).</p> <p>In Queensland, the Commonwealth listing advice specifically nominates RE Land Zone 5 (well-draining, sandy or loamy soils on low, gently sloping, flat to undulating plains and foothills) and RE Land Zone 7 (lateritic (duplex) soils on low "jump-up" and escarpments) as suitable foraging and breeding habitat for the species. Ground-level vegetation is typically patchy with vegetation cover rarely exceeding 33% (Squatter Pigeon Workshop 2011).</p>	<ul style="list-style-type: none"> <li>– 11.11.15 <i>Eucalyptus crebra</i> woodland to open woodland on deformed and metamorphosed sediments and interbedded volcanics</li> <li>– 11.11.16 <i>Eucalyptus cambageana</i>, <i>Acacia harpophylla</i> open forest to woodland on old sedimentary rocks with varying degrees of metamorphism and folding. Lowlands</li> <li>– 12.11.14 <i>Eucalyptus crebra</i>, <i>E. tereticornis</i>, <i>Corymbia intermedia</i> woodland on metamorphics +/- interbedded volcanics.</li> </ul> <p><b>Foraging habitat:</b> Remnant and regrowth open forest and woodland in the REs nominated below that occur on sandy or stony Land Zones and occur within 3 km of permanent or seasonal water:</p> <ul style="list-style-type: none"> <li>– 11.3.1 <i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open forest on alluvial plains</li> <li>– 11.3.2 <i>Eucalyptus populnea</i> woodland on alluvial plains</li> <li>– 11.3.3 <i>Eucalyptus coolabah</i> woodland on alluvial plains</li> <li>– 11.3.4 <i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains</li> <li>– 11.3.25 <i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines</li> <li>– 11.3.26 <i>Eucalyptus moluccana</i> or <i>E. microcarpa</i> woodland to open forest on margins of alluvial plains</li> <li>– 11.3.27 Freshwater wetlands</li> <li>– 11.3.29 <i>Eucalyptus crebra</i>, <i>E. exserta</i>, <i>Melaleuca</i> spp. woodland on alluvial plains</li> <li>– 12.3.3 <i>Eucalyptus tereticornis</i> woodland on Quaternary alluvium.</li> </ul>
<p><i>Hemiaspis damelii</i> Grey snake</p>	<p>Grey snake habitat has been defined based on the species distribution and habitat outlined in the <i>Targeted Species Survey Guidelines</i> (Rowland 2012).</p> <p>The species prefers woodlands habitat (typically brigalow and belah woodlands), favouring heavier cracking clay soils associated with gullies, ditches and water bodies (Rowland 2012). Within the woodland habitat this species takes shelter in seasonally moist habitat such as in soil cracks, abandoned burrows, or under flood debris, logs and rocks (Rowland 2012). Frogs almost exclusively make up the diet of this species (Rowland 2012). The core distribution of this species within Queensland is in the Brigalow Belt, south of the Great Dividing Range between Glenmorgan and Dalby (Rowland 2012).</p>	<p>Suitable habitat for the grey snake was recorded in brigalow woodlands retaining seasonally inundated habitats (i.e. gilgais) within the SGIC SDA study area. Suitable ground-level microhabitats such as cracking clays, ground logs, woody debris and rocks were moderately low within remnant brigalow areas; however, these ground-level microhabitats are very sparse to absent within regrowth brigalow areas, and are heavily altered by intensive cultivation, and cattle grazing and trampling.</p> <p>Mapping of grey snake habitat has been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery. The habitat type, Brigalow (<i>Acacia harpophylla</i>) woodland, was mapped as predicted habitat for the grey snake.</p>
<p><i>Hirundapus caudacutus</i> White-throated needletail</p>	<p>White-throated needletail habitat has been defined based on the formal habitat definition in the Commonwealth listing advice for the species (TSSC 2019; DCCEEW 2022) and recent peer-reviewed literature (Tarburton 2021).</p> <p>In Australia, the white-throated needletail is mostly aerial, from heights of less than 1 m up to more than 1000 m above the ground (Coventry 1989; Tarburton 1993). Although they occur over most</p>	<p>Due to the species' aerial nature, the species has no strict reliance on defined foraging habitats. Species habitat has not been mapped on that basis.</p>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
	<p>types of habitats, they are recorded most often above wooded areas, including open forest and rainforest, and may also fly below the canopy between trees or in clearings (Higgins 1999). The species is a non-breeding migrant to Australia (TSSC 2019).</p> <p><b>Roosting habitat:</b> The species roosts in trees amongst dense foliage in the canopy or in hollows (TSSC (2019). Roosting is typically on vertical trunks and upper branches of trees at the edge of forest breaks or on ridgetops, where birds would have some height to gain air-speed when departing in the morning (Tarburton 2021).</p> <p><b>Foraging habitat:</b> In Australia, white-throated needletails almost always forage aerially, at heights up to “cloud level”, above a wide variety of habitats ranging from heavily treed forests to open habitats, such as farmland, heathland or mudflats (DCCEEW 2022). Because they are aerial, it has been stated that conventional habitat descriptions are inapplicable (Cramp 1985), but there are, nevertheless, certain preferences exhibited by the species. Although they occur over most habitat types, they are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland (DCCEEW 2022).</p>	
<p><i>Ninox strenua</i> Powerful owl</p>	<p>Powerful owl habitat has been defined based on the formal definition outlined in the essential habitat factors listed by Queensland DoR (2022b).</p> <p>Essential habitat factors for the powerful owl as detailed by the Queensland DoR include: Wet and dry tall open eucalypt forest (<i>E. tereticornis</i>, <i>E. camaldulensis</i>, <i>E. crebra</i>, <i>Corymbia citriodora</i> and <i>C. intermedia</i>), including mountain forest gullies/gorges; forests aged 60+ years (large and old) on fertile soils with suitable hollows; roosting in dense foliage of closed forest (occasionally caves) and foraging in open forest and woodland including areas adjacent to urban/rural development.</p> <p>Individual RE communities that represent essential habitat factors for the species have been nominated by DoR. Additional information from peer-reviewed literature is also provided below.</p> <p><b>Nesting habitat:</b> Essential habitat definition: The species nests in large hollows (45-75 cm diameter, 50-180 cm deep) 6-45 m above ground, in large (&gt;100 cm dbh) old eucalypts on the side or at the head of heavily wooded gully (DoR 2022a).</p> <p>Riparian nesting habitats of the powerful owl are typically located in larger intact remnants of forest associated with small streams and minor drainage lines (DEC 2006). The species typically does not occur within fragmented forest remnants &lt;200 ha (Kavanagh and Stanton 2002). The species nests in large hollows (1 m wide and 2 m deep) usually in mature living eucalypts in unlogged, unburnt gullies and lower slopes immediately adjacent (within 100 m) to streams or minor drainage lines, surrounded by canopy trees and sub-canopy or understorey trees or tall shrubs.</p>	<p>Suitable habitat for the powerful owl was observed within areas retaining remnant, mature vegetation within the GSDA and southern extent of the SGIC SDA pipeline alignment. These areas were identified as suitable habitat for the species as they retain large, mature hollow-bearing trees, and suitable nesting and denning habitat for the arboreal mammals upon which the powerful owl preys.</p> <p>Mapping of powerful owl habitat has largely been based on habitats that are likely to support suitable hollow-bearing trees, necessary for provision of food (i.e. hollow-dependent arboreal mammal prey) and nesting sites for the powerful owl. Habitat mapping has also been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery. The habitat type, mature eucalypt woodland, was mapped as predicted habitat for the powerful owl.</p>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
	<p><b>Foraging habitat:</b> The species relies on the presence of mature, hollow-bearing trees which provide den sites for the hollow-dwelling arboreal mammals which form the bulk of its prey. Given the reliance on hollow-bearing trees, the species favours mature mid-to-late succession, mixed age or multi-aged forest greater than 60 years old (Davey, 1993; Milledge <i>et al.</i> 1991; Higgins, 1999).</p>	
<p><i>Ornithorhynchus anatinus</i> Platypus</p>	<p>Platypus habitat includes freshwater creeks, slow-moving rivers, lakes joined by rivers, and built water storages such as farm dams. Preferred habitat for the species is defined as areas that have steep, well vegetated banks (Grant and Temple-Smith 1998).</p> <p>Burrows occur in the river banks, often above the water line and amongst tree roots (DES 2022b)</p>	<p>Due to the species' aquatic nature, the species has no strict reliance on defined foraging habitats. Foraging habitat has not been mapped on that basis.</p>
<p><i>Petauroides volans</i> Greater glider (southern and central)</p>	<p>Greater glider habitat has been defined based on the formal habitat definition in the Commonwealth conservation advice for the species (DCCEEW 2022a) and in the <i>Guide to greater glider habitat in Queensland</i> (Eyre 2022).</p> <p>Eucalypt forests and woodlands, occurring in highest abundance in taller, montane, moist Eucalypt forests with relatively old trees and abundant hollows (DCCEEW 2022a). The species dens in large hollows (diameter &gt;10 cm) in mature trees (DCCEEW 2022a).</p> <p>The greater glider (southern and central) has been most frequently recorded feeding on trees including, <i>Corymbia citriodora</i>, <i>C. intermedia</i>, <i>Eucalyptus fibrosa</i>, <i>E. moluccana</i> and <i>E. portuensis</i>, with <i>C. citriodora</i> and <i>E. tereticornis</i> being important species in greater glider habitat (Eyre <i>et al.</i> 2022).</p> <p>Greater gliders have a relatively small home range, typically 1-4 ha (DCCEEW 2022a). Studies revealed that the occupation of a small (&lt; 3 ha) home range is consistent throughout the species Australian geographic range, and therefore, small patches should not be dismissed as important habitat especially if connected to other patches of suitable habitat (Eyre <i>et al.</i> 2022).</p>	<p>Mapping of greater glider (southern and central) habitat has been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery. Predicted habitat for the greater glider (southern and central) was differentiated into denning and foraging habitat based on the categories below.</p> <p><b>Denning habitat:</b> Remnant woodland retaining large, mature eucalypt trees supporting suitable hollows (diameter &gt;10 cm) (DCCEEW 2022a), and the patch of vegetation is larger than 1 ha and is connected to other patches of remnant woodland with gaps no larger than 35 m, as the species average glide length is typically 25 to 35 m (with a launch height of 20 to 25 m) (Australian Museum Business Service 2001)..</p> <p><b>Foraging habitat:</b> Remnant and regrowth woodland retaining suitable feed tree species including, <i>Corymbia tessellaris</i>, <i>C. intermedia</i>, <i>Eucalyptus crebra</i>, <i>E. moluccana</i> and <i>E. tereticornis</i>, and is connected to continuous habitats with gaps no larger than 35 m.</p> <p>–</p>
<p><i>Petaurus australis australis</i> Yellow-bellied glider (south-eastern)</p>	<p>Yellow-bellied glider (south-eastern) habitat has been defined based on the formal definition in the Commonwealth conservation advise for the subspecies (DAWE 2022a).</p> <p>The yellow-bellied glider occurs in eucalypt-dominated woodland and forest. The species is reliant on mature hollow-bearing trees for denning sites. The subspecies is very mobile and occupies large home ranges between 50-85 ha in order to utilise sufficient foraging resources (DAWE 2022). The yellow-bellied glider (south-eastern) primarily sap from incisions cut in smooth-bark eucalypts including <i>Eucalyptus tereticornis</i>, <i>E. moluccana</i>, <i>Corymbia citriodora</i> and <i>C. intermedia</i>. The subspecies diet also comprises insets, nectar, manna and pollen (DAWE 2022a).</p>	<p>Mapping of yellow-bellied glider (south-eastern) habitat has been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery. Predicted habitat for the yellow-bellied glider (south-eastern) was differentiated into denning and foraging habitat based on the categories below.</p> <p><b>Denning habitat:</b> Remnant woodland retaining large, mature eucalypt trees supporting suitable hollows, and is connected to large patches of remnant woodland (&lt; 200 km<sup>2</sup>).</p> <p><b>Foraging habitat:</b> Remnant and regrowth woodland retaining smooth-bark tree species including, <i>Corymbia tessellaris</i>, <i>E. moluccana</i> and <i>E. tereticornis</i>, and is connected to continuous habitats.</p>
<p><i>Phascolarctos cinereus</i></p>	<p><b>Koala habitat - general</b></p> <p>Koala habitat has been defined using the criteria outlined in the Commonwealth approved</p>	<p><b>Koala habitat</b></p> <p>Forest, woodland, open woodland and shrubland that contains koala food trees including,</p>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
Koala	<p>conservation advice for the species (DAWE 2022c) and National Recovery Plan for the koala (DAWE 2022d).</p> <p>Biophysical habitat attributes for the koala include places that contain the resources necessary for individual foraging, survival (including predator avoidance), growth, reproduction, and movement. For an individual koala, these resources include access to sufficient quality food and shelter trees to meet their daily energetic requirements and reproductive needs, and a place to avoid predators.</p> <p>Koala habitat includes forests or woodlands, roadside and rail vegetation and paddock trees, safe intervening ground matrix for travelling between trees and patches to forage and shelter and reproduce and access to vegetated corridors or paddock trees to facilitate movement between patches. These resources fall within individual koala's home ranges and allow for interaction with adjacent individuals.</p>	<p><i>Eucalyptus moluccana</i>, <i>E. tereticornis</i>, <i>E. coolabah</i>, <i>E. crebra</i>, <i>E. exserta</i>, <i>Corymbia citriodora</i>, <i>C. erythrophloia</i>, <i>C. tessellaris</i>, <i>C. intermedia</i> and <i>Lophostemon suaveolens</i>.</p> <p>Mapping criteria was based on essential habitat factors for the koala (DoR) and definitions of habitat from the Commonwealth approved conservation advice and National Recovery Plan for the Koala.</p>
	<p><b>Koala habitat – remnant vegetation</b></p> <p>Koala habitat includes forests or woodlands. These resources fall within individual koala's home ranges and allow for interaction with adjacent individuals.</p>	<p>Remnant woodland in the RE communities nominated below that contain the koala food trees listed above as a diagnostic criteria were mapped based on DoR and field verified RE communities, habitat assessments and high resolution aerial imagery.</p> <ul style="list-style-type: none"> <li>– 11.3.1 <i>Acacia harpophylla</i> and/or <i>Casuarina cristata</i> open forest on alluvial plains</li> <li>– 11.3.2 <i>Eucalyptus populnea</i> woodland on alluvial plains</li> <li>– 11.3.3 <i>Eucalyptus coolabah</i> woodland on alluvial plains</li> <li>– 11.3.4 <i>Eucalyptus tereticornis</i> and/or <i>Eucalyptus</i> spp. woodland on alluvial plains</li> <li>– 11.3.25 <i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines</li> <li>– 11.3.26 <i>Eucalyptus moluccana</i> or <i>E. microcarpa</i> woodland to open forest on margins of alluvial plains</li> <li>– 11.3.29 <i>Eucalyptus crebra</i>, <i>E. exserta</i>, <i>Melaleuca</i> spp. woodland on alluvial plains</li> <li>– 11.11.4 <i>Eucalyptus crebra</i> woodland on old sedimentary rocks with varying degrees of metamorphism and folding. Coastal ranges</li> <li>– 11.11.15 <i>Eucalyptus crebra</i> woodland to open woodland on deformed and metamorphosed sediments and interbedded volcanics</li> <li>– 11.11.16 <i>Eucalyptus cambageana</i>, <i>Acacia harpophylla</i> open forest to woodland on old sedimentary rocks with varying degrees of metamorphism and folding. Lowlands.</li> </ul>
	<p><b>Koala habitat – non-remnant vegetation</b></p> <p>Koala habitat includes roadside and rail vegetation and paddock trees, safe intervening ground matrix for travelling between trees and patches to forage and shelter and reproduce and access to vegetated corridors or paddock trees to facilitate movement</p>	<p>Patches of koala food trees within areas of non-remnant vegetation that provide connectivity to other patches of remnant or non-remnant vegetation within the landscape were mapped as predicted koala habitat. These were mapped using high resolution aerial imagery based on</p>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
	<p>between patches. These resources fall within individual koala's home ranges and allow for interaction with adjacent individuals.</p>	<p>ground-truthed information from field observations.</p> <p>Isolated koala food trees that do not provide connectivity to other areas of remnant and non-remnant vegetation within the landscape with a distance of more than 100 m from the nearest food tree were not mapped.</p>
<p><i>Pteropus poliocephalus</i> Grey-headed flying-fox</p>	<p>Grey-headed flying-fox habitat has been defined based on the formal definition outlined in the Commonwealth listing advice for the species (DAWE 2022ax) and the National Recovery Plan for the Grey-headed Flying-fox <i>Pteropus poliocephalus</i> (DAWE 2021).</p> <p><b>Roosting habitat:</b> Roost vegetation includes rainforest patches, stands of <i>Melaleuca</i>, mangroves and riparian vegetation (DAWE 2021), but colonies also use highly modified vegetation in urban and suburban areas (DAWE 2021). The species can maintain fidelity to roost sites for extended periods (DCCEEW 2022j), although new sites have been colonised (DAWE 2021).</p> <p><b>Foraging habitat:</b> The grey-headed flying-fox is a canopy-feeding frugivore and nectarivore, with a diet supplemented by leaves. The species utilises vegetation communities including rainforests, open forests, closed and open woodlands, <i>Melaleuca</i> swamps and <i>Banksia</i> woodlands. It also feeds on commercial fruit crops and on introduced tree species in urban areas. The primary food source is blossom from <i>Eucalyptus</i> and related genera but in some areas, it also utilises a wide range of rainforest fruits (DCCEEW 2022j; DAWE 2021). The species is known to fly up to 40 km from camp to feed. Almost none of the vegetation communities used by the grey-headed flying-fox produce continuous foraging resources throughout the year. As a result, the species has adopted complex migration traits in response to ephemeral and patchy food resources (DCCEEW 2022j; DAWE 2021).</p> <p><b>Habitat critical to the survival of the species</b></p> <p>Habitat critical to the survival of the species includes plant species that flower in winter and spring, when foraging resources are in limited supply. Important winter and spring vegetation communities are those that contain <i>Eucalyptus tereticornis</i>, <i>E. albens</i>, <i>E. crebra</i>, <i>E. fibrosa</i>, <i>E. melliodora</i>, <i>E. paniculata</i>, <i>E. pilularis</i>, <i>E. robusta</i>, <i>E. seeana</i>, <i>E. sideroxylon</i>, <i>E. siderophloia</i>, <i>Banksia integrifolia</i>, <i>Castanospermum australe</i>, <i>Corymbia citriodora citriodora</i>, <i>C. eximia</i>, <i>C. maculata</i>, <i>Grevillea robusta</i>, <i>Melaleuca quinquenervia</i> or <i>Syncarpia glomulifera</i> (DAWE 2021).</p>	<p>Remnant and non-remnant vegetation retaining suitable feed trees (i.e. <i>Eucalyptus tereticornis</i>, <i>E. crebra</i>, <i>Corymbia citriodora</i> and <i>Melaleuca quinquenervia</i>) within 40 km of the nearest flying-fox camp has been mapped as predicted grey-headed flying-fox habitat. Species habitat mapping was based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery.</p>
<p><i>Rheodytes leukops</i> Fitzroy River turtle</p>	<p>The Fitzroy River turtle, endemic to the Fitzroy River and associated tributaries prefers flowing river sections with large deep pools with rocky, gravel or sandy substrates, connected by shallow riffles (Cogger, et.al 1993).</p> <p>Critical habitat for the Fitzroy River turtle includes:</p> <ul style="list-style-type: none"> <li>– Parts of riverine systems with permanent water, including pools, within the species' distribution that contain shelter and refuges (e.g. bank</li> </ul>	<p>Due to the species' aquatic nature, the species has no strict reliance on defined foraging habitats. Foraging habitat has not been mapped on that basis.</p>

Species	Habitat description in Commonwealth/State listing advise	Criteria use to map habitat
	<p>overhangs, overhanging riparian vegetation, macrophyte beds, moderate to high densities of submerged boulders and/or log jams).</p> <p>All currently known and new aggregated nesting sites (all nesting sites should be considered to be part of an aggregation unless it can be demonstrated otherwise).</p>	
<p><i>Rostratula australis</i> Australian painted snipe</p>	<p>The Australian painted snipe is recorded in wetlands in all states of Australia. The most common occurrence is eastern Australia, scattered through much of Queensland, NSW, Victoria and south-eastern South Australia (DoE 2022). They occur in shallow freshwater wetlands, both ephemeral and permanent, including lakes, swamps, inundated or waterlogged grassland/saltmarsh, dams, sewage farms and bore drains (DSEWPC 2013). Nests are often placed in a scrape in the ground and is either a shallow bowl shaped made of dry grass or other material or has scant lining (DoE 2022). These are often located in swamps, cane grass swamps, flooded areas, grazing lands, among cumbungi, sedges, grasses, saltwater couch, saltbush and grass. The diet of the Australian painted snipe consists of vegetation, seeds, insects, worms and molluscs, crustaceans and other invertebrates (DoE 2022).</p>	<p>Suitable habitat for the species was observed in areas where the pipeline alignment intersects freshwater waterbodies and seasonal wetlands. Mapping of Australian painted snipe habitat has been based on DoR and field verified RE communities, habitat assessments and high-resolution aerial imagery.</p>

# **Appendix G**

**Field survey site photos of suitable and non-suitable koala habitat**

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20



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# Appendix H

Field survey species list

Scientific name	Common name	GSDA	SGIC SDA	Northern Section
Birds				
<i>Anas superciliosa</i>	Pacific Black Duck		X	X
<i>Anseranas semipalmata</i>	Magpie Goose			X
<i>Anthus novaeseelandiae</i>	Australasian Pipit	X	X	X
<i>Aprosmictus erythropterus</i>	Red-winged Parrot	X	X	
<i>Aquila audax</i>	Wedge-tailed Eagle		X	
<i>Ardea ibis</i>	Cattle Egret		X	
<i>Ardea intermedia</i>	Intermediate Egret		X	
<i>Ardea modesta</i>	Eastern Great Egret			X
<i>Ardea pacifica</i>	White-necked Heron		X	
<i>Ardeotis australis</i>	Australian Bustard		X	X
<i>Burhinus grallarius</i>	Bush Stone-curlew		X	
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	X	X	
<i>Calyptorhynchus banksii</i>	Red-tailed Black-Cockatoo	X	X	
<i>Centropus phasianinus</i>	Pheasant Coucal	X	X	
<i>Chenonetta jubata</i>	Australian Wood Duck		X	X
<i>Cincloramphus cruralis</i>	Brown Songlark			X
<i>Cisticola exilis</i>	Golden-headed Cisticola		X	X
<i>Cisticola juncidus</i>	Zitting Cisticola		X	
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike	X	X	
<i>Corvus orru</i>	Torresian Crow	X	X	X
<i>Coturnix ypsilophora</i>	Brown Quail	X	X	
<i>Cracticus nigrogularis+</i>	Pied Butcherbird	X		X
<i>Cracticus tibicen</i>	Australian Magpie	X	X	X
<i>Cygnus atratus</i>	Black Swan			X
<i>Dacelo leachii</i>	Blue-winged Kookaburra	X	X	

Scientific name	Common name	GSDA	SGIC SDA	Northern Section
<i>Dacelo novaeguineae</i>	Laughing Kookaburra	X	X	
<i>Dendrocygna eytoni</i>	Plumed Whistling-Duck		X	X
<i>Dicaeum hirundinaceum</i>	Mistletoebird	X	X	
<i>Dicrurus bracteatus</i>	Spangled Drongo	X	X	
<i>Dromaius novaehollandiae</i>	Emu			X
<i>Egretta novaehollandiae</i>	White-faced Heron			X
<i>Eseyornis melanops</i>	Black-fronted Dotterel		X	
<i>Entomyzon cyanotis</i>	Blue-faced Honeyeater	X	X	
<i>Eolophus roseicapillus</i>	Galah	X	X	X
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork		X	
<i>Eurystomus orientalis</i>	Dollarbird	X	X	
<i>Falco berigora</i>	Brown Falcon		X	
<i>Falco cenchroides</i>	Nankeen Kestrel	X	X	X
<i>Gallinula tenebrosa</i>	Dusky Moorhen		X	X
<i>Geopelia cuneata</i>	Diamond Dove	X	X	
<i>Geopelia humeralis</i>	Bar-shouldered Dove	X	X	
<i>Geopelia striata</i>	Peaceful Dove	X	X	X
<i>Geophaps scripta scripta</i>	Squatter Pigeon	X		
<i>Gerygone albogularis</i>	White-throated Gerygone	X	X	
<i>Glossopsitta pusilla</i>	Little Lorikeet	X		
<i>Grallina cyanoleuca</i>	Magpie-lark	X	X	X
<i>Grus rubicunda</i>	Brolga		X	
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle		X	
<i>Haliastur sphenurus</i>	Whistling Kite	X	X	X
<i>Himantopus himantopus</i>	Black-winged Stilt		X	
<i>Hirundo neoxena</i>	Welcome Swallow		X	X
<i>Lichmera indistincta</i>	Brown Honeyeater	X	X	
<i>Malurus melanocephalus</i>	Red-backed Fairy-wren	X	X	X

Scientific name	Common name	GSDA	SGIC SDA	Northern Section
<i>Manorina melanocephala</i>	Noisy Miner	X	X	X
<i>Meliphaga lewinii</i>	Lewin's Honeyeater	X		
<i>Melithreptus albogularis</i>	White-throated Honeyeater	X	X	
<i>Merops ornatus</i>	Rainbow Bee-eater	X	X	X
<i>Microcarbo melanoleucos</i>	Little Pied Cormorant			X
<i>Milvus migrans</i>	Black Kite	X	X	X
<i>Mirafra javanica</i>	Horsfield's Bushlark			X
<i>Myiagra rubecula</i>	Leaden Flycatcher	X	X	
<i>Nymphicus hollandicus</i>	Cockatiel	X		
<i>Ocyphaps lophotes</i>	Crested Pigeon	X	X	
<i>Pachycephala rufiventris</i>	Rufous Whistler		X	
<i>Pardalotus striatus</i>	Striated Pardalote		X	
<i>Pelecanus conspicillatus</i>	Australian Pelican			X
<i>Petrochelidon ariel</i>	Fairy Martin		X	X
<i>Petrochelidon nigricans</i>	Tree Martin			X
<i>Philemon citreogularis</i>	Little Friarbird	X	X	
<i>Philemon corniculatus</i>	Noisy Friarbird	X	X	
<i>Platycercus adscitus</i>	Pale-headed Rosella	X	X	
<i>Podargus strigoides</i>	Tawny Frogmouth		X	
<i>Porphyrio porphyrio</i>	Purple Swamphen		X	
<i>Rhipidura albiscapa</i>	Grey Fantail	X	X	
<i>Rhipidura leucophrys</i>	Willie Wagtail	X	X	X
<i>Smicronis brevirostris</i>	Weebill	X	X	
<i>Struthidea cinerea</i>	Apostlebird		X	X
<i>Sturnus tristis</i>	Common Myna		X	
<i>Tachybaptus novaehollandiae</i>	Australasian Grebe		X	X
<i>Taeniopygia bichenovii</i>	Double-barred Finch	X	X	X
<i>Threskiornis molucca</i>	Australian White Ibis		X	X

Scientific name	Common name	GSDA	SGIC SDA	Northern Section
<i>Todiramphus macleayi</i>	Forest Kingfisher	X	X	
<i>Trichoglossus chlorolepidotus</i>	Scaly-breasted Lorikeet	X	X	
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	X	X	
<i>Vanellus miles</i>	Masked Lapwing	X	X	X
<i>Zosterops lateralis</i>	Silvereye		X	
Mammals				
<i>Aepyprymnus rufescens</i>	Rufous Bettong		X	
<i>Austronomus australis</i>	White-striped Free-tail Bat		X	
<i>Canis lupus familiaris</i>	Wild Dog		X	
<i>Chaerephon jobensis</i>	Northern Freetail Bat	X	X	
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat	X	X	
<i>Chalinolobus nigrogriseus</i>	Hoary Wattled Bat	X	X	
<i>Chalinolobus picatus</i>	Little Pied Bat		X	
<i>Felis catus</i>	Cat			X
<i>Macropus agilis</i>	Agile Wallaby		X	
<i>Macropus giganteus</i>	Eastern Grey Kangaroo	X	X	
<i>Macropus parryi</i>	Whiptail Wallaby	X		
<i>Miniopterus australis</i>	Little Bent-wing Bat	X	X	
<i>Miniopterus orianae</i>	Large Bent-winged Bat		X	
<i>Myotis macropus</i>	Large-footed Myotis	X		
<i>Oryctolagus cuniculus</i>	European Rabbit	X	X	X
<i>Ozimops lumsdenae</i>	Northern Free-tailed Bat	X	X	
<i>Ozimops ridei</i>	Ride's Free-tailed Bat	X	X	
<i>Petaurus norfolcensis</i>	Squirrel Glider		X	
<i>Pteropus scapulatus</i>	Little Red Flying-fox	X		
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tailed Bat	X	X	
<i>Scotorepens greyii</i>	Little Broad-nosed Bat		X	
<i>Scotorepens sanborni</i>	Northern Broad-nosed Bat	X		

Scientific name	Common name	GSDA	SGIC SDA	Northern Section
<i>Sus scrofa</i>	Feral Pig	X	X	X
<i>Trichosurus vulpecula</i>	Common Brushtail Possum		X	
<i>Vulpes vulpes</i>	European Red Fox	X	X	
<i>Wallabia bicolor</i>	Swamp Wallaby	X	X	
Reptiles				
<i>Gehyra dubia</i>	Dubious Dtella	X	X	X
<i>Heteronotia binoei</i>	Bynoe's Gecko	X	X	X
<i>Pogona barbata</i>	Eastern Bearded Dragon	X	X	X
<i>Tropidonophis mairii</i>	Keelback			X
Amphibians				
<i>Cyclorana alboguttata</i>	Green-striped Burrowing Frog			X
<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog			X
<i>Litoria caerulea</i>	Green Tree Frog	X	X	X
<i>Litoria fallax</i>	Eastern Sedge Frog		X	
<i>Litoria rubella</i>	Desert Tree Frog	X	X	X
<i>Platyplectrum ornatum</i>	Ornate Burrowing Frog			X
<i>Rhinella marina</i>	Cane Toad	X	X	X

# **Appendix I**

**Microbat call identification reports**



## Microbat Call Identification Report

<b>Prepared for (“Client”):</b>	GHD
<b>Survey location/project name:</b>	Gladstone-Fitzroy Pipeline
<b>Survey dates:</b>	21-25 February 2022
<b>Client project reference:</b>	12559247
<b>Job no.:</b>	GHD-2205
<b>Report date:</b>	26 April 2022

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## Methods

### Data received

*Balance! Environmental* received some 4600 full-spectrum acoustic (WAV) files, recorded using two Anabat Swift detectors (Titley Scientific, Brisbane). Based on the GPS coordinates saved in the WAV files, the detector labelled “SD1” (SN583127) was deployed at a single site (23.8619° S 151.0483° E) for four nights (21-24 February 2022), while detector “SD2” (SN583123) sampled two separate sites for two nights each: 23.8403° S 151.1251° E on 21-22 February; and 23.8437° S 151.1109° E on 23-24 February.

### Data post-processing and analysis

The data were processed using *Anabat Insight* (Version 2.0.1; Titley Scientific, Brisbane). A generic noise filter was applied to all WAV files to separate those that contained only non-bat background noise from files with potentially identifiable bat calls. The Decision Tree analysis tool was then used to group similar calls and assign tentative species labels.

All Decision Tree groups were reviewed manually to confirm and/or reassign correct species identities. Manual species verification was achieved by comparing call spectrograms and derived metrics of all labelled files with those of reference calls from northern and central Queensland and/or with published call descriptions (e.g. Reinhold *et al.* 2001). The likelihood of a species’ occurrence was further confirmed by referring to published distributional information (e.g., Australasian Bat Society 2022; Churchill 2008; van Dyck *et al.* 2013).

Where calls could not be reliably identified to a single species (“unresolved” calls), due to overlapping call characteristics, they were assigned to multi-species groups. All members of such groups should be considered probably present during the survey.

### Reporting standard

The format and content of this report follows Australasian Bat Society standards for the interpretation and reporting of bat call data (Reardon 2003), available on-line at <http://www.ausbats.org.au/>. Species nomenclature follows Armstrong *et al.* (2020).

## Results & Discussion

Most of the WAV files contained only non-bat background noise. A total of 217 individual bat calls were identified in the 204 files that passed the noise filter. Most (202) of those calls were reliably attributed to one of nine distinct species (see **Table 1**). The other 15 calls could not be positively identified but belonged to two species (*Chalinolobus gouldii* and/or *Ozimops ridei*) that were otherwise reliably identified.

Sample call spectrograms for each species appear in **Appendix 2**.

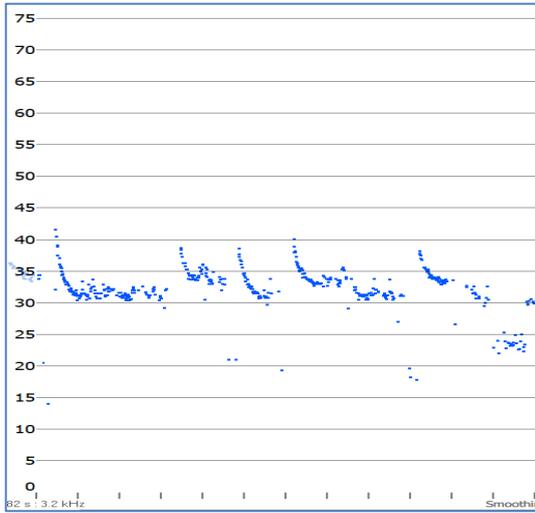
**Table 1** Bats recorded during the Gladstone-Fitzroy Pipeline survey, 21-24 February 2022.

Detector code-serial number:	SD1-SN583127	SD2-SN583123		Species total
Location:	23.8619° S 151.0483° E	23.8403° S 151.1251° E	23.8437° S 151.1109° E	
Nights deployed:	21-24 Feb	21-22 Feb	23-24 Feb	
<b>Positively identified calls</b>				
<i>Chalinolobus gouldii</i>	2	20	1	23
<i>Chalinolobus nigrogriseus</i>		41		41
<i>Myotis macropus</i>		21		21
<i>Scotorepens sanborni</i>		13		13
<i>Miniopterus australis</i>		12	6	18
<i>Chaerephon jobensis</i>	5	14		19
<i>Ozimops lumsdenae</i>	7	19	5	31
<i>Ozimops ridei</i>		34	1	35
<i>Saccolaimus flaviventris</i>	1			1
<b>Unresolved calls</b>				
<i>C. gouldii</i> / <i>O. ridei</i>	4	10	1	15
Detector-night total	19	184	14	217

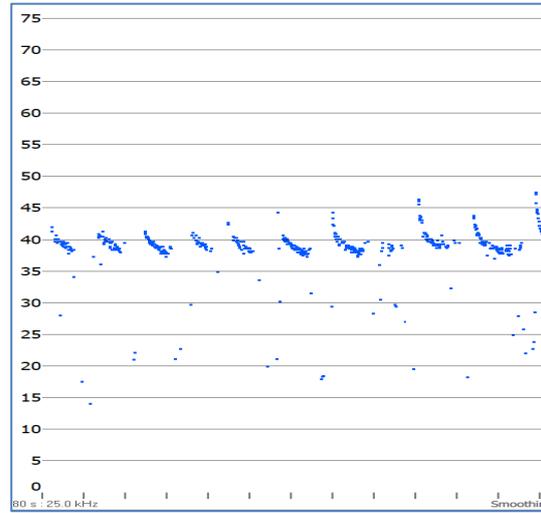
## References

- Armstrong, K.N., Reardon, T.B., and Jackson, S.M. (2020). A current taxonomic list of Australian Chiroptera. Australasian Bat Society. Version 2020-06-09.  
URL: <http://ausbats.org.au/species-list/4593775065>
- Australasian Bat Society (2022). *BatMap*. <http://ausbats.org.au/batmap>. Accessed 20/4/2022.
- Churchill, S. (2008). *Australian Bats*. Jacana Books, Allen & Unwin; Sydney.
- Reardon, T. (2003). Standards in bat detector based surveys. *Australasian Bat Society Newsletter* **20**, 41-43.
- Reinhold, L., Law, B., Ford, G. and Pennay, M. (2001). *Key to the bat calls of south-east Queensland and north-east New South Wales*. Department of Natural Resources and Mines, Brisbane.
- van Dyck, S., Gynther, I. and Baker, A. (ed.) (2013). *Field Companion to the Mammals of Australia*. New Holland; Sydney.

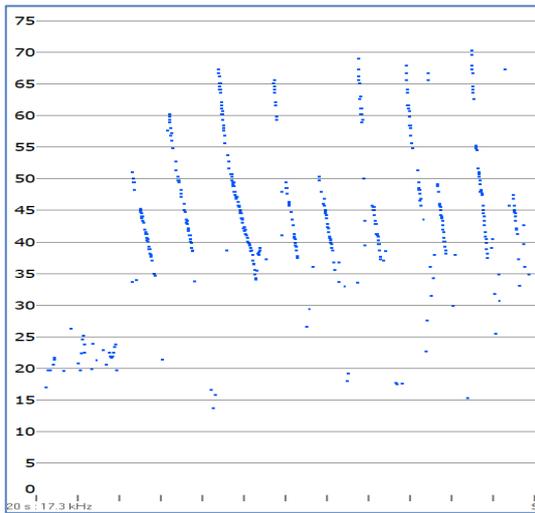
**Appendix 1** Representative call sequences: Gladstone-Fitzroy pipeline survey, February 2022.  
 x-axis = 10 ms per tick-mark; time between pulses removed ("compressed")



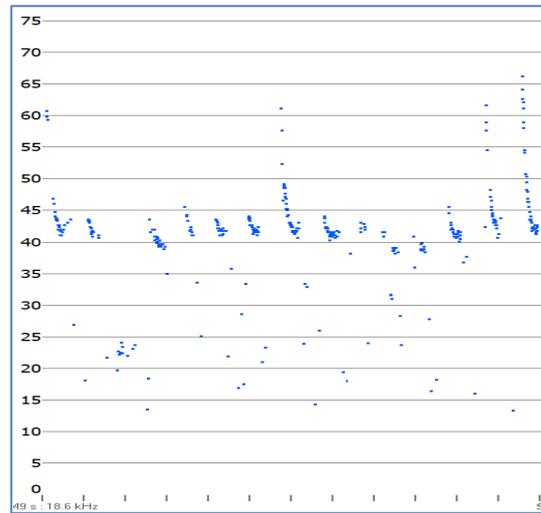
*Chalinolobus gouldii*



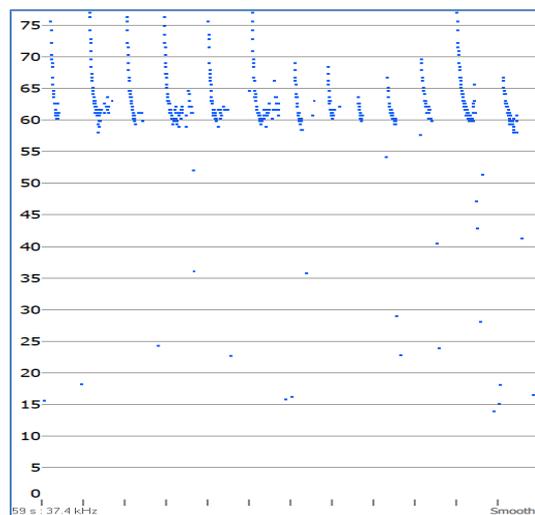
*Chalinolobus nigrogriseus*



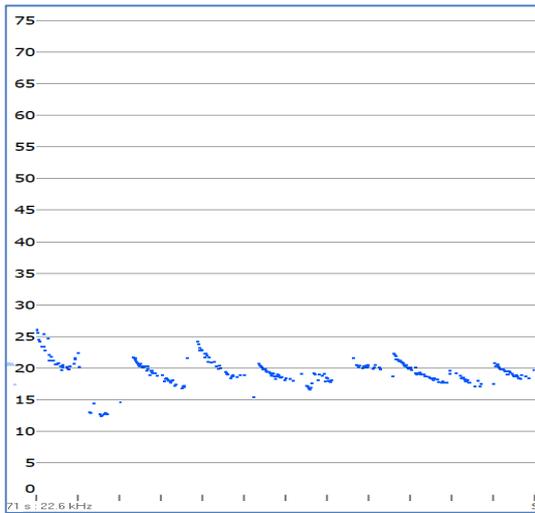
*Myotis macropus*



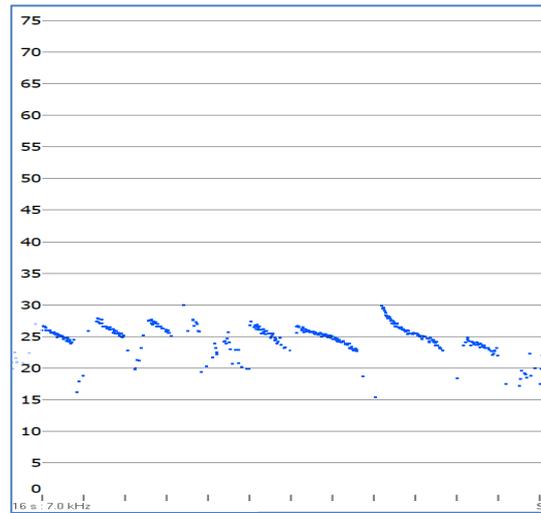
*Scotorepens sanborni*



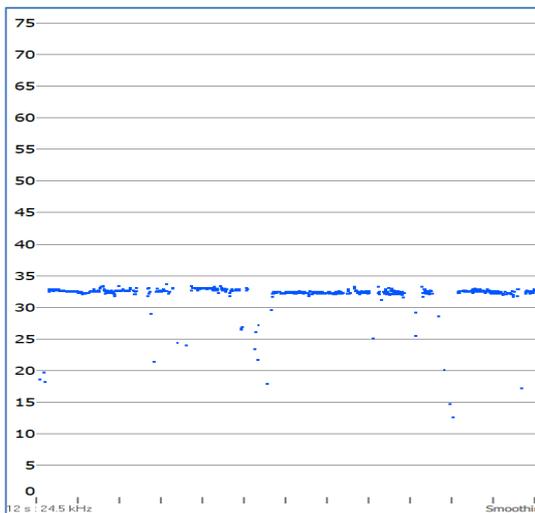
*Minopterus australis*



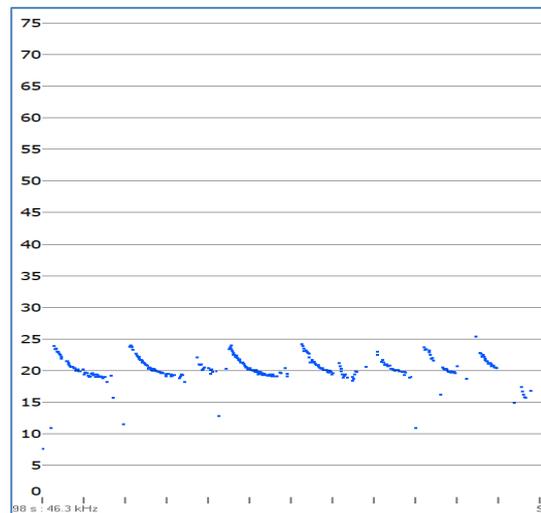
*Chaerephon jobensis*



*Ozimops lumsdenae*



*Ozimops ridei*



*Saccolaimus flaviventris*



## Microbat Call Identification Report

<b>Prepared for (“Client”):</b>	GHD
<b>Survey location/project name:</b>	Marmor & Mount Larcom
<b>Survey dates:</b>	3-6 May 2022
<b>Client project reference:</b>	12559247 GAWB GFP
<b>Job no.:</b>	GHD-2208
<b>Report date:</b>	16 June 2022

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## Methods

### Data received

*Balance! Environmental* received some 351 full-spectrum acoustic (WAV) files from an Anabat Swift detector, plus three raw ZCA files from an Anabat Express detector. The data were recorded from two sites between 3<sup>rd</sup> and 6<sup>th</sup> May 2022 (see **Table 1**).

### Data post-processing and analysis

Analyses were performed in *Anabat Insight* (Version 2.0.2; Titley Scientific, Brisbane).

The “Convert ZCA” function was used to extract individual trigger events (ZC sequence files) from the raw ZCA files. All resulting ZC files, plus the WAV files were then subjected to a noise filter, which set aside files that contained only non-bat background noise. Files that passed the noise filter (i.e., contained bat calls) were then processed with the Decision Tree analysis tool to group similar calls and assign tentative species labels.

All Decision Tree groups were reviewed manually to confirm and/or reassign correct species identities. Manual species verification was achieved by comparing call spectrograms and derived metrics of all labelled files with those of reference calls from northern and central Queensland and/or with published call descriptions (e.g. Reinhold et al. 2001). The likelihood of a species’ occurrence in the study area was confirmed by referring to published distributional information (e.g., Australasian Bat Society 2022; Churchill 2008; van Dyck *et al.* 2013).

Where calls could not be reliably identified to a single species due to overlapping call characteristics (“unresolved” calls), they were assigned to multi-species groups. All members of such groups should be considered probably present during the survey.

### Reporting standard

The format and content of this report follows Australasian Bat Society standards for the interpretation and reporting of bat call data (Reardon 2003), available on-line at <http://www.ausbats.org.au/>. Species nomenclature follows Armstrong *et al.* (2020).

**Table 1** Anabat deployment details for the surveys at Marmor and Mount Larcom, 3-6 May 2022.

Detector	Serial #	Nights	Location	Latitude	Longitude
Balance	SN583127	4 <sup>th</sup> & 5 <sup>th</sup> May	Twelve Mile Rd, Marmor	-23.6820	150.7577
GHD	SN507226	3 <sup>rd</sup> , 4 <sup>th</sup> & 5 <sup>th</sup> May	The Narrows Rd, Mount Larcom	-23.8114	150.9977

## Results & Discussion

The ZCA conversion process yielded 2904 ZC files for the Mount Larcom site; however, 2220 of those files contained only non-bat background noise. The noise filter also excluded 120 non-bat WAV files from the Marmor site. A total of 965 individual bat calls were identified in remaining dataset.

Some 62% (603) of the identifiable calls were reliably attributed to twelve distinct species (see upper portion of **Table 2**). The other 362 “unresolved” calls were allocated to seven multi-species groups (**Table 2**, bottom section), six of which represented only species that were otherwise positively identified. The remaining group included calls made by either *Myotis macropus* or one or more *Nyctophilus* species. Based on the GPS coordinates in the metadata (see **Table 1**), it appears both detectors were deployed adjacent to watercourses, so it is highly probable these calls all belonged to *M. macropus*, which forages predominantly over open water. Despite this, it is possible that some calls in the group also represented one or more of *N. bifax*, *N. geoffroyii* or *N. gouldi*.

Sample call spectrograms for each species appear in **Appendix 1**.

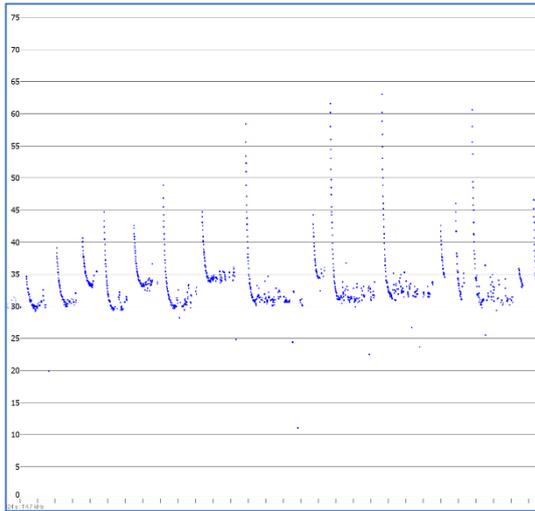
**Table 2** Bats recorded at Marmor and Mount Larcom, May 2022.

Site:	Marmor	Mount Larcom	Species Total
<b>Positively identified calls</b>			
<i>Chalinolobus gouldii</i>	3	23	26
<i>Chalinolobus nigrogriseus</i>		25	25
<i>Chalinolobus picatus</i>		4	4
<i>Scotorepens greyii</i>		13	13
<i>Scotorepens sanborni</i>		127	127
<i>Miniopterus australis</i>	1	79	80
<i>Miniopterus orianae</i>	1	7	8
<i>Austronomus australis</i>	3	1	4
<i>Chaerephon jobensis</i>	141	36	177
<i>Ozimops lumsdenae</i>	1	18	19
<i>Ozimops ridei</i>	1	20	21
<i>Saccolaimus flaviventris</i>	52	47	99
<b>Unresolved calls</b>			
<i>C. gouldii</i> / <i>O. ridei</i>	2	36	38
<i>C. nigrogriseus</i> / <i>S. greyii</i>		130	130
<i>C. picatus</i> / <i>S. sanborni</i>		65	65
<i>Myotis macropus</i> / <i>Nyctophilus</i> sp.	10	25	35
<i>S. greyii</i> / <i>S. sanborni</i>		15	15
<i>S. flaviventris</i> / <i>C. jobensis</i>	22	54	76
<i>S. flaviventris</i> / <i>O. lumsdenae</i>		3	3
Site Total	237	728	965

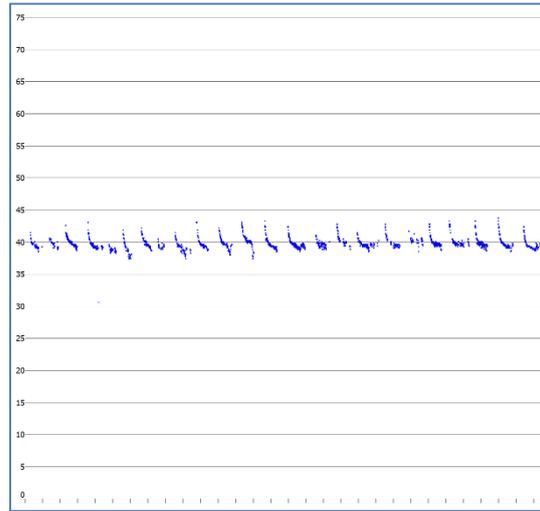
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URL: <http://ausbats.org.au/species-list/4593775065>
- Australasian Bat Society (2022). *BatMap*. <http://ausbats.org.au/batmap>. Accessed 20/4/2022.
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- Reinhold, L., Law, B., Ford, G. and Pennay, M. (2001). *Key to the bat calls of south-east Queensland and north-east New South Wales*. Department of Natural Resources and Mines, Brisbane.
- van Dyck, S., Gynther, I. and Baker, A. (ed.) (2013). *Field Companion to the Mammals of Australia*. New Holland; Sydney.

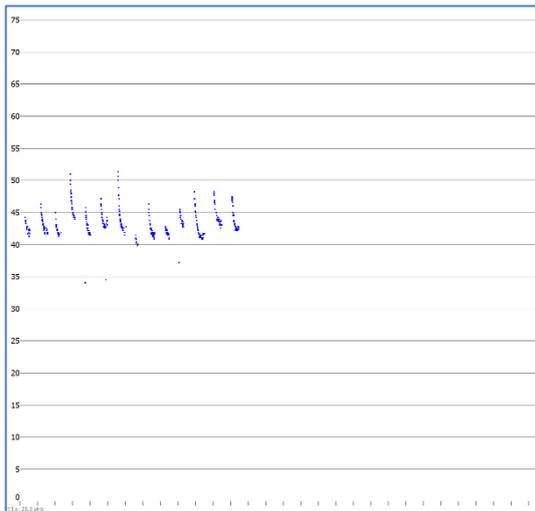
**Appendix 1** Representative call sequences: Marmor & Mount Larcom survey, May 2022.  
 x-axis = 10 ms per tick-mark; time between pulses removed ("compressed")



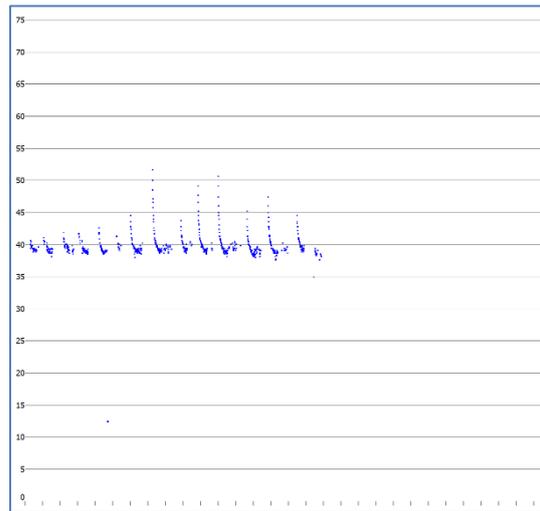
*Chalinolobus gouldii*



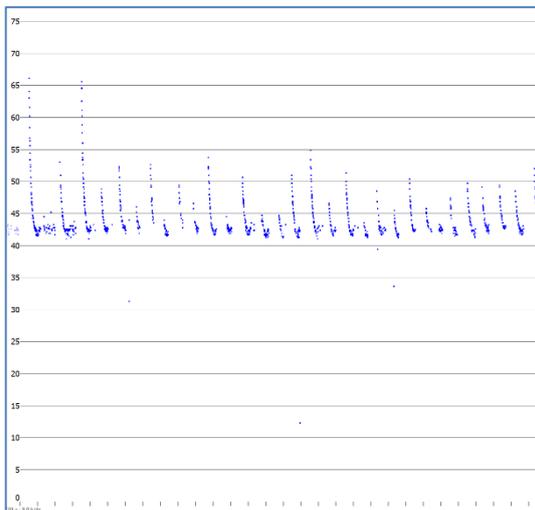
*Chalinolobus nigrogriseus*



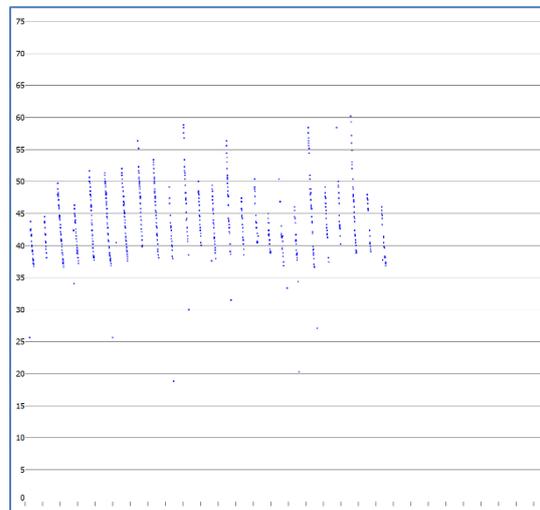
*Chalinolobus picatus*



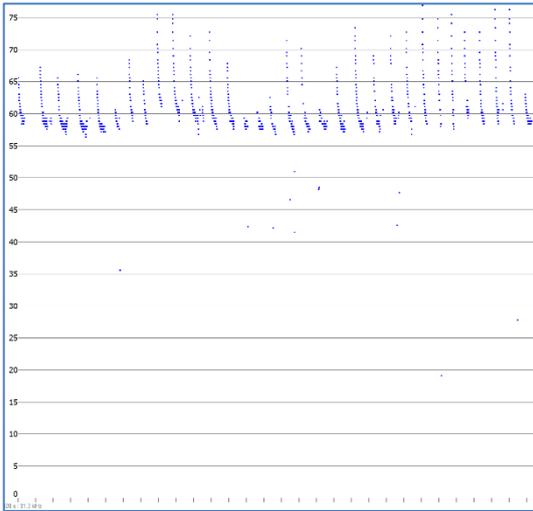
*Scotorepens greyii*



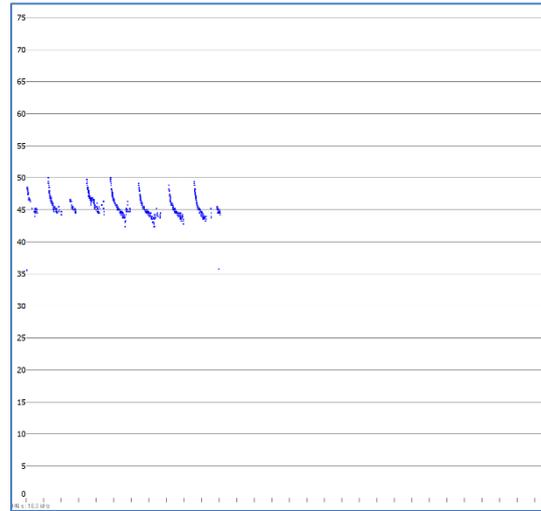
*Scotorepens sanborni*



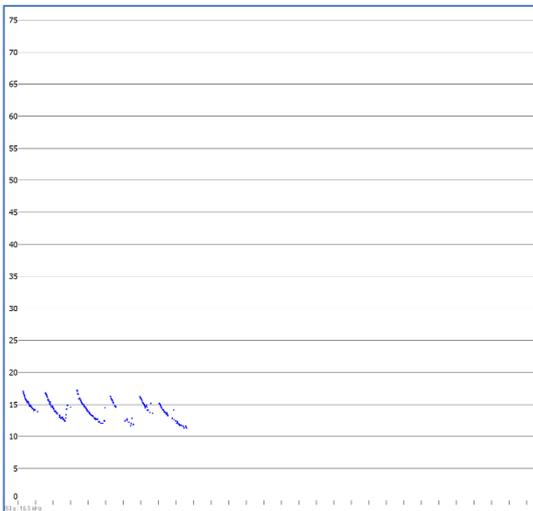
*Myotis macropus / Nyctophilus sp.*



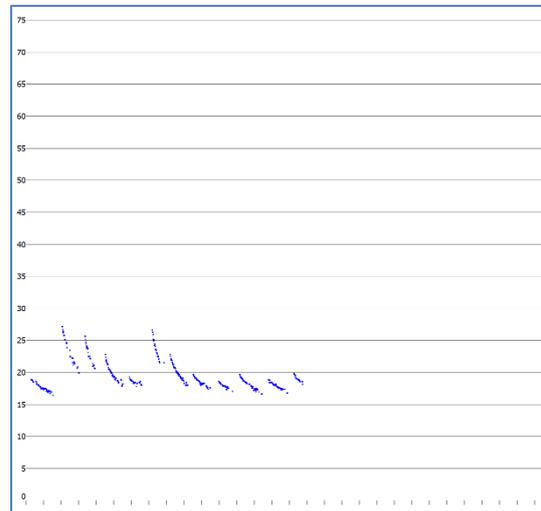
*Miniopterus australis*



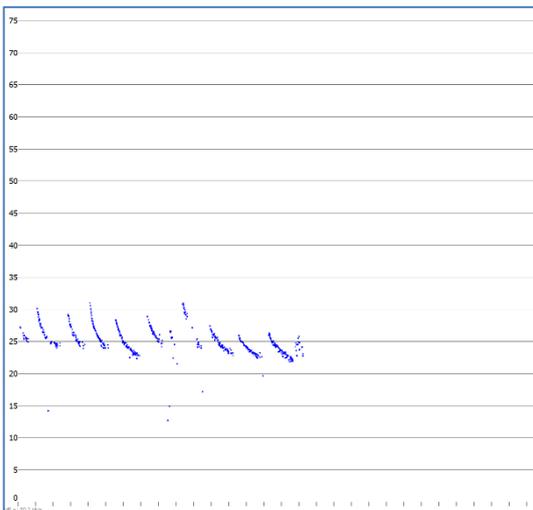
*Miniopterus orianae*



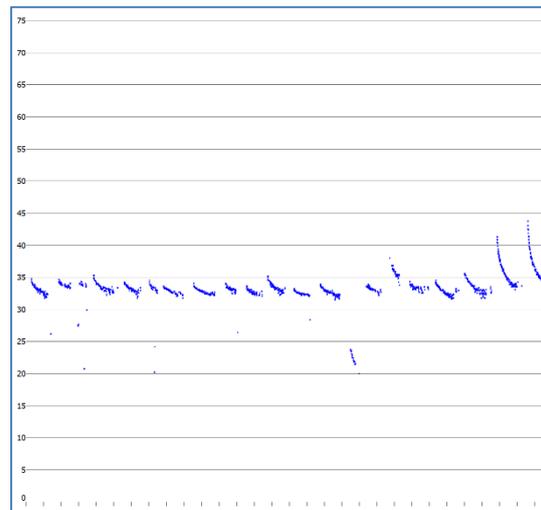
*Austronomus australis*



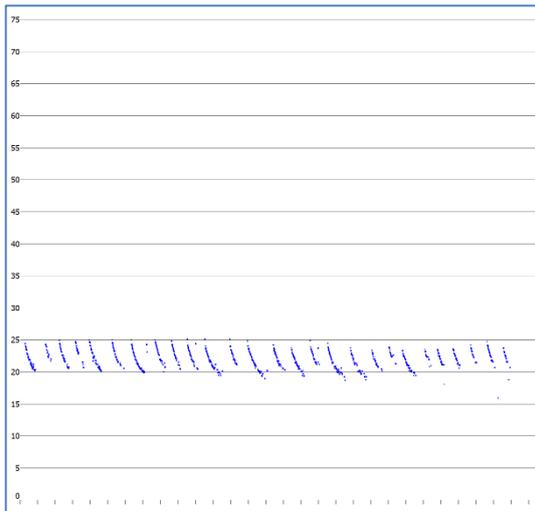
*Chaerephon jobensis*



*Ozimops lumsdenae*



*Ozimops ridei*



*Saccolaimus flaviventris*

# **Appendix J**

**Aquatic field survey result lists**

**Site 1**

Species Name	Number of Adults	Number of Intermediate	Number of Juveniles
Agassiz's glassfish ( <i>Ambassis agassizii</i> )	6		
Fly-specked hardyhead ( <i>Craterocephalus stercusmuscarum</i> )	4		
Mouth almighty ( <i>Glossamia aprion</i> )	4	1	1
Firetail gudgeon ( <i>Hypseleotris galii</i> )	1	1	1
Western carp gudgeon ( <i>Hypseleotris klunzingeri</i> )	2	1	
Hyrtl's tandan ( <i>Neosilurus hyrtlii</i> )	3		
Krefft's river turtle ( <i>Emydura macquarii krefftii</i> )			1

**Site 3**

Species Name	Number of Adults	Number of Intermediate	Number of Juveniles
Western carp gudgeon ( <i>Hypseleotris klunzingeri</i> )			5
Krefft's river turtle ( <i>Emydura macquarii krefftii</i> )	1		

**Site 5**

Species Name	Number of Adults	Number of Intermediate	Number of Juveniles
Agassiz's glassfish ( <i>Ambassis agassizii</i> )		53	
Fly-specked hardyhead ( <i>Craterocephalus stercusmuscarum</i> )		4	
Western carp gudgeon ( <i>Hypseleotris klunzingeri</i> )		10	5
Spangled perch ( <i>Leiopotherapon unicolor</i> )		3	8



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# Appendix F

## Design Details



# FITZROY TO GLADSTONE PIPELINE PROJECT



LOCALITY PLAN

## DRAWING REGISTER SETS

GSDA

Title	Prepared by	Date / Rev	Drawing number
General Drawing Register	MBJV	04/04/23 / Rev C	1151-DL00-W3P-CIV-DRG-10000
Standard Details Trench types	MBJV	08/06/23 / Rev E	1151-DL00-W3P-CIV-DRG-10001
Typical Right of Way – 30 m	MBJV	08/06/23 / Rev D	1151-DL00-W3P-CIV-DRG-10008
Typical Right of Way – 15 m	MBJV	08/06/23 / Rev D	1151-DL00-W3P-CIV-DRG-10009
DL05 Pipeline Key Plan 5 of 5	MBJV	08/06/23 / Rev C	1151-DL05-W3P-PL-DRG-65005
DL07 Pipeline Key Plan	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67001
DL05 Pipeline CH96485.10 – 97185.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65139
DL05 Pipeline CH97185.10 – 97885.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65140
DL05 Pipeline CH97885.10 – 98585.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65141
DL05 Pipeline CH98585.10 – 99285.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65142
DL05 Pipeline CH99285.10 – 99985.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65143
DL05 Pipeline CH99985.10 – 100685.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65144
DL05 Pipeline CH100685.10 – 101385.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65145
DL05 Pipeline CH101385.10 – 102085.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65146
DL05 Pipeline CH102085.10 – 102785.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65147
DL05 Pipeline CH102785.10 – 103485.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65148
DL05 Pipeline CH103485.10 – 104185.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65149
DL05 Pipeline CH104185.10 – 104885.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65150
DL05 Pipeline CH104885.10 – 105585.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65151
DL05 Pipeline CH105585.10 – 106285.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65152
DL05 Pipeline CH106285.10 – 106985.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65153
DL05 Pipeline CH106985.10 – 107685.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65154
DL05 Pipeline CH107685.10 – 108385.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65155
DL05 Pipeline CH108385.10 – 108385.10	MBJV	08/06/23 / Rev B	1151-DL05-W3P-PL-DRG-65156
DL07 Pipeline CH108899.44 – 109579.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67002
DL07 Pipeline CH109579.44 – 110279.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67003
DL07 Pipeline CH110279.44 – 110979.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67004
DL07 Pipeline CH110979.44 – 111679.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67005
DL07 Pipeline CH111679.44 – 112379.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67006
DL07 Pipeline CH112379.44 – 113079.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67007
DL07 Pipeline CH113079.44 – 113779.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67008
DL07 Pipeline CH113779.44 – 114479.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67009
DL07 Pipeline CH114479.44 – 115179.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67010
DL07 Pipeline CH115179.44 – 115879.44	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67011
DL07 Pipeline CH115879.44 – 116568.03	MBJV	08/06/23 / Rev B	1151-DL07-W3P-PL-DRG-67012
Larcom Creek Critical Crossing – General arrangement	MBJV	08/06/23 / Rev B	1151-DL05-W3P-CIV-DRG-35140
Larcom Creek Critical Crossing – Crossing detail	MBJV	08/06/23 / Rev B	1151-DL05-W3P-CIV-DRG-35141
Bajool Port Alma Road Critical Crossing – General arrangement	MBJV	08/06/23 / Rev B	1151-DL05-W3P-CIV-DRG-35170
Bajool Port Alma Road Critical Crossing – Crossing detail	MBJV	08/06/23 / Rev B	1151-DL05-W3P-CIV-DRG-35171
Gladstone Mt Larcom Road Critical Crossing – General arrangement	MBJV	08/06/23 / Rev B	1151-DL07-W3P-CIV-DRG-37020
Gladstone Mt Larcom Road Critical Crossing – Crossing detail	MBJV	08/06/23 / Rev B	1151-DL07-W3P-CIV-DRG-37021
DL07 Standard Details – Isolation valve assembly	MBJV	08/06/23 / Rev D	1151-DL07-W3P-CIV-DRG-17001
DL07 Standard Details – Air valve assembly	MBJV	08/06/23 / Rev D	1151-DL07-W3P-CIV-DRG-17002
DL07 Standard Details – Scour assembly	MBJV	08/06/23 / Rev D	1151-DL07-W3P-CIV-DRG-17003



LEGEND:

- DL02 FITZROY RIVER TO ALTON DOWNS PIPELINE OD 900 PE112
- DL05 ALTON DOWNS TO ALDOGA PIPELINE OD 1067 MSCL
- DL07 ALDOGA TO MT. MILLER PIPELINE OD 1200 PE112

ISSUED FOR CLIENT REVIEW

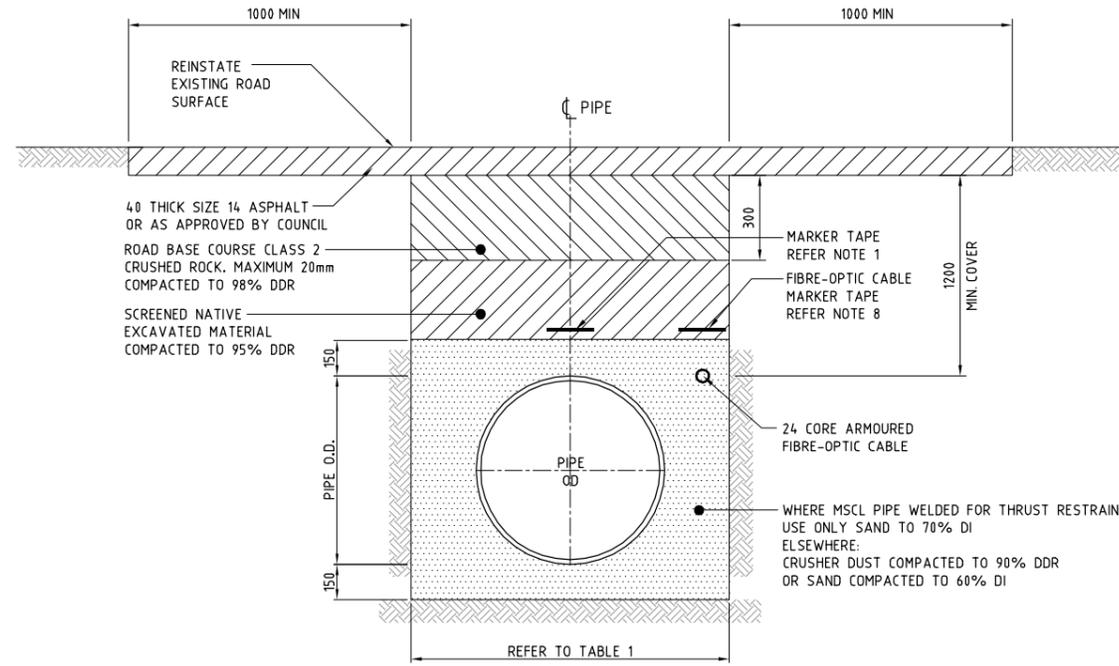


Designed	AS			
Drawn	TA			
Checked	MM			
RPEQ	PS			
REVISION	DETAILS OF AMENDMENT	APPD	DATE	

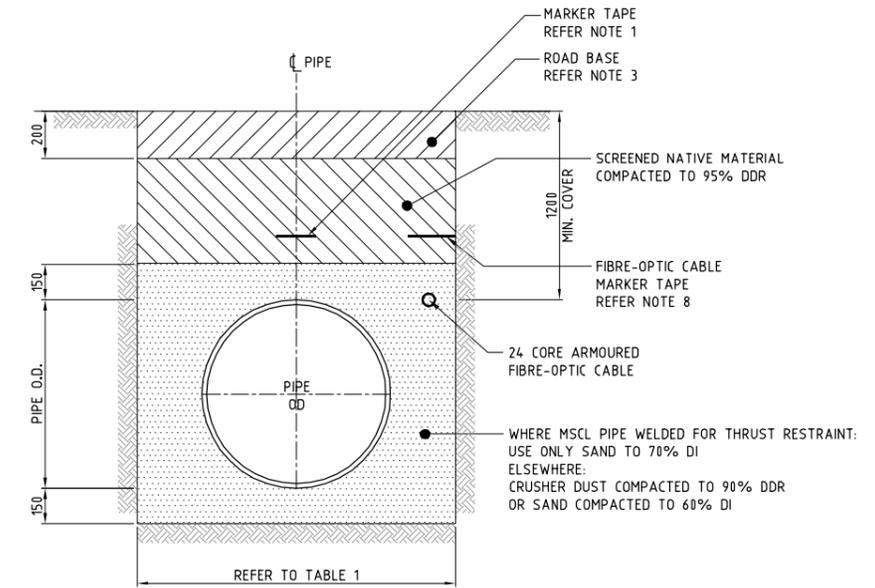


FITZROY TO GLADSTONE  
PIPELINE PROJECT  
GENERAL DRAWING REGISTER

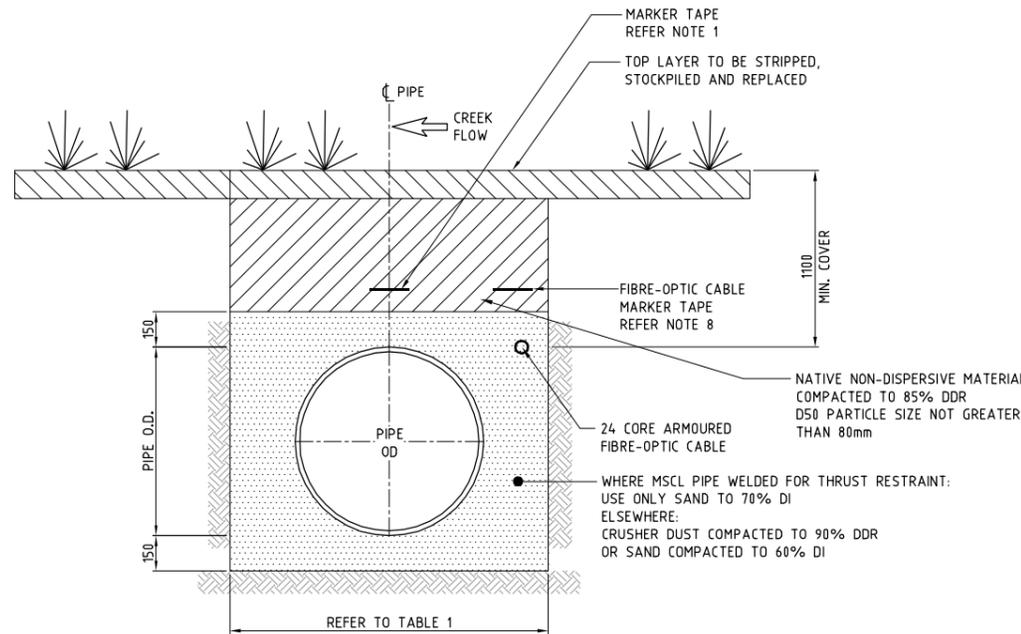
PLAN No.	1151-DL00-W3P-CIV-DRG-00000
REV:	C



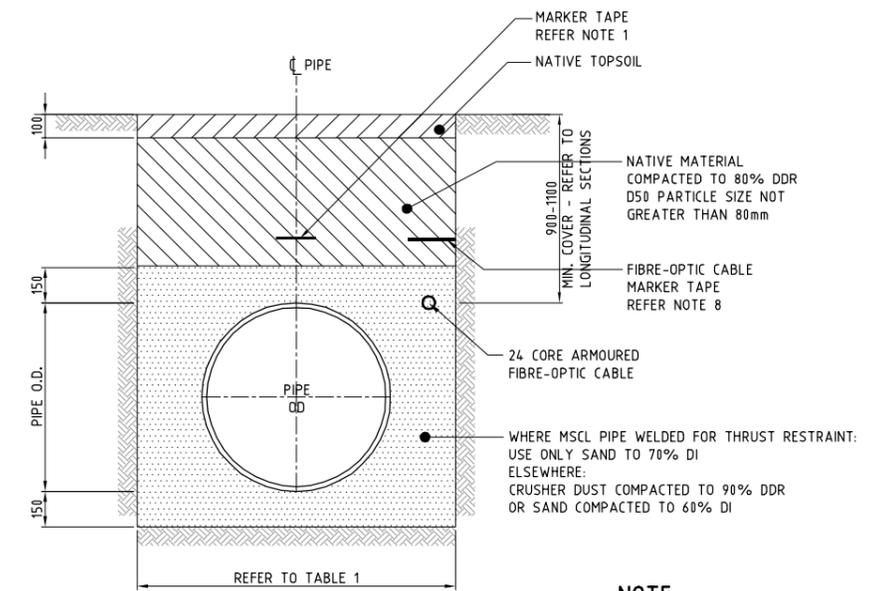
**TYPICAL TRENCH DETAIL TYPE-1  
UNDER SEALED ROADS  
(A160 AXLE LOAD)**  
N.T.S.



**TYPICAL TRENCH DETAIL TYPE-2  
UNDER UNSEALED ROADS  
(A160 AXLE LOAD)**  
N.T.S.



**TYPICAL TRENCH DETAIL TYPE-3  
MINOR CREEK CROSSING**  
N.T.S.



**TYPICAL TRENCH DETAIL TYPE-4  
PRIVATE PROPERTY & NATURE STRIP  
(A160 AXLE LOAD)**  
N.T.S.

**NOTE:**  
REFER TO PROJECT NOTES

PIPE OD (mm)	PIPE MATERIAL	TRENCH WIDTH MINIMUM (mm)	MIN CLEARANCE EACH SIDE
1067	MSCL	1600	268
1200	HDPE	1700	250
900	HDPE	1400	250

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
-	-	-	-	-	-	-	-	-
E	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	AS	PS	-	-	-
D	26/05/23	85% SUBMISSION JV REVIEW	TA	AS	PS	-	-	-
C	05/04/23	CREEK CROSSING UPDATED	TA	AS	PS	-	-	-
B	31/03/23	50% SUBMISSION	TA	AS	PS	-	-	-
A	18/03/23	ISSUED FOR CLIENT REVIEW	TA	AS	PS	-	-	-



**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

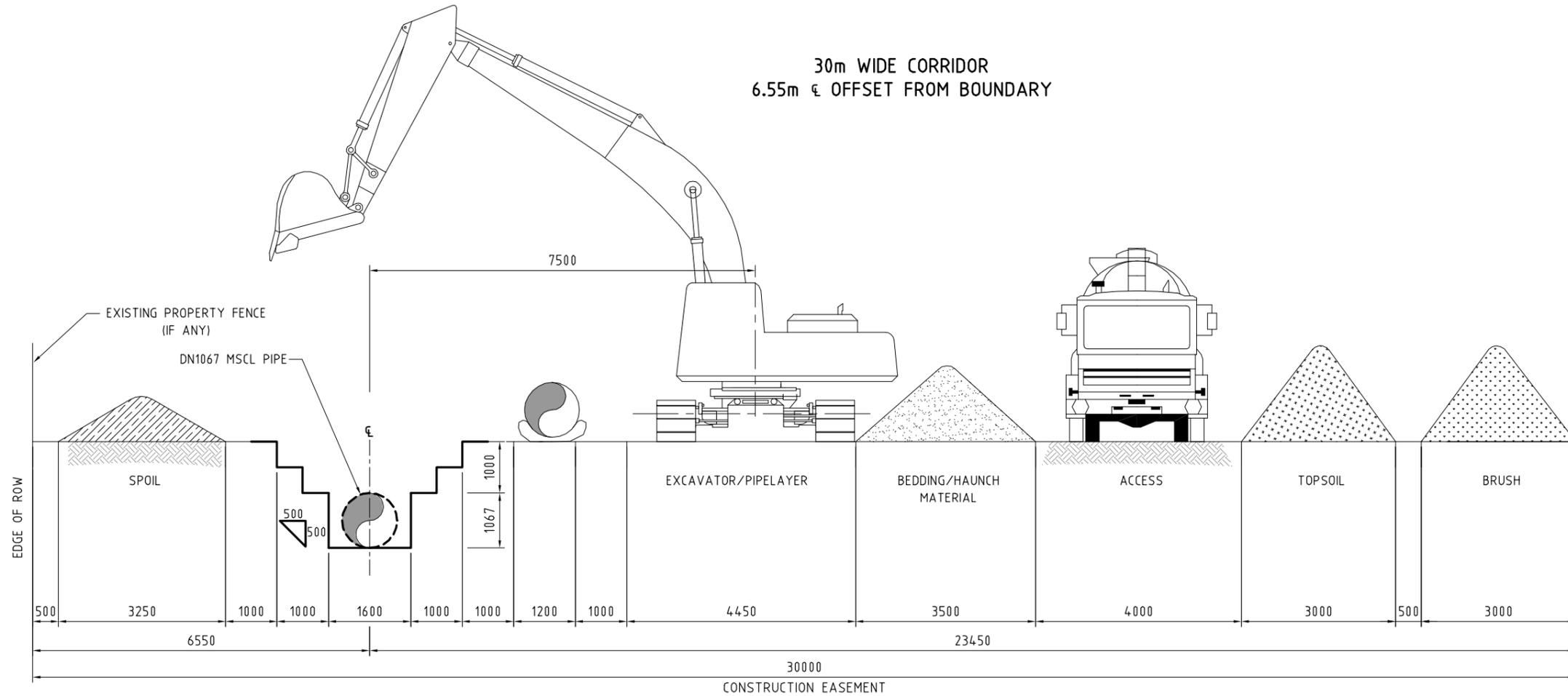
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**FITZROY TO GLADSTONE PIPELINE PROJECT  
STANDARD DETAILS  
TRENCH TYPES**

1151-DL00-W3P-CIV-DRG-10001

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	E

DO NOT SCALE



TYPICAL SECTION - CONSTRUCTION CORRIDOR



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
D	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	AS	PS	-		
C	26/05/23	85% SUBMISSION JV REVIEW	TA	AS	PS	-		
B	31/03/23	50% SUBMISSION	TA	AS	PS	-		
A	18/03/23	ISSUED FOR CLIENT REVIEW	TA	AS	PS	-		



**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

FITZROY TO GLADSTONE PIPELINE PROJECT  
 STANDARD DETAILS  
 TYPICAL RIGHT OF WAY - 30 METRES

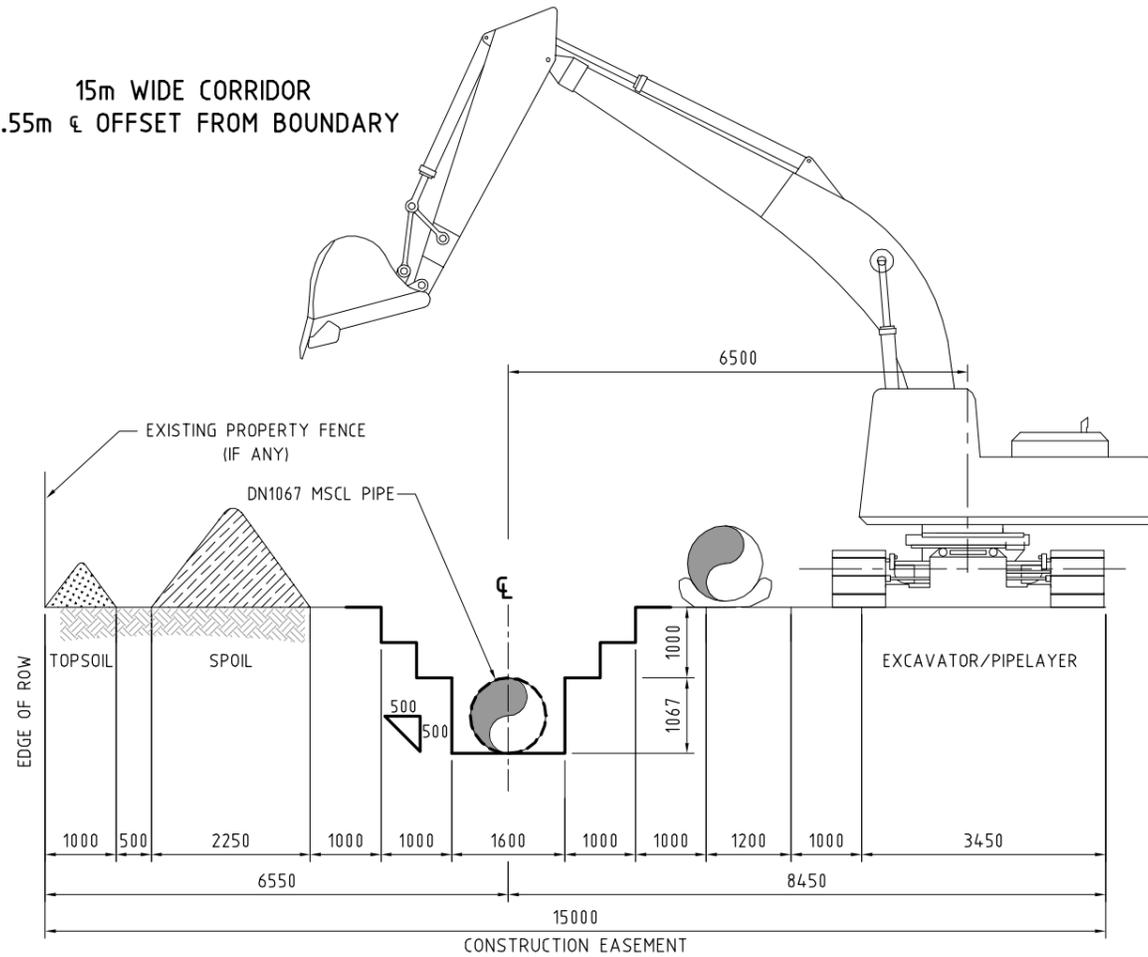
1151-DL00-W3P-CIV-DRG-10008

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	D

DO NOT SCALE



15m WIDE CORRIDOR  
6.55m  $\phi$  OFFSET FROM BOUNDARY



TYPICAL SECTION-REDUCED CONSTRUCTION CORRIDOR



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
D	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	AS	PS	-		
C	26/05/23	85% SUBMISSION JV REVIEW	TA	AS	PS	-		
B	31/03/23	50% SUBMISSION	TA	AS	PS	-		
A	18/03/23	ISSUED FOR CLIENT REVIEW	TA	AS	PS	-		



**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
STANDARD DETAILS  
TYPICAL RIGHT OF WAY - 15 METRES

1151-DL00-W3P-CIV-DRG-10009

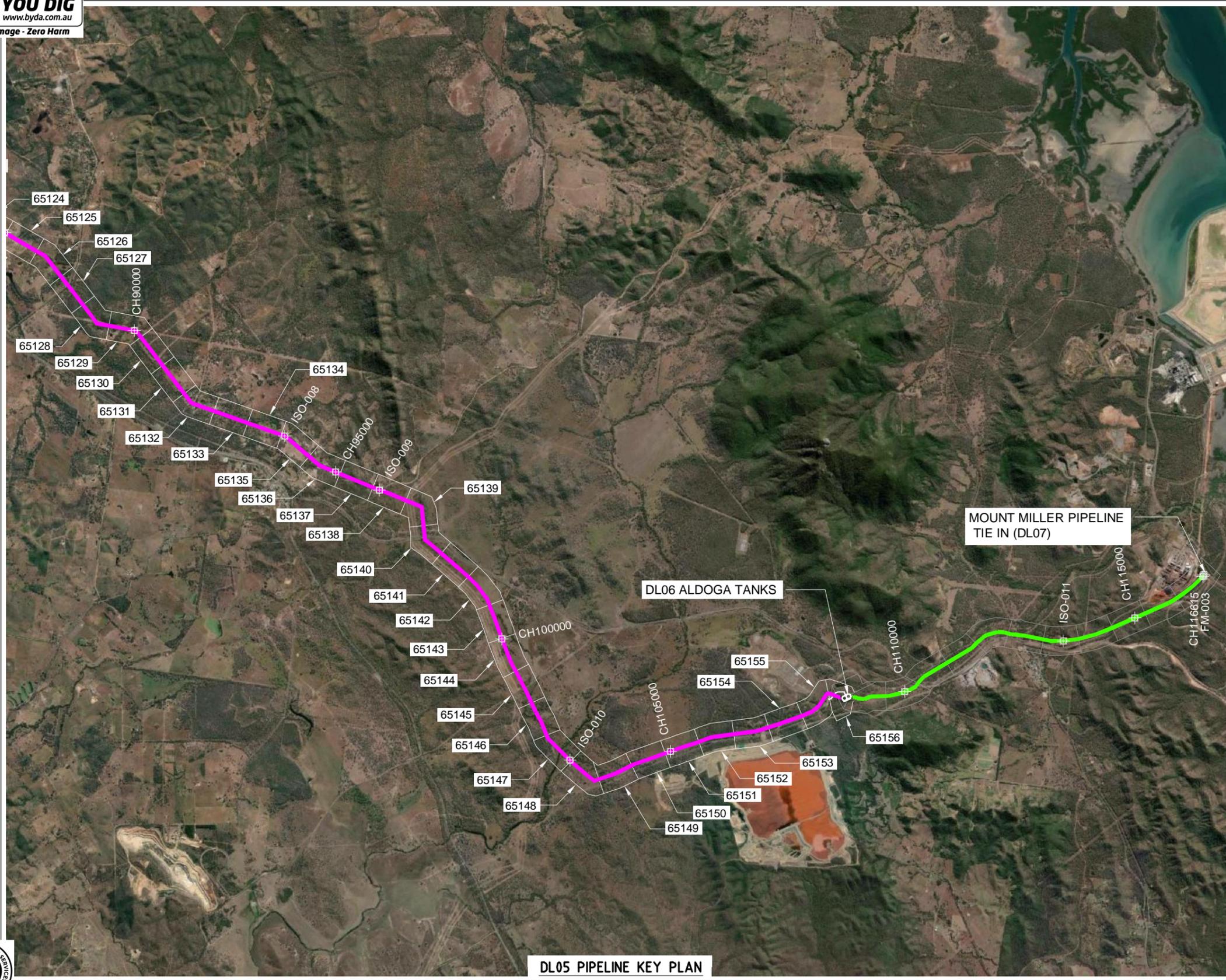
PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	D

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DO NOT SCALE



REFER DRAWING NO. 1151-DL05-W3P-PLD-DRG-65004 FOR CONTINUATION



- LEGEND:**
- DL02 FITZROY RIVER TO ALTON DOWNS PIPELINE OD900 PE112
  - DL05 ALTON DOWNS TO ALDOGA PIPELINE OD1067 MSCL
  - DL07 ALDOGA TO MT. MILLER PIPELINE OD1200 PE112

**DL05 PIPELINE KEY PLAN**

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
C	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS	-		
B	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS	-		
A	05/04/23	50% SUBMISSION	TA	MM	PS	-		



**Gladstone Area Water Board**  
 136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

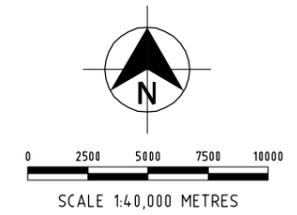
**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE KEY PLAN 5 OF 5

1151-DL05-W3P-CIV-DRG-65005

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	C

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DO NOT SCALE



- LEGEND:**
- DL02 FITZROY RIVER TO ALTON DOWNS PIPELINE OD 900 PE112
  - DL05 ALTON DOWNS TO ALDOGA PIPELINE OD 1067 MSCL
  - DL07 ALDOGA TO MT. MILLER PIPELINE OD 1200 PE112

**DL07 PIPELINE KEY PLAN**

**ISSUED FOR CLIENT REVIEW**



				Designed	AS
				Drawn	TA
				Checked	MM
A	50% SUBMISSION	PS	05-04-23	RPEQ	PS
REVISION	DETAILS OF AMENDMENT	APPD	DATE		

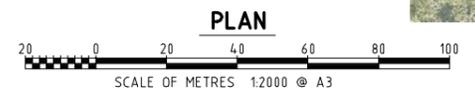
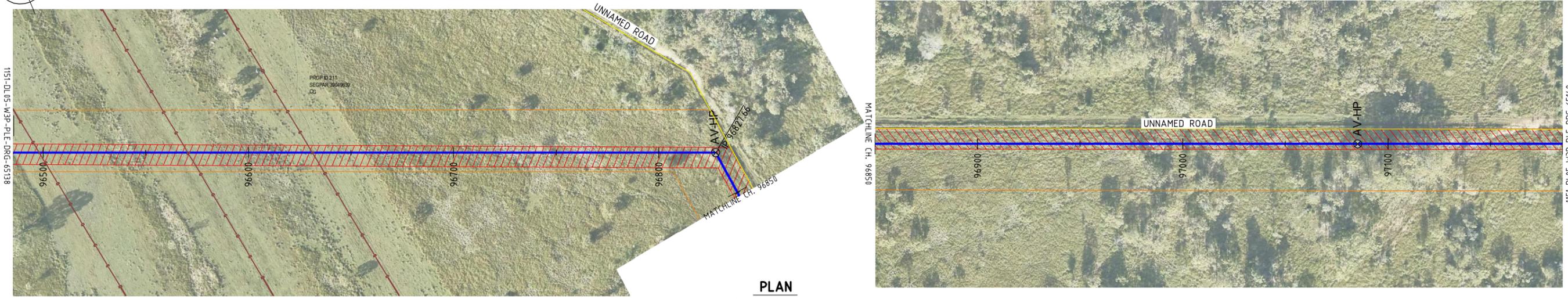
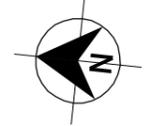


**FITZROY TO GLADSTONE  
PIPELINE PROJECT  
DL07 PIPELINE KEY PLAN**

PLAN No.	1151-DL07-W3P-CIV-DRG-67001
REV:	A

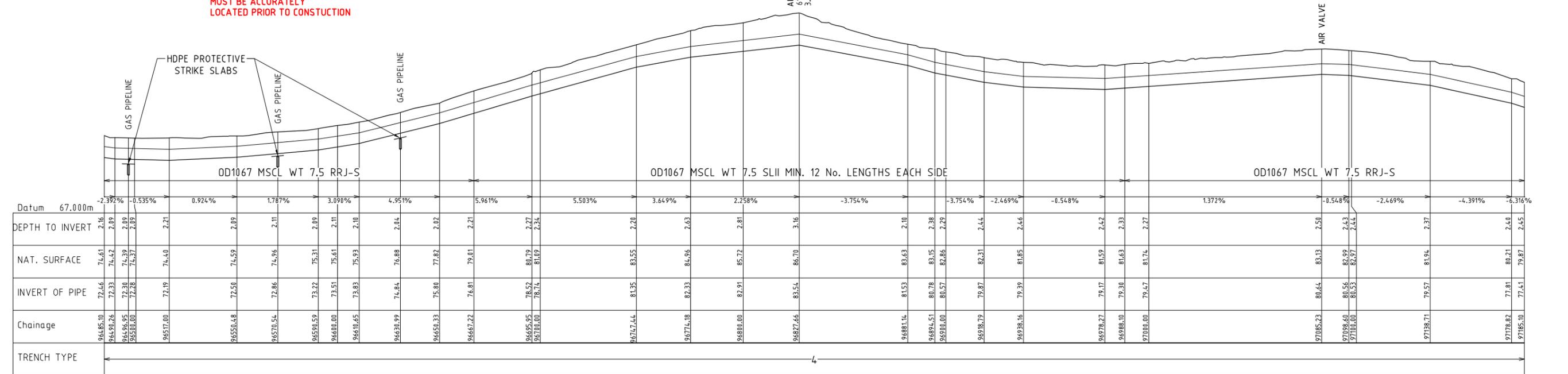


- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE
- LEGEND: EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
  - WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
  - CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS



**WARNING BURIED GAS PIPELINES  
DEPTH UNKNOWN  
MUST BE ACCURATELY  
LOCATED PRIOR TO CONSTRUCTION**

AIR VALVE REQUIRED ON  
WELDED PIPE SLII PIPE  
AIR VALVE  
6120 BEND  
3.44 VERT. BEND



LONGITUDINAL SECTION



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			

**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL05 PIPELINE CH 96485.10-97185.10

1151-DL05-W3P-PL-DRG-65139

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DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

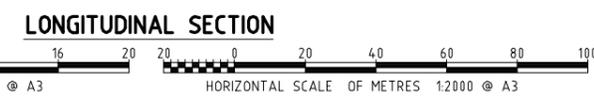
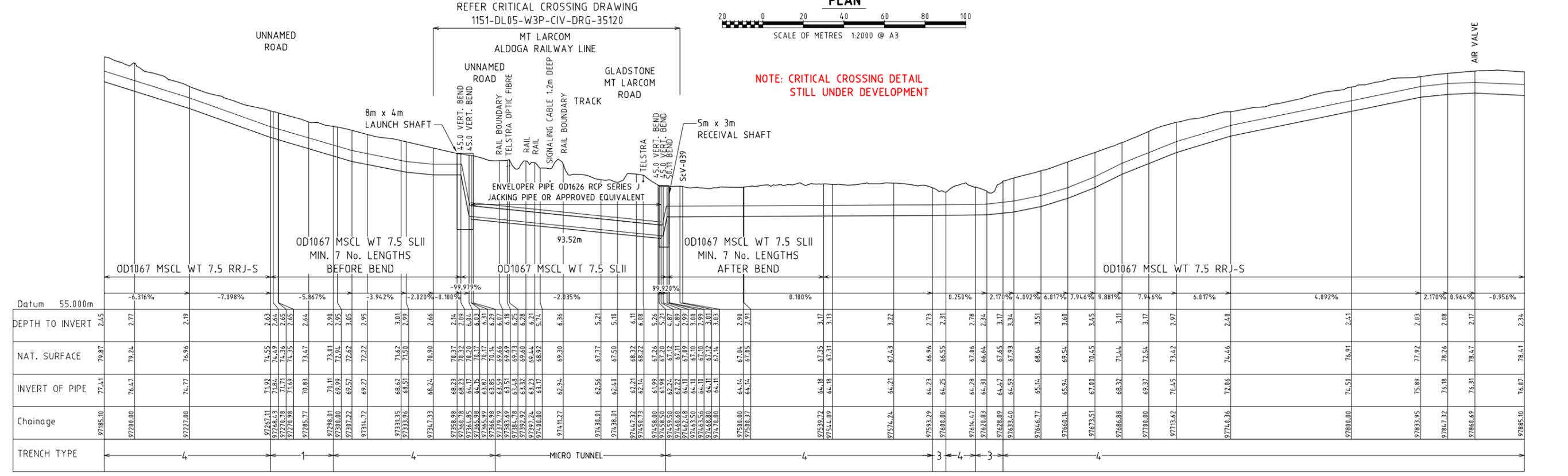
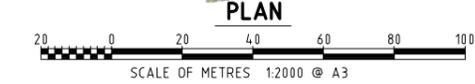
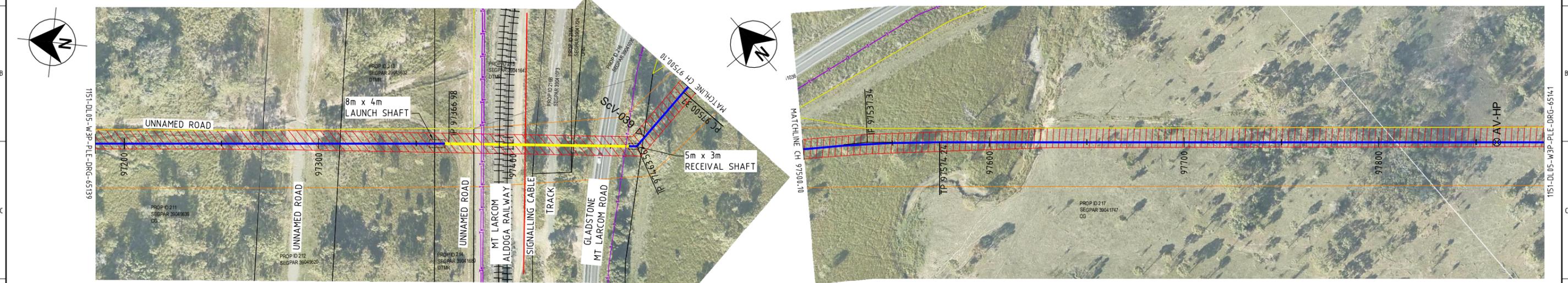
ACCEPTANCE BY: \_\_\_\_\_

DO NOT SCALE

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



- LEGEND: PROPOSED:**
- ⊗ - AIR VALVE
  - ▽ - SCOUR VALVE
  - ⊗ - ISOLATION VALVE
  - ⊗ - CONTROL VALVE
  - - PIPELINE
  - - ENVELOPER PIPE
- LEGEND: EXISTING:**
- - FENCE
  - G - GAS
  - E - ELECT'L POWER (OH or UG)
  - T - TELSTRA CABLE
  - - DRAIN
  - SW - STORM WATER
  - W - WATER OTHER
  - S - SEWER PIPE
  - - 100 ARI FLOOD LEVEL
  - - SURVEYED CADASTRE
  - - RIGHT OF WAY
  - - DCDB
- LEGEND: OTHER:**
- ⊕ - CULTURAL ARTEFACTS
  - - CONSTRUCTION ZONES
  - - LICENSED AREAS
  - - ENVIRONMENTAL CONSTRAINTS
  - - EXTRA WORK AREAS



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES

REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			

world wide water plus

CREATIVE CONSTRUCTION

DO NOT SCALE

**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680

PO Box 446 Gladstone Q 4680

Tel: (07) 4976 3000

ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 97185.10-97885.10

1151-DL05-W3P-PLD-DRG-65140

DRAWN BY: TED ALVARADO	04/05/23	ACCEPTANCE BY: PETER SEMIANIW APPROVAL: _____ GAWB ACCEPTANCE: _____
DESIGNED BY: MICHAEL MARIES	04/05/23	
REVIEWED BY: PETER SEMIANIW	04/05/23	
PROJECT No. GAWB #	SIZE A3	

SCALE AS NOTED    REV B



**LEGEND:**  
**PROPOSED:**

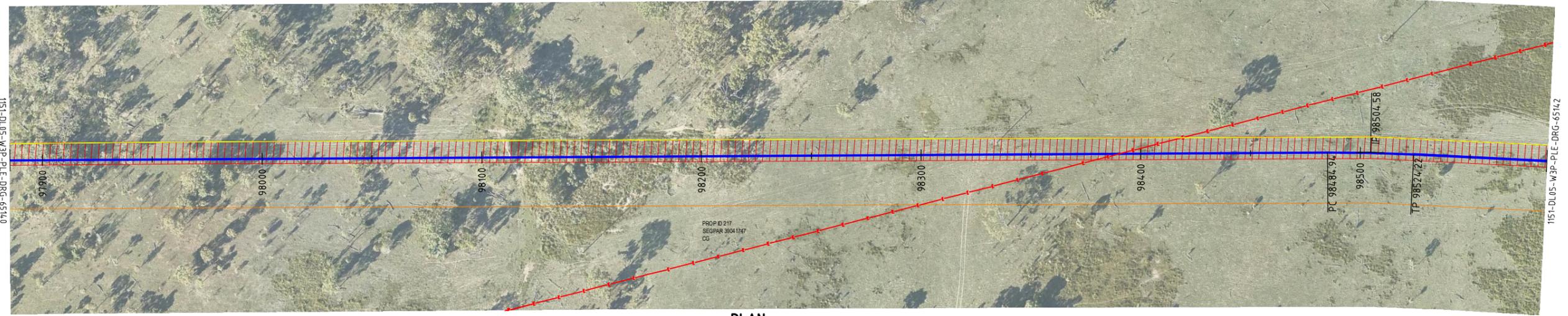
- AIR VALVE
- SCOUR VALVE
- ISOLATION VALVE
- CONTROL VALVE
- PIPELINE
- ENVELOPER PIPE

**LEGEND:**  
**EXISTING:**

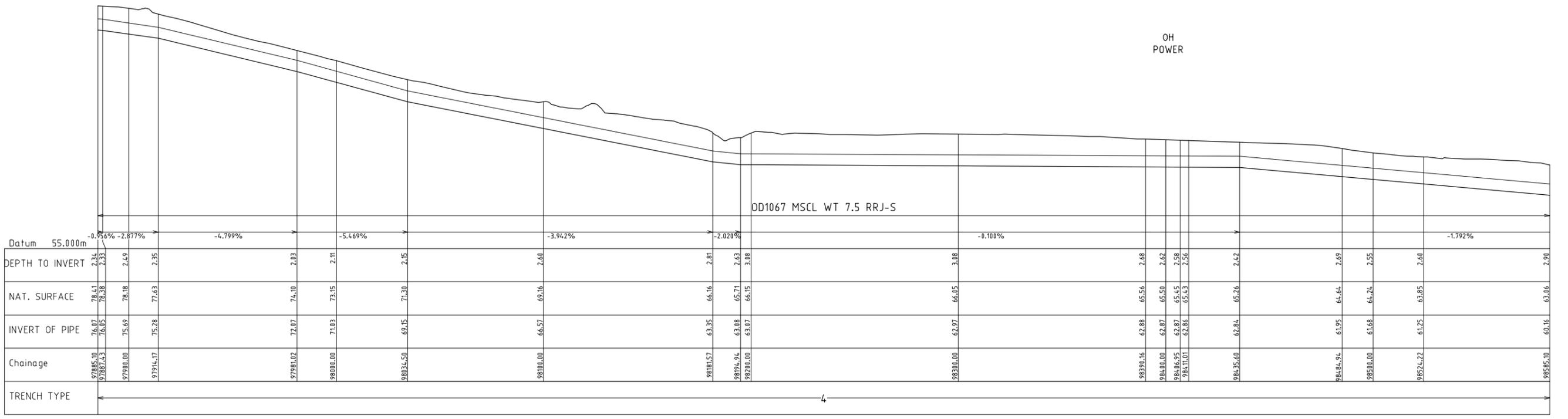
- FENCE
- GAS
- ELECT'L POWER (OH or UG)
- TELSTRA CABLE
- DRAIN
- STORM WATER

- WATER OTHER
- SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB

- CULTURAL ARTEFACTS
- CONSTRUCTION ZONES
- LICENSED AREAS
- ENVIRONMENTAL CONSTRAINTS
- EXTRA WORK AREAS



**PLAN**  
SCALE OF METRES 1:2000 @ A3



**LONGITUDINAL SECTION**

VERTICAL SCALE OF METRES 1:400 @ A3  
HORIZONTAL SCALE OF METRES 1:2000 @ A3

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**

DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23
ACCEPTANCE BY		
RPEQ APPROVAL		
GAWB ACCEPTANCE		

FITZROY TO GLADSTONE PIPELINE PROJECT  
DL05 PIPELINE CH 97885.10-98585.10

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

DO NOT SCALE

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136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181





**LEGEND:**  
**PROPOSED:**

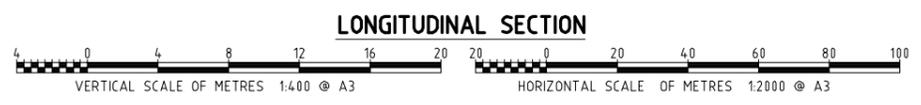
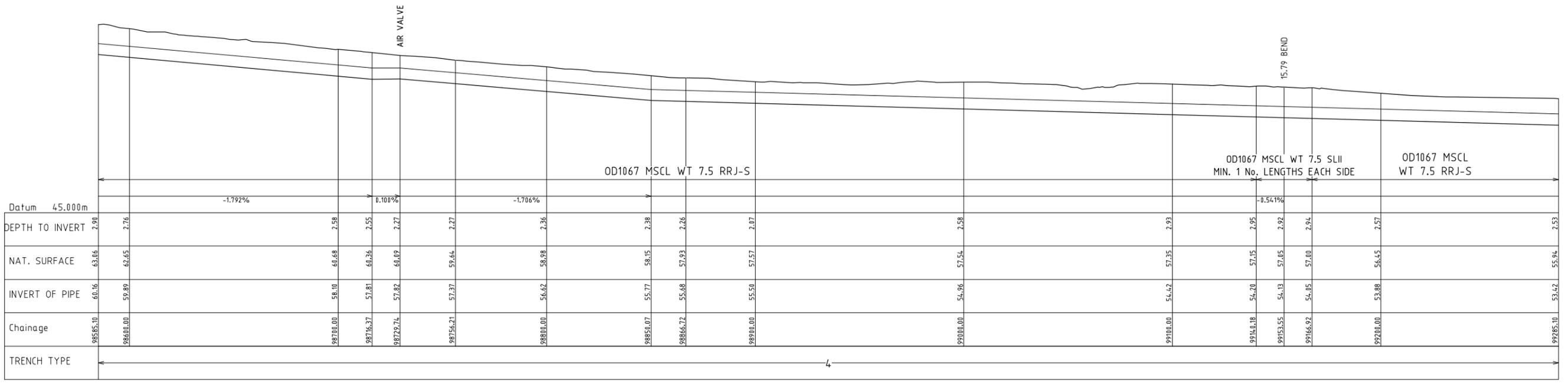
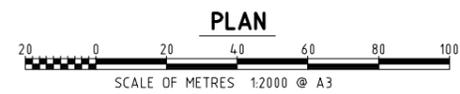
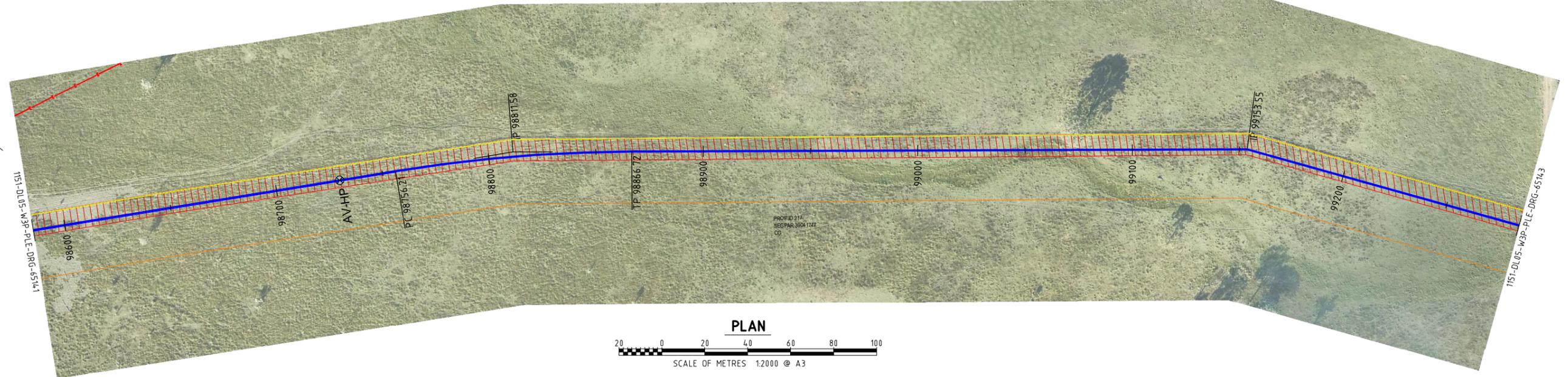
- AIR VALVE
- SCOUR VALVE
- ISOLATION VALVE
- CONTROL VALVE
- PIPELINE
- ENVELOPER PIPE

**LEGEND:**  
**EXISTING:**

- FENCE
- GAS
- ELECT'L POWER (OH or UG)
- TELSTRA CABLE
- DRAIN
- STORM WATER

- WATER OTHER
- SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB

- CULTURAL ARTEFACTS
- CONSTRUCTION ZONES
- LICENSED AREAS
- ENVIRONMENTAL CONSTRAINTS
- EXTRA WORK AREA



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

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A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680  
 PO Box 466 Gladstone Q 4680  
 Tel: (07) 4976 3000  
 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 98585.10-99285.10

1151-DL05-W3P-PL-DRG-65142

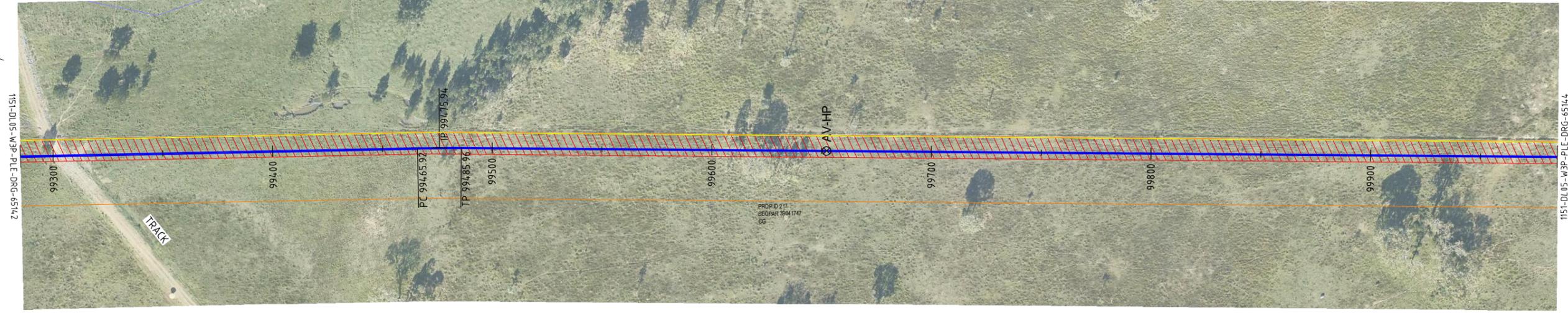
PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

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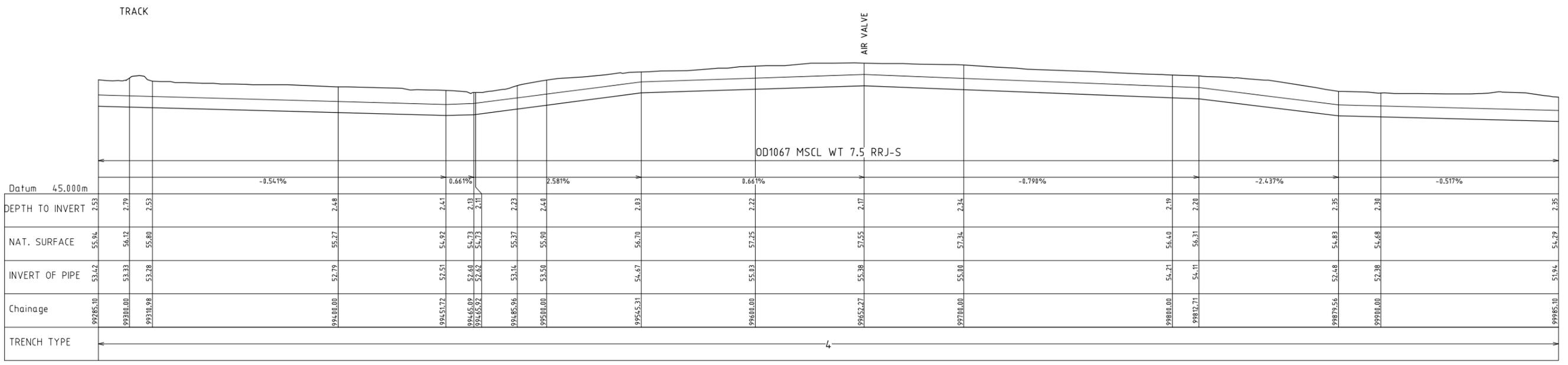
DO NOT SCALE



- LEGEND: PROPOSED:**
- ⊗ - AIR VALVE
  - ▽ - SCOUR VALVE
  - ⊗ - ISOLATION VALVE
  - ⊗ - CONTROL VALVE
  - - PIPELINE
  - - ENVELOPER PIPE
- LEGEND: EXISTING:**
- - FENCE
  - G - GAS
  - E - ELECT'L POWER (OH or UG)
  - T - TELSTRA CABLE
  - - DRAIN
  - SW - STORM WATER
  - W - WATER OTHER
  - S - SEWER PIPE
  - - 100 ARI FLOOD LEVEL
  - - SURVEYED CADASTRE
  - - RIGHT OF WAY
  - - DCDB
- LEGEND: CONSTRAINTS:**
- ⊕ - CULTURAL ARTEFACTS
  - ▭ - CONSTRUCTION ZONES
  - ▭ - LICENSED AREAS
  - ▭ - ENVIRONMENTAL CONSTRAINTS
  - ▭ - EXTRA WORK AREAS



**PLAN**  
SCALE OF METRES 1:2000 @ A3



**LONGITUDINAL SECTION**  
VERTICAL SCALE OF METRES 1:400 @ A3  
HORIZONTAL SCALE OF METRES 1:2000 @ A3

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
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A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL05 PIPELINE CH 99285.10 - 99985.10

1151-DL05-W3P-PLD-DRG-65143

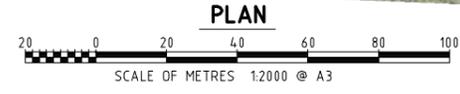
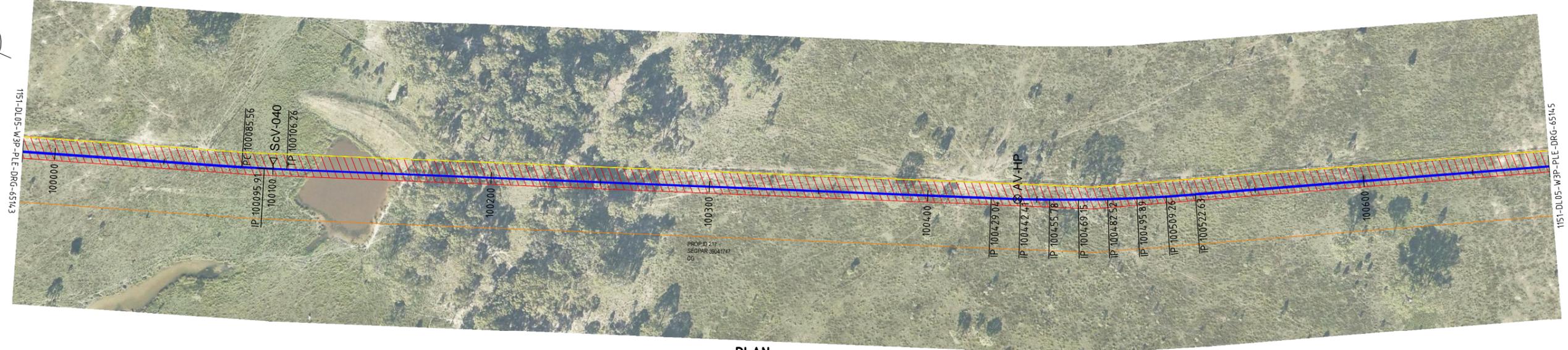
PROJECT No. GAWB # A3 DRAWING No. XXX-X-XXXX SCALE AS NOTED REV B

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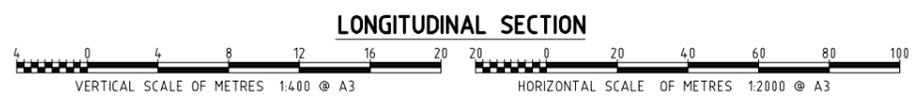
DO NOT SCALE



- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE
- LEGEND: EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
  - WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
  - CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS



Station	Chainage	Invert of Pipe	Nat. Surface	Depth to Invert	Gradient
99985.10	0.0000.00	51.94	54.79	2.85	-0.517%
100000.00	0.0000.00	51.86	54.86	2.90	
100085.56	0.0085.56	51.42	53.67	2.25	0.100%
100100.00	0.0100.00	51.34	53.66	2.31	
100106.26	0.0106.26	51.31	53.61	2.30	
100106.83	0.0106.83	51.31	53.61	2.30	
100133.59	0.0133.59	51.34	53.54	2.20	0.707%
100174.46	0.0174.46	51.62	55.48	3.85	2.356%
100200.00	0.0200.00	51.81	53.82	2.12	4.278%
100267.29	0.0267.29	52.28	54.64	2.35	2.356%
100280.66	0.0280.66	52.60	54.80	2.21	
100300.00	0.0300.00	53.42	55.54	2.11	
100307.40	0.0307.40	53.74	55.81	2.07	0.436%
100400.00	0.0400.00	55.92	58.05	2.13	-1.484%
100400.59	0.0400.59	55.95	58.06	2.12	
100429.04	0.0429.04	56.07	58.29	2.22	
100441.00	0.0441.00	56.12	58.29	2.17	
100442.41	0.0442.41	56.10	58.28	2.18	
100455.78	0.0455.78	55.90	58.17	2.27	
100469.15	0.0469.15	55.70	58.00	2.30	
100482.52	0.0482.52	55.51	57.67	2.17	
100495.89	0.0495.89	55.31	57.37	2.07	
100500.00	0.0500.00	55.25	57.29	2.05	
100507.95	0.0507.95	55.13	57.14	2.02	
100509.26	0.0509.26	55.09	57.12	2.03	
100522.63	0.0522.63	54.71	56.77	2.06	-2.855%
100588.17	0.0588.17	52.84	54.99	2.15	-1.059%
100600.00	0.0600.00	52.71	54.77	2.06	
100616.91	0.0616.91	52.55	54.62	2.07	
100685.10	0.0685.10	52.48	54.65	2.16	-0.100%



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

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**Gladstone Area Water Board**  
 136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 99985.10-100685.10

1151-DL05-W3P-PL-DRG-65144

PROJECT No. GAWB # A3 SIZE XXX-X-XXXXX SCALE AS NOTED REV B

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DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23
ACCEPTANCE BY		
RPEQ APPROVAL		
GAWB ACCEPTANCE		

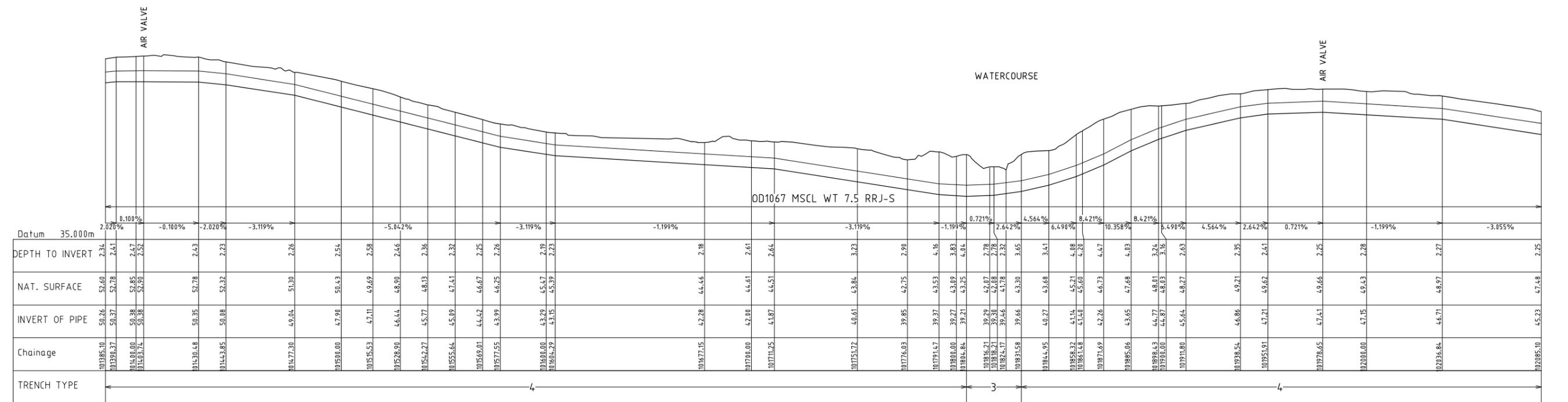




- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE
- LEGEND: EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
- WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
- CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS



**PLAN**  
SCALE OF METRES 1:2000 @ A3



**LONGITUDINAL SECTION**  
VERTICAL SCALE OF METRES 1:400 @ A3  
HORIZONTAL SCALE OF METRES 1:2000 @ A3

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
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REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
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DO NOT SCALE

**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680  
PO Box 466 Gladstone Q 4680  
Tel: (07) 4976 3000  
ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL05 PIPELINE CH 101385.10-102085.10

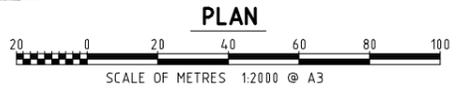
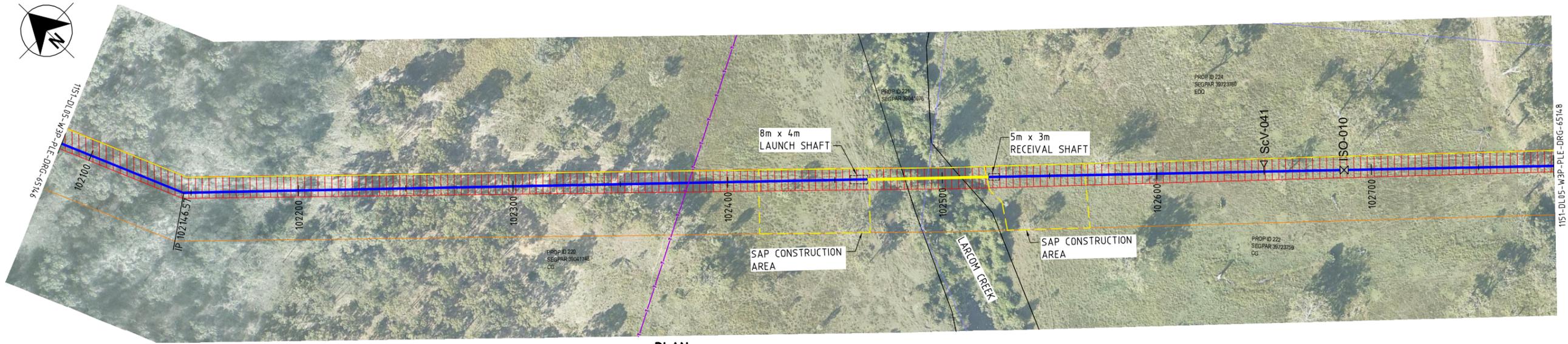
1151-DL05-W3P-PL-DRG-65146

DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

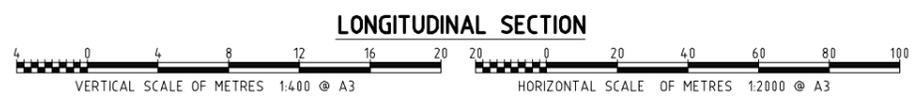
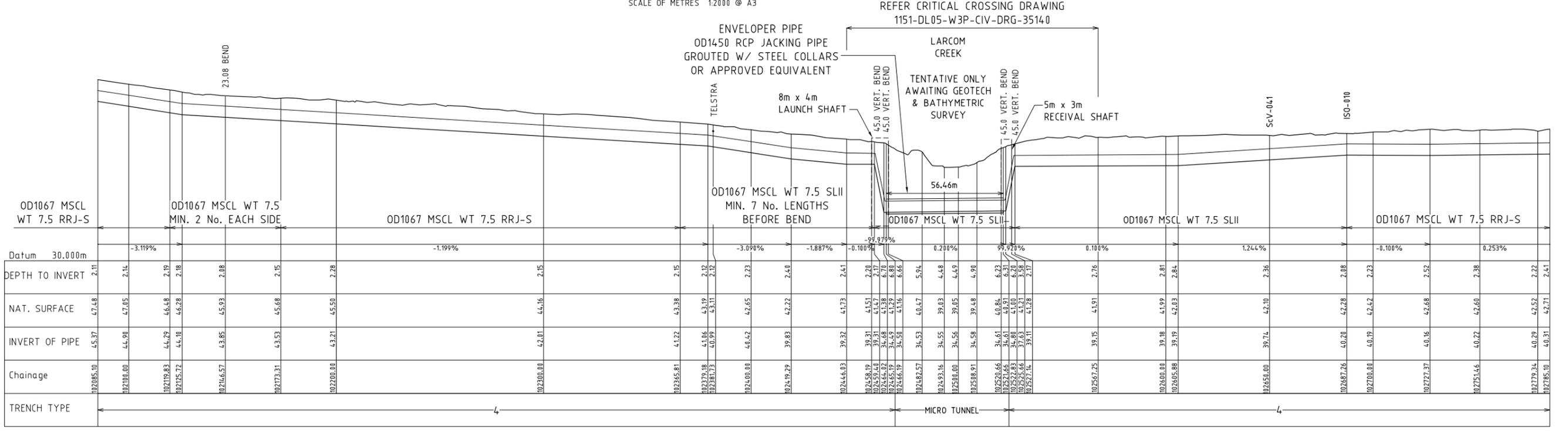
PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE
- LEGEND: EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
  - WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
  - CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS



NOTE: CRITICAL CROSSING DETAIL STILL UNDER DEVELOPMENT



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

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**Gladstone Area Water Board**  
 136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 102085.10-102785.10

1151-DL05-W3P-PLD-DRG-65147

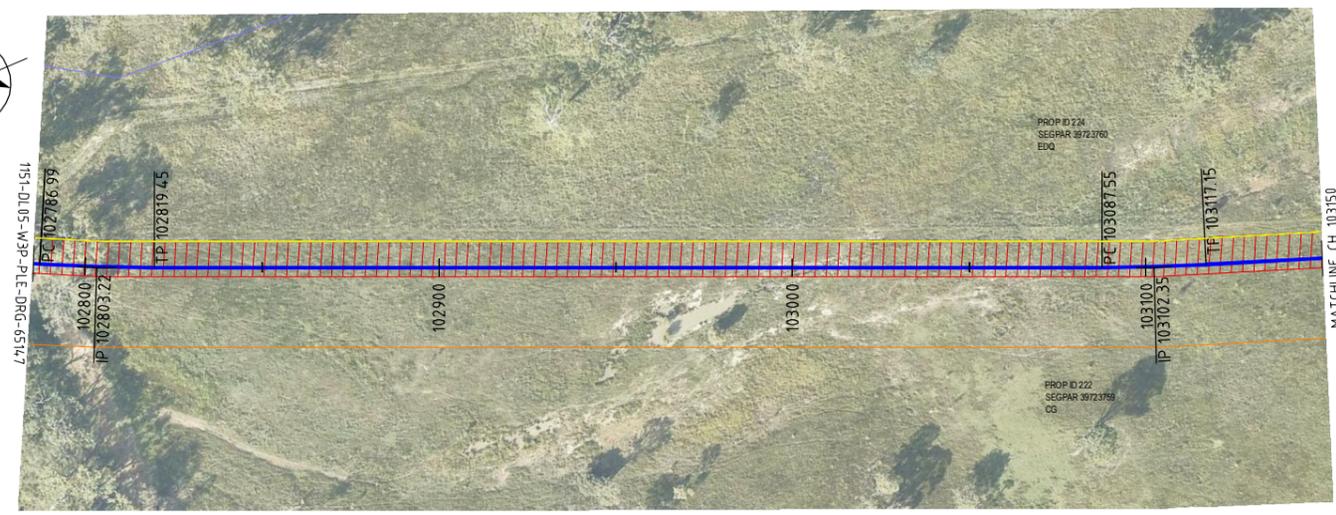
DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

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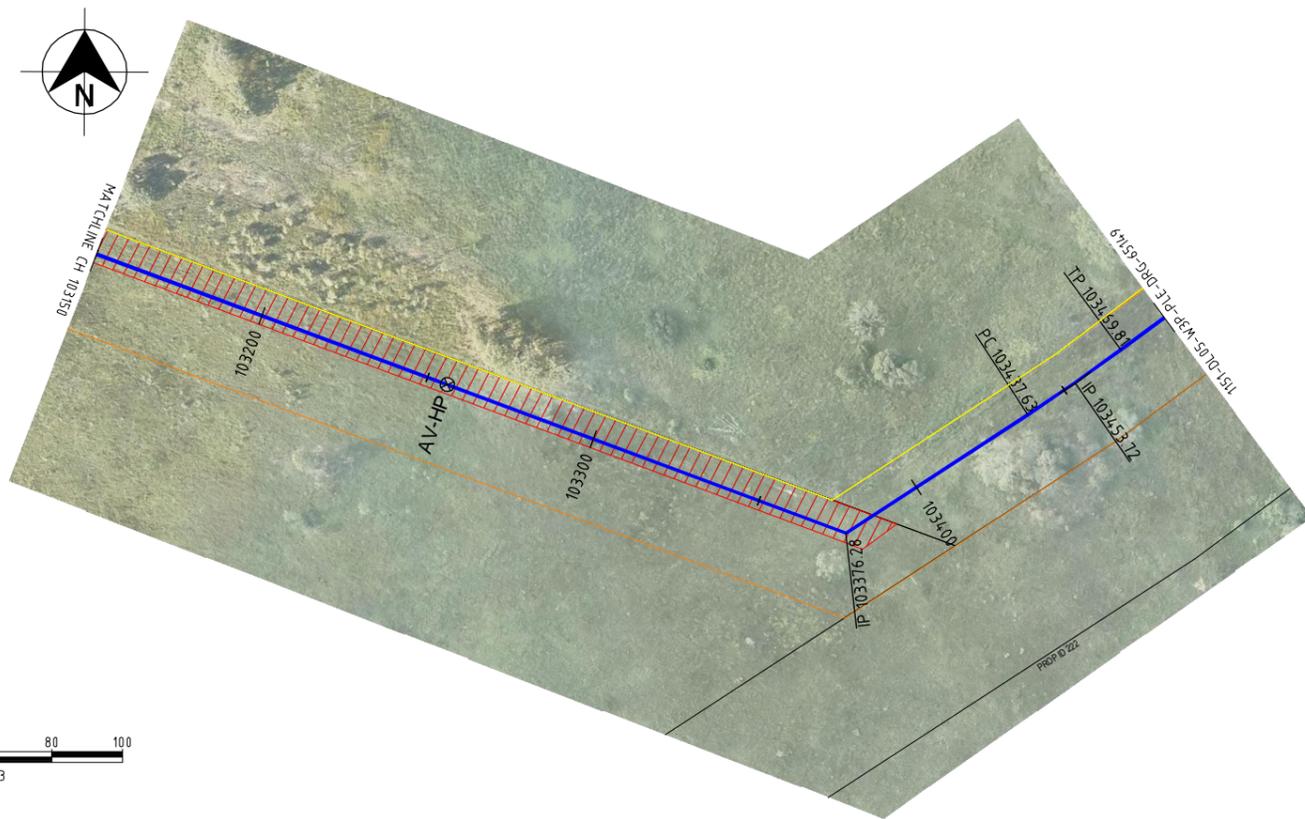
PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE
- LEGEND: EXISTING:**
- FENCE
  - GAS
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  - DRAIN
  - STORM WATER
  - WATER OTHER
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  - 100 ARI FLOOD LEVEL
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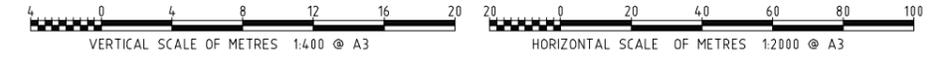


**PLAN**  
SCALE OF METRES 1:2000 @ A3



Station	Chainage	NAT. SURFACE	INVERT OF PIPE	DEPTH TO INVERT	TRENCH TYPE
102785.10	02785.10	42.71	40.31	2.41	4
102786.99	02786.99	42.71	40.31	2.39	
102819.45	02819.45	42.71	40.35	2.36	4
102834.33	02834.33	42.70	40.43	2.27	
102900.00	02900.00	43.24	41.13	2.12	4
102914.55	02914.55	43.42	41.28	2.14	
103000.00	03000.00	43.56	41.36	2.19	4
103034.88	03034.88	43.73	41.40	2.33	
103087.55	03087.55	44.27	41.17	2.11	4
103100.00	03100.00	44.52	42.35	2.17	
103117.15	03117.15	45.04	42.60	2.45	4
103200.00	03200.00	46.26	43.80	2.45	
103255.95	03255.95	46.79	44.62	2.17	4
103269.32	03269.32	46.82	44.61	2.22	
103300.00	03300.00	47.62	44.57	2.45	4
103376.28	03376.28	47.81	44.50	2.51	
103400.00	03400.00	47.26	44.47	2.78	4
103437.63	03437.63	47.51	44.44	3.07	
103469.81	03469.81	47.55	44.40	3.15	4
103483.24	03483.24	47.61	44.39	3.22	
103485.10	03485.10	47.61	44.39	3.22	4

**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

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world wide water plus

CREATIVE CONSTRUCTION™

DO NOT SCALE

**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680  
PO Box 466 Gladstone Q 4680  
Tel: (07) 4976 3000  
ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL05 PIPELINE CH 102785.10-103485.10

1151-DL05-W3P-PL-DRG-65148

DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23
ACCEPTANCE BY		
RPEQ APPROVAL		
GAWB ACCEPTANCE		

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



**LEGEND:**  
PROPOSED:

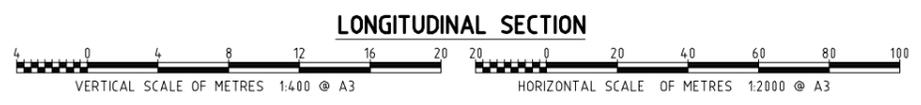
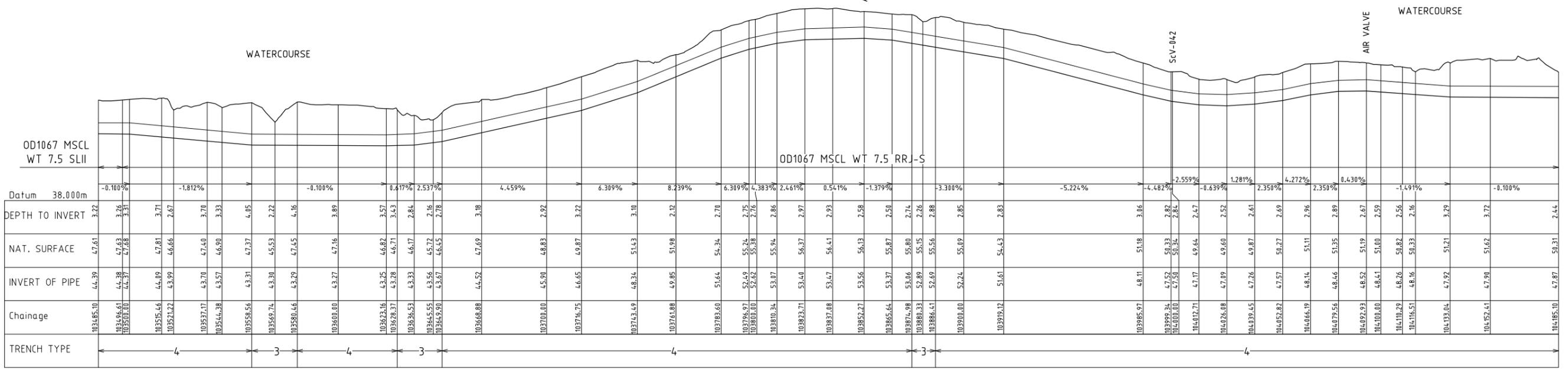
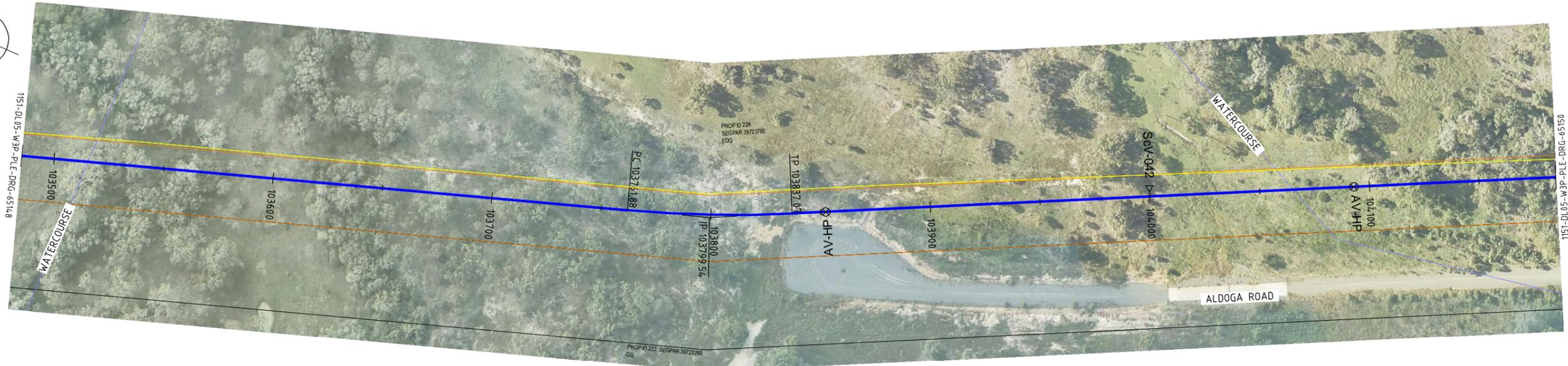
- AIR VALVE
- SCOUR VALVE
- ISOLATION VALVE
- CONTROL VALVE
- PIPELINE
- ENVELOPER PIPE

**LEGEND:**  
EXISTING:

- FENCE
- GAS
- ELECT'L POWER (OH or UG)
- TELSTRA CABLE
- DRAIN
- STORM WATER

- WATER OTHER
- SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB

- CULTURAL ARTEFACTS
- CONSTRUCTION ZONES
- LICENSED AREAS
- ENVIRONMENTAL CONSTRAINTS
- EXTRA WORK AREAS



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES

REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			

DO NOT SCALE

**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

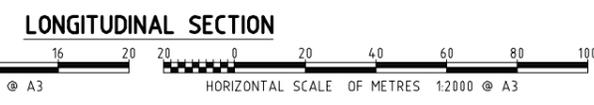
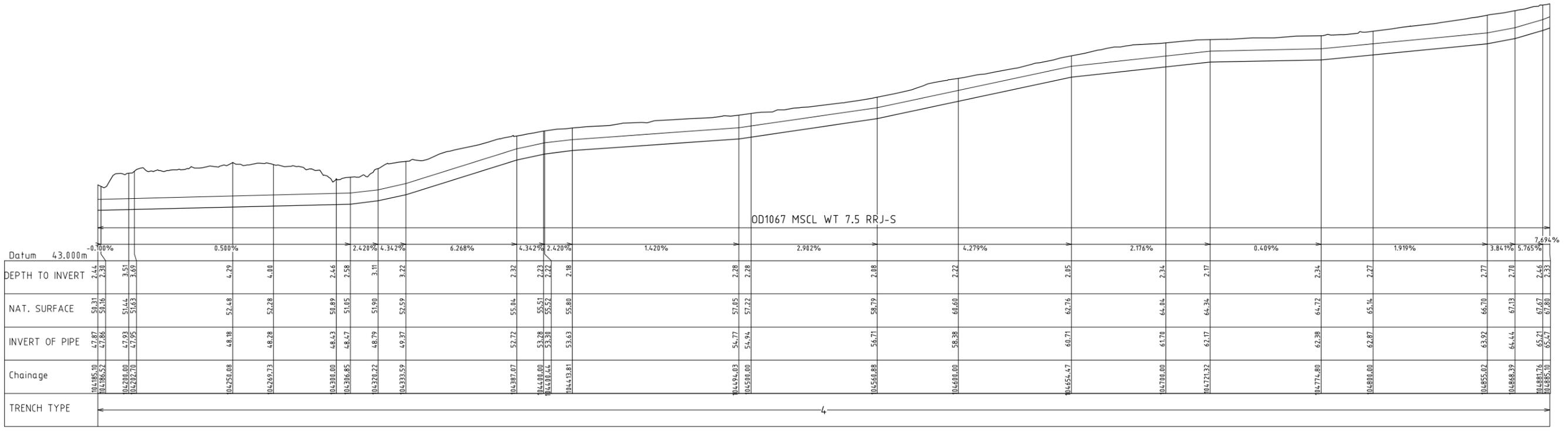
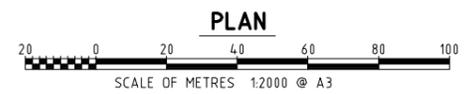
**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 103485.10-104185.10

1151-DL05-W3P-PL-DRG-65149

DESIGNED BY: TED ALVARADO	04/05/23	PROJECT No. GAWB # SIZE A3 DRAWING No. XXX-X-XXXX SCALE AS NOTED REV B
DESIGNED BY: MICHAEL MARIES	04/05/23	
REVIEWED BY: PETER SEMIANIW	04/05/23	
ACCEPTANCE BY: _____		



- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE
- LEGEND: EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
- WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
- CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
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**Gladstone Area Water Board**  
 136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 104185.10-104885.10

1151-DL05-W3P-PL-E-DRG-65151

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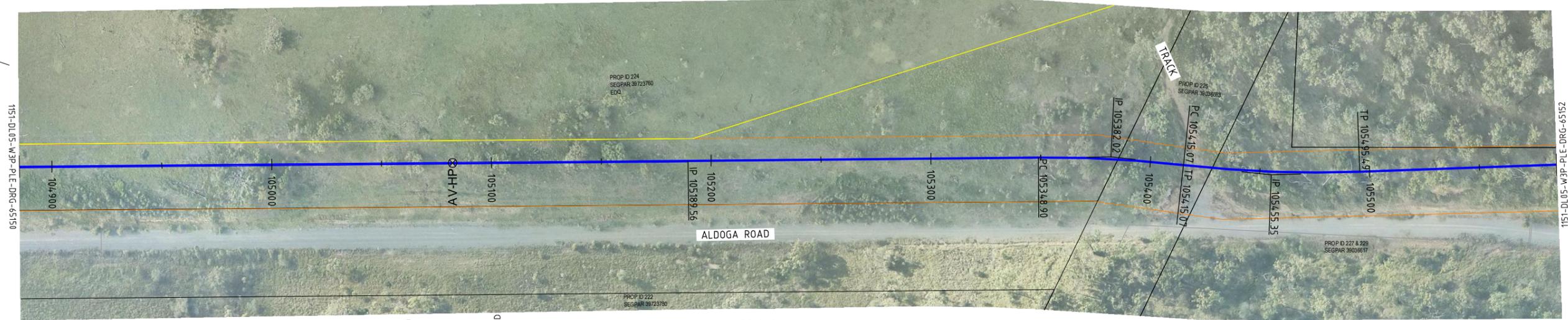
DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23
ACCEPTANCE BY		
RPEQ APPROVAL		
GAWB ACCEPTANCE		

PROJECT No. GAWB # A3 DRAWING No. XXX-X-XXXX SCALE AS NOTED REV B

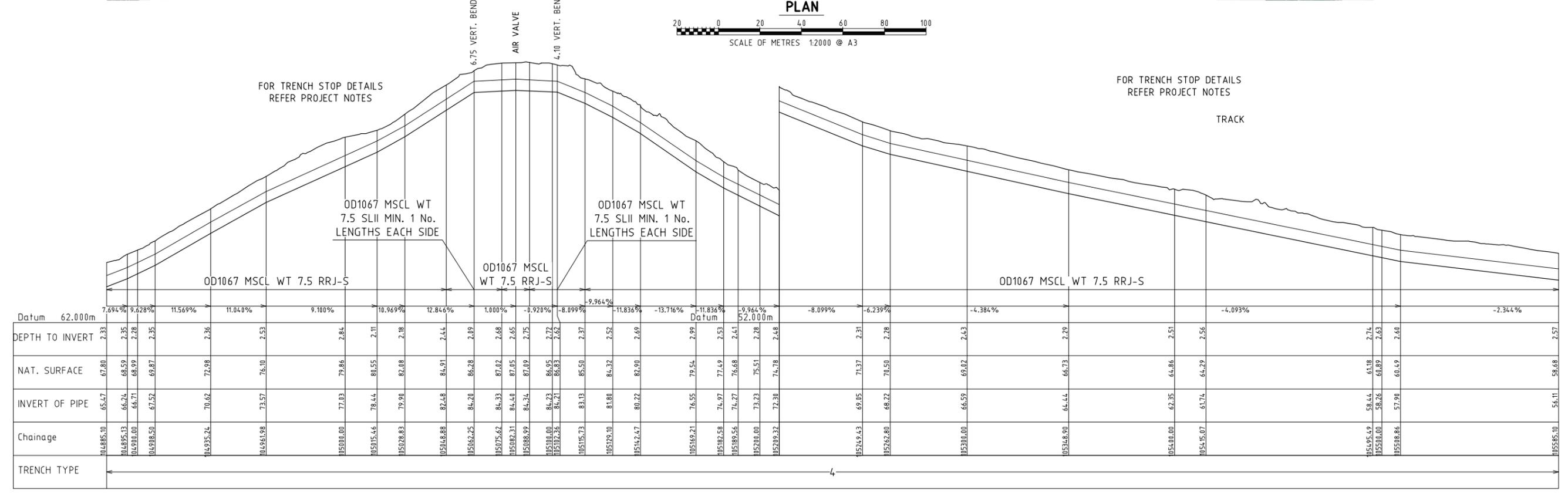
DO NOT SCALE



- LEGEND: PROPOSED:**
- ⊗ - AIR VALVE
  - ▽ - SCOUR VALVE
  - ⊙ - ISOLATION VALVE
  - ⊖ - CONTROL VALVE
  - - PIPELINE
  - - ENVELOPER PIPE
- LEGEND: EXISTING:**
- / — - FENCE
  - G - GAS
  - E - ELECT'L POWER (OH or UG)
  - T - TELSTRA CABLE
  - - DRAIN
  - SW - STORM WATER
  - - DCDB
- LEGEND:**
- W - WATER OTHER
  - S - SEWER PIPE
  - - 100 ARI FLOOD LEVEL
  - - SURVEYED CADASTRE
  - - RIGHT OF WAY
  - - CULTURAL ARTEFACTS
  - - CONSTRUCTION ZONES
  - - LICENSED AREAS
  - - ENVIRONMENTAL CONSTRAINTS
  - - EXTRA WORK AREAS



**PLAN**  
SCALE OF METRES 1:2000 @ A3



**LONGITUDINAL SECTION**  
VERTICAL SCALE OF METRES 1:400 @ A3  
HORIZONTAL SCALE OF METRES 1:2000 @ A3

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES

REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			

DO NOT SCALE

**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680  
PO Box 466 Gladstone Q 4680  
Tel: (07) 4976 3000  
ABN: 88 409 667 181

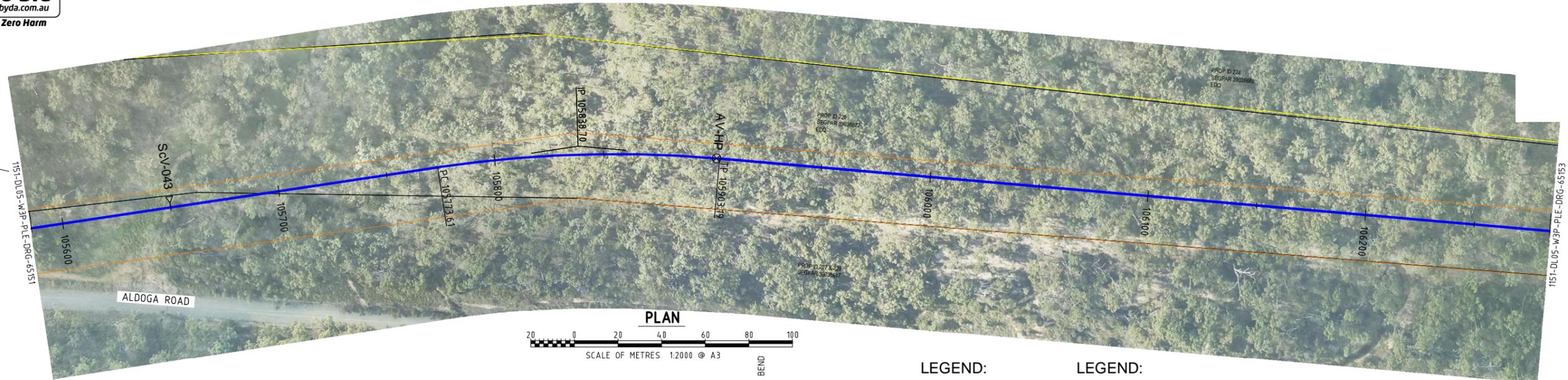
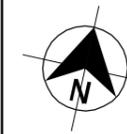
**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL05 PIPELINE CH 104885.10-105585.10

1151-DL05-W3P-PL-DRG-65151

DESIGNED BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

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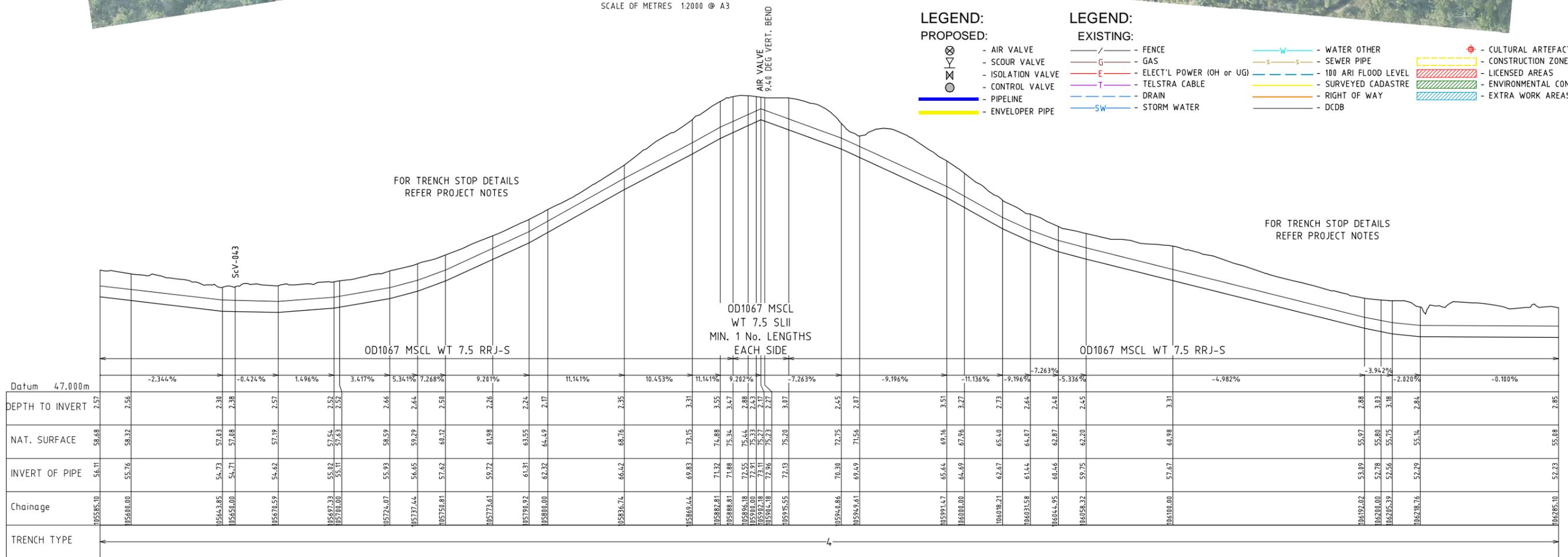
PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



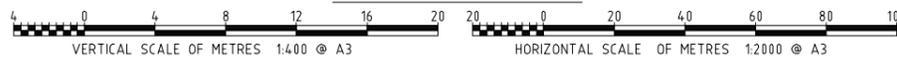
- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE

- LEGEND: EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER

- WATER OTHER
- SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB
- CULTURAL ARTEFACTS
- CONSTRUCTION ZONES
- LICENSED AREAS
- ENVIRONMENTAL CONSTRAINTS
- EXTRA WORK AREAS



LONGITUDINAL SECTION



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
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REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
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A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**

136 Goodson Street PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000  
 Gladstone Q 4680 ABN: 88 409 667 181

DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23
ACCEPTANCE BY		
RPEQ APPROVAL		
GAWB ACCEPTANCE		

FITZROY TO GLADSTONE PIPELINE PROJECT  
 DL05 PIPELINE CH 105585.10-106285.10

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

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DO NOT SCALE



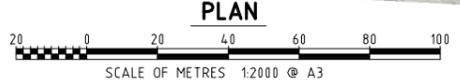
**LEGEND:**  
PROPOSED:

- ⊗ - AIR VALVE
- ▽ - SCOUR VALVE
- ⊖ - ISOLATION VALVE
- ⊙ - CONTROL VALVE
- - PIPELINE
- - ENVELOPER PIPE

**LEGEND:**  
EXISTING:

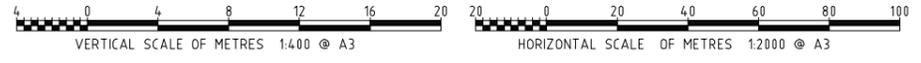
- / — - FENCE
- G - GAS
- E - ELECT'L POWER (OH or UG)
- T - TELSTRA CABLE
- - DRAIN
- SW - STORM WATER
- W - WATER OTHER
- S - S - SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB

- ⊕ - CULTURAL ARTEFACTS
- ▭ - CONSTRUCTION ZONES
- ▨ - LICENSED AREAS
- ▨ - ENVIRONMENTAL CONSTRAINTS
- ▨ - EXTRA WORK AREAS



Stationing	Chainage	TRENCH TYPE	DEPTH TO INVERT	NAT. SURFACE	INVERT OF PIPE	Gradients
106285.10	106285.10		2.85	55.88	52.73	-0.100%
106300.00	106300.00		2.51	54.73	52.73	-1.671%
106320.00	106320.00		2.50	54.69	52.73	
106340.00	106340.00		3.14	54.46	51.32	
106360.00	106360.00		2.17	53.49	51.33	
106400.00	106400.00		2.88	54.25	51.38	0.118%
106500.00	106500.00		3.19	54.69	51.49	
106570.39	106570.39		3.78	55.37	51.59	
106600.00	106600.00		3.63	55.24	51.61	
106620.00	106620.00		2.20	53.89	51.69	
106640.00	106640.00		2.75	54.44	51.69	
106660.00	106660.00		2.75	54.56	51.80	
106700.00	106700.00		2.58	54.53	51.94	0.822%
106720.00	106720.00		2.23	54.80	52.57	
106740.00	106740.00		2.17	54.88	52.71	
106760.00	106760.00		2.25	54.91	52.66	
106800.00	106800.00		2.42	54.57	52.16	-0.834%
106820.00	106820.00		2.31	54.56	52.26	0.754%
106840.00	106840.00		2.73	55.68	52.95	2.675%
106900.00	106900.00		2.98	56.30	53.33	
106985.10	106985.10		2.82	56.69	53.87	0.754%

**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
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DO NOT SCALE

**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680  
 PO Box 466 Gladstone Q 4680  
 Tel: (07) 4976 3000  
 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 106285.10-106985.10

1151-DL05-W3P-PL-DRG-65153

DESIGNED BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23
ACCEPTANCE BY		
RPEQ APPROVAL		
GAWB ACCEPTANCE		

PROJECT No.	GAWB #
-------------	--------

SIZE	A3
DRAWING No.	XXX-X-XXXX
SCALE	AS NOTED

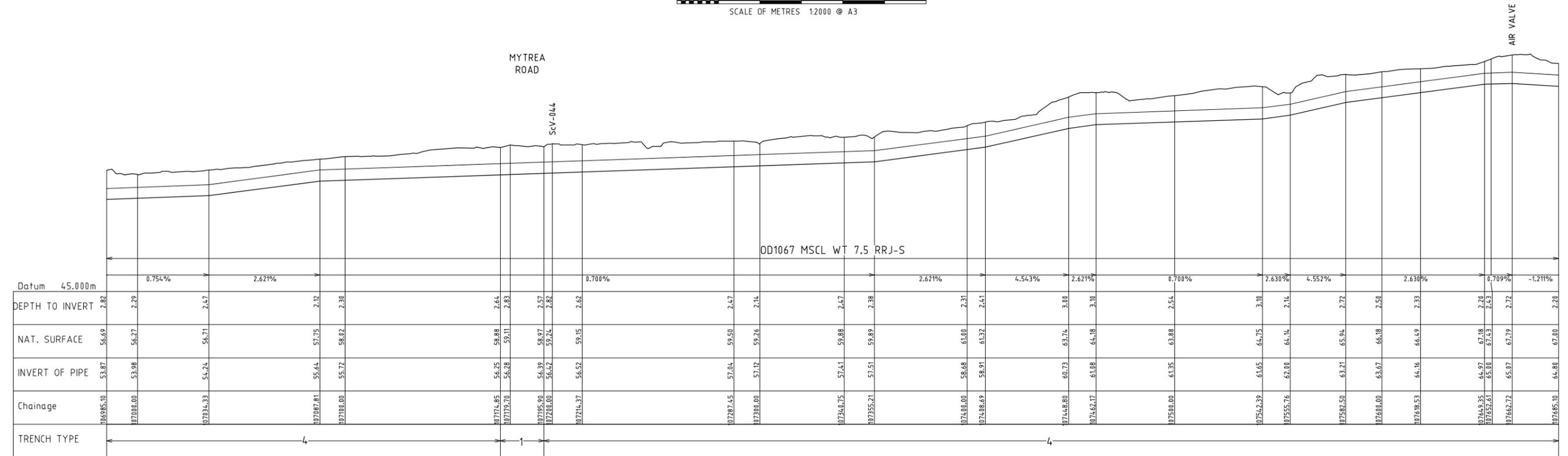
REV	B
-----	---



- LEGEND: PROPOSED:**
- ⊗ - AIR VALVE
  - ▽ - SCOUR VALVE
  - ⊙ - ISOLATION VALVE
  - ⊖ - CONTROL VALVE
  - - PIPELINE
  - - ENVELOPER PIPE
- LEGEND: EXISTING:**
- / — - FENCE
  - G - GAS
  - E - ELECT'L POWER (OH or UG)
  - T - TELSTRA CABLE
  - - DRAIN
  - SW - STORM WATER
- W - WATER OTHER
  - S - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
- ⊕ - CULTURAL ARTEFACTS
  - - CONSTRUCTION ZONES
  - - LICENSED AREAS
  - - ENVIRONMENTAL CONSTRAINTS
  - - EXTRA WORK AREAS



**PLAN**  
SCALE OF METRES 1:2000 @ A3



**LONGITUDINAL SECTION**  
VERTICAL SCALE OF METRES 1:400 @ A3  
HORIZONTAL SCALE OF METRES 1:2000 @ A3

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
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**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 446 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL05 PIPELINE CH 106985.10-107685.10

1151-DL05-W3P-PL-DRG-65154

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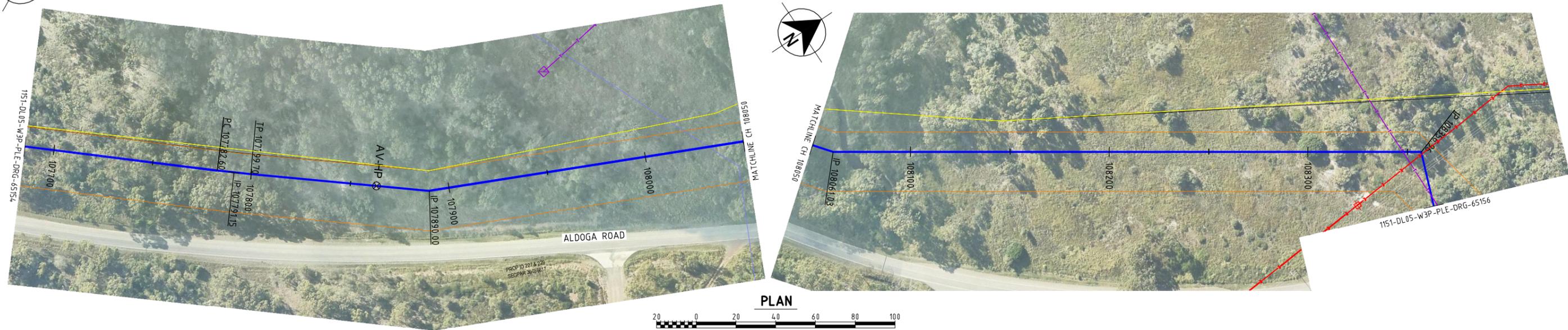
DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

ACCEPTANCE BY: \_\_\_\_\_  
RPEQ APPROVAL: \_\_\_\_\_  
GAWB ACCEPTANCE: \_\_\_\_\_

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

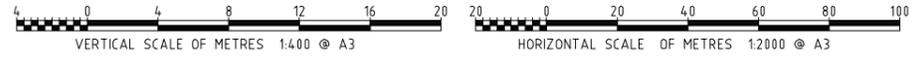


- LEGEND: PROPOSED:**
- ⊗ - AIR VALVE
  - ▽ - SCOUR VALVE
  - ⊖ - ISOLATION VALVE
  - ⊙ - CONTROL VALVE
  - - PIPELINE
  - - ENVELOPER PIPE
- LEGEND: EXISTING:**
- - FENCE
  - G - GAS
  - E - ELECT'L POWER (OH or UG)
  - T - TELSTRA CABLE
  - - DRAIN
  - SW - STORM WATER
- W - WATER OTHER
  - S - SEWER PIPE
  - - 100 ARI FLOOD LEVEL
  - - SURVEYED CADASTRE
  - - RIGHT OF WAY
  - - DCDB
- ⊕ - CULTURAL ARTEFACTS
  - ▭ - CONSTRUCTION ZONES
  - ▭ - LICENSED AREAS
  - ▭ - ENVIRONMENTAL CONSTRAINTS
  - ▭ - EXTRA WORK AREAS



		WATERCOURSE										WATERCOURSE										TELSTRA OPTIC FIBRE CABLE																								
		AIR VALVE										14.26 BEND										OH POWER																								
		17.52 BEND																				76.86 BEND																								
		OD1067 MSCL WT 7.5 RRJ-S										OD1067 MSCL WT 7.5 SLII MIN. 1 No. LENGTHS EACH SIDE										OD1067 MSCL WT 7.5 RRJ-S										OD1067 MSCL WT 7.5 SLII MIN. 16 No. LENGTHS EACH SIDE														
Datum 54,000m																																														
DEPTH TO INVERT																																														
NAT. SURFACE																																														
INVERT OF PIPE																																														
Chainage																																														
TRENCH TYPE		4										4										4																								
		107685.10	107689.46	107700.00	107702.83	107729.57	107742.94	107756.31	107769.68	107782.61	107791.62	107794.62	107799.70	107800.00	107809.79	107863.27	107876.64	107890.01	107900.00	107903.38	107967.00	107980.81	107994.18	108000.00	108007.55	108020.92	108032.52	108034.29	108047.66	108061.03	108063.28	108074.40	108087.77	108100.00	108101.14	108183.15	108200.00	108321.36	108347.07	108356.96	108358.20	108369.95	108380.05	108383.52	108385.10	
		2.20	2.24	2.38	2.24	2.83	3.32	2.71	3.28	2.31	3.17	3.16	2.99	2.98	2.72	2.10	2.33	2.51	2.47	2.44	2.10	2.22	2.88	3.15	3.24	3.37	3.23	3.21	3.29	3.32	3.43	3.38	2.84	2.79	2.75	2.38	2.31	2.66	2.66	2.89	2.66	2.28	2.43			
		-1.211%	-3.131%	-5.055%	-3.131%	-1.211%	0.709%	2.630%	2.630%	-0.051%	-1.525%	-5.055%	-6.981%	-5.055%	-3.131%	-1.211%	0.709%	2.571%	0.709%	0.709%	3.964%																									

**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
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**Gladstone Area Water Board**  
 136 Goondoon Street Gladstone Q 4680 PO Box 446 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

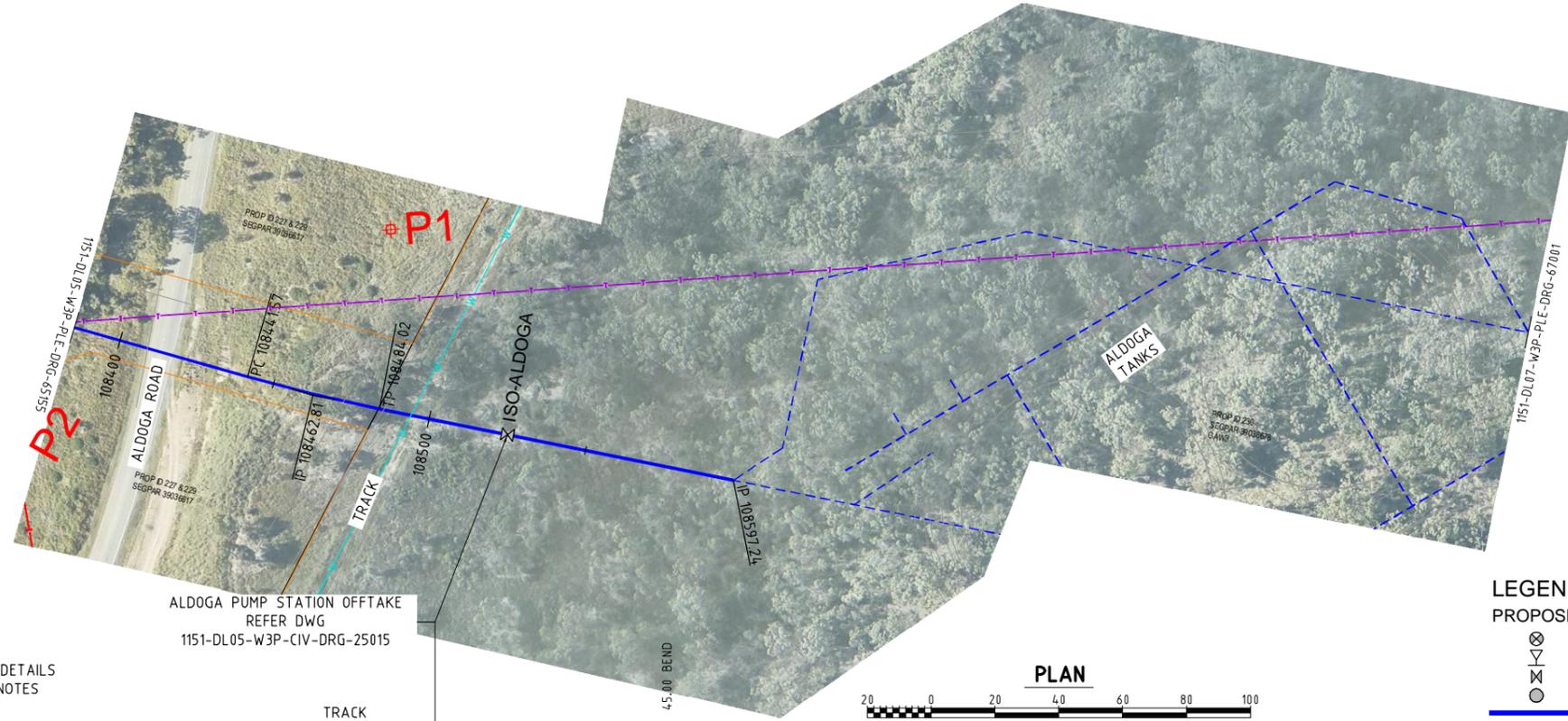
**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL05 PIPELINE CH 107685.10-108385.10

1151-DL05-W3P-PLE-DRG-65155

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DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23
ACCEPTANCE BY		
RPEQ APPROVAL		
GAWB ACCEPTANCE		

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



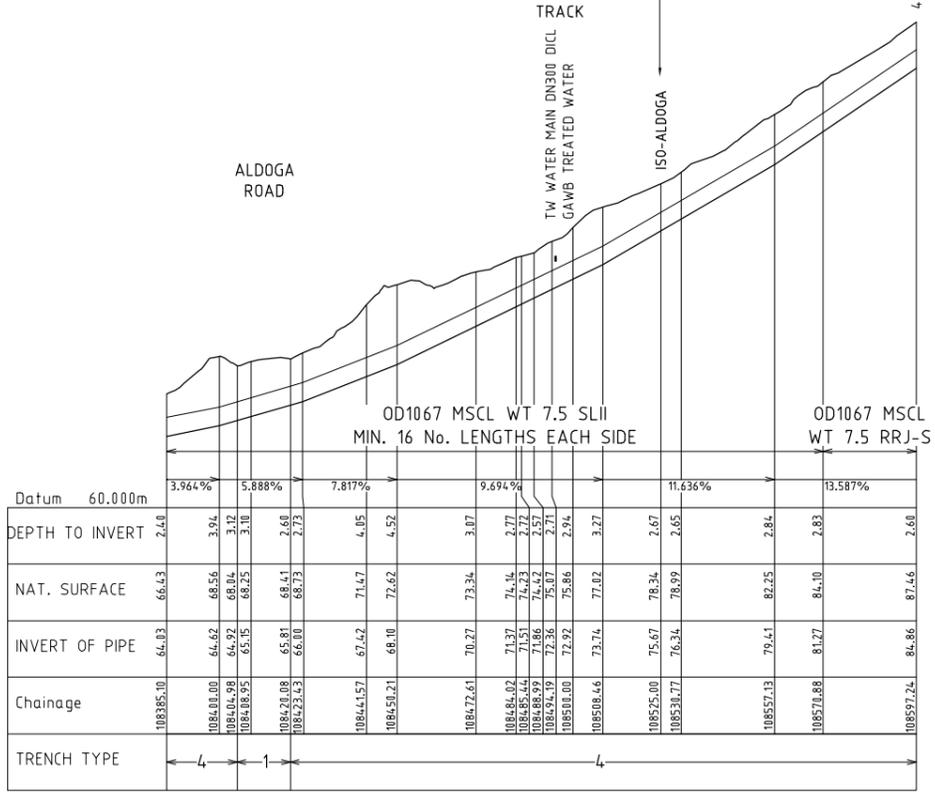
**PLAN**  
SCALE OF METRES 1:2000 @ A3

- LEGEND:**  
**PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE

- LEGEND:**  
**EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
  - WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
  - CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS

FOR TRENCH STOP DETAILS  
REFER PROJECT NOTES

ALDOGA PUMP STATION OFFTAKE  
REFER DWG  
1151-DL05-W3P-CIV-DRG-25015



**LONGITUDINAL SECTION**

VERTICAL SCALE OF METRES 1:400 @ A3  
HORIZONTAL SCALE OF METRES 1:2000 @ A3

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

DRAWN BY: TED ALVARADO 04/05/23  
DESIGNED BY: MICHAEL MARIES 04/05/23  
REVIEWED BY: PETER SEMIANIW 04/05/23  
ACCEPTANCE BY: \_\_\_\_\_  
RPEQ APPROVAL: \_\_\_\_\_  
GAWB ACCEPTANCE: \_\_\_\_\_

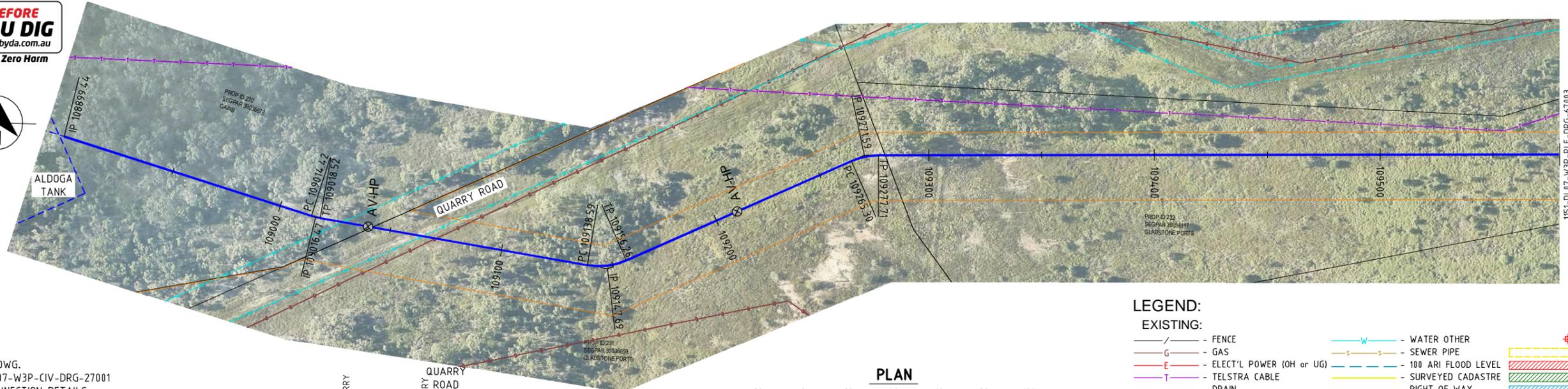
FITZROY TO GLADSTONE PIPELINE PROJECT  
DL05 PIPELINE CH 108385.10-108597.24

1151-DL05-W3P-PL-DRG-65156  
PROJECT No. GAWB # A3 DRAWING No. XXX-X-XXXX SCALE AS NOTED REV B

REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS	-	-	-
A	25/05/23	85% SUBMISSION JV REVIEW	TA	MM	PS	-	-	-

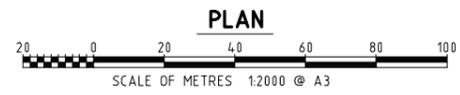
DO NOT SCALE

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INITIALS SHOWING (W) AS TERISK INDICATE ORIGINAL SIGNATURE HAS BEEN SIGNED OFF AS PER DATE INDICATED



REFER DWG.  
1151-DL07-W3P-CIV-DRG-27001  
FOR CONNECTION DETAILS

ALDOGA TANK SITE



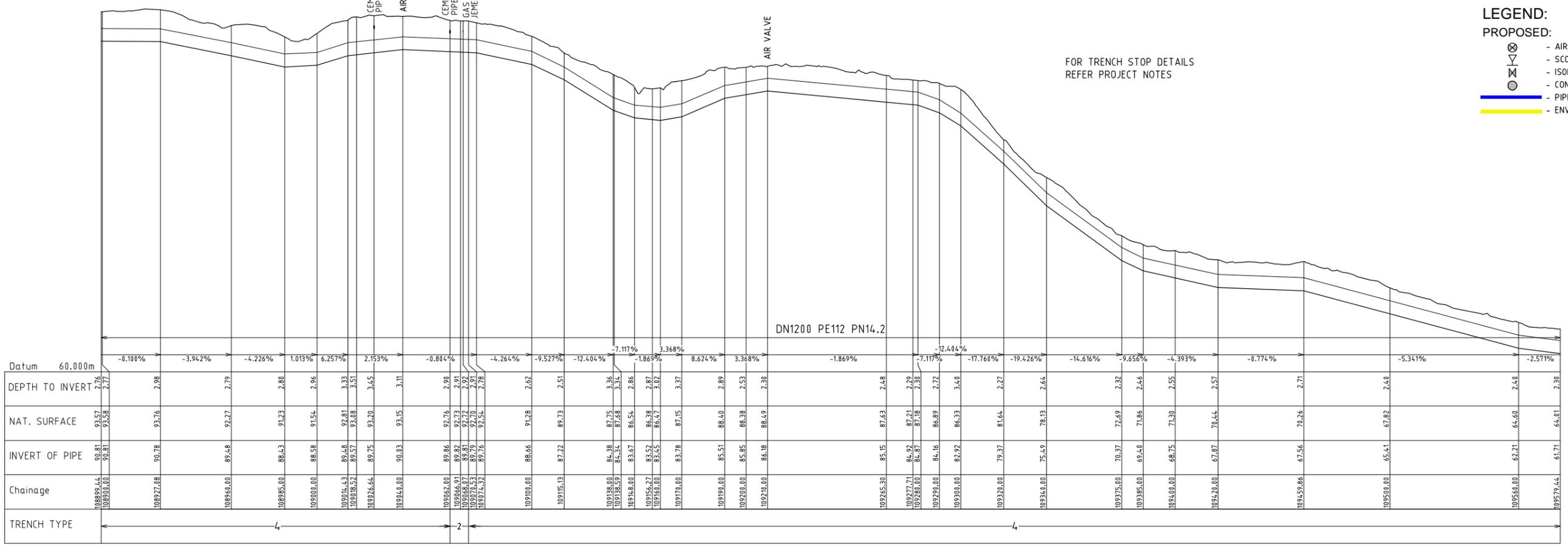
**LEGEND:**

- EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
  - WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - SURVEYED CADASTRE
  - RIGHT OF WAY
  - DCDB
  - CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS

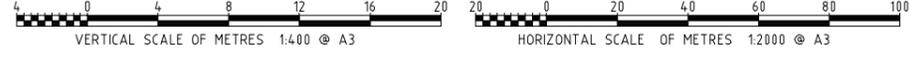
**LEGEND:**

- PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE

FOR TRENCH STOP DETAILS  
REFER PROJECT NOTES



**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL07 PIPELINE CH 108899.44-109579.44

1151-DL07-W3P-PL-DRG-67002

DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

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PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	01/06/23	85% SUBMISSION JV REVIEW	TA	MM	PS			

DO NOT SCALE



**LEGEND:**

**PROPOSED:**

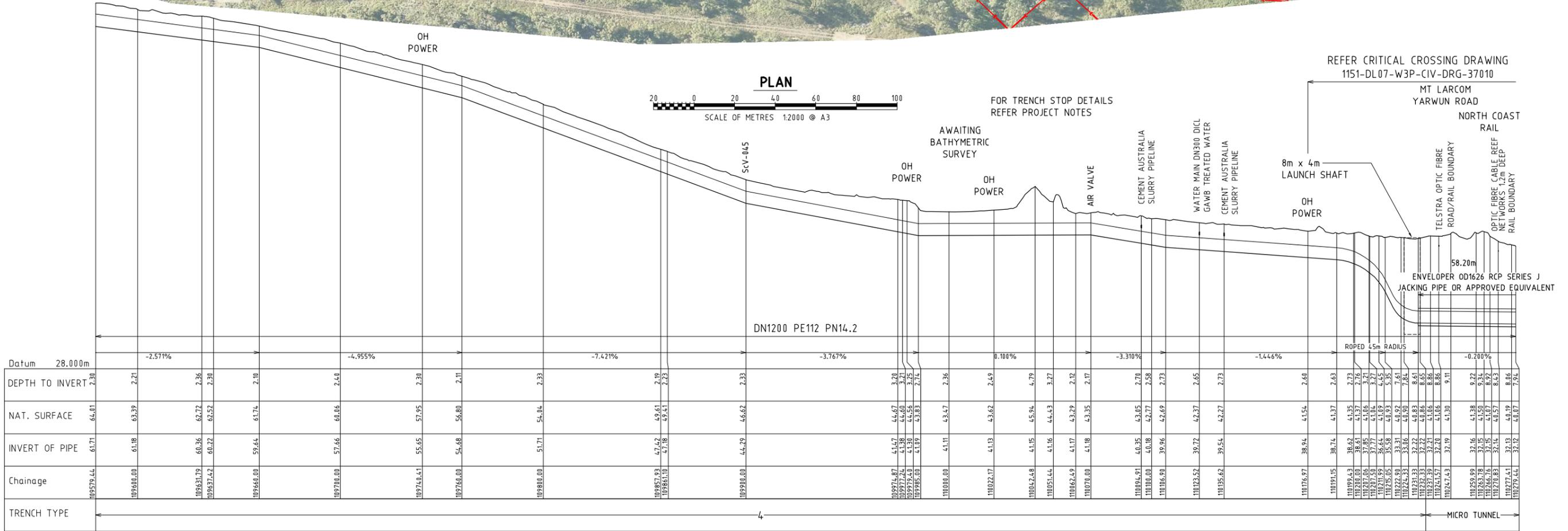
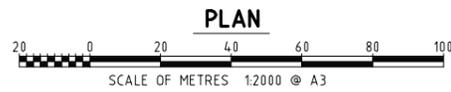
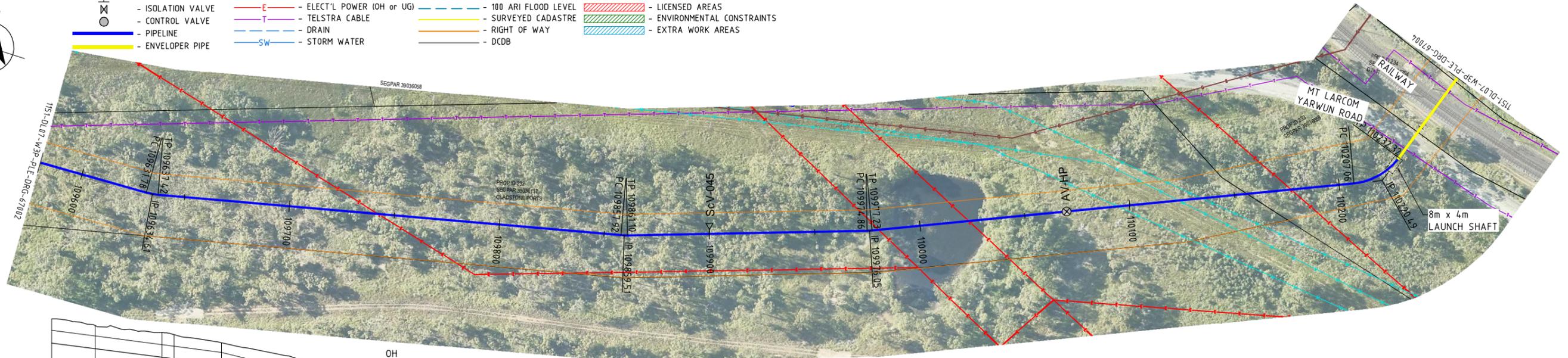
- ⊗ - AIR VALVE
- ⊕ - SCOUR VALVE
- ⊗ - ISOLATION VALVE
- ⊗ - CONTROL VALVE
- - PIPELINE
- - ENVELOPER PIPE

**LEGEND:**

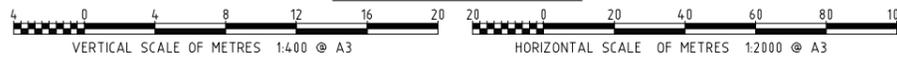
**EXISTING:**

- - FENCE
- - GAS
- - ELECT'L POWER (OH or UG)
- - TELSTRA CABLE
- - DRAIN
- - SW - STORM WATER
- - WATER OTHER
- - SEWER PIPE
- - 100 ARI FLOOD LEVEL
- - SURVEYED CADASTRE
- - RIGHT OF WAY
- - DCDB

- ⊕ - CULTURAL ARTEFACTS
- - CONSTRUCTION ZONES
- - LICENSED AREAS
- - ENVIRONMENTAL CONSTRAINTS
- - EXTRA WORK AREAS



**LONGITUDINAL SECTION**



REFER CRITICAL CROSSING DRAWING  
1151-DL07-W3P-CIV-DRG-37010

MT LARCOM  
YARWUN ROAD  
NORTH COAST  
RAIL

8m x 4m  
LAUNCH SHAFT

OH POWER

ENVELOPER OD1626 RCP SERIES J  
JACKING PIPE OR APPROVED EQUIVALENT

ROPED 45m RADIUS

58.20m

TELSTRA OPTIC FIBRE  
ROAD/RAIL BOUNDARY

OPTIC FIBRE CABLE REEF  
NETWORKS 1.2m DEEP  
RAIL BOUNDARY

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	01/06/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 446 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL07 PIPELINE CH 109579.44-110279.44

1151-DL07-W3P-PL-DRG-67003

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

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ACCEPTANCE BY: PETER SEMIANIW  
RPEQ APPROVAL: \_\_\_\_\_  
GAWB ACCEPTANCE: \_\_\_\_\_



**LEGEND:**

**PROPOSED:**

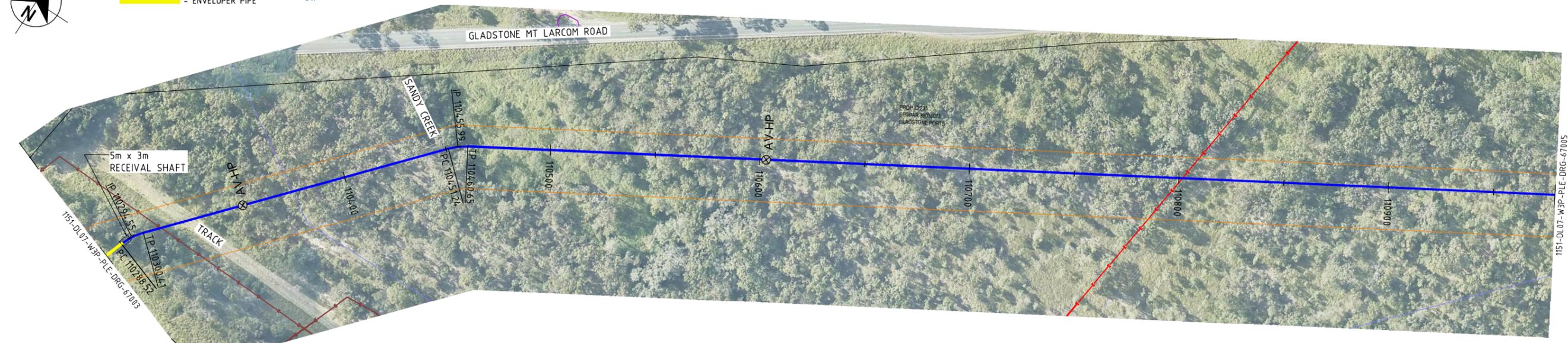
- AIR VALVE
- SCOUR VALVE
- ISOLATION VALVE
- CONTROL VALVE
- PIPELINE
- ENVELOPER PIPE

**LEGEND:**

**EXISTING:**

- FENCE
- GAS
- ELECT'L POWER (OH or UG)
- TELSTRA CABLE
- DRAIN
- STORM WATER
- WATER OTHER
- SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB

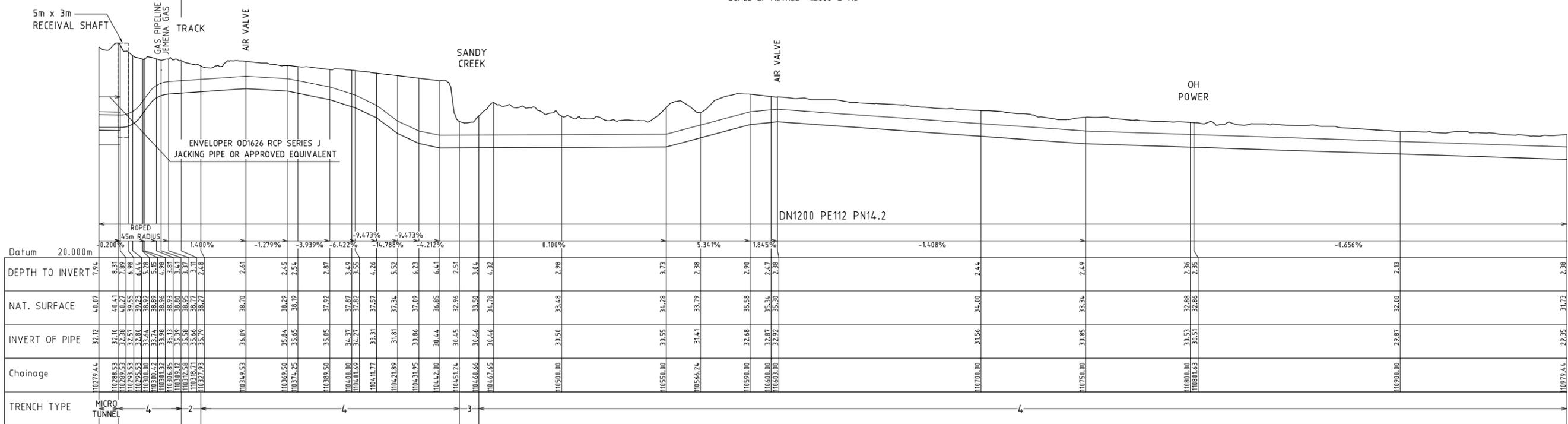
- CULTURAL ARTEFACTS
- CONSTRUCTION ZONES
- LICENSED AREAS
- ENVIRONMENTAL CONSTRAINTS
- EXTRA WORK AREAS



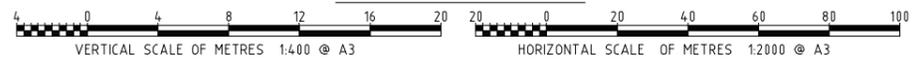
**PLAN**



REFER CRITICAL CROSSING DRAWING  
1151-DL07-W3P-CIV-DRG-37010



**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	01/06/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL07 PIPELINE CH 110279.44-110979.44

1151-DL07-W3P-PL-DRG-67004

DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

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PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



**LEGEND:**

**PROPOSED:**

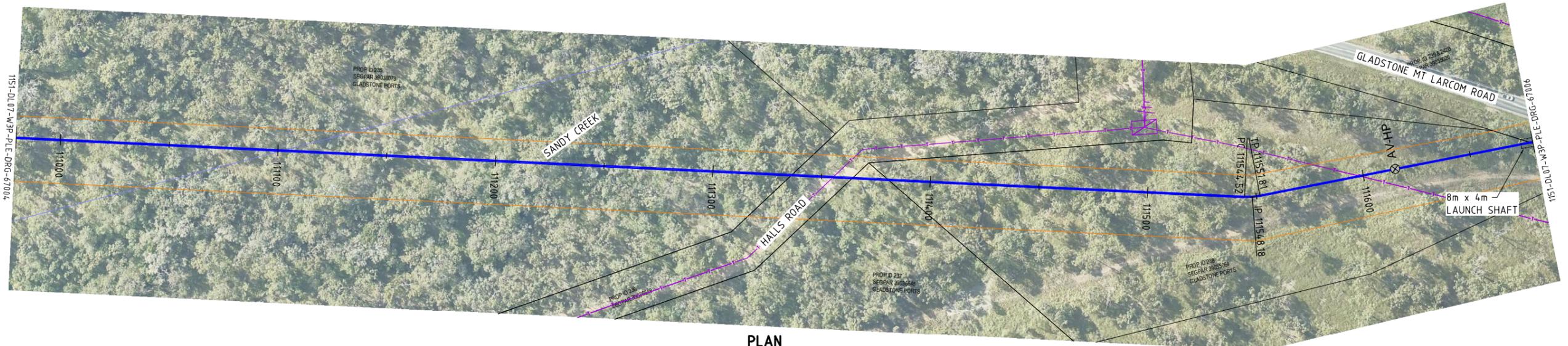
- ⊗ - AIR VALVE
- ⊙ - SCOUR VALVE
- ⊗ - ISOLATION VALVE
- ⊙ - CONTROL VALVE
- - PIPELINE
- - ENVELOPER PIPE

**LEGEND:**

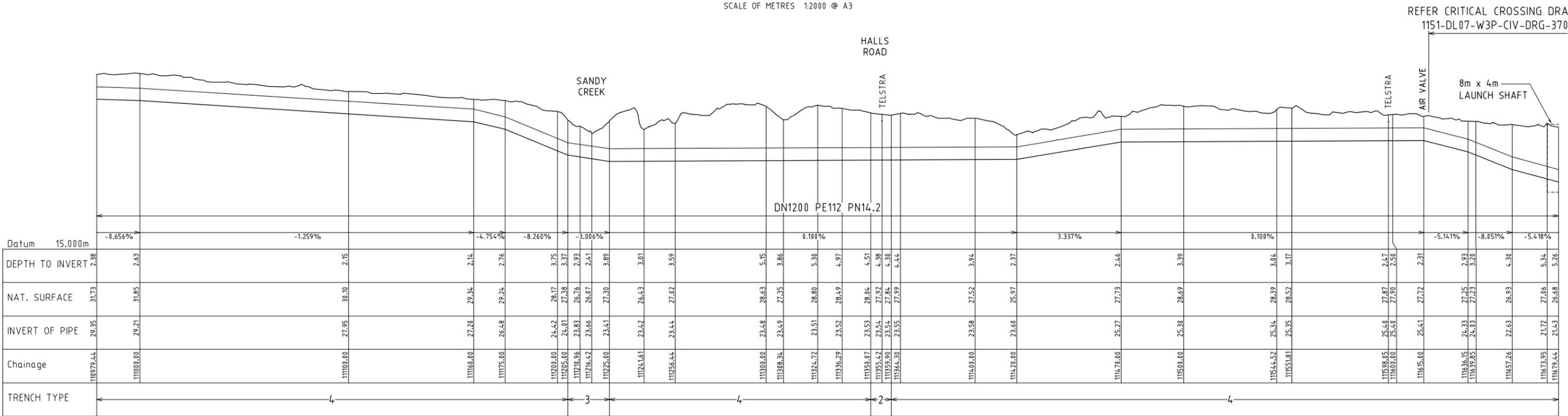
**EXISTING:**

- / — - FENCE
- G — - GAS
- E — - ELECT'L POWER (OH or UG)
- T — - TELSTRA CABLE
- - DRAIN
- SW — - STORM WATER
- W — - WATER OTHER
- S — - SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB

- ⊕ - CULTURAL ARTEFACTS
- ▭ - CONSTRUCTION ZONES
- ▨ - LICENSED AREAS
- ▨ - ENVIRONMENTAL CONSTRAINTS
- ▨ - EXTRA WORK AREAS



**PLAN**  
SCALE OF METRES 1:2000 @ A3



**LONGITUDINAL SECTION**

VERTICAL SCALE OF METRES 1:400 @ A3  
HORIZONTAL SCALE OF METRES 1:2000 @ A3

REFER CRITICAL CROSSING DRAWING  
1151-DL07-W3P-CIV-DRG-37020

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	01/06/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

DESIGNED BY: TED ALVARADO 04/05/23  
DESIGNED BY: MICHAEL MARIES 04/05/23  
REVIEWED BY: PETER SEMIANIW 04/05/23

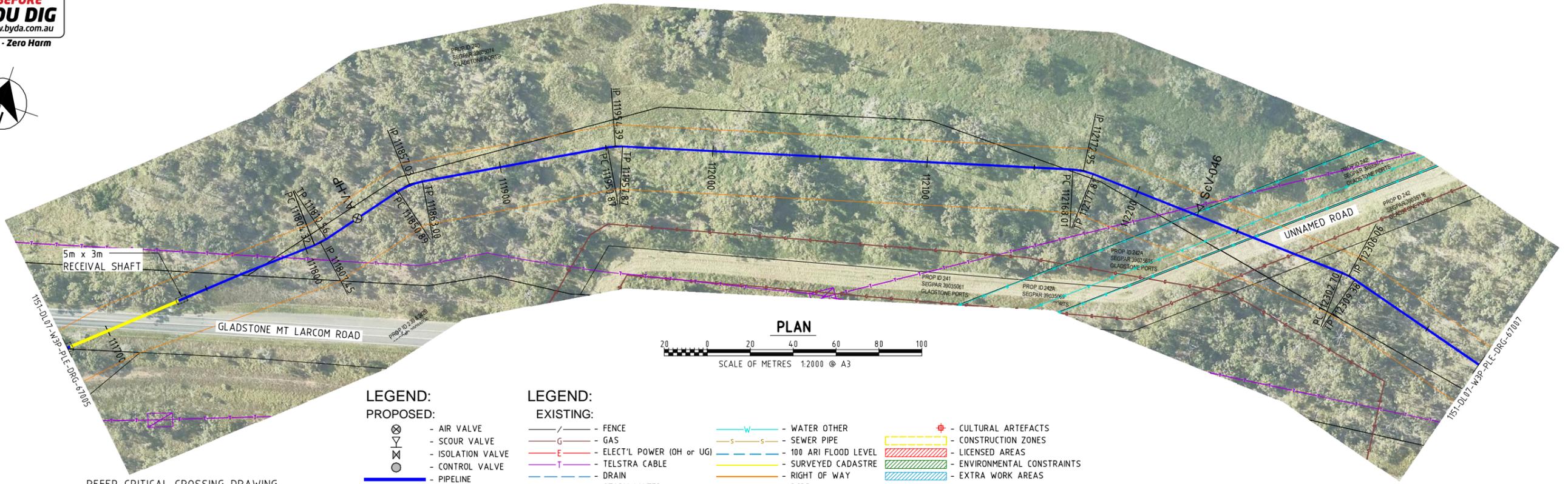
FITZROY TO GLADSTONE PIPELINE PROJECT  
DL07 PIPELINE CH 110979.44 - 111679.44

1151-DL07-W3P-PL-DRG-67005

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

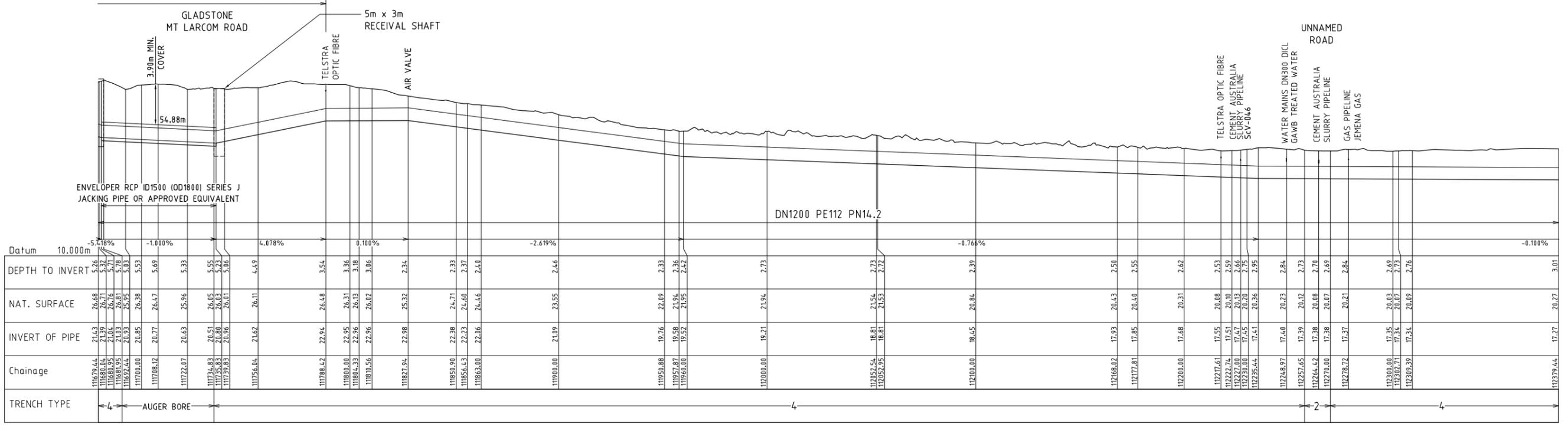
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DO NOT SCALE

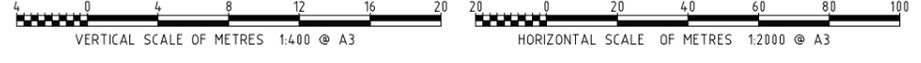


- LEGEND: PROPOSED:**
- AIR VALVE
  - SCOUR VALVE
  - ISOLATION VALVE
  - CONTROL VALVE
  - PIPELINE
  - ENVELOPER PIPE
- LEGEND: EXISTING:**
- FENCE
  - GAS
  - ELECT'L POWER (OH or UG)
  - TELSTRA CABLE
  - DRAIN
  - STORM WATER
- WATER OTHER
  - SEWER PIPE
  - 100 ARI FLOOD LEVEL
  - RIGHT OF WAY
  - DCDB
- CULTURAL ARTEFACTS
  - CONSTRUCTION ZONES
  - LICENSED AREAS
  - ENVIRONMENTAL CONSTRAINTS
  - EXTRA WORK AREAS

REFER CRITICAL CROSSING DRAWING  
1151-DL07-W3P-CIV-DRG-37020



**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
NAME: \_\_\_\_\_  
RPEQ NO: \_\_\_\_\_  
DIVISION: \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	01/06/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**  
136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
DL07 PIPELINE CH 111679.44 - 112379.44

1151-DL07-W3P-PL-DRG-67006

PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B

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ACCEPTANCE BY: PETER SEMIANIW 04/05/23



**LEGEND:**

**PROPOSED:**

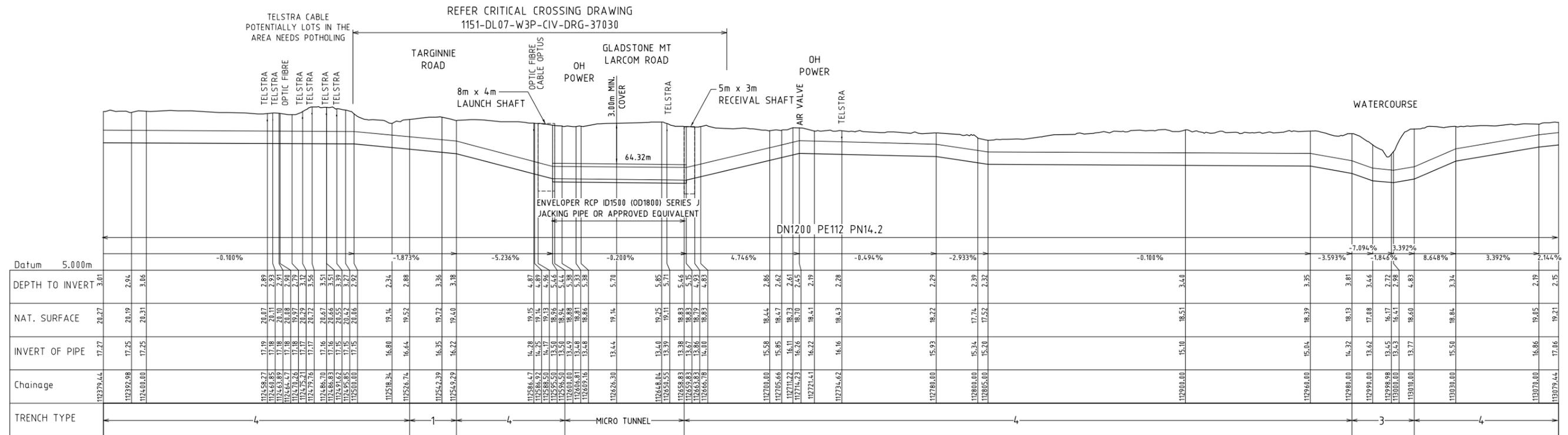
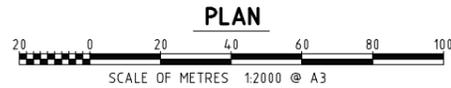
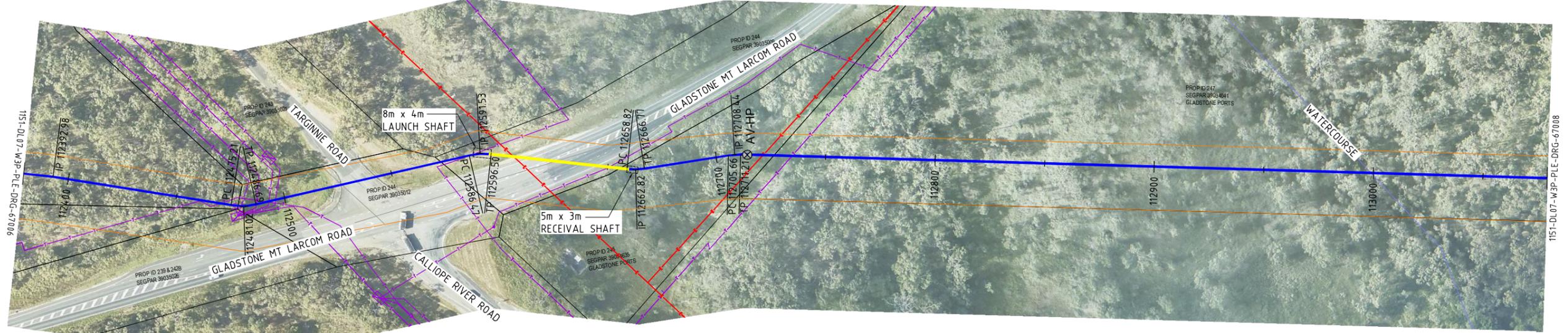
- ⊗ - AIR VALVE
- ⊙ - SCOUR VALVE
- ⊗ - ISOLATION VALVE
- ⊙ - CONTROL VALVE
- - PIPELINE
- - ENVELOPER PIPE

**LEGEND:**

**EXISTING:**

- / — - FENCE
- G — - GAS
- E — - ELECT'L POWER (OH or UG)
- T — - TELSTRA CABLE
- - DRAIN
- SW — - STORM WATER
- W — - WATER OTHER
- S — - SEWER PIPE
- - 100 ARI FLOOD LEVEL
- - SURVEYED CADASTRE
- - RIGHT OF WAY
- - DCDB

- ⊕ - CULTURAL ARTEFACTS
- - CONSTRUCTION ZONES
- - LICENSED AREAS
- - ENVIRONMENTAL CONSTRAINTS
- - EXTRA WORK AREAS



**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APPR.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS	-	-	-
A	01/06/23	85% SUBMISSION JV REVIEW	TA	MM	PS	-	-	-



**Gladstone Area Water Board**  
 136 Goondoon Street Gladstone Q 4680 PO Box 466 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL07 PIPELINE CH 112379.44 - 113079.44

1151-DL07-W3P-PL-DRG-67007

DRAWN BY	TED ALVARADO	04/05/23
DESIGNED BY	MICHAEL MARIES	04/05/23
REVIEWED BY	PETER SEMIANIW	04/05/23

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PROJECT No.	SIZE	DRAWING No.	SCALE	REV
GAWB #	A3	XXX-X-XXXX	AS NOTED	B



**LEGEND:**

**PROPOSED:**

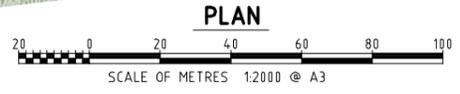
- AIR VALVE
- SCOUR VALVE
- ISOLATION VALVE
- CONTROL VALVE
- PIPELINE
- ENVELOPER PIPE

**LEGEND:**

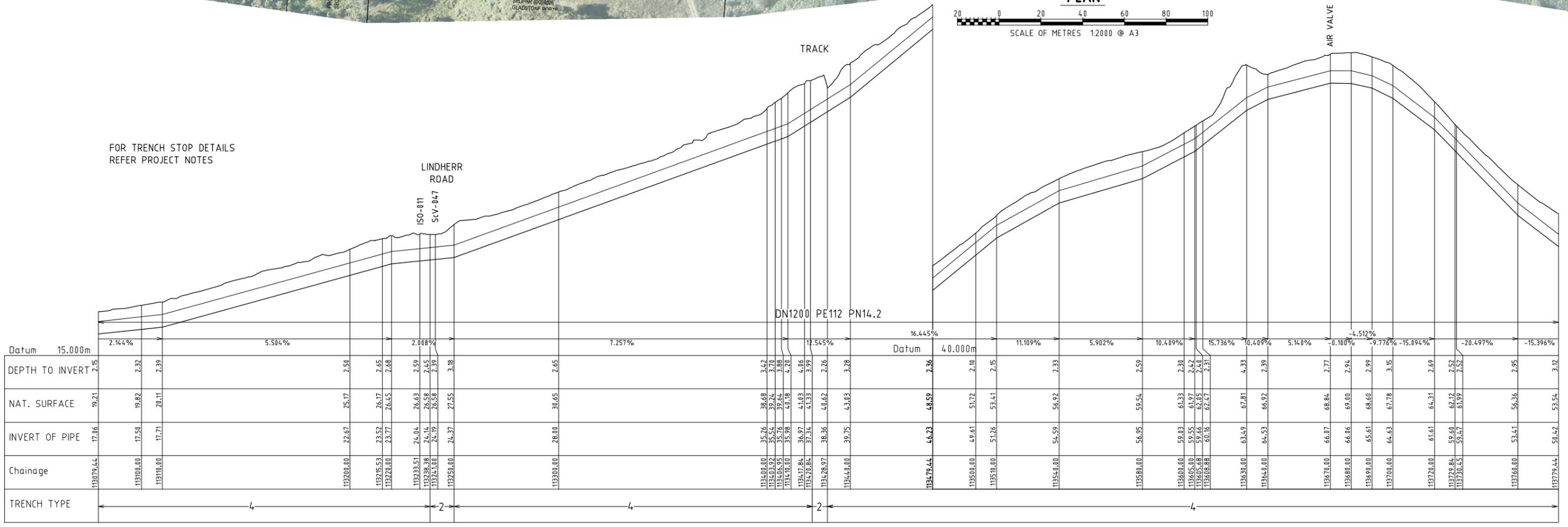
**EXISTING:**

- FENCE
- GAS
- ELECT'L POWER (OH or UG)
- TELSTRA CABLE
- DRAIN
- STORM WATER
- WATER OTHER
- SEWER PIPE
- 100 ARI FLOOD LEVEL
- SURVEYED CADASTRE
- RIGHT OF WAY
- DCDB

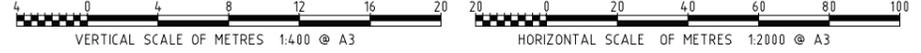
- CULTURAL ARTEFACTS
- CONSTRUCTION ZONES
- LICENSED AREAS
- ENVIRONMENTAL CONSTRAINTS
- EXTRA WORK AREAS



FOR TRENCH STOP DETAILS REFER PROJECT NOTES



**LONGITUDINAL SECTION**



REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND  
 NAME: \_\_\_\_\_  
 RPEQ NO: \_\_\_\_\_  
 DIVISION: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_

**PRELIMINARY DRAWING**  
 NOT TO BE USED FOR CONSTRUCTION PURPOSES



REV	DATE	REVISION DESCRIPTION	DRN	CHKD	EXT. APP.	GAWB ACC.	REFERENCE DRAWINGS	NUMBER
B	08/06/23	85% SUBMISSION FOR CLIENT REVIEW	TA	MM	PS			
A	01/06/23	85% SUBMISSION JV REVIEW	TA	MM	PS			



**Gladstone Area Water Board**

136 Goondoon Street Gladstone Q 4680 PO Box 446 Gladstone Q 4680 Tel: (07) 4976 3000 ABN: 88 409 667 181

DRAWN BY: TED ALVARADO 04/05/23  
 DESIGNED BY: MICHAEL MARIES 04/05/23  
 REVIEWED BY: PETER SEMIANIW 04/05/23  
 ACCEPTANCE BY: \_\_\_\_\_  
 RPEQ APPROVAL: \_\_\_\_\_  
 GAWB ACCEPTANCE: \_\_\_\_\_

**FITZROY TO GLADSTONE PIPELINE PROJECT**  
 DL07 PIPELINE CH 113079.44 - 113779.44

1151-DL07-W3P-PL-DRG-67008  
 PROJECT No. GAWB # A3 DRAWING No. XXX-X-XXXX SCALE AS NOTED REV B

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