



# Annual Compliance Report

03 February 2023 to 02 February 2024 EPBC 2016/7797  
Ormeau Quarry Expansion, 12 km north-west of Oxenford,  
Queensland  
Prepared for Boral Resources (QLD) Pty Ltd

1 May 2024

Job No. 10233 E

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

---

**Signed**



---

<b>Full name</b>	Megan McKinney
<b>Position</b>	Principal Ecologist
<b>Organisation</b>	Saunders Havill Group ABN 24 144 972 949
<b>Date</b>	1 <sup>st</sup> May 2024

---

# Document Control

Document: EPBC Annual Compliance Report (Year 3), prepared by Saunders Havill Group for Boral Resources Pty Limited, dated 1<sup>st</sup> May 2024.

## Document Issue

Issue	Date	Prepared By	Checked By
A	24/04/2024	KR	KFB / MM

### Prepared by

© Saunders Havill Group Pty Ltd 2022.

ABN 24 144 972 949

[www.saundershavill.com](http://www.saundershavill.com)

SHG has prepared this document for the sole use of the Client and for a specific purpose, as expressly stated in the document. No other party should rely on this document without the prior consent of SHG. SHG undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use the document. This document has been prepared based on the Client's description of their requirements and SHG's experience, having regard to assumptions that SHG can reasonably be expected to make in accordance with sound professional principles. SHG may have also relied upon information provided by the Client and other third parties to prepare this document, some of which may have not been verified. Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

# Table of Contents

<b>1.</b>	<b>Introduction</b>	<b>1</b>
1.1.	Reporting Period	1
1.2.	EPBC Approval	1
1.3.	Site Context	2
1.4.	Overview of Key Activities and Achievements	2
<b>2.</b>	<b>Current Status of the Project</b>	<b>5</b>
2.1.	Offset Area Legally Secured	5
2.2.	Vegetation Clearing	5
2.3.	Key Consultants and Roles	5
2.4.	Offset Area Monitoring	5
2.4.1	Habitat quality surveys – SHG	6
2.4.2	Camera trapping and observed fauna – SHG	6
2.4.3	Weed mapping – SHG	7
2.4.4	Non-native vertebrate pest monitoring	7
2.5.	Offset Area Management	8
2.5.1	Weeds of National Significance (WONS) treatment	8
2.5.2	Rehabilitation and Regeneration	8
2.5.3	Vertebrate Pest Species Management	8
2.5.4	Koala Habitat Quality	9
2.5.5	Bushfire Management	9
2.5.6	Ongoing Access Track	10
2.5.7	Offsets Area Adjacent Landholder Encroachment	12
2.6.	Offset Management Plan	21
<b>3.</b>	<b>EPBC Conditions and Compliance</b>	<b>29</b>
<b>4.</b>	<b>Non-compliances</b>	<b>35</b>
4.1.	Weed Management and Rehabilitation	35
4.2.	Bushfire Management	36
<b>5.</b>	<b>Appendices</b>	<b>37</b>

# Figures

Figure 1:	Site Context	3
Figure 2:	Site Aerial	4
Figure 3:	Location of accidental historical encroachment by neighbour, discovered during surveying of offsets site boundary.	14
Figure 4:	Aerial showing the western boundary of the offsets site and the prior encroachment into the site unknowingly by neighbouring landholders.	15

# Tables

Table 1:	Approval Details	1
Table 2:	Key Consultants and Roles	5
Table 3:	Observed fauna and camera trapping results – SHG surveys July/August 2023	6
Table 4:	Rainfall received compared to the mean rainfall data.	11
Table 5:	Offset Management Plan implementation	21
Table 6:	Modified Habitat Quality Assessment Scores – Year 3	25
Table 7:	Comparison of MHQA Scores between baseline, Year 1, Year 2 and Year 3	26
Table 8:	Compliance Audit of EPBC 2016/7797 Conditions for Ormeau Quarry	29

# Plans

Plan 1:	Koala Critical Habitat Clearing Extent	16
Plan 2:	Offset Area – Habitat Management Zones Map	17
Plan 3:	Field Survey Effort – Year 3	18
Plan 4:	Weed Mapping Results – Year 3	19
Plan 5:	Weed Management Areas – Year 3	20

# Acronyms and Abbreviations

ACR	Annual Compliance Report
DAWE	Department of Agriculture, Water and Environment (Cth) – former
DOR	Department of Resources (Qld)
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cth)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
GCCC	Gold Coast City Council
ha	hectares
KCH	Koala critical habitat
km	kilometres
m	metres
MNES	Matters of National Environmental Significance
NCA	<i>Nature Conservation Act 1992</i> (Qld)
PMAV	Property Map of Assessable Vegetation
PMR	Protected Matters Report
RE	Regional Ecosystem
SHG	Saunders Havill Group
TEC	Threatened Ecological Community (under the EPBC Act)
VMA	<i>Vegetation Management Act 1999</i> (Qld)

## **Management Plans**

VDEC	Offset Area Voluntary Declaration Package (Year 1 ACR – Appendix C)
BMP	Bushfire Management Plan, prepared by Land and Environment Consultants (Year 1 ACR – Appendix H)
EMP	Environmental Management Plan, prepared by Saunders Havill Group, dated November, 2018 (Year 1 ACR – Appendix D)
KHMP	Koala Habitat Management Plan, prepared by Saunders Havill Group, dated September 2021 (Year 1 ACR – Appendix F).
KMP	Koala Management Plan, prepared by Saunders Havill Group, dated December 2021.
OMP	Offset Management Plan (EPBC 2016/7797), prepared by Saunders Havill Group, dated December 2018 (Year 1 ACR – Appendix D).
VPMP	Vertebrate Pest Management Plan, prepared by Saunders Havill Group, dated September 2021 (Year 1 ACR – Appendix G).
WMP	Weed Management Plan, prepared by Saunders Havill Group, dated July 2021 (Year 1 ACR – Appendix E).

# 1. Introduction

This Annual Compliance Report (ACR) Year 3 (3 February 2023 – 2 February 2024) has been prepared on behalf of Boral Resources (Qld) Pty Ltd (the Proponent) as per the EPBC Act approval transfer granted on 16 February 2018 for the Ormeau Quarry Expansion (the Project) located on Upper Ormeau Road, Kingsholme, Queensland (EPBC 2016/7797).

In accordance with the approval granted on the 16 February 2018 under the *Environmental Protection and Biodiversity Act 1999* (EPBC Act), this ACR has been prepared in response to Condition 10 of the approval which states:

*“Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published. ”*

## 1.1. Reporting Period

This ACR details the status and compliance of the Project for the 12-month reporting period between the 3 February 2023 and 2 February 2024.

As per Condition 10 of the approval, the ACR must be published on the Proponent’s website and notification provided to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) within 3 months of the 12-month anniversary of the commencement of the action (3 February 2021). The end of the three-month period for the Year 3 reporting period is the 3 May 2024.

## 1.2. EPBC Approval

Boral Resources (Qld) Pty Ltd, as the Proponent of the Project (EPBC Act Referral 2016/7797) was issued with an approval by the former Department of the Environment and Energy (now DCCEEW) on the 16 February 2018, subject to conditions.

Key details related to the EPBC 2016/7797 approval, including variation conditions, are provided in **Table 1** below. Refer to **Appendix A** for EPBC approval.

**Table 1: Approval Details**

<b>Commonwealth Reference</b>	EPBC 2016/7797
<b>Approval Holder</b>	Boral Resources (Qld) Pty Ltd
<b>ACN</b>	009 671 809
<b>Project Name on the Approval</b>	Ormeau Quarry Expansion, 12km north-west of Oxenford, Queensland.
<b>Approved Action</b>	Thirty-eight hectare (38 ha) expansion of the existing Ormeau Quarry, including clearing of 38 ha of vegetation. The quarry expansion site is

located on Upper Ormeau Road, 12 km north west of Oxenford; as described in the referral received by the Department on 13 October 2016 [See EPBC Act referral 2016/7797].

<b>Controlling Provision(s)</b>	Listed threatened species and communities (sections 18 & 18A)
<b>Approval Date</b>	16 February 2018
<b>Expiry Date of the Approval</b>	8 November 2057
<b>Date of Commencement of the Action</b>	3 February 2021
<b>Address</b>	578 Upper Ormeau Road, Kingsholme, Queensland, 4208
<b>Local Government Area</b>	Gold Coast City Council

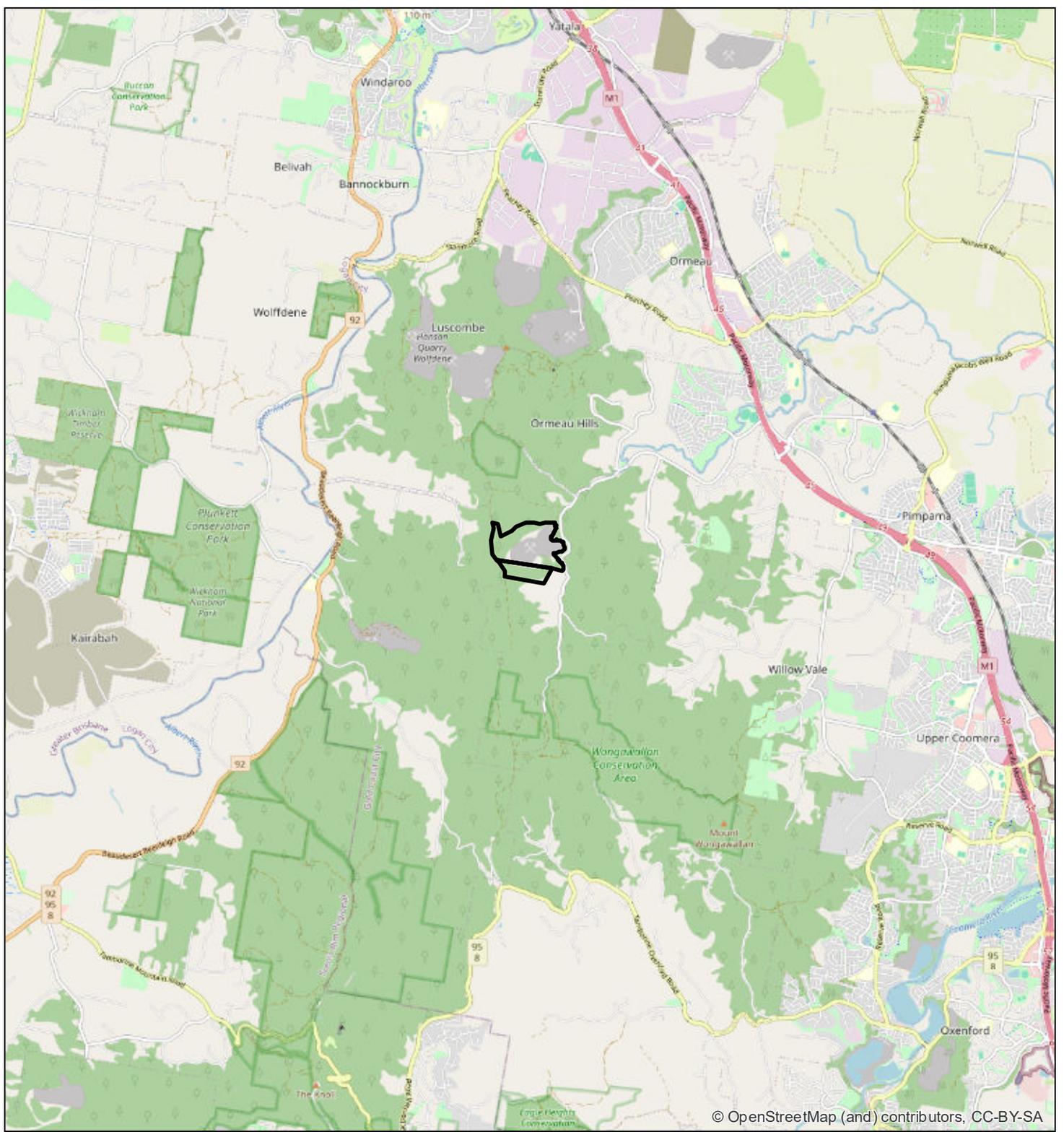
### 1.3. Site Context

Contextually, the Project is located in south-east Queensland, approximately 12 km north-west of Oxenford within the Gold Coast City Council Local Government Area. The Project area is surrounded by a matrix of rural and rural residential allotments, remnant vegetation and other quarries in the greater landscape. Refer to **Figure 1** for the Site Context and **Figure 2** for Site Aerial.

### 1.4. Overview of Key Activities and Achievements

During Year 3 of the Project, the following development and environmental management activities occurred:

- Clearing of 7.03 ha Koala critical habitat (KCH) within impact area.
- Continued use of the Bushfire Management Plan, Weed Management Plan, Koala Habitat (Rehabilitation) Management Plan and Vertebrate Pest Management Plan for offset site.
- Habitat quality monitoring surveys within offset area utilising the Modified Habitat Quality Assessment (MHQA) methodology to ascertain habitat quality of vegetation compared to baseline conditions.
- Weed mapping targeting Weeds of National Significant (WONS), conducted by SHG across offset area.
- Bushcare Services completed treatment of WONS where accessible at the offset site.
- Non-native vertebrate pest monitoring services were carried out within the offset area by Biodiversity Australia and Saunders Havill Group (SHG). Monitoring surveys involved the use of passive infrared monitoring cameras in accordance with the Vertebrate Pest Management Plan (VPMP)
  - Biodiversity Australia conducted monitoring during summer/autumn from mid to late February 2024. *Vulpes vulpes* (European red fox) was the only non-native pest species recorded.
  - SHG conducted monitoring during winter/spring season from late July to early August 2024. *Vulpes vulpes* (European red fox) and a potential domestic dog (*Canis lupus familiaris*) were the two non-native pest species recorded.
- Fireland completed the preparation of a Burn Plan for the offsets site, planned by specialist bushfire management consultants, in accordance with the Bushfire Management Plan.



© OpenStreetMap (and) contributors, CC-BY-SA

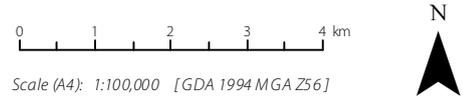
**Legend**

 Project Site

**Figure 1**  
Project Site Context



**File ref.** 10233 E Figure 1 YR3 Project Site Context A  
**Date** 18/03/2024  
**Project** Upper Ormeau Road, Ormeau



THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT. SAUNDERS HAVILL GROUP CANNOT ACCEPT RESPONSIBILITY FOR ANY USE OF OR RELIANCE UPON THE CONTENTS OF THESE DRAWINGS BY ANY THIRD PARTY.



**Legend**

-  Project Site
-  Project Area
-  Qld DCDB

**Figure 2**  
Project Site Aerial

**File ref.** 10233 E Figure 2 YR3 Project Site Aerial A  
**Date** 18/03/2024  
**Project** Upper Ormeau Road, Ormeau

0 50 100 150 200 m

Scale (A4): 1:7,500 [GDA 1994 MGA Z56]



THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT. SAUNDERS HAVILL GROUP CANNOT ACCEPT RESPONSIBILITY FOR ANY USE OF OR RELIANCE UPON THE CONTENTS OF THESE DRAWINGS BY ANY THIRD PARTY.

## 2. Current Status of the Project

### 2.1. Offset Area Legally Secured

As required by Condition 5 of the EPBC Act approval, the offset area, which is located over parts of Lot 2 on RP15912 Cliff Barrons Road, Kingsholme, was legally secured via a Voluntary Declaration under the VMA by the Proponent on 22 February 2019 (refer **Year 1 ACR – Appendix C**). The Chief Executive of the then Queensland Department of Natural Resources, Mines and Energy (now Department of Resources, DOR) declared the offset area in a Declared Area Map (DAM 2018/007110) as an area of high nature conservation value in accordance with section 19F(1) of the VMA. The offset area is shown as Category A on a Property Map of Assessable Vegetation (PMAV) (PMAV 2018/007111) and is subject to management provisions of the Offset Management Plan (OMP) EPBC 2016/7797, prepared by Saunders Havill Group, December 2018. Evidence of compliance with Condition 5 was provided to DCCEEW and was addressed in the Year 1 ACR (refer **Year 1 ACR – Appendix C**).

### 2.2. Vegetation Clearing

Clearing commenced on 3 February 2021, and written evidence was provided to the Department (refer **Appendix D**). During Year 3, 7.03 ha of Koala habitat was cleared, resulting in a total 13.28 ha of Koala habitat being cleared during the life of the project. Refer **Plan 1** for clearing extent.

### 2.3. Key Consultants and Roles

**Table 2** below is a list of the key appointed contractors and their roles in the Project during Year 3.

**Table 2: Key Consultants and Roles**

Role	Appointed Contractor
Proponent / Project Coordinator	Boral – Kelli Adair
Environmental Coordinator	Boral – Matthew Allan
Site Supervisor / Quarry Manager	Boral – Bruce Barry
Environmental Consultant	Saunders Havill Group
Bush Regeneration Contractor	Bushcare Services
Bushfire Management Contractor	Fireland
Pest Management Contractor	Biodiversity Australia

### 2.4. Offset Area Monitoring

Monitoring activities were completed across the offset area in accordance with the management actions outlined in the OMP, offset management zones shown on **Plan 2** and associated management plans. SHG completed on-ground surveys on the 24, 25 and 27<sup>th</sup> of July and 7 and 8<sup>th</sup> August 2023 (refer to **Plan 3**).

### 2.4.1 Habitat quality surveys – SHG

SHG ecologists completed monitoring across the offset area including habitat quality assessment surveys at established assessment locations utilising the MHQA methodology. Refer to **Plan 3** for the location of MHQA transects and survey area completed by SHG during Year 3.

### 2.4.2 Camera trapping and observed fauna – SHG

SHG ecologists completed general meander surveys and motion sensor camera trapping during the Year 3 monitoring period. These surveys were conducted within the offset area to identify koala and non-native vertebrate pest presence.

**Plan 3** displays the camera trap locations during the Year 3 monitoring period. The fauna equipment was deployed on the 24 and 25 July 2023 and collected on the 8 August 2023, resulting in an active period of 14 nights. A total of fourteen (14) fauna species were recorded as a result of on-ground field surveys and camera trapping (refer **Table 3** and **Appendix B** for camera trap images).

Camera traps also recorded unauthorised access of the offset area in the form of recreational motorbikes (refer to **Appendix B**).

**Table 3: Observed fauna and camera trapping results – SHG surveys July/August 2023**

Scientific Name	Common Name	Native/Introduced	Survey Method*
<b>Birds</b>			
<i>Alectura lathami</i>	Australian Brush Turkey	Native	CT
<i>Colluricincla harmonica</i>	Grey Shrike Thrush	Native	CT
<i>Eopsaltria australis</i>	Eastern Yellow Robin	Native	CT
<i>Leucosarcia melanoleuca</i>	Wonga Pigeon	Native	CT
<i>Podargus strigoides</i>	Tawny Frogmouth	Native	CT
<b>Mammals</b>			
<i>Canis familiaris</i>	Wild/Domestic Dog	Introduced	CT
<i>Isodon macrourus</i>	Northern Brown Bandicoot	Native	CT
<i>Macropus rufogriseus</i>	Red-necked Wallaby	Native	CT
<i>Perameles nasuta</i>	Long-nosed Bandicoot	Native	CT
<i>Rattus fuscipes</i>	Bush Rat	Native	CT
<i>Trichosurus vulpecula</i>	Brush-tailed Possum	Native	CT
<i>Vulpes vulpes</i>	European Red Fox	Introduced	CT
<i>Wallabia bicolor</i>	Swamp Wallaby	Native	CT
<b>Reptile</b>			
<i>Varanus varius</i>	Lace Monitor	Native	CT

\*CT = camera trapping, S = direct sighting

### 2.4.3 Weed mapping – SHG

SHG ecologists spatially recorded areas within the offset area containing WONS, specifically targeting *Lantana camara* (Lantana). Refer to **Plan 4** for the Year 3 weed mapping results. As shown on the plan, WONS are present in varying density levels across the site. (refer to **Photo set 1**).



**Photo set 1:** Dense *Lantana camara* patches

### 2.4.4 Non-native vertebrate pest monitoring

Targeted vertebrate pest monitoring was conducted at permanent monitoring locations across the offset site as part of the annual monitoring (refer to **Section 2.4.2**). Targeted non-native vertebrate pest monitoring was undertaken by Biodiversity Australia during Year 3 as part of the requirements under the Vertebrate Pest species Management Plan (refer to **Year 1 ACR**). The required camera monitoring program was completed over a period of 14 consecutive days, beginning 15<sup>th</sup> February 2024 and ending 28<sup>th</sup> February 2024 (refer to **Appendix C** for Monitoring Report). In addition, the previous camera monitoring program was conducted from 24<sup>th</sup> February 2023 to 7<sup>th</sup> March 2023 (see **Appendix C**).

During both aforementioned monitoring periods, *Vulpes vulpes* (European red fox) was the only non-native vertebrate pest recorded and was detected multiple times across two camera locations in 2024 and five in 2023. In addition, the native *Macropus rufogriseus* (red-necked wallaby) and *Alectura lathami* (Australian Brush Turkey) was detected several times across multiple camera locations.

## 2.5. Offset Area Management

Management activities have been conducted across the site in accordance with the management actions outlined in the Offset Management Plan (OMP) during the Year 3 compliance period. Weed management, bushfire management, access tracks and vertebrate pest species management were conducted across the site. The following Sections, along with **Table 5** detail the management actions conducted during Year 3.

### 2.5.1 Weeds of National Significance (WONS) treatment

As per the OMP requirements a Weed Management Plan (WMP) was produced by SHG in 2021 to fulfil the requirements of the OMP. The WMP details the baseline surveys of weed cover and weed species detected within the offset area along with management actions, timeframes, and monitoring techniques (refer to **Year 1 ACR**).

SHG ecologists mapped the extent of WONS across the offset area during the 2023/2024 compliance period. WONS identified and mapped were predominately *Lantana camara* (Lantana) (refer to **Plan 4**).

Bushcare services continued treating WONS across the site during the current compliance period in the southern portion of the site that could be safely accessed. Accessibility issues continued into Year 3, due to heavy rainfall impacting the construction of the culvert on three separate occasions (refer to **Section 4.1** for further details). Treatment methods completed in areas that could be safely accessed included chemical treatment (cut and paint) and manual removal. Manual removal was the preferred method of removal due to weather conditions. Weed treatment areas are demonstrated on **Plan 5**.

Daily record sheets completed by the weed management contractor are provided at **Appendix D**.

### 2.5.2 Rehabilitation and Regeneration

Baseline mapping of the offset site was conducted in order to identify areas of potential rehabilitation and regeneration area as well as a plan specifying techniques and species to be planted.

Rehabilitation across the offset site is predominantly driven by associated weed management, with assisted regeneration utilised in more open areas following intense weed treatment, which will be supported by safe access for efficient management and to ensure high survival rates of any planted specimens.

### 2.5.3 Vertebrate Pest Species Management

A Vertebrate Pest Management Plan (VPMP) was completed by SHG in 2021 to provide specifications and guidance for the on-ground Pest Management Strategies across the site to achieve objectives under the approval. The overarching completion criteria for pest management onsite is that *dogs or evidence of dogs is not detected on the offset area for a period of three years*, as detailed within the approved Offset Management Plan and the Vertebrate Pest Management Plan.

Vertebrate pest monitoring across the site occurred twice within this ACR year with the aim to identify any feral or domestic dogs or evidence of dogs. One (1) *Canis familiaris* (Domestic / Feral Dog) event was recorded by camera trap analysis conducted by SHG in the north-western portion of the offset site. Multiple sightings of fox were detected during both monitoring events, with additional non-predator vertebrate pest species detected onsite. Objectives under the Vertebrate Pest Management Plan include:

- *Numbers of feral dogs will be reduced through monitoring and management; and*
- *Annual pest monitoring by a suitably qualified pest management contractor, with evidence of pest animals GPS recorded. Where there is evidence of pest animals, targeted trapping and baiting programs will be implemented by an independent, suitably qualified pest management contractor. Where annual monitoring does not identify any feral or pest species monitoring it will reduce to 2 yearly.*

As no evidence of feral dogs were detected during the previous two targeted monitoring events across the offset site by Biodiversity Australia, trapping was not completed. Continued monitoring efforts generally in accordance with the VPMP during Year 3 and into Year 4 (outside of the current reporting period) were completed, although altered due to access limitations.

As such, it is considered that the pest management activities completed during this ACR year achieve compliance under Condition 6.

In addition, annual monitoring was completed in February and March 2023 by Biodiversity Australia consultants, also identifying the European Red Fox as the only non-native vertebrate pest within the offset area (refer to **Year 2 ACR**).

#### 2.5.4 Koala Habitat Quality

The Koala Habitat Management Plan (KHMP) developed by SHG for the offset area details strategies that will be implemented to achieve koala habitat rehabilitation aims detailed in the OMP, under Management Action 5. The management zones detailed in **Plan 2** display the management actions and techniques to be utilised within each zone. Management of WONs as detailed in **Section 2.5.1** were not able to be completed across the entirety of the offset area due to ongoing access issues. Further, rehabilitation works including proposed planting could also not be completed due to access issues.

SHG ecologists conducted annual habitat quality monitoring of koala habitat utilising the MHQA methodology at six permanent transect locations across the offset site during the Year 3 compliance period (refer **Plan 3**).

Habitat quality scores remained relatively steady between Year 1, Year 2, and Year 3 with only minor variation.

Koala scats were recorded during SAT surveys within the current ACR year at two (2) of the transect locations, demonstrating Koalas continue to use the offset site.

#### 2.5.5 Bushfire Management

A Burn Plan was developed for the site by Fireland in accordance with the requirements under the Bushfire Management Plan for the site, under the OMP Management Action 6. The BMP details management measures that will be implemented across the site to reduce risk of bushfire, with an annual Burn Plan forming a component of these management measures.

The Burn Plan incorporates a burn map, complexity ratings, pre-burn works order, a risk assessment and contingency maps. On-ground fire management of the offset has not commenced at present due to the weather conditions not being suitable to complete the prescribed Bushfire Management, as determined by the bushfire specialists. To reduce potential risks to areas outside the proposed burn area, weather conditions

need to be suitable to safely complete the burn. Due to weather issues, the burn was unable to be safely conducted.

On-ground fire management is currently awaiting suitable weather, following which actions from the current burn plan will be commenced.

Refer to **Appendix E** for current Burn Plan and bushfire management reporting.

### 2.5.6 Ongoing Access Track

The overall site access to perform efficient management and monitoring across the offset site was identified as insufficient while undertaking required monitoring and management during the Year 1 reporting period. In addition, it was identified by Boral and specialist contractors, that safety protocols under risk management thresholds were too high to complete manual and physical tasks whereby certain activities were required to be completed. These included carrying heavy equipment, toxic substances, completing fire management activities or completing dangerous or animal-related trapping methods. Ethics legislation and approval conditions for animal trapping also limits the ability to use vertebrate traps in terrain whereby regular access to ensure animal health and minimisation of distress is precluded.

For safety management purposes, reliable access and/or proximity to a vehicle and/or tracks for immediate exit of the offset site are required in association with the aforementioned dangerous activities. In order to ensure safety for all staff and contractors onsite, a review of state and local legislation to ensure compliance with environmental aspects was undertaken. The outcome of this review indicated that tracks could be maintained and improved under Accepted Development Clearing Codes under state legislation, but the local council (Gold Coast City Council, GCCC) required two separate works approvals.

During the Year 2 reporting period, internal issues within council delayed the approval through misaligned departmental expectations in regards to environmental management of the minor watercourse crossing and civil design requirements for the small track and crossing. Several re-designs were requested to satisfy each department before the extended process was able to be resolved. Evidence of Boral's journey to navigate the works approval, involving numerous meetings and correspondence, and associated approval are detailed in Year 2 ACR documentation.

The approval to complete the access tracks works was received in April 2023 and Boral expedited the works for commencement in May 2023. However, heavy rainfall was received in South East Queensland during December and January 2023. This resulted in significant impacts to the construction of the crossing, resulting in damage to the crossing. **Table 4** demonstrates the rainfall received for the month compared to the long-term average.

Further, severe storms hit the Gold Coast and other Local Government areas on 25 December 2023. Heavy rainfall and strong winds hit South East Queensland, resulting in extensive damage across the Gold Coast, Logan and Scenic Rim Local Government Areas. A total of 138.6mm of rainfall was recorded overnight and a maximum wind gust of 106km/hr was recorded. This data was extracted from Gold Coast Seaway (Station ID 040764) (BOM 2024).

**Table 4: Rainfall received compared to the mean rainfall data.**

Month Year	Rainfall Received	Mean Rainfall
November 2023	173.0 mm	96.5 mm
December 2023	115.0 mm	127.8 mm
January 2024	592.0 mm	142.8 mm

*Luscombe Alert (Station 40345) extracted from the Bureau of Meteorology 2024*

On the 19 December 2023, after receiving heavy rainfall over the weekend, the crossing was inspected and the high rainfall resulted in the rainwater going down the drain, and a washout near the headwall occurred (refer to **Photo set 2**).



**Photo set 2: Washout at Headwall, photos dated 19 December 2023.**

On the 8 January 2024, the crossing was inspected again, following heavy rainfall over the Christmas period. The heavy rainfall results in the crossing being damaged again, requiring a complete re-build once the rainfall had ceased.



**Photo set 3: Damages to crossing, dated 8 January 2024.**

Although dated outside of the Year 3 reporting period, the crossing was inspected on the 18 February 2024 following significant rainfall received on the 16 February 2024. The crossing was damaged again, requiring reconstruction.

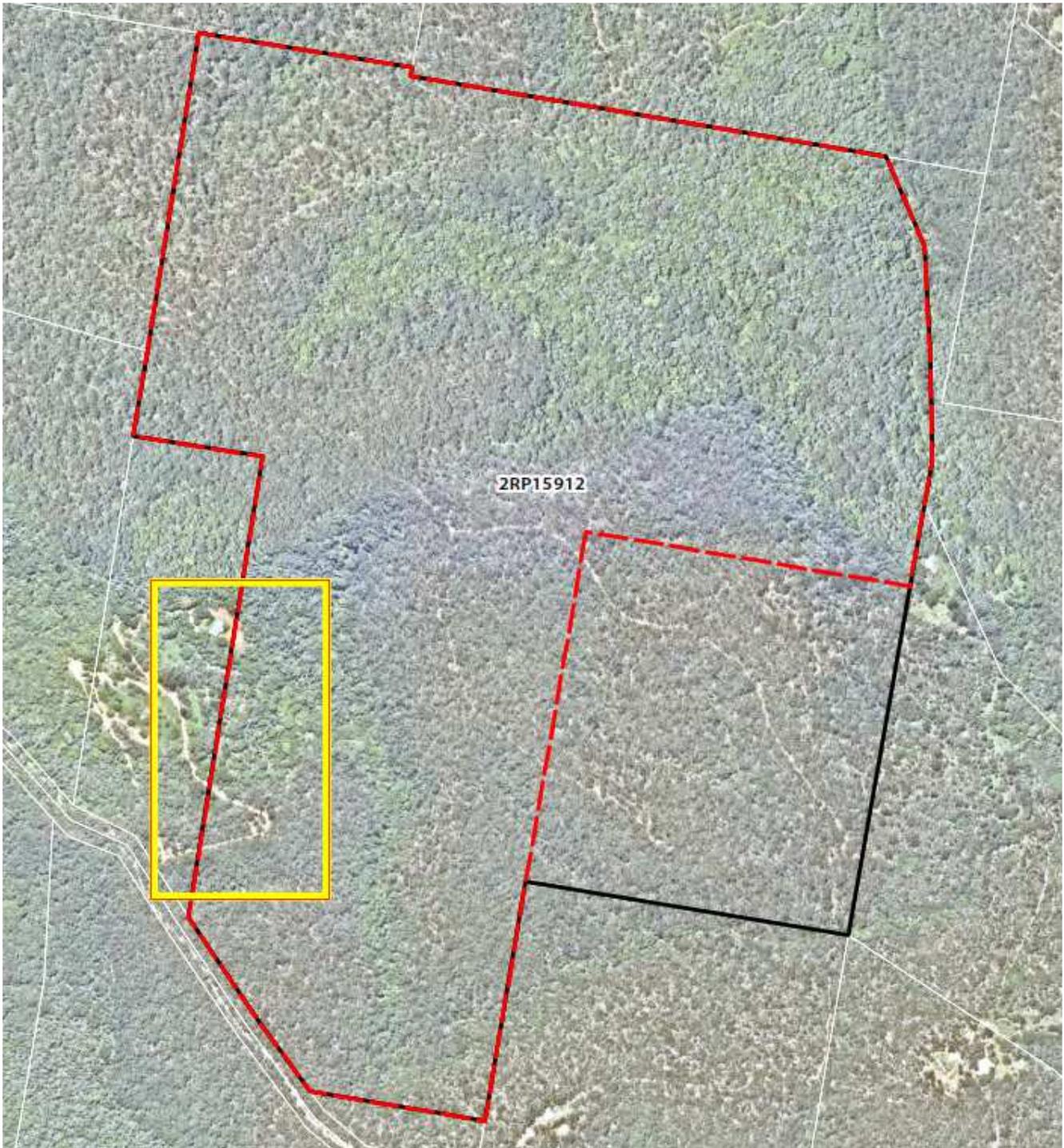
Boral have construction contractors preparing to commence the rebuild of this crossing in the coming months, for completion, to avoid any further issues with weather damage. Following construction, the design of the crossing will hold against such weather events, providing functional access to expedite the planned management actions safely and effectively.

### 2.5.7 Offsets Area Adjacent Landholder Encroachment

During Year 1, Boral proactively surveyed the offset area to ensure all works proposed under the OMP were completed within the offset area boundary. During this process, minor clearing encroachment within the offset area was detected on the western boundary. This included unauthorised clearing for an access track and clearing for a dam completed by the adjacent landholder. Refer to **Figure 3** and **Figure 4** for location. This minor, historical clearing was reported fully within the Year 1 ACR.

Under the EPBC Act approval, specifically condition 6, clearing within the offset area is not permitted. However, as the clearing was not undertaken by Boral and relates to historical clearing predating the securing of the offset area, it is considered a minor non-compliance under the EPBC Act approval. As the clearing is against the objectives of the OMP, actions were proposed to prevent further clearing of the area and integrate it back into the management regime of the offset area under the OMP and specific offset area management plans.

No additional clearing or issues arising from this historical incident have occurred during the current reporting period. The management of these areas are occurring in accordance with the requirements detailed within the Koala Habitat Rehabilitation Management Plan and as specified within the chosen management methods for the encroached area. As such, the minor non-compliance is considered to have been sufficiently addressed and resolved during the Year 1 ACR reporting period.

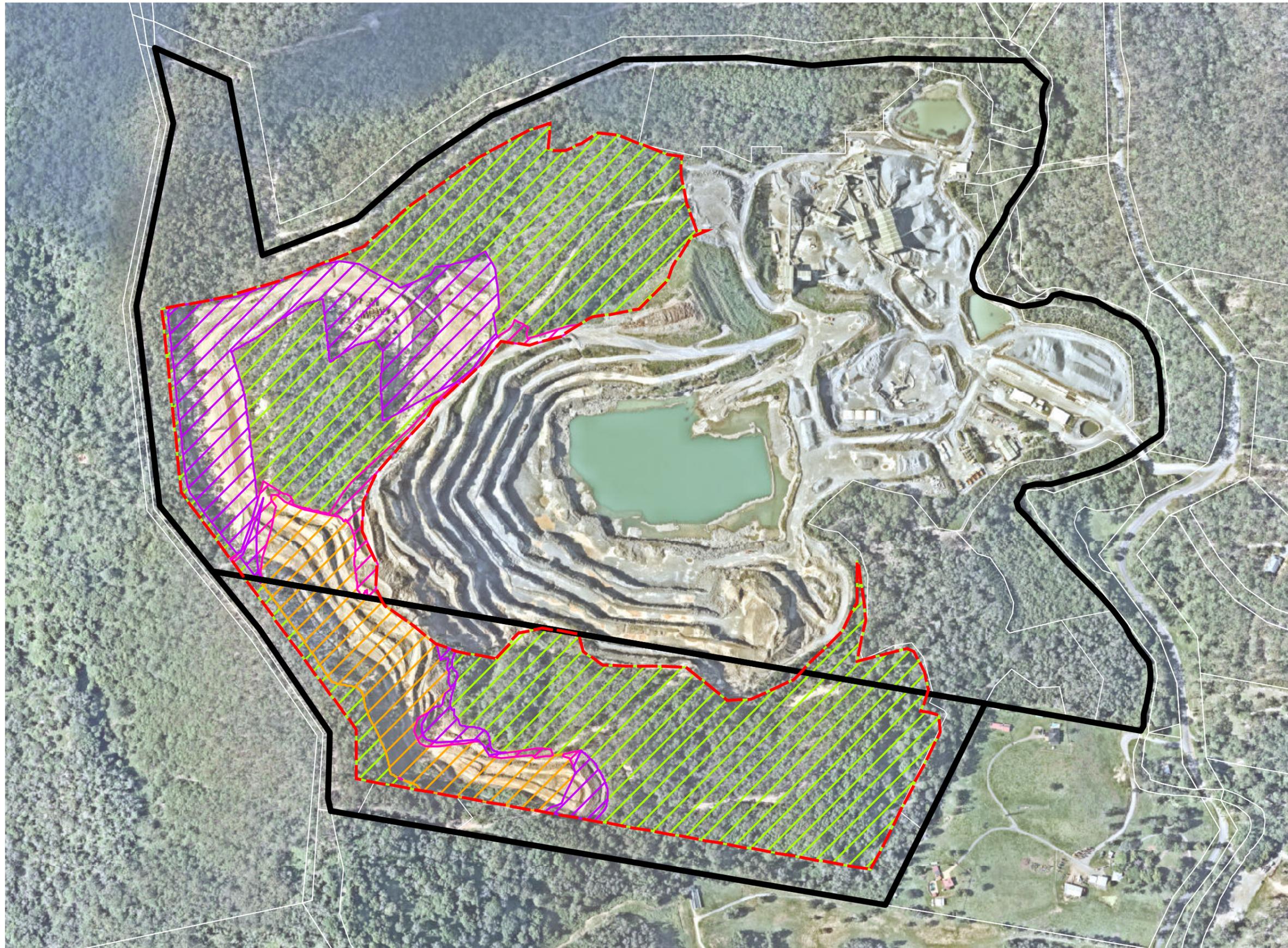


**Figure 3:** Location of accidental historical encroachment by neighbour, discovered during surveying of offsets site boundary.



**Figure 4:** Aerial showing the western boundary of the offsets site and the prior encroachment into the site unknowingly by neighbouring landholders.

# 1. Koala critical habitat clearing - impact area



**Notes:**  
 This plan was prepared as a desktop assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

**Layer Sources**  
 © State of Queensland (Department of Resources) 2024  
 Updated data available at  
<http://qldspatial.information.qd.gov.au/catalogue/>  
 © Nearmap, 2024

\*This note is an integral part of this plan/data. Reproduction of this plan or any part of it without this note being included in full will render the information shown on such reproduction invalid and not suitable for use.

**Legend**

- Project Site
- Project Area
- Qld DCDB

**Koala Critical Habitat Areas**

- Year 1 KCH Clearing [5.16 ha]
- Year 2 KCH Clearing [1.09 ha]
- Year 3 KCH Clearing [7.03 ha]
- Remaining KCH [24.34 ha]

Issue	Date	Description	Drawn	Checked
A	1/05/2024	Preliminary	TF	MM



Transverse Mercator | GDA 1994 | Zone 56 | 1:5,000 @ A3

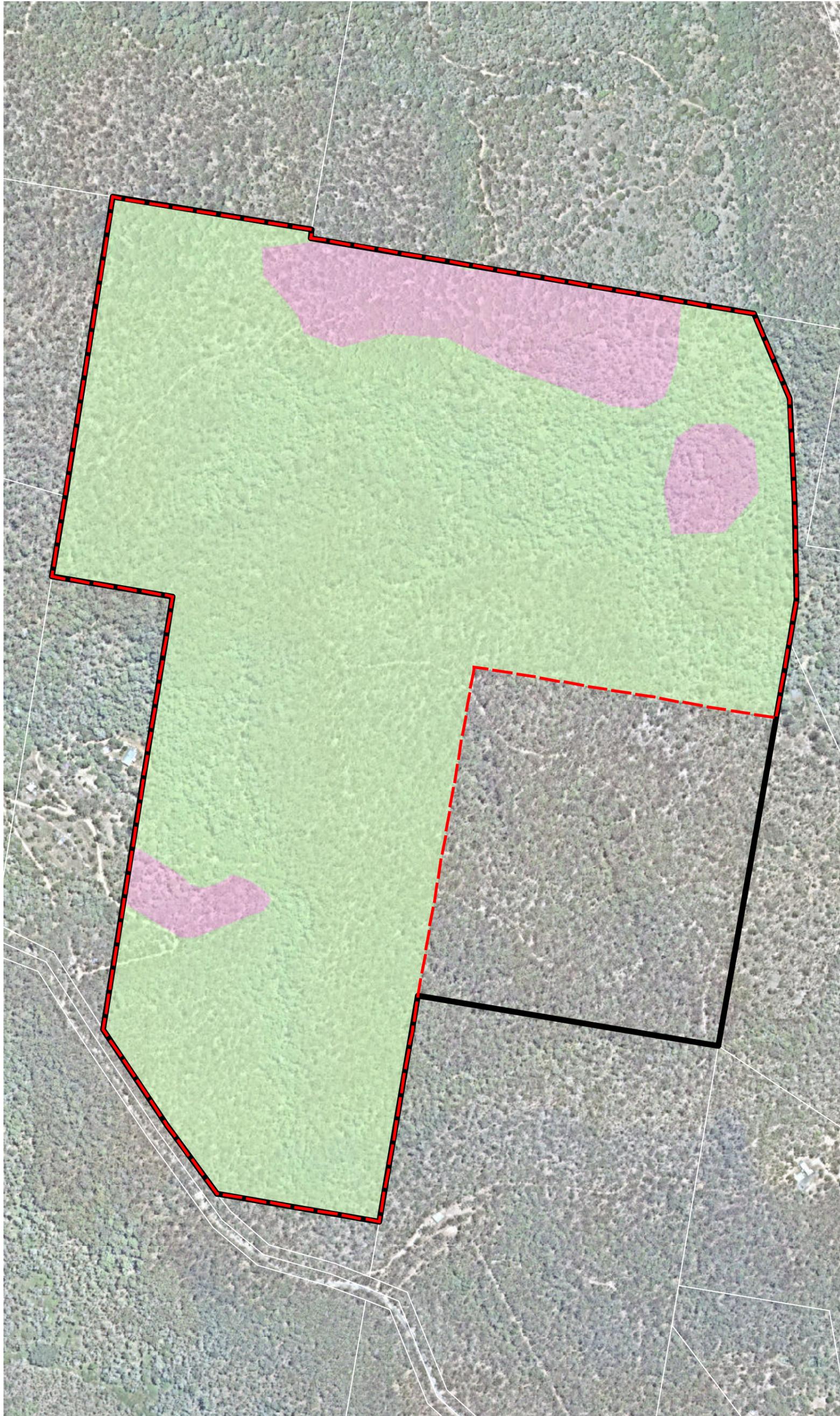
Address / RPD: 43/SP243239

1/05/2024 | 10233 E 01 YR3 Clearing Extent A



Upper Ormeau Road, Ormeau

## 2. Offset Area Management Zones



Notes:  
 This plan was prepared as a desktop assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

Layer Sources  
 © State of Queensland (Department of Resources) 2024  
 Updated data available at  
<http://qls.patrol.information.qld.gov.au/catalogue/>  
 © Neamap, 2024

\* This note is an integral part of this plan/data. Reproduction of this plan or any part of it without this note being included in full will render the information shown on such reproduction invalid and not suitable for use.

### Legend

-  Offset Site
-  Offset Area
-  Qld DCDB

### Management Zones

-  Habitat Rehabilitation Areas
-  Remnant Vegetation Management Areas

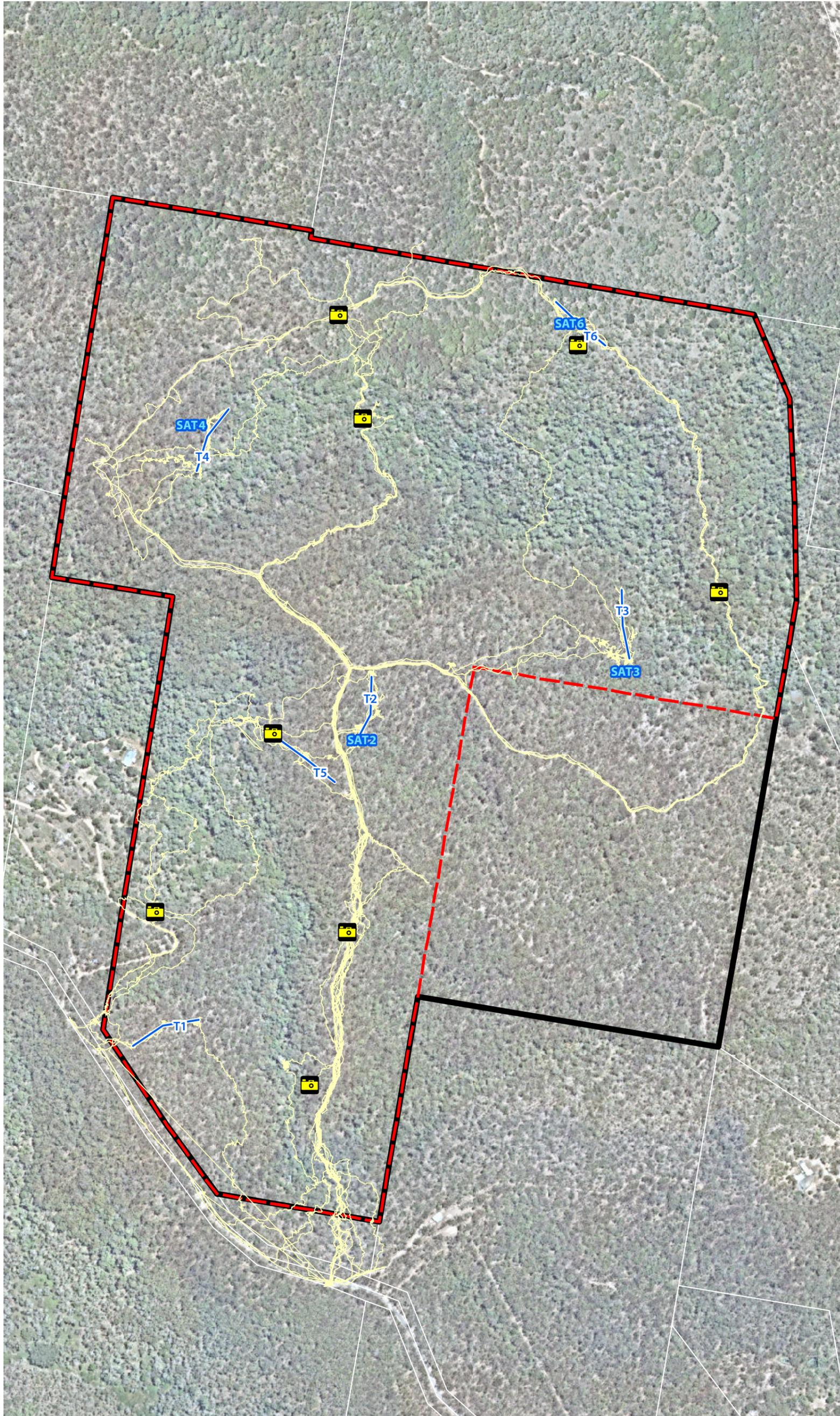
Issue	Date	Description	Drawn	Checked
A	18/03/2024	Preliminary	TF	MM

0 50 100 150 m



Transverse Mercator | GDA 1994 | Zone 56 | 1:5000 @ A3

# 3. Baseline Field Survey Effort



Notes:  
 This plan was prepared as a desktop assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

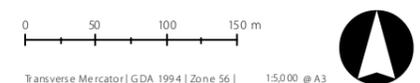
Layer Sources  
 © State of Queensland (Department of Resources) 2024  
 Updated data available at  
<http://qls.patrol.information.qd.gov.au/catalogue/>  
 © Neamap, 2024

\* This note is an integral part of this plan/data. Reproduction of this plan or any part of it without this note being included in full will render the information shown on such reproduction invalid and not suitable for use.

## Legend

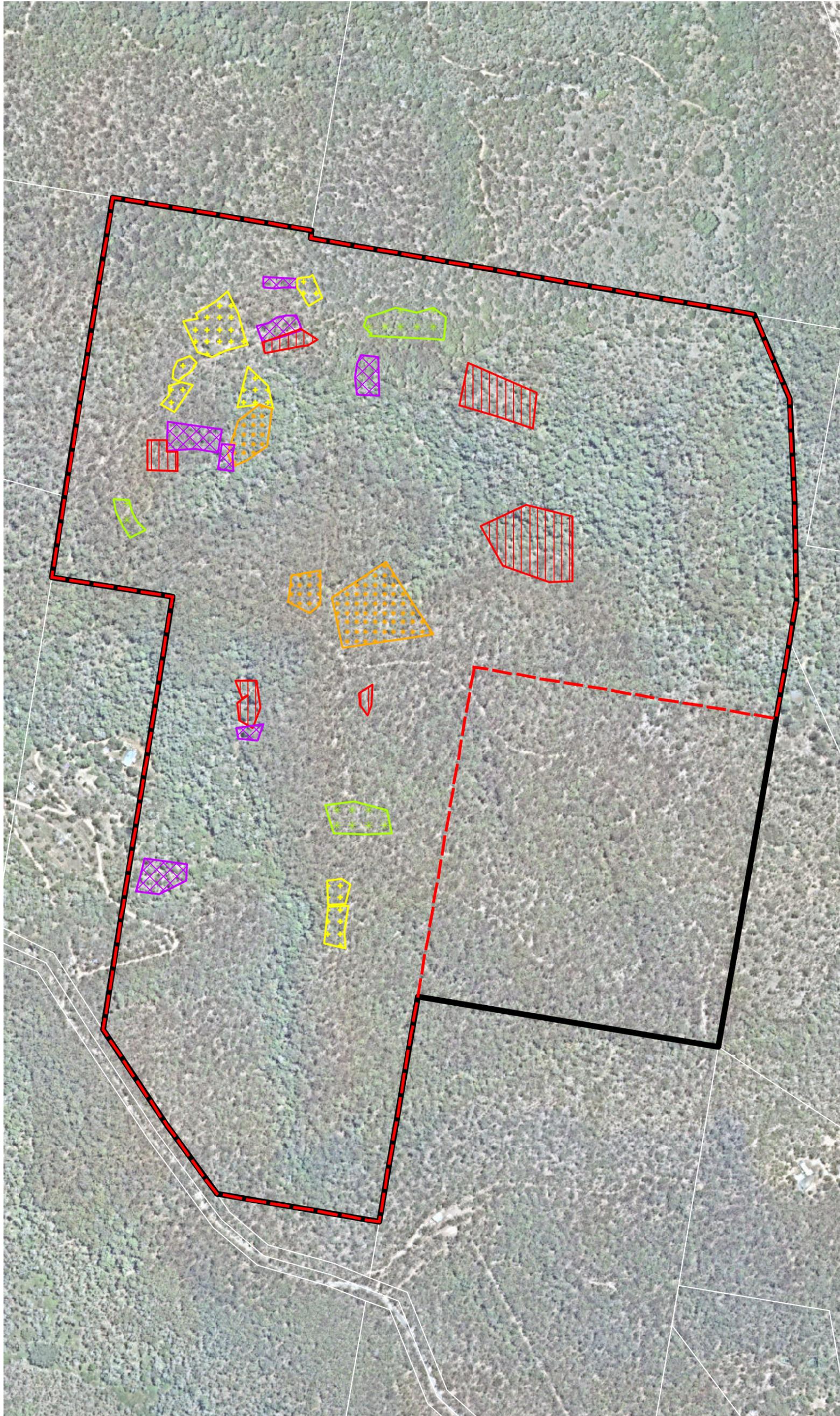
-  Offset Site
-  Offset Area
-  Old DCDB
-  Camera Trap Locations
-  SAT Survey Locations
-  Habitat Transects
-  GPS Track log

Issue	Date	Description	Drawn	Checked
A	18/03/2024	Preliminary	TF	MM



Transverse Mercator | GDA 1994 | Zone 56 | 1:5,000 @ A3

# 4. Baseline Weed Mapping



**Notes:**  
 This plan was prepared as a desktop assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

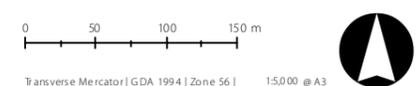
**Layer Sources**  
 © State of Queensland (Department of Resources) 2024  
 Updated data available at  
<http://qls.patrol.information.qld.gov.au/catalogue/>  
 © Neamap, 2024

\* This note is an integral part of this plan/data. Reproduction of this plan or any part of it without this note being included in full will render the information shown on such reproduction invalid and not suitable for use.

## Legend

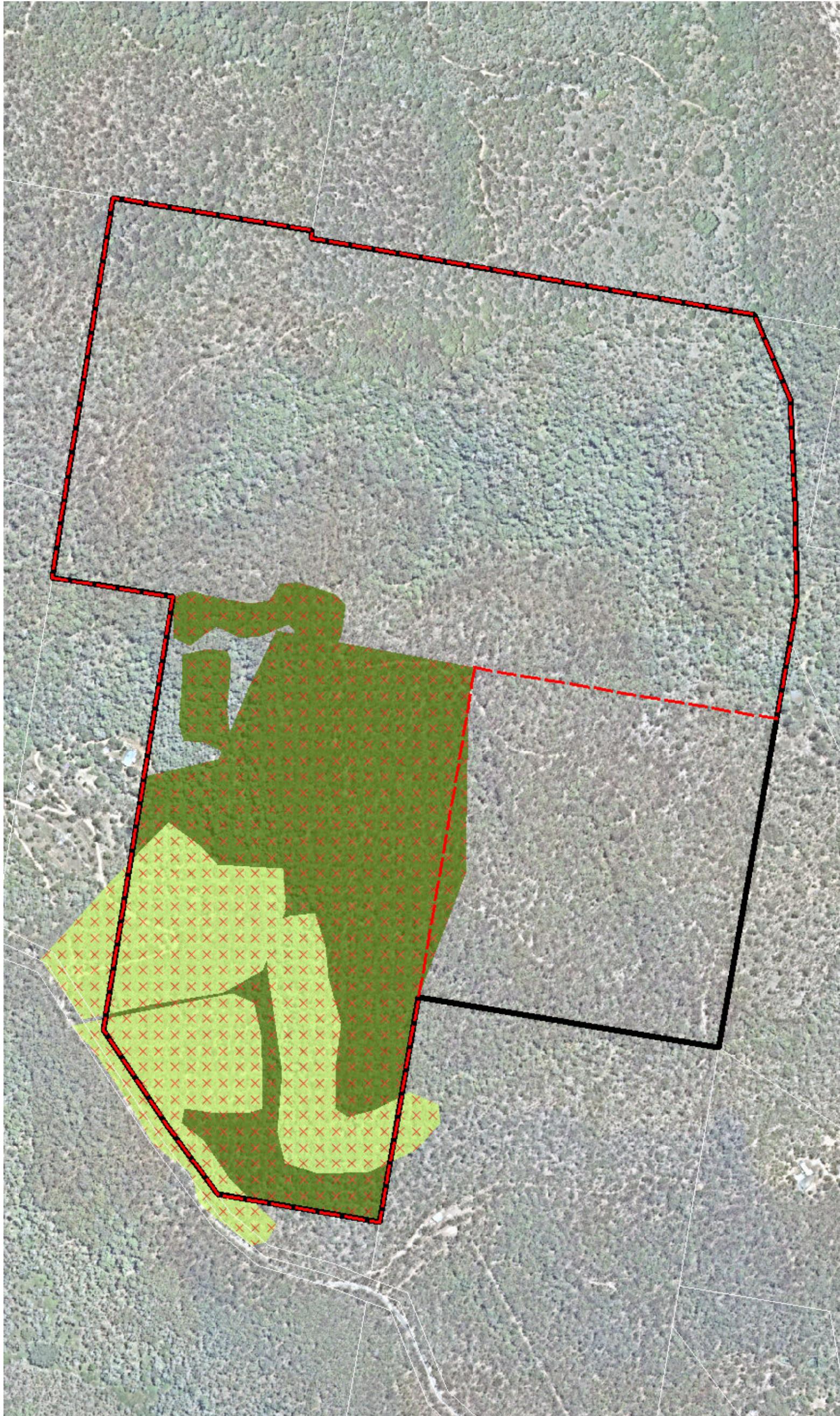
-  Offset Site
-  Offset Area
-  Qld DCDB
- Weed Mapping Results**
-  Treated Areas (Scattered to Low Density)
-  Scattered Weeds
-  Low Density
-  Medium Density
-  High Density

Issue	Date	Description	Drawn	Checked
A	18/03/2024	Preliminary	TF	MM



Transverse Mercator | GDA 1994 | Zone 56 | 1:5,000 @ A3

# 5. Offset Site Weed Treatment Areas



Notes:  
 This plan was prepared as a desktop assessment tool. The information on this plan is not suitable for any other purpose. Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

Layer Sources  
 © State of Queensland (Department of Resources) 2024  
 Updated data available at  
<http://qls.patid.information.qld.gov.au/catalogue/>  
 © Neamap, 2024

\*This note is an integral part of this plan/data. Reproduction of this plan or any part of it without this note being included in full will render the information shown on such reproduction invalid and not suitable for use.

## Legend

-  Offset Site
-  Offset Area
-  Qld DCDB
-  Weed Treatment Areas (Years 1 and 2)
-  Weed Treatment Areas (Year 3)

Issue	Date	Description	Drawn	Checked
A	24/04/2024	Preliminary	TF	MM



Transverse Mercator | GDA 1994 | Zone 56 | 1:5,000 @ A3

## 2.6. Offset Management Plan

A review of the OMP commitments and implementation is provided in **Table 5**.

**Table 5: Offset Management Plan implementation**

Management Action	Commitment	Evidence / Comments / Status
<b>OMP 1</b>	<p><b>WONS Management</b></p> <p>Management measures for the control of WONS, specifically <i>Lantana camara</i> will include;</p> <ul style="list-style-type: none"> <li>• Baseline weed mapping for WONS will be completed in 2019 will be conducted throughout the offset area and site specific treatment techniques developed depending on the location and extent of weed coverage within six months of commencement of the action.</li> <li>• All identified WONS will be treated within 12 months of commencement of the action.</li> <li>• WONS will be monitored and treated annually, including in 2019, until they are not observed on the property. Once WONS are not detected where they have previously been detected, every 2 years:                             <ul style="list-style-type: none"> <li>○ Comprehensive monitoring for WONS will be conducted.</li> <li>○ WONS that are reported or detected by comprehensive monitoring will be treated.</li> </ul> </li> <li>• A suitably qualified bush regeneration contractor will be engaged to undertake the necessary weed control.</li> </ul>	<p>The OMP specified that baseline weed mapping should be completed across the site in 2019, however, this did not occur. As weed status and coverage has the ability to change quickly, dependent on weather and rainfall, conducting baseline weed mapping across the site prior to the commencement of the action (triggering the additional actions under the OMP) may have resulted in incorrect representation to inform management actions. Despite this, this is considered a minor non-compliance.</p> <p>A Weed Management Plan (WMP) was developed by SHG in 2021 to fulfil the requirements of the OMP. The WMP details baseline surveys of weed cover and weed species detected within the offset area. Specific management actions and timeframes have been developed for the control of weeds on-site as well as regular and annual monitoring techniques.</p> <p>SHG Ecologists mapped the extent of WONS across the offset area during the 2023/2024 Year 3 reporting period (July/August 2023). WONS identified and mapped were predominantly <i>Lantana camara</i> (Lantana) (refer to <b>Plan 4</b>).</p>
	<ul style="list-style-type: none"> <li>• Control of infestations will utilise techniques that avoid disturbance to surrounding area.</li> </ul>	<p>Bushcare Services were engaged to complete ongoing weed management across the offset site. Despite the contractor providing continual management services across the offset area, the extent of weed treatment work was significantly limited by safe accessibility. As discussed in <b>Section 2.5.6</b>, a combination of lack of vehicle access tracks and severe track damage /erosion limited access across the site. As a result, weed treatment was limited to more accessible portions of the offset area located within the central and southern portions of site, as demonstrated in <b>Plan 5</b>.</p> <p>Track repair and rebuild design have been undergoing the approval process under the Gold Coast City Planning Scheme for an operational works application. This approval was obtained in the Year 3 reporting period (April 2023) and thus Boral will began track works in May 2023 to increase access and safety across the site.</p> <p>Bushcare Services continued treating WONS in the southern portion the site and moved northwards (refer to <b>Plan 5</b>) in the lack of suitable access during the Year</p>

Management Action	Commitment	Evidence / Comments / Status
<p><b>OMP 2</b></p>	<p><b>Rehabilitation and Regeneration Management Plan</b></p> <p>Management measures for rehabilitation and regeneration include:</p> <ul style="list-style-type: none"> <li>• Baseline mapping to identify rehabilitation and regeneration areas and development of a rehabilitation plan specifying techniques and species to be utilised will be completed within 12 months of commencement of the action.</li> <li>• Rehabilitation areas are to consist of one canopy tree per 10m<sup>2</sup>, three shrubs per 10m<sup>2</sup> and one groundcover per 2m<sup>2</sup>. Where natural regeneration is the preferred approach, infill planting will be implemented where regeneration has been unsuccessful after three years.</li> <li>• All rehabilitation activities are to be carried out by a suitably qualified bush regeneration contractor.</li> <li>• The plants reinstated in any particular location must be consistent with the mapped regional ecosystem or pre-clear regional ecosystem over that area.</li> <li>• All rehabilitation is to commence within three years of commencement of the action. Regeneration areas that require infill planting will be identified and regeneration actions outlined in the third annual compliance report.</li> </ul>	<p>3 reporting period but will be provided better access following the recent approval.</p> <p>It is noted that as all WONS were not treated across the offset site this is considered a minor non-compliance. Once access tracks have been re-instated, Bushcare Services will be able to complete the weed treatment efficiently and safely.</p> <p>A minor non-compliance was identified in the Year 1 ACR where baseline weed mapping and treatment did not commence in 2019 as specified within the OMP. As the action did not commence until 2021, this baseline weed mapping and treatment occurred following this and will continue until WONS are not identified on the property, as per the OMP.</p> <p>A Koala Habitat Management Plan (KHMP) was completed by SHG to guide rehabilitation efforts across the offset area. This was addressed in the Year 1 ACR. Baseline mapping across the site identified areas suitable for different restoration management techniques (refer Plan 2 of KHMP).</p> <p>Treatment of WONS is currently being carried out across the offset area which are required works leading into the commencement of regeneration and infill planting. As discussed in <b>Section 2.5.6</b>, on-going access issues has resulted in Weed Management being limited to the southern and central portions of the site.</p> <p>Further, infill plantings have not been completed due to ongoing access issues. The lack of access resulted in the rehabilitation areas not being able to safely and effectively accessed to import the tube-stock to the planting areas as well as water the plantings whereby the tube-stock was able to be planted.</p> <p>As such, this is considered a non-compliance and will be discussed further in <b>Section 4</b>.</p>
<p><b>OMP 3</b></p>	<p><b>Legally securing the offset area</b></p> <p>A Voluntary Declaration will be placed over the offset area to legally secure the conservation use on the land prior to the action commencing. Boral will continue to manage the offset area for the life of the approval.</p>	<p>The Proponent legally secured the offset via a Voluntary Declaration under the <i>Vegetation Management Act 1999</i> on the 22 February 2019. In accordance with Condition 5, the offset was legally secured prior to the official commencement of the action on the 3 March 2021. Evidence was provided in the Year 1 ACR.</p>
<p><b>OMP 4</b></p>	<p><b>Pest Management Plan</b></p>	<p>Baseline monitoring of pest species across the offset site was completed by SHG in 2021 which identified <i>Vulpes vulpes</i> (European red fox) as utilising the site. While camera trapping during baseline surveys was not successful in detecting</p>

Management Action	Commitment	Evidence / Comments / Status
	<p>Management measures for the control of feral or unwanted domestic dogs across the offset site include:</p> <ul style="list-style-type: none"> <li>• Baseline pest monitoring including motion activated cameras and scat analysis to identify evidence of feral or unwanted dogs (and other pest species), and development of a property wide feral animal management program specifying techniques (trapping, baiting, shooting) to be utilised will be completed within 12 months of commencement of the action.</li> <li>• Annual pest monitoring by a suitably qualified pest management contractor, with evidence of pest animals GPS recorded. Where there is evidence of pest animals, targeted trapping and baiting programs will be implemented by an independent suitably qualified pest management contractor. Where annual monitoring does not identify any feral or pest species monitoring will reduce to 2 yearly.</li> <li>• Where practical and appropriate, participate cooperatively in pest management planning and implementation with local land managers (government departments, local governments and utility providers) to ensure effective pest management in the locality of the offset area.</li> <li>• Install appropriate signage informing the area is under feral control.</li> </ul>	<p><i>Canis lupus familiaris</i> (wild dogs), dog prints were observed across the offset area during baseline surveys. The results of the baseline monitoring are detailed in the Vertebrate Pest Management Plan (VPMP) produced by SHG in 2021. The VPMP outlines specific pest management measures and methods to be undertaken throughout the life of the offset.</p> <p>Site access during Year 1, Year 2 and Year 3 has been highly restricted due to the main access track being severely eroded, with the above-average rainfall in the previous reporting period contributing to the deterioration of access tracks. This restricted access removed any ability for vehicular access onto the site for management purposes, placing limitations on work which could be completed, while prioritising compliance with animal ethics requirements for pest management.</p> <p>As discussed in <b>Section 2.5.6</b>, the prolonged approval process with City of Gold Coast Council and high rainfall and continued to inhibit construction of the access tracks and safe access of the site.</p> <p>The completion of management tracks throughout the offset site will allow for increased access, affording the efficient and appropriate use of pest management techniques across the offset site.</p> <p>For the reasons mentioned above, pest management activities have not commenced within the offset area, with only monitoring surveys being completed. Annual monitoring was completed by Biodiversity Australia which identified <i>Vulpes vulpes</i> (European Red Fox) as the only non-native vertebrate pest within the offset area (refer <b>Appendix C</b> for monitoring report).</p> <p>Signage will be installed as a component of the commencement of onsite trapping and pest species management for safety and in compliance with the conditions.</p>
<p><b>OMP 5</b></p>	<p><b>Koala Habitat Quality Management Plan</b></p> <p>The use of the habitat quality assessment methodology prepared by the Queensland Herbarium (DEHP 2017) provides a repeatable and consistent method for determining habitat quality specific to koalas. The method also utilises benchmark scores to ensure all sites measured are calibrated against a known standard. This calibration provides additional confidence and assurance in the accuracy of the method to score habitat quality.</p>	<p>A Koala Habitat Management Plan (KHMP) (Rehabilitation Plan) was developed for the offset area which details strategies that will be implemented in order to achieve the Koala habitat rehabilitation aims set out in the OMP.</p> <p>The management zones within the offset area include 'Remnant Vegetation' and 'Habitat Rehabilitation.' Management of WONS, namely Lantana, occurred within the central and southern portion of the offset area, assisting with natural regeneration of native vegetation. Management of WONS was not able to be completed throughout the entire offset area due to the lack of suitable access</p>

Management Action	Commitment	Evidence / Comments / Status
	<p>The habitat quality monitoring is to be undertaken at six (6) permanent transect locations established during baseline habitat quality score assessments within the koala offset area.</p> <p>The total area of the offset site is 77 ha consisting of non-remnant vegetation and three REs, which are sized as follows:</p> <ul style="list-style-type: none"> <li>• 32.6 ha of RE12.11.3</li> <li>• 37.5 ha of RE12.11.5</li> <li>• 1.6 ha of RE12.11.10</li> <li>• 5.3 ha of non-remnant vegetation</li> </ul> <p>Habitat quality monitoring will be undertaken annually for the first three (3) years and then once every five (5) years to determine if the target quality score has been maintained for the offset area over the EPBC Act period of approval (maintain a habitat quality score of eight (8)). The habitat quality monitoring is to be reported in the ACR every five (5) years or the subsequent year that the monitoring is completed.</p> <p>Koala usage monitoring will be carried out as part of the habitat monitoring. Surveys will be carried out using the Spot Assessment Technique (SAT) at all six (6) permanent transect locations.</p>	<p>tracks which created safety concerns for the weed management personnel as well as not being able to access the entire site with the necessary equipment. Annual habitat quality monitoring of Koala habitat utilising the MHQA methodology was conducted at six permanent transect locations across the offset area in August 2023. MHQA scores for the offset area are reported within this ACR. This includes five transects within the Remnant vegetation area and one transect within the non-remnant vegetation area (refer to <b>Plan 3</b>).</p> <p>Habitat quality scores remained relatively steady between Year 2 and Year 3, with a slight increase in Vegetation Quality at AU1 (RE 12.11.5), AU2 (RE 12.11.3) and AU3 (RE 12.11.10). Habitat quality of AU4 (non-remnant 12.11.10) remained constant with Year 2 assessment.</p> <p>Koala scats were recorded during SAT surveys at one transect location, demonstrating Koalas continue to use the offset site.</p>
<b>OMP 6</b>	<p><b>Bushfire Management Plan</b></p> <p>The Bushfire Management Plan will be prepared by a suitably qualified professional and will detail: current vegetation condition and fire risk, locations of current and required firebreaks and fire control lines, current fuel loads, recommended actions and timeframes for maintenance of bushfire risk within the context of the adapted Regional Ecosystem Description Database guidelines and biodiversity outcomes sought for the offset area.</p> <p>Management measures will be outlined in the BMP for the control of bush fire across the offset area but will include:</p> <ul style="list-style-type: none"> <li>• Installation of firebreaks and fire trails.</li> <li>• Annual inspection and maintenance of firebreaks and access tracks required to achieve compliance with Offset Area Bushfire Management Plan.</li> <li>• Prescribed burning undertaken in consultation with, and under the guidance of the Queensland Rural Fire Brigade and in compliance with the Fire and Emergency Services Act 1990.</li> <li>• Use of domestic livestock or other methods to reduce fuel loads in the event that a fire risk professional (e.g. representative of Queensland Rural</li> </ul>	<p>A Bushfire Management Plan (BMP) was developed for the site by Land and Environment Consultants (LEC) in accordance with OMP Management Action 6 in 2021. This BMP details management measures that will be implemented across the site to reduce risk of bushfire.</p> <p>A Burn Plan was developed for the site by Fireland in January 2024 in accordance with the requirements under the Bushfire Management Plan for the site, under the OMP Management Action 6. The BMP details management measures that will be implemented across the site to reduce risk of bushfire, with an annual Burn Plan forming a component of these management measures.</p> <p>The Burn Plan incorporates a burn map, complexity ratings, pre-burn works order, a risk assessment and contingency maps. On-ground fire management of the offset has not commenced at present due to unsuitable weather conditions as well as access limitations across the site. These approvals and the issues with obtaining them is detailed under <b>Section 2.5.6</b> and within <b>Section 4</b>.</p>

Management Action	Commitment	Evidence / Comments / Status
	Fire Service) and a suitably qualified environmental scientist deem that conditions are not suitable for an ecological burn and that grazing is appropriate to manage a high level of fire risk. Level of risk (and any need to repeat this grazing cycle) is to be reassessed by the aforementioned professionals following the grazing event.	

**Table 6: Modified Habitat Quality Assessment Scores – Year 3**

Condition characteristics	Max. score	Score (RE12.11.3)	Score (RE12.11.5)	Score (RE12.11.10)	Score(non-remnant)
<b>Site Condition (30%)</b>					
<b>Recruitment of woody perennial species</b>	5	5	5	5	3
<b>Native plant species richness - trees</b>	5	5	5	2.5	2.5
<b>Native plant species richness - shrubs</b>	5	2.5	2.5	2.5	0
<b>Native plant species richness - grasses</b>	5	2.5	2.5	5	5
<b>Native plant species richness - forbs</b>	5	2.5	2.5	2.5	0
<b>Tree canopy height</b>	5	5	5	3.33	4
<b>Tree canopy cover</b>	5	5	5	3.33	5
<b>Shrub canopy cover</b>	5	3	3	3	0
<b>Native perennial grass cover</b>	5	5	5	5	5
<b>Organic litter</b>	5	5	5	5	5
<b>Large trees</b>	15	5	15	5	5
<b>Coarse woody debris</b>	5	5	5	5	2
<b>Weed cover</b>	10	3	5	3	3
<b>Quality and availability of food and foraging habitat</b>	10	10	10	10	10
<b>Quality and availability of shelter</b>	10	10	10	10	10
Site condition score	<b>100</b>	<b>72.5</b>	<b>84.5</b>	<b>70.16</b>	<b>59.5</b>
Site condition score (out of 3)	<b>3</b>	<b>2.18</b>	<b>2.54</b>	<b>2.10</b>	<b>1.79</b>

Condition characteristics	Max. score	Score (RE12.11.3)	Score (RE12.11.5)	Score (RE12.11.10)	Score(non-remnant)
<b>Site Context (30 %)</b>					
Size of the patch	10	7	7	7	7
Connectedness	5	4	4	4	4
Context	5	5	5	5	5
Ecological corridors	6	6	6	6	6
Role of site location to species overall population	5	4	4	4	4
Threats to the species	15	15	15	15	15
Species mobility capacity	10	7	7	7	7
Site context score	<b>56</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>
Site context score (out of 3)	<b>3</b>	<b>2.57</b>	<b>2.57</b>	<b>2.57</b>	<b>2.57</b>
<b>Species Stocking Rate (40 %)</b>					
Species stocking rate score	<b>70</b>	<b>40</b>	<b>45</b>	<b>40</b>	<b>40</b>
Species stocking rate score (out of 4)	<b>4</b>	<b>2.29</b>	<b>2.57</b>	<b>2.29</b>	<b>2.29</b>
<b>Unit Scores Total</b>	<b>(rounded)</b>	<b>7.03</b>	<b>7.68</b>	<b>6.96</b>	<b>6.64</b>

**Table 7: Comparison of MHQA Scores between baseline, Year 1, Year 2 and Year 3**

Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Comment
<b>RE 12.11.3</b>					
Site Condition	2.13	2.12	2.12	2.18	Baseline survey transects were completed in different locations, resulting in variations to the MHQA scores.
Site Context	2.57	2.57	2.57	2.57	
Species Stocking Rate	2.57	2.57	2.57	2.29	However, Year 1, Year 2 and Year 3 locations were consistent. Year 1 and Year 2 site condition has remained steady, there was a

Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Comment
					slight decrease in overall score recorded in Year 3.
					The slight decrease in scoring results from no scats being detected during Year 3 SAT surveys in AU1.
<b>RE 12.11.5</b>					
Site Condition	2.26	2.33	2.45	2.54	Baseline survey transects were completed in different locations, resulting in variations to the MHQA scores. However, Year 1, Year 2 and Year 3 locations were consistent. Site condition has increased slightly in Year 3 to levels recorded during Baseline surveys.
Site Context	2.57	2.57	2.57	2.57	
Species Stocking Rate	2.57	2.57	2.29	2.57	
<b>RE 12.11.10</b>					
Site Condition	2.15	1.97	1.95	2.10	Baseline survey transects were completed in different locations, resulting in variations to the MHQA scores. However, Year 1, Year 2 and Year 3 locations were consistent and site condition has remained steady across Years 2 and 3.
Site Context	2.57	2.57	2.57	2.57	
Species Stocking Rate	2.57	2.57	2.29	2.29	
<b>Non-remnant</b>					
Site Condition	-	1.82	1.79	1.79	No surveys were completed during Baseline surveys, thus results from Year one surveys are used as the baseline comparison. This transect will monitor the rehabilitation efforts within the non-remnant areas. Year 1, Year 2 and Year 3 locations remain
Site Context	-	2.57	2.57	2.57	
Species Stocking Rate	-	2.29	2.57	2.29	

Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Comment
					consistent with a slight decrease in site condition to levels recorded during Year 1.  Further, no scats were observed during Year 3 surveys, resulting in a decrease in scoring for the species stocking rate.

### 3. EPBC Conditions and Compliance

**Table 8** details the Conditions attached to the Ormeau Quarry Approval (EPBC 2016/7797). Sections 2-5 above provide details on process, steps and methodologies used to achieve the Conditions under the approval.

**Table 8: Compliance Audit of EPBC 2016/7797 Conditions for Ormeau Quarry**

Condition Number	Condition	Is The Project compliant with this condition?	Evidence
1	The person taking the action must not undertake the action outside the Project Site as shown in Attachment A.	Compliant	The action has not occurred outside of the Project Site as shown in Attachment A of the EPBC Approval.
2	The person taking the action must not clear more than 38 hectares of koala habitat in the Project Site as shown in Attachment A.	Compliant	<b>Plan 1</b> shows the clearing of Koala critical habitat that has occurred within the impact area.  A total of <b>13.28 ha</b> has been cleared in total which includes 7.03 ha cleared during Year 3.
3	The person taking the action must implement the Offset Strategy.	Compliant	The Project is compliant with implementing the Offset Management Plan, refer to <b>Table 5</b> .
4	In the case that the Offset Strategy cannot be implemented on Lot 2 RP15912 and in accordance with the EPBC Act Environmental Offsets Policy (2012), an alternate Offset Strategy must be submitted to the Minister for approval prior to the commencement of the action.	Not applicable	Lot 2 on RP15912 was legally secured under Voluntary Declaration on 22 February 2019.
5	The person taking the action must not commence the action until the offset area is legally secured.	Compliant	Lot 2 on RP15912 was legally secured under Voluntary Declaration on 22 February 2019.
6	The person taking the action must prepare and submit an Offset Management Plan for the Minister's approval to offset the loss of 38 hectares of koala habitat. The person taking the action must not commence the action unless the Minister has approved the Offset Management Plan in writing. The approved Offset Management Plan must be implemented by the person taking the action. The Offset Management Plan must be prepared in accordance with the Department's	Compliant	The Offset Management Plan was completed by Saunders Havill Group in December 2018 and approved by DCCEEW.

Condition Number	Condition	Is The Project compliant with this condition?	Evidence
	Environmental Management Plan Guidelines, and the EPBC Act Environmental Offsets Policy (2012) and include:		
6a	detail of the offset area(s) required to address the loss of 38 hectares of koala habitat consistent with the Offset Strategy or subsequent Offset Strategy described at condition 4;	Compliant - As per Condition 6	
6b	detail of the proposed legal mechanism and timeframes for securing the offset area(s);	Compliant - As per Condition 6	
6c	a map of the offset area(s) in relation to other habitats and biodiversity corridors;	Compliant - As per Condition 6	
6d	information about how the offset area(s) provide connectivity with other koala habitat and biodiversity corridors;	Compliant - As per Condition 6	
6e	a description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data;	Compliant - As per Condition 6	
6f	a description of the management measures (including timing, frequency and longevity) that will be implemented, including discussion of how measures outlined take into account relevant conservation advice;	Compliant - As per Condition 6	
6g	performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions;	Compliant - As per Condition 6	
6h	a detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;	Compliant - As per Condition 6	
6i	potential risks to the successful implementation of the plan, and a description of the contingency measures that would be implemented to mitigate against these risks, including a bushfire management plan and a pest species management plan.	Compliant - As per Condition 6	
7	The person taking the action must prepare and submit an Environmental Management Plan for the Minister's approval	Compliant	An Environmental Management Plan was completed by Saunders Havill Group in November 2018.

Condition Number	Condition	Is The Project compliant with this condition?	Evidence
	to ensure the protection of EPBC Act listed species on the project site. The Environmental Management Plan must include:		
<b>7a</b>	Details of the mitigation and management measures that will be implemented on the Project Site including, but not limited to:	Compliant Condition 7	– as per
<b>7a. i.</b>	all vehicles within the Project Site be restricted to travel at 40km/hr or less except in an emergency;	Compliant Condition 7	– as per
<b>7a. ii.</b>	signage alerting drivers to the risk of collisions with koalas;	Compliant Condition 7	– as per
<b>7a. iii.</b>	measures to avoid or minimise impacts to the Ormeau Bottle Tree ( <i>Brachychiton</i> sp. Ormeau [L.H.Bird AQ435851]) during clearing or operations; and	Compliant Condition 7	– as per
<b>7a. iv.</b>	measures to avoid or minimise impacts to the Grey-Headed Flying Fox ( <i>Pteropus poliocephalus</i> ) during clearing or operations.	Compliant Condition 7	– as per
<b>General</b>			
<b>8</b>	Within 20 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.	Compliant	The action began on the 3 February 2021 and the Department was advised on the 4 February 2021 via e-mail confirmation. Evidence of this was provided in the Year 1 ACR.
<b>9</b>	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	Boral Resources and SHG are responsible for maintaining accurate records of all activities associated with the action.  No request from the Department was made.

Condition Number	Condition	Is The Project compliant with this condition?	Evidence
10	Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published.	Compliant	The final day of Year 3 was 2 February 2024, the ACR is due to be published to Boral's website by no later than the 3 May 2024 at the below weblink:  <a href="https://www.boral.com.au/locations/boral-quarries-ormeau-kingsholme">https://www.boral.com.au/locations/boral-quarries-ormeau-kingsholme</a>
11	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Not applicable	No request from the Minister was made to complete an independent audit.
12	The person taking the action may choose to revise a Management Plan approved by the Minister under conditions 3, 4, 6 and 7 without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact. If the person taking the action makes this choice it must:	Not applicable	No revisions to the management plans were made in the reporting period.
12 i.	Notify the Department in writing that the approved plan has been revised and provide the Department with an electronic copy of the revised plan;	Not applicable	No revisions to the management plans were made in the reporting period.
12 ii.	Implement the revised plan from the date that the plan is submitted to the Department; and	Not applicable	No revisions to the management plans were made in the reporting period.
12 iii.	For the life of this approval, maintain a record of the reasons the person taking the action considers that taking the action in accordance with the revised plan would not be likely to have a new or increased impact.	Not applicable	No revisions to the management plans were made in the reporting period.

Condition Number	Condition	Is The Project compliant with this condition?	Evidence
13	The person taking the action may revoke their choice under condition 12 at any time by notice to the Department. If the person taking the action revokes the choice to implement a revised plan without approval under section 143A of the EPBC Act, the plan approved by the Minister must be implemented.	Not applicable	The proponent did not revoke their choice under condition 12 within the current reporting period.
14	Condition 12 does not apply if the revisions to the approved plan include changes to environmental offsets provided under the plan in relation to a matter protected by a controlling provision for the action, unless otherwise agreed in writing by the Minister. This does not otherwise limit the circumstances in which the taking of the action in accordance with a revised plan would, or would not, be likely to have new or increased impacts.	Not applicable	No revisions to the management plans were made in the reporting period.
15	If the Minister gives a notice to the person taking the action that the Minister is satisfied that the taking of the action in accordance with the revised plan would be likely to have a new or increased impact, then:	Not applicable	No revisions to the management plans were made in the reporting period.
15 i.	Condition 12 does not apply, or ceases to apply, in relation to the revised plan; and	Not applicable	No revisions to the management plans were made in the reporting period.
15 ii.	The person taking the action must implement the plan approved by the Minister.	Not applicable	No revisions to the management plans were made in the reporting period.
	To avoid any doubt, this condition does not affect any operation of conditions 12, 13 and 14 in the period before the day the notice is given. At the time of giving the notice the Minister may also notify that for a specified period of time that condition 12 does not apply for one or more specified plans required under the approval.		
16	Conditions 12, 13, 14 and 15 are not intended to limit the operation of section 143A of the EPBC Act which allows the person taking the action to submit a revised plan to the Minister for approval.	Not applicable	No revisions to the management plans were made in the reporting period.
17	If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced	Not applicable	The action commenced on 3 February 2021.

Condition Number	Condition	Is The Project compliant with this condition?	Evidence
	<p>the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.</p>		
18	<p>Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all management plans referred to in these conditions of approval on its website. Each management plan must be published on the website within one month of being approved by the Minister or submitted under condition 12.</p>	Compliant	<p>All management plans referred to under this approval (the Environmental Management Plan and Offset Management Plan) were published on Boral's website within one month of approval by the Minister.</p>

## 4. Non-compliances

### 4.1. Weed Management and Rehabilitation

The OMP states that all WONS will be treated within 12 months of the commencement of the Action. As detailed in **Section 2.4**, management of WONS was unable to be completed across the entirety of the Offset site in Year 1, Year 2 and Year 3 attributed to ongoing access issues. Areas of weed management has been completed in the southern portion of the offset site where access was gained by the weed management contractor.

The approval process under the local legislation, required to allow clearing for conservation management purposes within the offset site, is relatively complex, and was being actively driven by Boral in Year 2 to attempt to progress the installation of minor tracks to provide for management purposes. Approval was granted from Gold Coast City Council in April 2023, with works commencing in May 2023.

As discussed in **Section 2.5.1** and **Section 2.5.6**, Boral has attempted to provide safe access for the contractors by expediting construction for May 2023 as soon as the approval was received in April 2023. However, additional operational works requirements by local council caused several months delay in allowing the works to occur and in conjunction with the significant rainfall that occurred in November, December 2023 and January 2024, the crossing has been impacted in three separate occasions, resulting in multiple re-constructions of the crossing. This crossing has continued to affect vehicle access into the site to allow contractors to safely and effectively work.

As demonstrated in **Plan 5**, areas of the southern portion of the offset area were treated by Bushcare Services. A large area of WONS was treated during Year 3, with efforts concentrated within more accessible portions of the offset area within the central and southern portions however, as weed treatment could not occur across the entire offset area, despite constant work onsite, this is identified as a minor non-compliance under the requirements of the EPBC Act OMP (Condition 6). The inaccessibility of the site during Years 1, 2 and 3, combined with extreme rain events, rendering access even more difficult, has led to Boral preparing to complete the remainder of the site weed and planting objectives following the reconstruction of the crossing, via increased numbers of contractors a revision of weed treatment timeframes over the 24-month period.

However, as the entire offset area was not treated, this is a non-compliance under the OMP specifications (Condition 6). It is acknowledged that

Further, due to the ongoing access issues and the offset area not being entirely treated for WONS, this has resulted in a flow on affect to rehabilitation and regeneration efforts. Areas that require infill planting have also not been completed due the offset area not being able to provide vehicle access to support transfer of seedlings and sufficient water to support early stages of regenerative growth. As rehabilitation was not commenced within three years of commencement of the action, this is considered a minor non-compliance under the requirements of the EPBC Act OMP (Condition 6).

## 4.2. Bushfire Management

A Bushfire Management Plan has been completed for the offset site, provided in the Year 1 ACR. The BMP details management measures that will be implemented across the site to reduce risk of bushfire, with an annual Burn Plan forming a component of these management measures. The eroded and damaged state of the main access track in conjunction with an overall lack of access tracks inhibited the commencement of active operations for bushfire management across the offset site throughout previous reporting years.

The inaccessibility of the site resulted in on-ground Bushfire Management actions, identified within the BMP, not commencing during the Year 2 reporting period, where the BMP stated a prescribed burn in FMU2 should have been completed, which was unable to safely be completed. This was considered a minor non-compliance under Condition 6.

The BMP stipulated that a prescribed burn of FMU 5 be completed in 2024. A Burn Plan was developed for the site by Fireland in accordance with the requirements under the Bushfire Management Plan for the site, under the OMP Management Action 6. The Burn Plan incorporates a burn map, complexity ratings, pre-burn works order, a risk assessment and contingency maps.

The prescribed burn for FMU 5 was not completed during the Year 3 reporting period, due to unsuitable weather conditions.

## 5. Appendices

### Appendix A

EPBC Approval (EPBC 2016/7797)

### Appendix B

SHG camera trapping images

### Appendix C

Non-native Vertebrate Pest Monitoring Report Year 3 – Biodiversity Australia

### Appendix D

Weed Management Record Sheets Year 3 – Bushcare Services

### Appendix E

Burn Plan/Fire Reporting Year 3 – Fireland

### Appendix F

Gold Coast City Council approval

# Appendix A

EPBC Approval (EPBC 2016/7797)



**Approval**

Ormeau Quarry Expansion, 12 km north-west of Oxenford, Queensland (EPBC 2016/7797).

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

**Proposed action**

<b>person to whom the approval is granted</b>	BORAL RESOURCES (QLD) PTY. LIMITED
<b>proponent's ACN</b>	009 671 809
<b>proposed action</b>	To expand the existing Ormeau Quarry Site, approximately 12 kilometres (km) north-west of Oxenford and 43 km from Brisbane, Queensland [See EPBC Act referral 2016/7797].

**Approval decision**

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved

**Conditions of approval**

This approval is subject to the conditions specified below.

**Expiry date of approval**

This approval has effect until 8 November 2057

**Decision-maker**

<b>name and position</b>	James Barker Assistant Secretary Assessments and Governance Branch
--------------------------	--

**signature**

**date of decision**

16 / 2 / 2018

## Conditions attached to the approval

Conditions
1. The person taking the action must not undertake the action outside the <b>Project Site</b> as shown in <u>Attachment A</u> .
2. The person taking the action must not clear more than 38 hectares of <b>koala habitat</b> in the <b>Project Site</b> as shown in <u>Attachment A</u> .
3. The person taking the action must implement the <b>Offset Strategy</b> .
4. In the case that the <b>Offset Strategy</b> cannot be implemented on Lot 2 RP15912 and in accordance with the <b>EPBC Act Environmental Offsets Policy (2012)</b> , an alternate Offset Strategy must be submitted to the <b>Minister</b> for approval prior to the <b>commencement</b> of the action.
5. The person taking the action must not <b>commence</b> the action until the offset area is <b>legally secured</b> .
6. The person taking the action must prepare and submit an Offset Management Plan for the <b>Minister's</b> approval to offset the loss of 38 hectares of <b>koala habitat</b> . The person taking the action must not commence the action unless the <b>Minister</b> has approved the Offset Management Plan in writing. The approved Offset Management Plan must be implemented by the person taking the action. The Offset Management Plan must be prepared in accordance with the <b>Department's Environmental Management Plan Guidelines</b> , and the <b>EPBC Act Environmental Offsets Policy (2012)</b> and include: <ol style="list-style-type: none"><li>detail of the offset area(s) required to address the loss of 38 hectares of <b>koala habitat</b> consistent with the <b>Offset Strategy</b> or subsequent Offset Strategy described at condition 4;</li><li>detail of the proposed legal mechanism and timeframes for securing the offset area(s);</li><li>a map of the offset area(s) in relation to other habitats and biodiversity corridors;</li><li>information about how the offset area(s) provide connectivity with other <b>koala habitat</b> and biodiversity corridors;</li><li>a description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data;</li><li>a description of the management measures (including timing, frequency and longevity) that will be implemented, including discussion of how measures outlined take into account relevant conservation advice;</li><li>performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions;</li><li>a detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;</li><li>potential risks to the successful implementation of the plan, and a description of the contingency measures that would be implemented to mitigate against these risks, including a bushfire management plan and a pest species management plan.</li></ol>

7. The person taking the action must prepare and submit an Environmental Management Plan for the **Minister's** approval to ensure the protection of EPBC Act listed species on the project site. The Environmental Management Plan must include:
- a. Details of the mitigation and management measures that will be implemented on the **Project Site** including, but not limited to:
    - i. all vehicles within the **Project Site** be restricted to travel at 40km/hr or less except in an **emergency**;
    - ii. signage alerting drivers to the risk of collisions with koalas;
    - iii. measures to avoid or minimise impacts to the Ormeau Bottle Tree (*Brachychiton* sp. *Ormeau* [L.H.Bird AQ435851]) during clearing or operations; and
    - iv. measures to avoid or minimise impacts to the Grey-Headed Flying Fox (*Pteropus poliocephalus*) during clearing or operations.
  - b. Details of the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing.

The person taking the action must not commence the action unless the **Minister** has approved the Environmental Management Plan in writing. The approved Environmental Management Plan must be implemented

#### **General**

8. Within 20 days after the **commencement** of the action, the person taking the action must advise the **Department** in writing of the actual date of **commencement**.
9. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.
10. Within three months of every 12 month anniversary of the **commencement** of the action, the person taking the action must publish a report on its website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the **Department** at the same time as the compliance report is published.

11. Upon the direction of the **Minister**, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

12. The person taking the action may choose to revise a Management Plan approved by the **Minister** under conditions 3, 4, 6 and 7 without submitting it for approval under section 143A of the **EPBC Act**, if the taking of the action in accordance with the revised plan would not be likely to have a **new or increased impact**. If the person taking the action makes this choice it must:

- i. Notify the **Department** in writing that the approved plan has been revised and provide the **Department** with an electronic copy of the revised plan;
- ii. Implement the revised plan from the date that the plan is submitted to the **Department**; and
- iii. For the life of this approval, maintain a record of the reasons the person taking the action considers that taking the action in accordance with the revised plan would not be likely to have a **new or increased impact**.

13. The person taking the action may revoke their choice under condition 12 at any time by notice to the **Department**. If the person taking the action revokes the choice to implement a revised plan without approval under section 143A of the **EPBC Act**, the plan approved by the **Minister** must be implemented

14. Condition 12 does not apply if the revisions to the approved plan include changes to environmental offsets provided under the plan in relation to a matter protected by a controlling provision for the action, unless otherwise agreed in writing by the **Minister**. This does not otherwise limit the circumstances in which the taking of the action in accordance with a revised plan would, or would not, be likely to have **new or increased impacts**.

15. If the **Minister** gives a notice to the person taking the action that the **Minister** is satisfied that the taking of the action in accordance with the revised plan would be likely to have a **new or increased impact**, then:

- i. Condition 12 does not apply, or ceases to apply, in relation to the revised plan; and
- ii. The person taking the action must implement the plan approved by the **Minister**.

To avoid any doubt, this condition does not affect any operation of conditions 12, 13 and 14 in the period before the day the notice is given.

At the time of giving the notice the **Minister** may also notify that for a specified period of time that condition 12 does not apply for one or more specified plans required under the approval.

16. Conditions 12, 13, 14 and 15 are not intended to limit the operation of section 143A of the **EPBC Act** which allows the person taking the action to submit a revised plan to the **Minister** for approval.

17. If, at any time after 5 years from the date of this approval, the person taking the action has not substantially **commenced** the action, then the person taking the action must not substantially **commence** the action without the written agreement of the **Minister**.

18. Unless otherwise agreed to in writing by the **Minister**, the person taking the action must publish all management plans referred to in these conditions of approval on its website. Each management plan must be published on the website within one month of being approved by the **Minister** or submitted under condition 12.

**Definitions:**

**Commence(d)/commencement:** The clearing of vegetation or construction of any infrastructure, excluding fences and signage, associated with the proposed action.

**Department:** The Australian Government Department or any other agency administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) from time to time.

**Emergency:** a serious, unexpected, or dangerous situation requiring immediate action.

**Environmental Management Plan Guidelines (2014):** the *Environmental Management Plan Guidelines, Commonwealth of Australia 2014*, or subsequent revision.

<http://environment.gov.au/epbc/publications/environmental-management-plan-guidelines>

**EPBC Act:** the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

**EPBC Act Environmental Offsets Policy (2012):** the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012), or subsequent revision, including the Offset Assessment Guide.

**Koala habitat:** forest or woodland with two or more **known koala food tree species**, or one food tree species that alone accounts for >50% of the vegetation in the relevant strata, as described in *EPBC Act referral guidelines for the vulnerable koala (combined populations of Qld, NSW and the ACT)*. Commonwealth of Australia, 2014.

**Known koala food tree species:** species of trees whose leaves are consumed by koalas as agreed by the **Minister** or defined in the following webpage:

[www.ehp.qld.gov.au/wildlife/koalas/koala-ecology.html](http://www.ehp.qld.gov.au/wildlife/koalas/koala-ecology.html).

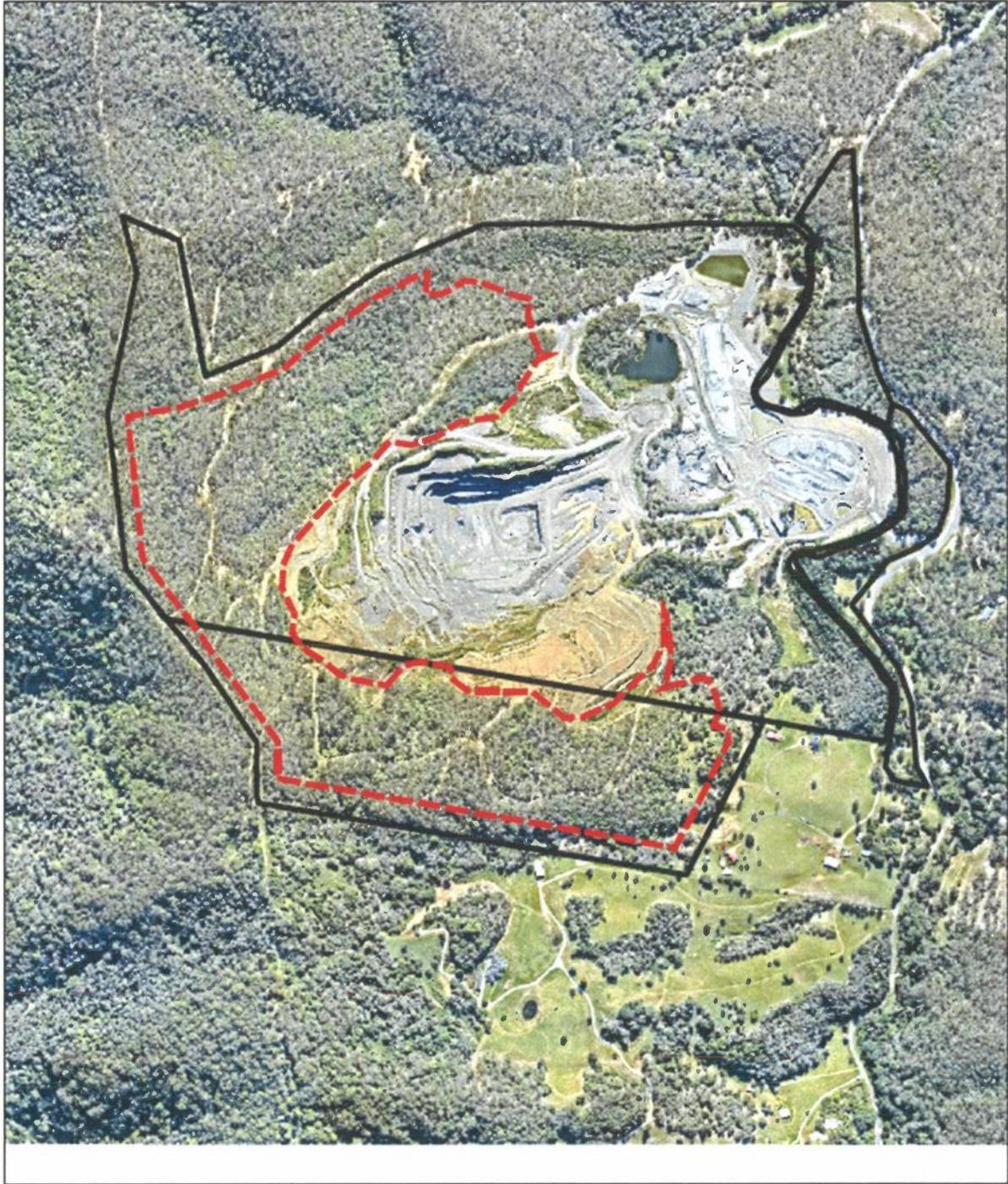
**Legally secured:** to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against development incompatible with conservation.

**Minister:** the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and includes a delegate of that Minister.

**New or increased impact:** A new or increased impact on any matter protected by the controlling provisions for the action, when compared to the plan that has been approved by the **Minister**.

**Offset Strategy:** *Environmental Offset Strategy*, dated 31 January 2018, prepared by Saunders Havill Group.

**Project Site:** The site at 580—582 Upper Ormeau Road, Kingsholme, Queensland (Lot 1 on RP164904 and Lot 43 on SP243239) designated as 'Project Site' in Appendix A.



**Legend**

-  Site DCDB
-  Project Site

**Figure 2 Site Aerial**

File ref. 8354 E Figure 2 Aerial B  
 Date 21/07/2017  
 Project EPBC

0 50 100 200 300 400 m  
 Scale (A4): 1:9,000 (GDA 1994 MGA 256)



SH is a registered trademark of SH Group Pty Ltd. All rights reserved. SH Group Pty Ltd is a registered provider of environmental services. SH Group Pty Ltd is a registered provider of environmental services. SH Group Pty Ltd is a registered provider of environmental services.

# Appendix B

## SHG camera trapping images



Australian Brush Turkey



Long-nosed Bandicoot



Swamp Wallaby



Australian brush turkey



Bush Rat



Long-nosed Bandicoot



Swamp Wallaby



Tawny Frogmouth



Australian Brush Turkey



Red-necked Wallaby



Australian Brush Turkey



European Red Fox



Swift 056F 13C 07/07/2023 12:55:45

Wild/Domestic Dog



Swift 060F 15C 02/08/2023 17:12:58

Australian Brush Turkey



Swift 049F 09C 07/08/2023 01:20:29

Long-nosed Bandicoot



Swift 063F 17C 27/07/2023 15:39:58

Red-necked wallaby



Swift 047F 08C 05/08/2023 00:37:54

Brush Tailed Possum



Swift 056F 13C 30/06/2023 01:11:12

Wonga Pigeon



Red-necked Wallaby



Swamp Wallaby



Australian Brush Turkey



Bush Rat



Grey Strikethrust



Lace Monitor



Short Nosed Bandicoot



Swamp Wallaby



Eastern Yellow Robin



Motorbike



Motorbike

# Appendix C

## Non-native Vertebrate Pest Monitoring Report Year 3 – Biodiversity Australia

LEADING THE WAY  
IN ENVIRONMENTAL  
MANAGEMENT



**BORAL**

ORMEAU QUARRY- FERAL ANIMAL  
MONITORING PROGRAM

**February 2024**

## Contents

<b>Document Control Page .....</b>	<b>3</b>
<b>1. Introduction .....</b>	<b>4</b>
1.1 Objectives.....	4
1.2 Site Location and Description .....	4
1.3 Target Species.....	6
<b>2. Methodology.....</b>	<b>7</b>
<b>3. Results.....</b>	<b>9</b>
<b>4. Discussion.....</b>	<b>10</b>
<b>5. Recommendations .....</b>	<b>11</b>
<b>6. Appendix 1 – Camera Trap Photos .....</b>	<b>12</b>

## Document Control Page

### Version Control

Version	Purpose	Author	Reviewed / approved by	Date
0.1	Draft	Jessica Hobart	Tiffany Sieuwerts	04/03/2024
1.0	Final	Jessica Hobart	Steve Noy	21/03/2024

### Distribution Control

Copy	Purpose	Method	Issued to:	Name	Date
1.0	Issue	Electronic	Boral	Matthew Allan	21/03/2024

Project Number: BSQ6312

Our Document Reference: BSQ6312-BVP-REP-Boral-OrmeauQuarryMonitoring-rev1.0

This document has been prepared to the requirements of the client identified on the cover page and no representation is made to any third party. It may be cited for the purposes of scientific research or other fair use, but it may not be reproduced or distributed to any third party by any physical or electronic means without the express permission of the client for whom it was prepared or Biodiversity Australia Pty Ltd.

# 1. Introduction

Biodiversity Australia Pty Ltd (Bio Aus) was contracted by Boral to conduct Vertebrate Pest Management at Ormeau Quarry's offset area. Biodiversity Australia was engaged to assess and manage wild dogs (*Canis lupus familiaris*) within the site. As such, a monitoring program was undertaken during which, the monitoring of wild dogs was the focus of feral animal control. The report contains the methodology and results of these works.

## 1.1 Objectives

The objectives of the project were to:

- Establish the approximate size of the feral canid populations within Ormeau Quarry's offset area; and
- Provide data-based recommendations for future pest animal management at Ormeau Quarry's offset area.

## 1.2 Site Location and Description

The Ormeau Quarry offset is located on Upper Ormeau Road, Ormeau, approximately 10km from Pimpama township (Figure 1). Boral's offset area for the Ormeau Quarry is approximately 38 hectares. The site is surrounded by state forest, with established housing to the east. Tamborine National Park lies to the southwest of the site. Monitoring efforts were focused within areas stipulated within *Vertebrate Pest Management Plan (2021)*.

The site itself consist of steep inclines and escarpments, with open eucalypt woodland and forests dominating. The site is consistent with the state mapping, with the following RE's present;

- RE 12.11.3 (Least Concern): Eucalyptus siderophloia, E. propinqua +/- E. microcorys, Lophostemon confertus, Corymbia intermedia, E. acmenoides open forest on metamorphics +/- interbedded volcanics
- RE 12.11.5 (Least Concern): Corymbia citriodora subsp. variegata woodland to open forest +/- Eucalyptus siderophloia/E. crebra, E. carnea, E. acmenoides, E. propinqua on metamorphics +/- interbedded volcanics
- RE 12.11.24 (Least Concern): Eucalyptus carnea or E. tindaliae, Corymbia intermedia +/- E. siderophloia or E. crebra woodland on metamorphics +/- interbedded volcanics

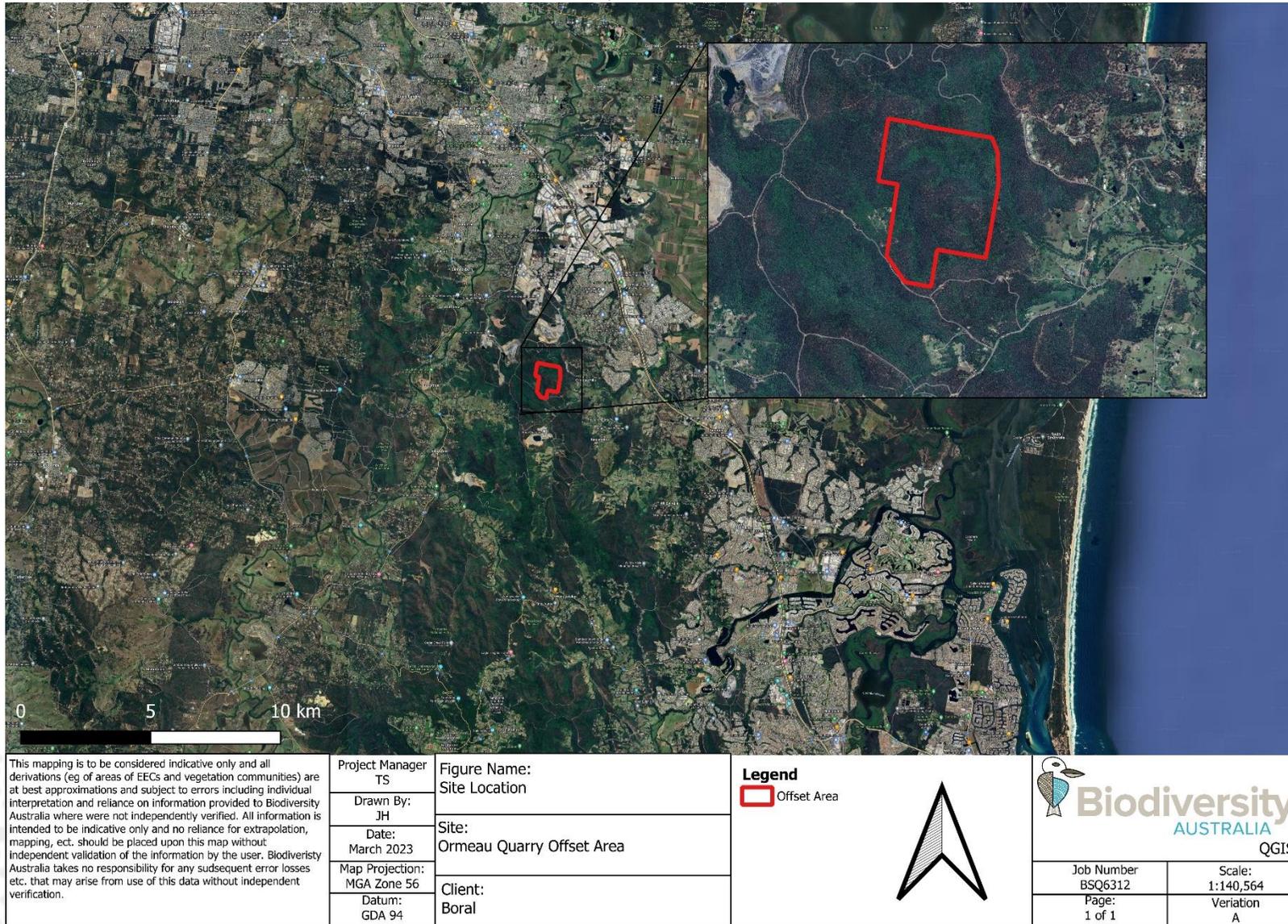


Figure 1 - Site Location

## 1.3 Target Species

### 1.3.1 Wild dog (*Canis lupus familiaris*)

The term wild dog encapsulates any wild-living dogs including dingoes, feral dogs and hybrids. Dingoes were initially brought to Australia by Asian seafarers, approximately 4000 years ago (Glen et al., 2007). Domestic dogs then arrived in Australia as domestic pets of European settlers. It was from here that domestic dogs escaped to or were released into the wild. It is not possible to distinguish between pure dingoes and hybrids purely by colour or appearance. To determine this, DNA tests can be conducted using hair follicles or the ear tips of humanely killed wild dogs.

Wild dogs cause significant damage to the agricultural industry through their predation on livestock and are a restricted invasive animal under the *Biosecurity Act 2014*. They preferentially feed on small and medium-sized mammals, including native mice, dunnarts, bandicoots and wallabies, but they will prey upon a variety of native and exotic animals, including insects, kangaroos and livestock. They are implicated in the decline of several native species. As opportunistic feeders they may also enter sites where human activity has made food easily available, such as rubbish disposal areas.

Control methods for wild dogs include baiting, trapping, exclusion fencing, shooting and the use of guard animals. Donkeys and alpacas are often used to ward off wild dogs on cattle or sheep farms.

## 2. Methodology

Passive infrared monitoring cameras were used to obtain baseline data on levels of pest animal abundance, distribution, and activity throughout the Ormeau Quarry Offset site. Monitoring cameras were placed along within the same vicinity as 2023 camera monitoring activities, including along tracks and high traffic areas. Camera traps were utilised for 14 consecutive days at five locations. Passive infrared (PIR) camera traps were installed in selected areas, mapped using a GIS system, and given a unique identifier (Figure 2).

Cameras were installed on the 15<sup>th</sup> of February 2024 and left in place for fourteen (14) days. Camera outputs were formally assessed at the end of the monitoring period, and the following data collected:

- Species;
- Number of animals seen;
- Sex of animals (where this could be determined);
- Direction of travel and activity observed;
- Camera trap number; and
- Time of day.

Data collected during the monitoring provided insight on wild dog travel routes and indicated activity levels will be used to assist in trap placement and key areas for control. Opportunistic data on other feral animal species, particularly foxes and feral cats collected throughout the data analysis component of camera monitoring will also be used to contribute to understanding of feral animal activity levels both prior to and following control efforts.

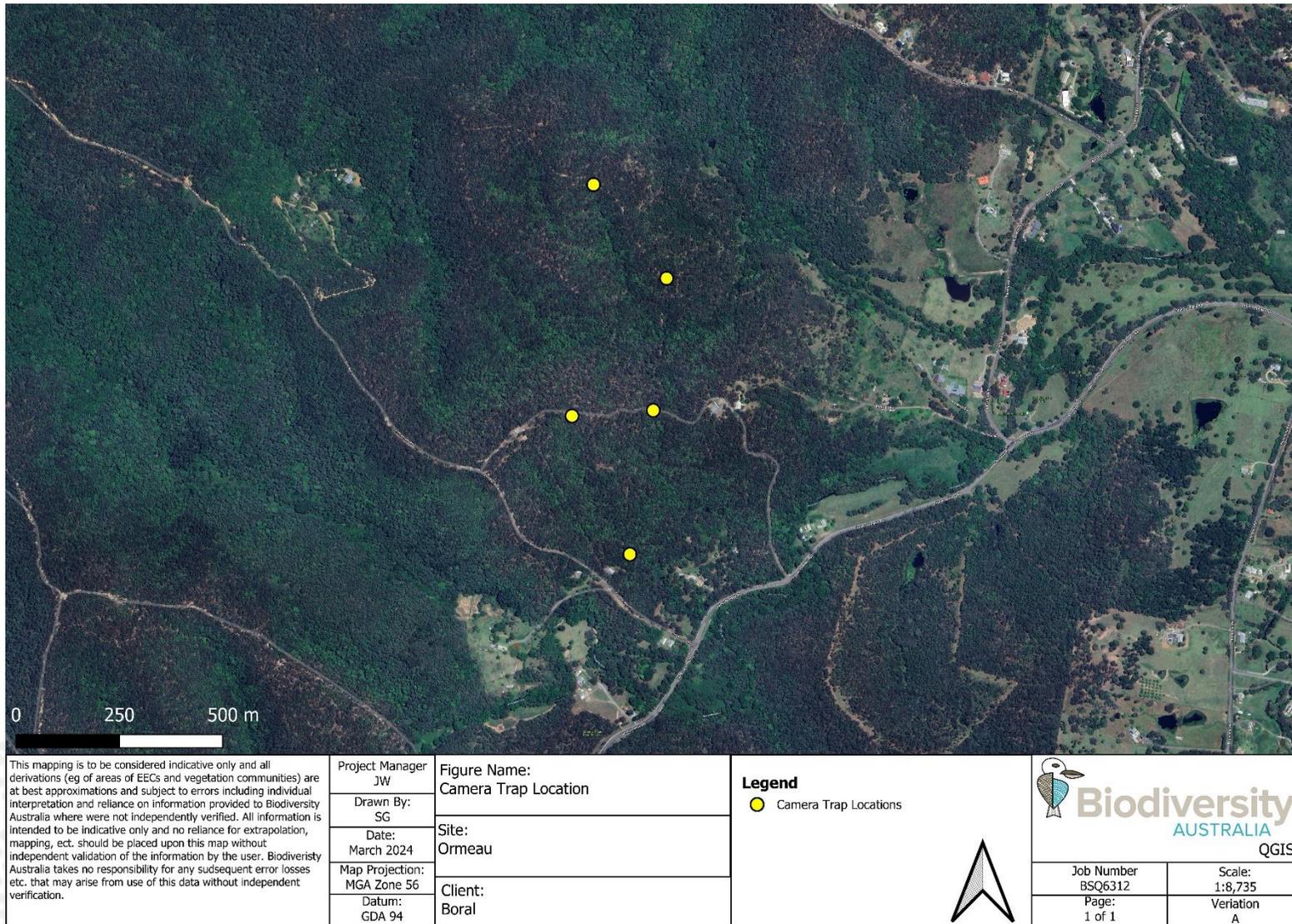


Figure 2 - Camera Trap Locations

### 3. Results

Cameras were utilised for 14 consecutive days (15<sup>th</sup> February – 28<sup>th</sup> February 2024) at five different locations. Table 1 displays all fauna captured within each camera trap. Appendix 1 displays some Fauna that were captured.

No feral dogs or cats were observed throughout the monitoring period, with the European Red Fox (*Vulpes vulpes*) being the only feral species observed.

Opportunistic monitoring of native animals was also captured; Red-necked Wallaby (*Macropus rufogriseus*) (19), and Australian Brush-turkey (*Alectura lathamii*) (1).

Table 1: Camera monitoring results

Days	Camera 1 (ID: 3.01)	Camera 2 (ID: 3.02)	Camera 3 (ID: 3.03)	Camera 4 (ID: 3.04)	Camera 5 (ID: 3.05)
	-27.808120727539062, 153.2247888555829	-27.8111924, 153.2260508	-27.8052403, 153.226953	-27.8032194, 153.2251578	-27.8080883, 153.2266251
1	Nil	1 Red Fox	Nil	Nil	Nil
2	Nil	1 Red Fox	Nil	Nil	Nil
3	Nil	Nil	Nil	Nil	Nil
4	Nil	Nil	1 Red-necked Wallaby	Nil	2 Red-necked Wallaby
5	1 Red-necked Wallaby	1 Red-necked Wallaby	1 Red-necked Wallaby	Nil	Nil
6	Nil	Nil	Nil	Nil	Nil
7	1 Red-necked Wallaby	1 Red-necked Wallaby	Nil	1 Unidentified animal	1 Red-necked Wallaby
8	Nil	Nil	Nil	Nil	Nil
9	Nil	Nil	Nil	Nil	1 Red-necked Wallaby
10	Nil	1 Brush Turkey	Nil	Nil	1 Red-necked Wallaby
11	Nil	Nil	Nil	Nil	Nil
12	Nil	1 Red-necked Wallaby	Nil	Nil	1 Red Fox 4 Red-necked Wallaby (1 with Joey)
13	Nil	1 Brush Turkey	Nil	Nil	1 Red-necked Wallaby
14	1 Red-necked Wallaby	Nil	Nil	Nil	1 Red-necked Wallaby 1 Swamp Wallaby

## 4. Discussion

The 2024 camera locations followed the 2023 camera locations that were agreed upon, due to inaccessibility to large portions of the offset area. The northern portion of the offset area was inaccessible due to no fire trails, tracks or bridges for access. The Biodiversity Australia Senior Pest Officer followed the Management Plan where possible, however final locations as per Fig 2 were decided upon based on inaccessibility restraints and suggestions from the Quarry Environmental Officer.

Monitoring site locations generated a different composition of feral and native animals. Camera 4 lacked animal presence, other than a single unidentifiable photo. Camera 2 and 5 presented Red Fox observations, being particularly abundant around Camera 2. Camera 5 showed the most animal presence, with thirteen (13) fauna observations in total. No feral cats or dogs were captured throughout this monitoring period.

## 5. Recommendations

For consistency and to address trapping success it is recommended to follow the camera locations as per Fig 2 above. However, if accessibility improves locating a camera in the south-eastern area as per the 2022 proposed camera sites in the Vertebrate Pest Management Plans would be suggested. This includes the installation of fire trails and tracks, and a bridge over waterways.

## 6. Appendix 1 – Camera Trap Photos

*Please note the full set of monitoring photos are available upon request.*

### CAMERA 1



Photo 1 - Red-necked Wallaby

### CAMERA 2



Photo 2 - European Red Fox



Photo 3 - Australian Brush-turkey

### CAMERA 3



Photo 4 - Red-necked Wallaby

CAMERA 4



Photo 5 - Unidentified Fauna

CAMERA 5

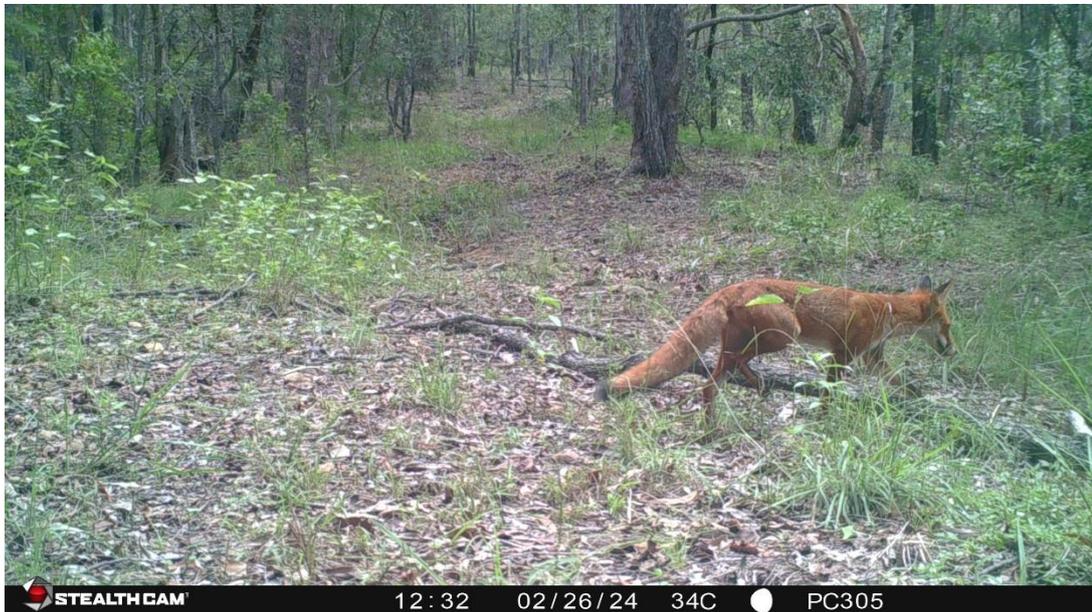


Photo 6 - European Red Fox



Photo 7 - Red-necked Wallabies



Photo 8 - Swamp Wallaby

# Appendix D

## Weed Management Record Sheets Year 3 – Bushcare Services

# Bushcare Services – Daily Record Sheet v 1.3

<b>Client:</b>	<i>Boral</i>	<b>Project:</b>	<i>Ormeau EPBC Offset</i>	<b>Time Allocated:</b>	<i>?</i>
<b>Date of Work:</b>	<i>12/08/2023</i>	<b>Team Size:</b>	<i>3</i>	<b>Supervisor:</b>	<i>Luke C-Cooper</i>

<b>Start Time:</b>	<i>7.00am</i>	<b>Finish Time:</b>	<i>3.30pm</i>	<b>Total Working Hours:</b>	<i>24</i>
--------------------	---------------	---------------------	---------------	-----------------------------	-----------

(30-minute lunch break is assumed)

<b>Vehicle Rego:</b>	<i>920 DN7</i>
----------------------	----------------

Tasks to Be Undertaken/ Completed				
	Detail Work Area, Output and Outcomes	Output	Units	Time Taken (hours)
1	Cut scrape paint and hand pulled lantana regrowth through areas previously worked.	8000	m 2	24
2				
3				
4				
5				

Team Members / Hours Worked on Site										
	Name	Hours		Name	Hours		Name	Hours	Name	Hours
1	Jack Thatcher	8	2	Nicholas Kent	8	3	Luke C-Cooper	8	4	
5			6			7			8	

WHS – Toolbox Talk					
1	Steep Terrain.	2	Bull Ants.	3	Cock spur / Lawyer Vine.
4	Fallen Logs	5	Rubbish / Debris / Waste.	6	Are of works.

# Bushcare Services – Daily Record Sheet v 1.3

## Herbicide Use

### Application 1:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method
Applicator Bottle	Active Ingredient	Trade Name	(ml, g, other)				
	<input checked="" type="checkbox"/>	Glyphosate	Nufarm Weedmaster Duo 360	QTY	600ml	Lantana Jacaranda Tobacco	CSP/HW
	<input type="checkbox"/>	Other		QTY			
	<input type="checkbox"/>	Dye		QTY			
	<input type="checkbox"/>	Adjuvant		QTY			
<b>Total Volume of mixture (litres):</b>				1.2L			

### Application 2:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method
	Active Ingredient	Trade Name	(ml, g, other)				
	<input type="checkbox"/>	Glyphosate		QTY			
	<input type="checkbox"/>	Other		QTY			
	<input type="checkbox"/>	Dye		QTY			
	<input type="checkbox"/>	Adjuvant		QTY			
<b>Total Volume of mixture (litres):</b>							

### Application 3:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method
	Active Ingredient	Trade Name	(ml, g, other)				
	<input type="checkbox"/>	Glyphosate		QTY			
	<input type="checkbox"/>	Other		QTY			
	<input type="checkbox"/>	Dye		QTY			
	<input type="checkbox"/>	Adjuvant		QTY			
<b>Total Volume of mixture (litres):</b>							

### Environmental Conditions:

<input type="checkbox"/> Clear	<input type="checkbox"/> Dry	Wind speed (km/hr):	10-30
<input checked="" type="checkbox"/> Overcast	<input checked="" type="checkbox"/> Mild	Wind direction (N, E, S, W):	SE
<input type="checkbox"/> Showers	<input type="checkbox"/> Humid	Temperature (°C):	21.8

**Methods:** Foliar Spray (FS), Cut Scrape Paint (CSP), Frilling (FR), Cut and Paint (CP), Stem injection (SJ)

# Bushcare Services – Daily Record Sheet v 1.3

## Site Notes

<b>Fauna notes: (significant sightings)</b>	None.	
<b>Flora notes:</b>	Flowering:	Cassinia subtropica Podolobium ilicifolium
	Fruiting:	Smilax sp.
	Germinating:	-
	Threatened or significant:	Brachychiton ormeau
<b>Provide general comments on the work undertaken (constraints, wins etc...)</b>		
Hand pulled and cut scrape paint of lantana regrowth, stumps missed during hedge trimming, and failed splatter. Opting to manually removed due to other treatments in the past failing.		
<b>What should be the focus for next time?</b>		
Continue manually removing lantana. Focus in the area adjacent to dam. Then work down along. If completed work area adjacent to Cliff Barrons Road.		
<b>Any recommendations for the management of the site?</b>		
None.		
<b>Are there any site-specific issues that our client should be aware of (detail and add photos if necessary)?</b>		
None.		

# Bushcare Services – Daily Record Sheet v 1.3

Mud Map:



Legend					
	Foliar Spray		CSP, Fr, Si		Rubbish
	Slashing		Hand Weed		Other
Define Other:					

# Bushcare Services – Daily Record Sheet v 1.3

## Photo Record

**Photo 1 - Before.**



**Photo 2 – After.**



# Bushcare Services – Daily Record Sheet v 1.3

**Photo 3 - Before.**



**Photo 4 - After.**



# Bushcare Services – Daily Record Sheet v 1.3

**Photo 5 -**



**Photo 6 -**



# Bushcare Services – Daily Record Sheet v 1.3



## Internal Reporting

Use this section to detail any issues, concerns, wins or requests

--	--

Use this section to log access reporting documents  
(if any item is ticked yes, an appropriate report must be submitted)

Vehicle Damage:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Accident / Incident:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Equipment Maintenance Required:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does anything need restocking?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

**Supervisor to Sign: This report represents a true and accurate reflection of works undertaken:**

	12/08/2023
<b>Supervisor Signature</b>	<b>Date</b>

**Bushcare Administration to Sign: This report has been checked and approved**

<b>Administration Signature</b>	<b>Date</b>

# Bushcare Services – Daily Record Sheet v 1.3

<b>Client:</b>	<i>Boral</i>	<b>Project:</b>	<i>Ormeau EPBC Offset</i>	<b>Time Allocated:</b>	<i>?</i>
<b>Date of Work:</b>	<i>13/08/2023</i>	<b>Team Size:</b>	<i>3</i>	<b>Supervisor:</b>	<i>Luke C-Cooper</i>

<b>Start Time:</b>	<i>7.00am</i>	<b>Finish Time:</b>	<i>3.30pm</i>	<b>Total Working Hours:</b>	<i>24</i>
--------------------	---------------	---------------------	---------------	-----------------------------	-----------

(30-minute lunch break is assumed)

<b>Vehicle Rego:</b>	<i>920 DN7</i>
----------------------	----------------

Tasks to Be Undertaken/ Completed				
	Detail Work Area, Output and Outcomes	Output	Units	Time Taken (hours)
1	Cut scrape paint & hand removal of lantana regrowth.	5000	m 2	24
2				
3				
4				
5				

Team Members / Hours Worked on Site											
	Name	Hours		Name	Hours		Name	Hours		Name	Hours
1	Nicholas Kent	8	2	Jack Thatcher	8	3	Luke C-Cooper	8	4		
5			6			7			8		

WHS – Toolbox Talk					
1	Fallen Logs.	2	Wash Outs.	3	Falling Branches.
4	Steep Terrain.	5	Waterway.	6	Lawyer Vine.

# Bushcare Services – Daily Record Sheet v 1.3

## Herbicide Use

### Application 1:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
Applicator Bottle.	Active Ingredient	Trade Name	(ml, g, other)					
	<input checked="" type="checkbox"/>	Glyphosate	Nufarm Weedmaster Duo 360	QTY	400ml	1:1	Lantana	CSP/HW
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>				800ml				

### Application 2:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input type="checkbox"/>	Glyphosate		QTY				
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>								

### Application 3:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input type="checkbox"/>	Glyphosate		QTY				
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>								

### Environmental Conditions:

<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Dry	Wind speed (km/hr):	10-30
<input type="checkbox"/> Overcast	<input checked="" type="checkbox"/> Mild	Wind direction (N, E, S, W):	SE
<input type="checkbox"/> Showers	<input type="checkbox"/> Humid	Temperature (°C):	22.1

**Methods:** Foliar Spray (FS), Cut Scrape Paint (CSP), Frilling (FR), Cut and Paint (CP), Stem injection (SJ)

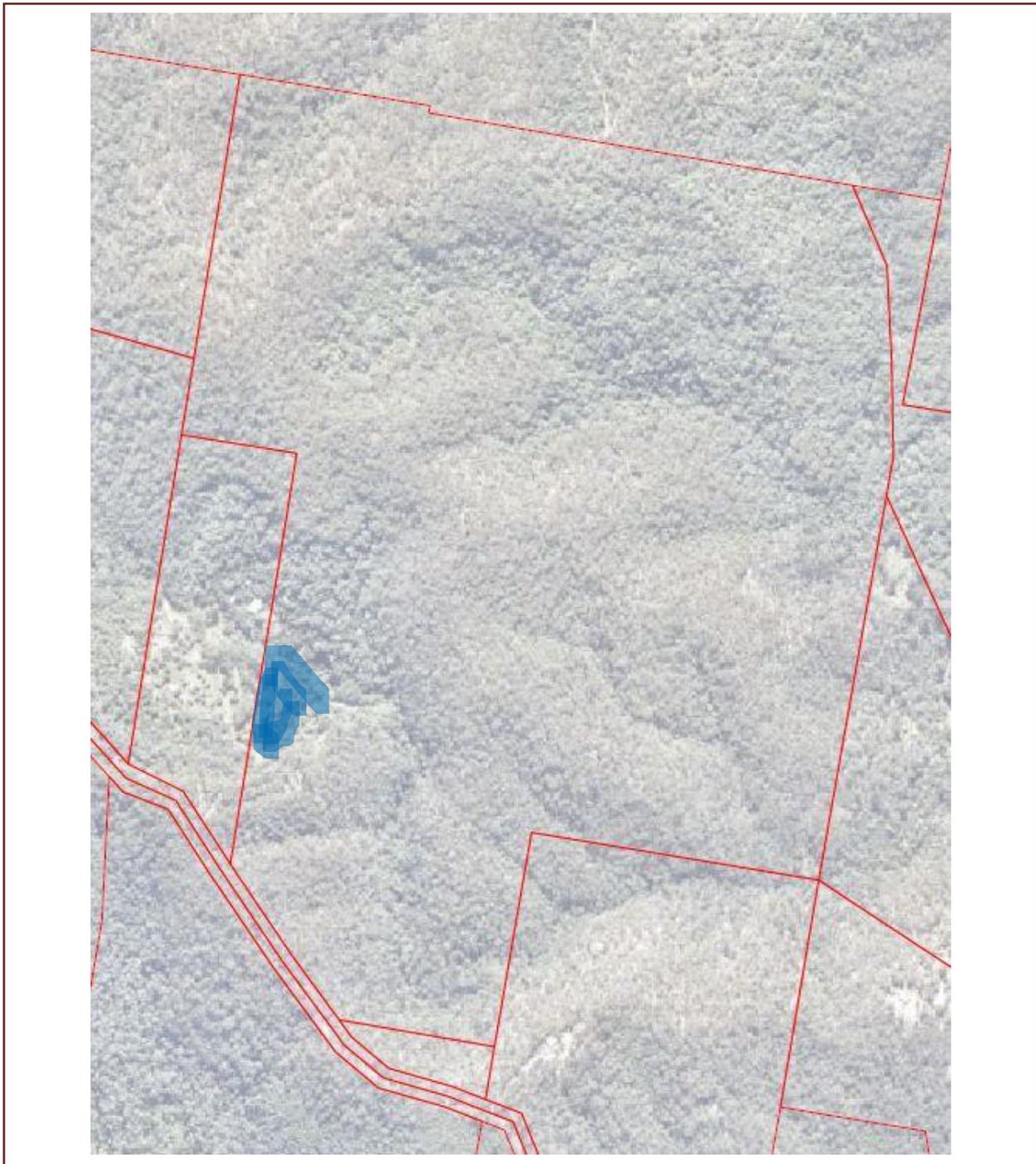
# Bushcare Services – Daily Record Sheet v 1.3

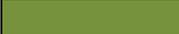
## Site Notes

<b>Fauna notes: (significant sightings)</b>		
<b>Flora notes:</b>	Flowering:	Rubus rosifolius Rubus moluccanus
	Fruiting:	-
	Germinating:	-
	Threatened or significant:	Cupaniopsis newmanni, Brachychiton ormeau
<b>Provide general comments on the work undertaken (constraints, wins etc...)</b>		
Continued re treatment of lantana through areas previously worked, hand pulling or cut scrape painting new growth & lantana that treatment had failed. Worked area adjacent to road then pushed down towards waterway. Opted to leave a small area for hedge trimming in future due to thickness of clump.		
<b>What should be the focus for next time?</b>		
Take hedge trimmer for thicker clump, and cut paint.  Work area between waterway and Cliff Barrons Road.		
<b>Any recommendations for the management of the site?</b>		
None.		
<b>Are there any site-specific issues that our client should be aware of (detail and add photos if necessary)?</b>		
None.		

# Bushcare Services – Daily Record Sheet v 1.3

Mud Map:



Legend					
	Foliar Spray		CSP, Fr, Si		Rubbish
	Slashing		Hand Weed		Other
Define Other:					

# Bushcare Services – Daily Record Sheet v 1.3

## Photo Record

**Photo 1 - Before.**



**Photo 2 – After.**



# Bushcare Services – Daily Record Sheet v 1.3

**Photo 3 - Before.**



**Photo 4 – After.**



# Bushcare Services – Daily Record Sheet v 1.3

**Photo 5 -**



**Photo 6 -**



# Bushcare Services – Daily Record Sheet v 1.3



## Internal Reporting

Use this section to detail any issues, concerns, wins or requests

--	--

Use this section to log access reporting documents  
(if any item is ticked yes, an appropriate report must be submitted)

Vehicle Damage:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Accident / Incident:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Equipment Maintenance Required:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does anything need restocking?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

**Supervisor to Sign: This report represents a true and accurate reflection of works undertaken:**

 <b>Supervisor Signature</b>	13/07/2023  <b>Date</b>
---	-------------------------------

**Bushcare Administration to Sign: This report has been checked and approved**

<b>Administration Signature</b>	<b>Date</b>

# Bushcare Services – Daily Record Sheet v 1.3

<b>Client:</b>	<i>Boral</i>	<b>Project:</b>	<i>Ormeau EPBC Offset</i>	<b>Time Allocated:</b>	<i>24</i>
<b>Date of Work:</b>	<i>26/09/2023</i>	<b>Team Size:</b>	<i>3</i>	<b>Supervisor:</b>	<i>Luke C-Cooper</i>

<b>Start Time:</b>	<i>7.00am</i>	<b>Finish Time:</b>	<i>3.30pm</i>	<b>Total Working Hours:</b>	<i>24</i>
--------------------	---------------	---------------------	---------------	-----------------------------	-----------

(30-minute lunch break is assumed)

<b>Vehicle Rego:</b>	<i>920 DN7</i>
----------------------	----------------

Tasks to Be Undertaken/ Completed				
	Detail Work Area, Output and Outcomes	Output	Units	Time Taken (hours)
1	Cut paint & hand removal of germinating & regrowth lantana	9,000	m 2	24
2				
3				
4				
5				

Team Members / Hours Worked on Site											
	Name	Hours		Name	Hours		Name	Hours		Name	Hours
1	Blaine Williams	8	2	Odin Mircic	8	3	Luke C-Cooper	8	4		
5			6			7			8		

WHS – Toolbox Talk					
1	Steep Slopes – Work along slope. Avoid where possible walking up and down.	2	Falling while hand removing lantana – Where possible cut paint lantana.	3	Waterway – Leave buffer from waterway.
4	Remoteness – In event of emergency one person goes for help, second person stays with injured.	5	Fire – Call 000, walk together as team to vehicle.	6	

# Bushcare Services – Daily Record Sheet v 1.3

## Herbicide Use

### Application 1:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
Knapsack	Active Ingredient	Trade Name	(ml, g, other)					
	<input checked="" type="checkbox"/>	Glyphosate	Nufarm Weedmaster Duo 360	QTY	750ml	1:1	Lantana	HW/CP
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>				1.5L				

### Application 2:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input type="checkbox"/>	Glyphosate		QTY				
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>								

### Application 3:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input type="checkbox"/>	Glyphosate		QTY				
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>								

### Environmental Conditions:

<input type="checkbox"/> Clear	<input type="checkbox"/> Dry	Wind speed (km/hr):	10-35
<input type="checkbox"/> Overcast	<input type="checkbox"/> Mild	Wind direction (N, E, S, W):	NNE
<input type="checkbox"/> Showers	<input type="checkbox"/> Humid	Temperature (°C):	25.8

**Methods:** Foliar Spray (FS), Cut Scrape Paint (CSP), Frilling (FR), Cut and Paint (CP), Stem injection (SJ)

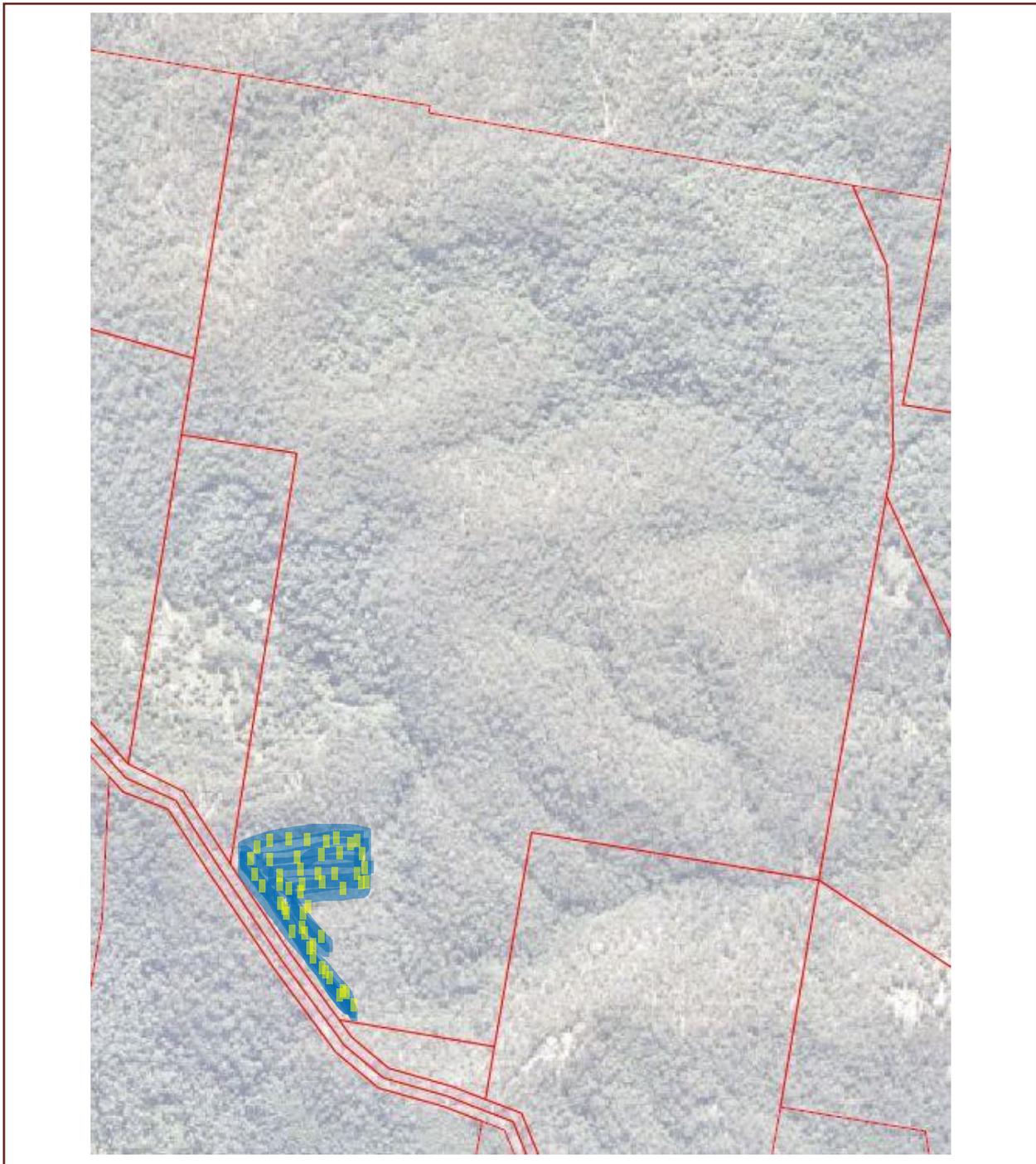
# Bushcare Services – Daily Record Sheet v 1.3

## Site Notes

<b>Fauna notes: (significant sightings)</b>	None.	
<b>Flora notes:</b>	Flowering:	Cassinia sp.
	Fruiting:	Xanthorrhoea sp.
	Germinating:	-
	Threatened or significant:	Xanthorrhoea sp. Brachychiton ormeau.
<b>Provide general comments on the work undertaken (constraints, wins etc...)</b>		
Boral EPBC – Hand removal and cut paint of germinating lantana, lantana clumps, and regrowth working along Cliff Barron Way.		
<b>What should be the focus for next time?</b>		
Continue working along cliff barron ways.  Jump across waterway work area previously treated along ridgeline.		
<b>Any recommendations for the management of the site?</b>		
None.		
<b>Are there any site-specific issues that our client should be aware of (detail and add photos if necessary)?</b>		
None.		

# Bushcare Services – Daily Record Sheet v 1.3

Mud Map:



Legend					
	Foliar Spray		CSP, Fr, Si		Rubbish
	Slashing		Hand Weed		Other
Define Other:					

# Bushcare Services – Daily Record Sheet v 1.3

## Photo Record

**Photo 1 - Before.**



**Photo 2 – After.**



# Bushcare Services – Daily Record Sheet v 1.3

**Photo 3 - Before.**



**Photo 4 - After.**



# Bushcare Services – Daily Record Sheet v 1.3

**Photo 5 -**



**Photo 6 -**



# Bushcare Services – Daily Record Sheet v 1.3

## Internal Reporting

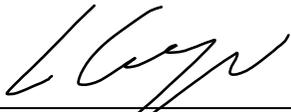
**Use this section to detail any issues, concerns, wins or requests**

--	--

**Use this section to log access reporting documents**  
(if any item is ticked yes, an appropriate report must be submitted)

Vehicle Damage:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Accident / Incident: Employee slipped while traversing slope.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Equipment Maintenance Required:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does anything need restocking?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

**Supervisor to Sign: This report represents a true and accurate reflection of works undertaken:**

	26/09/2023
<b>Supervisor Signature</b>	<b>Date</b>

**Bushcare Administration to Sign: This report has been checked and approved**

<b>Administration Signature</b>	<b>Date</b>

# Bushcare Services – Daily Record Sheet v 1.3

<b>Client:</b>	<i>Boral</i>	<b>Project:</b>	<i>Ormeau EPBC Offset</i>	<b>Time Allocated:</b>	<i>24</i>
<b>Date of Work:</b>	<i>27/09/2023</i>	<b>Team Size:</b>	<i>3</i>	<b>Supervisor:</b>	<i>Luke C-Cooper</i>

<b>Start Time:</b>	<i>7.00am</i>	<b>Finish Time:</b>	<i>3.30pm</i>	<b>Total Working Hours:</b>	<i>24</i>
--------------------	---------------	---------------------	---------------	-----------------------------	-----------

(30-minute lunch break is assumed)

<b>Vehicle Rego:</b>	<i>920 DN7</i>
----------------------	----------------

Tasks to Be Undertaken/ Completed				
	Detail Work Area, Output and Outcomes	Output	Units	Time Taken (hours)
1	Hand removal and cut paint of lantana through areas previously treated.	10,000	m 2	24
2				
3				
4				
5				

Team Members / Hours Worked on Site										
	Name	Hours		Name	Hours		Name	Hours	Name	Hours
1	Blaine Williams	8	2	Odin Mircic	8	3	Luke C-Cooper		4	
5			6			7			8	

1	Fire – Leave site as group, head to vehicle. Call emergency services.	2	Medical emergency – One staff member stays with injured, other goes for help.	3	Steep slopes – Work along slope, avoid walking up and down, leave buffer from cliff
4	Working away from car – Carry water, snake bandage. Ensure vehicle is locked.	5		6	

# Bushcare Services – Daily Record Sheet v 1.3

## Herbicide Use

### Application 1:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
Applicator Bottle	Active Ingredient	Trade Name	(ml, g, other)					
	<input checked="" type="checkbox"/>	Glyphosate	Nufarm Weedmaster Duo 360	QTY	300ml	1:1	Lantana	HW/CP
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>				600ml				

### Application 2:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input type="checkbox"/>	Glyphosate		QTY				
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>								

### Application 3:

Equipment Used	Chemicals Used (active ingredient/trade name)		Quantity applied		Rate:	Plants treated	Method	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input type="checkbox"/>	Glyphosate		QTY				
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
<b>Total Volume of mixture (litres):</b>								

### Environmental Conditions:

<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Dry	Wind speed (km/hr):	10-30
<input type="checkbox"/> Overcast	<input type="checkbox"/> Mild	Wind direction (N, E, S, W):	NNE
<input type="checkbox"/> Showers	<input checked="" type="checkbox"/> Humid	Temperature (°C):	29.6

**Methods:** Foliar Spray (FS), Cut Scrape Paint (CSP), Frilling (FR), Cut and Paint (CP), Stem injection (SJ)

# Bushcare Services – Daily Record Sheet v 1.3

## Site Notes

<b>Fauna notes: (significant sightings)</b>		
<b>Flora notes:</b>	Flowering:	Rubus parvifolius Cordyline sp. Pultenaea spinosa
	Fruiting:	Smilax sp.
	Germinating:	-
	Threatened or significant:	Davidsonia sp. Macadamia sp. Bracychiton ormeau
<b>Provide general comments on the work undertaken (constraints, wins etc...)</b>		
Hand removed and cut paint lantana working area opposite waterway adjacent to Barrenjoey Drive. Swept through areas previously worked. Small amounts of new Lantana regrowth.		
<b>What should be the focus for next time?</b>		
Continue sweeping areas on opposite side of waterway.  Check area splatter treated.		
<b>Any recommendations for the management of the site?</b>		
None.		
<b>Are there any site-specific issues that our client should be aware of (detail and add photos if necessary)?</b>		
None.		

# Bushcare Services – Daily Record Sheet v 1.3

Mud Map:



Legend				
	Foliar Spray		CSP, Fr, Si	Rubbish
	Slashing		Hand Weed	Other
Define Other:				

# Bushcare Services – Daily Record Sheet v 1.3

## Photo Record

**Photo 1 - Before.**



**Photo 2 – After.**

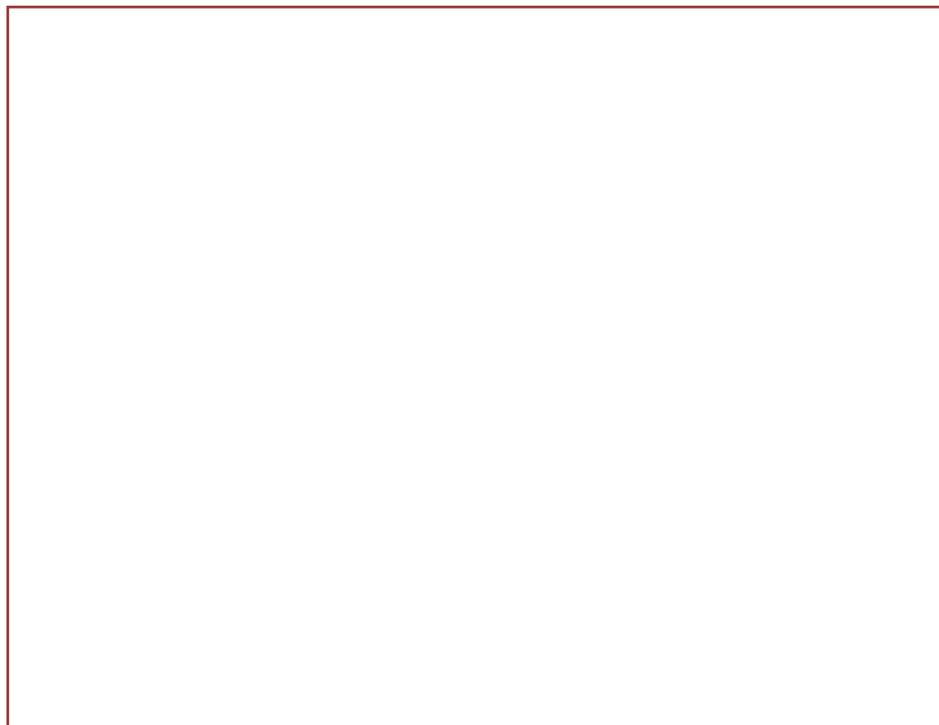


# Bushcare Services – Daily Record Sheet v 1.3

**Photo 3 - Davidsons Plum.**



**Photo 4 -**



# Bushcare Services – Daily Record Sheet v 1.3

**Photo 5 -**



**Photo 6 -**



# Bushcare Services – Daily Record Sheet v 1.3

## Internal Reporting

**Use this section to detail any issues, concerns, wins or requests**

--

**Use this section to log access reporting documents**  
(if any item is ticked yes, an appropriate report must be submitted)

Vehicle Damage:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Accident / Incident:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Equipment Maintenance Required:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does anything need restocking?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

**Supervisor to Sign: This report represents a true and accurate reflection of works undertaken:**

	27/09/2023
<b>Supervisor Signature</b>	<b>Date</b>

**Bushcare Administration to Sign: This report has been checked and approved**

<b>Administration Signature</b>	<b>Date</b>

# Appendix E

## Burn Plan/Fire Reporting Year 3 – Fireland

# S27 – C OPERATIONAL PRESCRIBED BURN PLAN

<b>BURN NAME</b>	<b>FMU-05</b>	<b>Lot/Plan/s No.</b>	53/RP895391 - Boral
<b>Burn No.</b>	Bor_Orm_01.24	(all approvals obtained) <input type="checkbox"/> Yes	93/SP193378 – Boral <b>3/RP19511 – Private, seek approval. No approval will require an alternative containment strategy and burn plan ammendment .</b>
<b>Location</b>	Ormeau Quarry Offset	<b>Road Segment No.</b>	Cliff Barrons Road – seek Cof GC approval
<b>LGA</b>	City of Gold Coast	<b>Proposed Timing</b>	
<b>ECC details</b>	NA	<b>TASMIS number</b>	NA
<b>Permit Number</b>		<b>Actual Date</b>	

<b>Prescribed Burn Planner</b>	Ben Tidey	January 15 <sup>th</sup> 2024
	Name & position	Signature & date
	Burn Planning checklist complete	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Burn Plan Reviewer</b>		
	Name & position	Signature & date
	Burn Plan Review checklist complete	<input type="checkbox"/> Yes <input type="checkbox"/> No

<b>ATTACHMENTS (not all attached)</b>	
<input type="checkbox"/> Burn permit (Mandatory) <input checked="" type="checkbox"/> Burn map (Mandatory) <input checked="" type="checkbox"/> Complexity Rating (Mandatory) <input checked="" type="checkbox"/> Pre Burn Works order (if applicable) <input checked="" type="checkbox"/> Vegetation & Habitat Map (VMA Report) (if applicable) <input type="checkbox"/> Traffic management plan (if applicable)	<input type="checkbox"/> Map of notified residents (if applicable) <input type="checkbox"/> Media advice (if applicable) <input checked="" type="checkbox"/> Risk assessment (if applicable) <input type="checkbox"/> Contingency map/s (if applicable) <input type="checkbox"/> Other (if so what)

## SITUATION (SMEACS)

### PLANNING

**Complexity Rating:** (CR – 2), complexity [69 ].

### SITE CHARACTERISTICS (refer to Operational Burn Map)

<b>Area to be treated</b>	~ 35Ha	Percentage aim	40-60%	Last Fire type Unknown	Unknown Years since last fire
---------------------------	--------	----------------	--------	---------------------------	-------------------------------

**Description of site**  
(Topography, slope and aspect) Steep to undulating topography ranging from ~200m descending to ~100m with access roads broadly on ridges spurs with a creek line dissecting the area.

### FUEL CHARACTERISTICS

**Vegetation type**  
(General description of vegetation & fuel type, height, fuel variability)  
Eucalypt woodland featuring Gum topped box, Lemmon Scented gum, Moreton Bay Ash, Grey Iron Bark with a grassy element on the higher slopes transitioning to shrubby, Brush box forest on lower slopes.  
Fire behaviour predominantly driven by surface leaf litter with flame height increases with near surface grasses and interaction with shrubby elements.

**Overall fuel hazard score**  Low  Moderate  High  Very High  Extreme 16t/Ha

### VALUES MANAGEMENT

**Vegetation Management Act class**  Not of Concern  Least Concern  Of Concern  Vulnerable  Endangered

**Fauna/Flora of site Significant**  
(Any values listed here that may be adversely affected by the planned fire to be included in the Values Assessment section.)

**Species:** glossy black-cockatoo  
**Source of record:**  
 Veg Mgt Report  Atlas of Living Australia  Other (pls specify)  
**Essential habitat present:**  Yes  No  
**NCA Status**  CE  E  V  NT  SL  C  
**Known identified location:**  Yes  No  
**Presence identified as likely:**  Yes  No  
**Value at threat from planned fire activities:**  Yes – include in values assessment.  No

**Species:** Koala  
**Source of record:**  
 Veg Mgt Report  Atlas of Living Australia  Other (pls specify)  
**Essential habitat present:**  Yes  No  
**NCA Status**  CE  E  V  NT  SL  C  
**Known identified location:**  Yes  No  
**Presence identified as likely:**  Yes  No  
**Value at threat from planned fire activities:**  Yes – include in values assessment.  No

**Species:** tusked frog  
**Source of record:**  
 Veg Mgt Report  Atlas of Living Australia  Other (pls specify)  
**Essential habitat present:**  Yes  No  
**NCA Status**  CE  E  V  NT  SL  C  
**Known identified location:**  Yes  No  
**Presence identified as likely:**  Yes  No  
**Value at threat from planned fire activities:**  Yes – include in values assessment.  No

	<p><b>Regional Ecosystem code:</b> 12.11.3  <b>VMA Class:</b> <input type="checkbox"/> Not of Concern <input type="checkbox"/> Least Concern <input type="checkbox"/> Of Concern <input type="checkbox"/> Vulnerable <input type="checkbox"/> Endangered  <b>Short Description:</b>  Eucalyptus siderophloia, E. propinqua +/- E. microcorys, Lophostemon confertus, Corymbia intermedia, E. acmenoides open forest on metamorphics +/- interbedded volcanics  <b>Fire Management Guidelines:</b>  SEASON: Summer to winter. INTENSITY: Plan for low to moderate. Unplanned occasional high intensity wildfire will occur. INTERVAL: 4-8 years maintains a healthy grassy system. 8-20 years for shrubby elements of understorey. INTERVAL_MIN: 4. INTERVAL_MAX: 20. STRATEGY: Aim for 40-60% mosaic burn. Needs disturbance to maintain RE structure (eucalypt overstorey with open understorey of predominantly non-rainforest species). Any moist sclerophyll that is relatively open with a mixture of grasses and shrubs should be a priority for fire management to retain RE structure. ISSUES: Frequent fire is needed to maintain understorey integrity, keeping more mesic species low in the profile of the understorey so that other species can compete. A grassy system is especially important for species such as the eastern bristlebird and its habitat. It is essential that wildfires are not the sole source of fire in this ecosystem. High intensity fires occur periodically through time, however frequent low to moderate intensity fires will create the disturbance required to keep the understorey diverse. A follow-up burn soon after a high intensity wildfire can be considered to reduce germinating/resprouting mesic species.  <b>Value at threat from planned fire activities:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes – include in values assessment</p>
	<p><b>Regional Ecosystem code:</b> 12.11.18  <b>VMA Class:</b> <input type="checkbox"/> Not of Concern <input type="checkbox"/> Least Concern <input type="checkbox"/> Of Concern <input type="checkbox"/> Vulnerable <input type="checkbox"/> Endangered  <b>Short Description:</b>  Eucalyptus moluccana woodland on metamorphics +/- interbedded volcanics  <b>Fire Management Guidelines:</b>  SEASON: Summer to late-autumn. INTENSITY: Low. INTERVAL: 3-6 years. INTERVAL_MIN: 3. INTERVAL_MAX: 6. STRATEGY: Aim to burn 40-60% of any given area. Spot ignition in cooler or moister periods encourages mosaics. Burning should aim to produce fine scale mosaics of unburnt areas. ISSUES: Control of weeds (e.g., Lantana camara) with fire might be required. Repeated burning can deal with molasses grass Melinis minutifolia.  <b>Value at threat from planned fire activities:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes – include in values assessment</p>

### Burn Area Values Assessment

This section to be used to assess values within (or adjacent) to the burn area that may be threatened (adversely) from the planned fire event

Value Type	Value	Threat (from the activity)	Mitigation – Task/Constraint
B – Built N – Natural C – Cultural U - Utility	(eg Power pole) (eg Water Mouse)	(Pole may become fire affected and fall, disrupting power supply) (Fire may affect nests)	(Task – rake around pole) (Could be a task – rake, or constraint. Refer to Standard Mitigation Actions sheet and insert relevant details) Any <u>tasks</u> to be transferred to the 'Pre burn works order' sheet.
N	Glossy black Cockatoo	Loss of canopy seed banks of sheoak from too frequent fire.	Burn within RE intervals and consider fire behaviour to minimise adverse impacts.
		Loss of hollow bearing nesting trees.	Undertake burn with good soil moisture conditions. (T) Pre burn preparation of identified hollow bearing trees.
N	Koala	Direct flame contact resulting in burns/death.	Identify expected fire behaviour to minimise likelihood of adverse impacts. (T) Identify any koalas, mark trees with pink flagging tape, follow Fireland Koala SOP. Record location and advise field crews.
		Loss of food source in local area from canopy scorch.	Identify expected fire behaviour and consider fuel structure and canopy density to minimise likelihood of adverse impacts.
		Post fire midstory recruitment resulting in difficulty to move from tree to tree.	Consider planned burn guidelines, soil moisture, fire history and expected fire behaviour coupled to and species composition present to minimise adverse impacts.
		Post fire species recovery resulting in unfavourable forest type/species presence.	Consider planned burn guidelines, soil moisture, fire history and species composition present.
N	Tusked frog	Habitat/breeding place loss	Consider QPWS planned burn guidelines and fire behaviour to minimise likelihood of adverse impacts. Burn with good soil moisture and wet drainage lines.
B	House Map ref: L17	Damage from embers/ radiant heat.	(T) Ensure suitable vegetation clearance around building. IC to allocate suitable resources to minimise likelihood of damage.

<b>Control Lines</b>			
<b>Control lines</b> Refer to Operational Map Type Description	Name of control line	Location	Type /width (A – B – C – D)
<b>A – Heavy appliance</b> (Urban fire truck or water tanker etc.)  <b>B – Medium appliance</b> (Echo or Isuzu etc.)  <b>C – 4WD vehicle access</b> (Land Cruiser or Patrol etc.)  <b>D – Walking trail or UTV</b>	Northern control line FT_BO_7a & 08	05Na – 05Nj	C 4m
	WT_BO_02	05Nj – 05Nm	D 1.5m
	Eastern control line FT_BO_05b & 05a	05Nm – 05-EF	C 4m
	Southern control line FT_BO_02 & 4a & 4b	05Si – 05Ef	C 4m
	South Western control line Cliff Barrons Road	05Si – 05Wf	B 6
	Western Control line FT_BO_01a & WT_BO_01	05Wf – 05Na	C – 4 D – 1.5m
<b>Contingency control lines</b> (Identify where a breach of containment could possibly occur. List fallback lines in the event of a breakout)	<b>Northern containment:</b> Internal/boundary control lines. Moisture gradients and vegetation types may assist in control. <b>Eastern containment:</b> Nil containment, private property. Open managed areas and creek lines. <b>Southern containment:</b> One internal control line. Private property, Upper Ormeau Road. <b>Western containment:</b> Nil containment. Private property. Creek lines and vegetation/moisture gradients.		
<b>Control Line Task Actions Required</b>	<input checked="" type="checkbox"/> Yes (If <b>yes</b> , has the <i>Pre burn works order</i> sheet been populated?) <input type="checkbox"/> No		

## MISSION

<b>Aim &amp; Objectives</b> (Outline the general intent of the proposed burn and the specific objectives. Consider fuel load, fuel structure & mosaic effect)	<b>Aim:</b> Implement the planned burn as required to support the Offset and Bushfire Management Plan. <b>Objective 1.</b> Undertake planned burn aiming for 40-60% coverage. <b>Objective measures:</b> <u>Objective 1</u> – Post fire mapping to allow approximate calculation of percent bunt of the FMU.
<b>Expected duration of burn/Timeline</b>	2 days plus ongoing patrol.

## EXECUTION

### PREFERRED FIRE/FUEL PARAMETERS

<b>Weather conditions</b>	Max temp	30°	Max wind speed & preferred direction	15 km Any (Pref NNW)	Min RH Max RH	30% 100%
<b>Flame height</b>	3 – 1.5m (average)	Scorch Height:	(average 1.2 – 6m @ factor of 4)			
<b>Other guidelines</b> (List any weather and fuel moisture conditions which will prohibit or restrict burning)	QPWS planned burn guidelines. RE fire management guidelines					
	Max fire danger index	>High	Max KBDI	>120		
<b>Suggested Ignition Method</b>	<input checked="" type="checkbox"/> Ground <input type="checkbox"/> Aerial <input type="checkbox"/> Slingshot <input type="checkbox"/> Other (if other what)					
<b>Ignition pattern</b> (Describe the ignition method and sequence of lighting) (Procedure may be modified on the day of the burn, based on conditions and test burn)	Ground ignitions supported by incendiaries as required. Ignition at point 05Na to 05Wf and 05Na to 05Nd consecutively and secured. Once Western control line contained, ignition from 05Nd to 05Nn. Once contained, ignition continues from 05Nn to 05Eb and 05Ef to 05Eb consecutively. Once contained, ignition from 05Ef – 05Si and 05Wf – 05Si. Ongoing patrol and mopup. Once containment ignition complete, internal ignition to occur to meet objectives.					

SUGGESTED MINIMUM RESOURCES						
Machinery/plant items		Fireland	Council /Utility	RFSQ	QFES	Other Land manager
Type	Number req.					
<b>Dozer</b>		4 LA				
<b>Grader (opt)</b>		3 x ULA (opt)				
<b>Tractor/FEL (opt)</b>						
<b>Water trailer (FC)</b>	1					
<b>Totals:</b>						
<b>Specialist personnel</b> (List function & name)		Nil				
<b>Contingency resources</b> (List additional resources required if breakout occurs)		Fireland personnel. Contract heavy plant Rural Fire Service.				
<b>Water points</b> (Refer to operational map) (Describe the type e.g. hydrant, dam, static etc. & the location/s-grid reference)		Type	Location			
		Creek	05Eb (seasonal and unreliable)			
		Trailer	TBC			

Smoke Management			
Assessment (Describe what may be affected and the strategies to reduce the risk of adverse effects)			
This section to be used to assess values (relating to smoke) that may be threatened (adversely) from the planned fire event			
Value Type	Value	Threat (from the activity)	Mitigation – Task/Constraint
B – Built N – Natural P - Person C – Cultural U - Utility	(e.g. Vulnerable persons)	(Smoke impacts - health)	(Task – liaise with management to close windows) (Constraint – Only burn with a northerly wind) Any <u>tasks</u> to be transferred to the 'Pre burn works order sheet.
P	Community concern	Community alarm	(T) Neighbour/stakeholder notifications

Traffic Management		
Assessment (Describe what may be affected and the strategies to reduce the risk of adverse effects)		
This section to be used to assess values (in relation to traffic management) that may be threatened (adversely) from the planned fire event		
Value	Threat (from the activity)	Mitigation – Task/Constraint
(e.g. Gympie Road)	(Smoke reducing visibility)	(Task – Install smoke hazard signs) (Constraint – Only burn with a northerly wind) Any <u>tasks</u> to be transferred to the 'Pre burn works order sheet.
Cliff Barron Road	Reduced visibility	(T) Install smoke hazard/fire fighter ahead signage.

## ADMINISTRATION

<b>Key point and places</b> (Refer to Operational Burn Map) (Describe the location)	Assembly Area - map reference: L17 Staging Area – map reference: L17 Evacuation Route - Out to Cliff Barron Road
<b>Catering</b> (Describe location, time and supplier)	Self-sufficient.
<b>Fuel</b> (Describe location and type)	Ampol – Peachey Rd.

### NEIGHBOUR & LAND OWNER NOTIFICATIONS

- Firecom must** be notified prior to lighting up, and at the completion of the day.
- All land owners **must** give consent for works to be carried out on their land.
- 72 hours notice **must** be given to adjoining land owners/occupiers.

Agency / Neighbour	Contact No.	Advised Date / Time	Notes
City of Gold Coast	<a href="mailto:mail@goldcoast.qld.gov.au">mail@goldcoast.qld.gov.au</a>		
Division 1	<a href="mailto:division1@goldcoast.qld.gov.au">division1@goldcoast.qld.gov.au</a>		
NAMU	NAMU@goldcoast.qld.gov.au		
QFES media	<a href="mailto:QFESMedia@qfes.qld.gov.au">QFESMedia@qfes.qld.gov.au</a>		
Neighbours			Letter Box drop
Dept Health	<a href="mailto:GCHHSDisaster@health.qld.gov.au">GCHHSDisaster@health.qld.gov.au</a>		
Dept Health	<a href="mailto:SHECC@health.qld.gov.au">SHECC@health.qld.gov.au</a>		
Fiecomm SE	1800689958		

<b>Patrol</b> (outline patrol responsibilities, timeframe & resources)	IC to determine and detail crews and works required.
<b>Other</b> (Include any other logistical arrangements. Gate keys?)	Notification to quarry manager.

## COMMAND AND COMMUNICATIONS

### ORGANISATIONAL STRUCTURE & COMMUNICATIONS

<b>Fire command</b>	Network/Channel FC - UHF channel 1			
<b>Fire-ground</b>	Network/Channel			
<b>Aviation</b>	Network/Channel			
<b>Position</b>	<b>Name</b>	<b>Call Sign</b>	<b>Channel/s</b>	<b>Mobile</b>
<b>Incident Controller</b>				
<input type="checkbox"/> <b>Sector</b> <input type="checkbox"/> <b>Crew leader</b> Name TBA				
<input type="checkbox"/> <b>Sector</b> <input type="checkbox"/> <b>Crew leader</b> Name TBA				
<input type="checkbox"/> <b>Sector</b> <input type="checkbox"/> <b>Crew leader</b> Name TBA				
<input type="checkbox"/> <b>Sector</b> <input type="checkbox"/> <b>Crew leader</b> Name TBA				
<input type="checkbox"/> <b>Sector</b> <input type="checkbox"/> <b>Crew leader</b> Name				
<b>Safety advisor</b>				
<b>Contingency communications</b> (Describe arrangements if radio network fails)	<b>Mobile phone</b>			

DRAFT

## SAFETY

### Personal Safety

**Assessment** (Describe what threats are present that may cause adverse effects to individuals for this activity)

This section to be used to assess specific threats that exist that could adversely affect individuals from the activity.

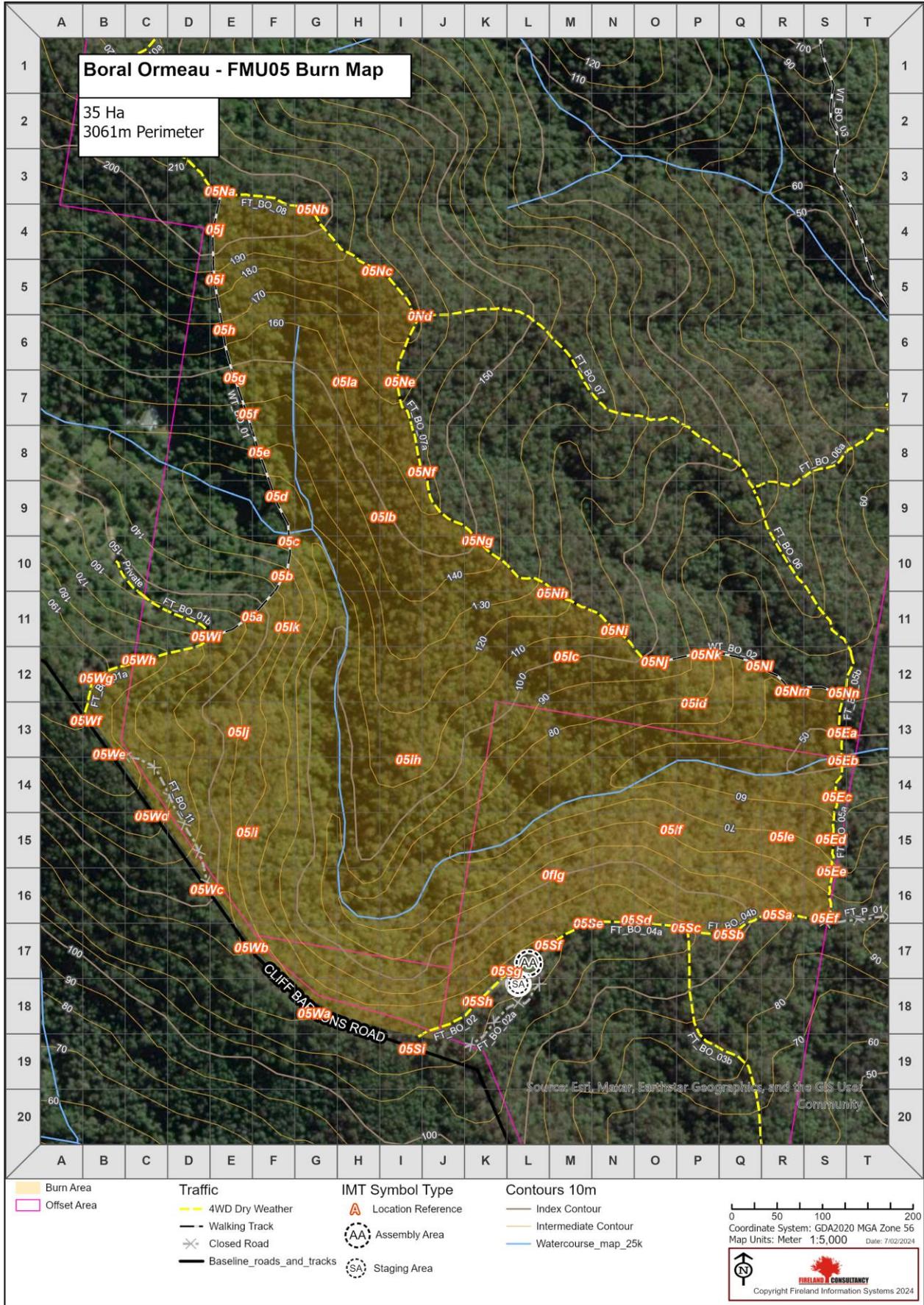
Threat Type	Threat (from the activity)	Consequence	Mitigation – Task/Constraint
B – Built N – Natural H – Haz Materials P - Person U - Utility	(e.g. Hazard tree)	Personal harm	(Task – Identify hazardous trees) (Task – Exclude hazardous trees) (Constraint – Burn with high soil moisture) Any <u>tasks</u> to be transferred to the 'Pre burn works order sheet.
P	Hazard tree	Personal injury	(T) Identify hazard trees and mitigate risk.  (C) Burn with suitable soil moisture to lessen likelihood of engagement of hazard trees.
P	Interaction with vehicles on public road	Personal injury	(T) Traffic signage in place. Vehicles to have flashing lights on. Vehicles parked up on side. Vehicles used to create safe working space from passing traffic.

DRAFT

<b>Crew briefing</b> (Prior to lighting up all personnel are to be briefed using the <b>SMEACS</b> )	Arrangement for access through quarry area.
<b>Incidents</b>	<b>All incidents or near misses should be immediately reported to the IC and recorded in the Incident Log.</b> <b>Refer to Emergency and Incident Flow Chart.</b> <b>Start Incident Reporting as soon as practicable.</b>
<b>Escape routes</b> (list location) refer to operational burn map	Road 8C0
<b>Safe areas</b> (list locations) refer to operational burn map	Map reference T3
<b>Evacuation points</b> (List location) refer to operational burn map	Quarry site office.

BRIEFING UNDERTAKEN			
Date	Time	Incident Controller's signature (IC)	
INCIDENT CONTROLLER HANDOVER BRIEFING			
Date	Time	Outgoing IC signature	Incoming IC name & signature
DEBRIEFING UNDERTAKEN			
Date	Time	Incident controller's signature (IC)	

**SAFETY BRIEFING – to be completed all burn days**



# Appendix F

Gold Coast City Council approval

Our reference: OPW/2022/893  
Your reference: 2766

**Decision notice—approval (with conditions)**

(Given under section 63(2) of the *Planning Act 2016*)

**Date of decision notice:** 2 March 2023

**Applicant details**

---

Applicant name: Boral Property Group Pty Ltd  
Applicant contact details: C/- New Ground  
PO BOX 713  
MERMAID BEACH QLD 4218

**Application details**

---

Application number: OPW/2022/893  
Approval sought: Operational Works  
Details of proposed development: Tree works development – in accordance with OPW/2022/879

**Location details**

---

Street address: Lot 2 Cliff Barrons Road, Ormeau Hills Qld 4208  
Real property description: Lot 1 RP174509

**Decision**

---

Date of decision: 28 February 2023  
Decision details: Under Delegated Authority, the supervisor of the environmental assessment branch of Council has resolved to approve the development application in full with conditions

**Referral agency(s) for the application**

---

Not applicable – no part of the application required referral.

**Details of the approval**

---

Development permit: Operational works - Vegetation clearing

**Conditions**

---

The conditions that have been imposed by Council, as Assessment manager, are enclosed.

**Further development permits**

---

Notwithstanding the above, other approvals/development permits may be required.

**Properly made submissions**

---

Not applicable—No part of the application required public notification.

**Currency period for the approval (section 85 of the *Planning Act 2016*)**

In accordance with section 85 of the *Planning Act 2016*, this approval has a currency period of two years.

**Approved plans and drawings**

Approved plans and drawings are attached and are identified in the conditions imposed by Council as the Assessment manager.

**Appeal rights**

Applicant	<p>You have appeal rights in relation to this decision. An appeal may be made against, as applicable:</p> <ul style="list-style-type: none"><li>• the refusal of part of the development application; or</li><li>• a provision of the development approval; or</li><li>• if a development permit was applied for, the decision to give a preliminary approval.</li></ul> <p>An appeal must be started within 20 business days after this notice is given to you.</p> <p>An appeal may be made to the Planning and Environment Court or, for certain matters which are identified in section 1(2) of Schedule 1 of the <i>Planning Act 2016</i>, to a development tribunal.</p> <p>An appeal is started by lodging a notice of appeal with the registrar of the Planning and Environment Court or a development tribunal, as applicable. The notice of appeal must be in the approved form, succinctly state the grounds of the appeal and be accompanied by the required fee.</p> <p>An appellant to the Planning and Environment Court must give a copy of the notice of appeal, within 10 business days after the appeal is started, to the persons identified in section 230(3) of the <i>Planning Act 2016</i>. A person who is appealing to the Planning and Environment Court must comply with the rules of the court that apply to the appeal.</p> <p>An extract of Chapter 6, Part 1 and Schedule 1 of the <i>Planning Act 2016</i> is attached to this notice, which sets out further information about the appeal rights.</p>
-----------	---

For further information please contact Karen Vigoya, Environmental Planner on p: 07 5582 8866 or via email [mail@goldcoast.qld.gov.au](mailto:mail@goldcoast.qld.gov.au) who will be pleased to assist.

Yours faithfully



Mark Spears  
**Supervisor - Environmental Assessment**  
*For the Chief Executive Officer*  
Council of the City of Gold Coast

Enclosed: Conditions imposed by Council as Assessment manager  
Attached: Stamped approved plans and drawings

<b>Development Conditions imposed by Council as Assessment Manager</b>																
<b>General</b>																
<b>1</b>	<p><b>Timing</b></p> <p>a All conditions of this development approval must be complied with at no cost to Council at all times unless otherwise stated in another condition.</p> <p>b Where the timing in a condition is prior to commencement of the use and a Building Format Plan is lodged for approval, the timing in the condition changes from being prior to commencement of the use to being prior to the earlier of the commencement of the use and approval of the plan of subdivision. This timing requirement prevails despite any inconsistency with the timing requirement in another condition.</p>															
<b>2</b>	<p><b>Approved drawings</b></p> <p>Undertake and maintain the development generally in accordance with the following drawings:</p> <table border="1"> <thead> <tr> <th>Drawing Title</th> <th>Author</th> <th>Date</th> <th>Drawing No.</th> <th>Ver</th> </tr> </thead> <tbody> <tr> <td><i>Vegetation Management Plan</i></td> <td><i>New Ground</i></td> <td><i>2/11/2022</i></td> <td><i>2766</i></td> <td><i>1</i></td> </tr> <tr> <td><i>Supplementary Data: Individual Tree Survey Data</i></td> <td><i>New Ground</i></td> <td>-</td> <td><i>2766</i></td> <td>-</td> </tr> </tbody> </table> <p>The conditions of this approval are to be read in conjunction with the attached stamped approved drawings. Where a conflict occurs between the conditions of this approval and the stamped approved drawings, the conditions of this approval shall take precedence.</p>	Drawing Title	Author	Date	Drawing No.	Ver	<i>Vegetation Management Plan</i>	<i>New Ground</i>	<i>2/11/2022</i>	<i>2766</i>	<i>1</i>	<i>Supplementary Data: Individual Tree Survey Data</i>	<i>New Ground</i>	-	<i>2766</i>	-
Drawing Title	Author	Date	Drawing No.	Ver												
<i>Vegetation Management Plan</i>	<i>New Ground</i>	<i>2/11/2022</i>	<i>2766</i>	<i>1</i>												
<i>Supplementary Data: Individual Tree Survey Data</i>	<i>New Ground</i>	-	<i>2766</i>	-												
<b>3</b>	<p><b>Approved Plans</b></p> <p>Undertake and maintain the development generally in accordance with the following plans:</p> <table border="1"> <thead> <tr> <th>Plan Title</th> <th>Author</th> <th>Date</th> <th>Plan Reference No.</th> <th>Ver</th> </tr> </thead> <tbody> <tr> <td><i>Vegetation Management Plan</i></td> <td><i>New Ground</i></td> <td><i>2/11/2022</i></td> <td><i>2766</i></td> <td><i>1</i></td> </tr> </tbody> </table>	Plan Title	Author	Date	Plan Reference No.	Ver	<i>Vegetation Management Plan</i>	<i>New Ground</i>	<i>2/11/2022</i>	<i>2766</i>	<i>1</i>					
Plan Title	Author	Date	Plan Reference No.	Ver												
<i>Vegetation Management Plan</i>	<i>New Ground</i>	<i>2/11/2022</i>	<i>2766</i>	<i>1</i>												
<b>4</b>	<p><b>Scope of works</b></p> <p>Undertake the vegetation clearing in accordance with the following scope of works:</p> <table border="1"> <thead> <tr> <th>Vegetation ID No.</th> <th>Quantity and species</th> <th>Approved works</th> <th>Justification of works</th> </tr> </thead> <tbody> <tr> <td>Trees 1 to 29</td> <td>Mixture of species</td> <td>To be retained and not damaged</td> <td>Outside area of works</td> </tr> </tbody> </table> <p>The conditions of this approval are to be read in conjunction with the attached stamped approved drawings. Where a conflict occurs between the conditions of this approval and the stamped approved drawings, the conditions of this approval shall take precedence.</p>	Vegetation ID No.	Quantity and species	Approved works	Justification of works	Trees 1 to 29	Mixture of species	To be retained and not damaged	Outside area of works							
Vegetation ID No.	Quantity and species	Approved works	Justification of works													
Trees 1 to 29	Mixture of species	To be retained and not damaged	Outside area of works													
<b>Environmental and Landscaping</b>																
<b>5</b>	<p><b>Vegetation management</b></p> <p>a Implement the vegetation management measures identified in the plan listed below at no cost to Council:</p>															

	<b>Plan Title</b>	<b>Author</b>	<b>Date</b>	<b>Plan Reference No.</b>	<b>Ver</b>						
	<i>Vegetation Management Plan</i>	<i>New Ground</i>	<i>2/11/2022</i>	<i>2766</i>	<i>1</i>						
	b Undertake works generally in accordance with an operational works approval and City Plan Policy SC6.8 – Environmental management plans and the Vegetation management code.										
<b>6</b>	<b>Tree pruning and work</b> a Topping, lopping, spur or spike climbing of any tree must not occur. b Pruning may only occur in a manner consistent with the <i>Australian Standard AS4373 - 2007 – Pruning of Amenity Trees</i> . c Undertake all other work on the trunk, foliage or root systems of the trees marked on the drawings listed below in a manner consistent with <i>Australian Standard AS4373 - 2007 - Pruning of Amenity Trees</i> .										
<b>7</b>	<b>Root pruning and barriers</b> a Ensure root pruning utilises a high pressure, needle point water jet prior to insertion of proprietary root barriers. b Ensure root barriers are installed to a minimum depth of 900mm along the side closest to the structure specified in the approved scope of works condition to prohibit or deter growth of roots towards the structure.										
<b>8</b>	<b>No damage to retained vegetation</b> Ensure all other existing vegetation is retained and not disturbed or damaged during implementation of the approved works.										
<b>Construction Management</b>											
<b>9</b>	<b>Erosion and sediment control</b> a Undertake works generally in accordance with the Healthy waters code of the City Plan and include in particular: <ul style="list-style-type: none"> <li>i Sediment control structures e.g. sediment fence must be placed at the base of all materials imported on site to mitigate sediment run-off.</li> <li>ii A perimeter bund and/or diversion drain must be constructed around the disturbed areas to prevent any outside clean stormwater from mixing with polluted/contaminated stormwater.</li> <li>iii All polluted/contaminated water from the site, including dewatering discharge, must be treated to achieve the water quality objectives in Table 8.2.1 of the Queensland Water Quality Guidelines (DERM September 2009) prior to discharging from the site.</li> <li>iv Inspections for erosion and sediment control measures are to occur in accordance with the compliance procedures in City Plan Policy SC6. 11 – Land development guidelines, section 6.</li> </ul>										
<b>10</b>	<b>Supervision of works</b> During construction of any works the following professionals must be appointed to supervise the below described actions:										
	<table border="1"> <thead> <tr> <th colspan="2"><b>Environmental Assessment</b></th> </tr> <tr> <th><b>Expertise required of the suitably qualified</b></th> <th><b>Actions to be overseen by the professional</b></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>					<b>Environmental Assessment</b>		<b>Expertise required of the suitably qualified</b>	<b>Actions to be overseen by the professional</b>		
<b>Environmental Assessment</b>											
<b>Expertise required of the suitably qualified</b>	<b>Actions to be overseen by the professional</b>										

	<b>professional</b>																
	Minimum AQF Level 5 Arborist	Construction and fencing works within the Tree Protection Zone (TPZ) of subject trees to be retained Supervision of works within Tree Protection Zone (TPZ) of trees to be retained															
<b>11</b>	<p><b>Certification of works</b></p> <p>Provide Council with certificates prepared by qualified experts from the disciplines listed below, confirming as follows:</p> <table border="1"> <thead> <tr> <th colspan="5"><b>Environmental Assessment</b></th> </tr> <tr> <th><b>Certified document</b></th> <th><b>Certification date</b></th> <th><b>Plan/ Drawing</b></th> <th><b>Expert discipline</b></th> <th><b>Requesting Council Section</b></th> </tr> </thead> <tbody> <tr> <td><i>Vegetation management plan</i></td> <td><i>Upon practical completion of works</i></td> <td>2766</td> <td><i>AQF Level 5 Arborist</i></td> <td><i>Environmental Assessment</i></td> </tr> </tbody> </table> <p>The certification is to confirm:</p> <ul style="list-style-type: none"> <li>i The works on site were undertaken in accordance with the approved Vegetation management plan</li> <li>ii Vegetation identified to be retained has been retained without damage.</li> <li>iii Any recommended actions to remediate damage to any retained vegetation.</li> <li>iv The TPZ fencing was maintained at all times. No works occurred within this area unless supervised by Project Arborist - Certificate Level 5.</li> </ul>		<b>Environmental Assessment</b>					<b>Certified document</b>	<b>Certification date</b>	<b>Plan/ Drawing</b>	<b>Expert discipline</b>	<b>Requesting Council Section</b>	<i>Vegetation management plan</i>	<i>Upon practical completion of works</i>	2766	<i>AQF Level 5 Arborist</i>	<i>Environmental Assessment</i>
<b>Environmental Assessment</b>																	
<b>Certified document</b>	<b>Certification date</b>	<b>Plan/ Drawing</b>	<b>Expert discipline</b>	<b>Requesting Council Section</b>													
<i>Vegetation management plan</i>	<i>Upon practical completion of works</i>	2766	<i>AQF Level 5 Arborist</i>	<i>Environmental Assessment</i>													
<b>12</b>	<p><b>Availability of approved plans, drawings and reports</b></p> <p>Retain a copy of this decision notice and stamped approved plans, drawings and reports on site at all times during construction. Any contractors undertaking approved work (including tree removal or relocations) must be directly provided with a copy of these conditions and instructed as to the need to comply with them.</p>																

<b>Advice Notes</b>	
<b>A</b>	<p><b>Compliance with conditions</b></p> <p>Once this development approval takes effect, the conditions attach to the land and are applicable in perpetuity. It is a development offence to contravene a development approval, including any of its conditions.</p>
<b>B</b>	<p><b>Indigenous cultural heritage legislation and duty of care requirement</b></p> <p>The <i>Aboriginal Cultural Heritage Act 2003</i> ('<b>ACHA</b>') is administered by the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP). The ACHA establishes a duty of care to take all reasonable and practicable measures to ensure any activity does not harm Aboriginal cultural heritage. This duty of care:</p> <ul style="list-style-type: none"> <li>a Is not negated by the issuing of this development approval;</li> <li>b Applies on all land and water, including freehold land;</li> <li>c Lies with the person or entity conducting an activity; and</li> <li>d If breached, is subject to criminal offence penalties.</li> </ul> <p>Those proposing an activity involving surface disturbance beyond that which has already occurred at the proposed site must observe this duty of care.</p> <p>Details of how to fulfil this duty of care are outlined in the duty of care guidelines gazetted with the ACHA.</p> <p>The applicant should contact DSDSATSIP's Cultural Heritage Coordination Unit on 1300 378</p>

	401 for further information on the responsibilities of developers under the ACHA.
<b>C</b>	<p><b>Applicant responsibilities</b></p> <p>The applicant is responsible for securing all necessary approvals and tenure, providing statutory notifications and complying with all relevant laws.</p> <p>Nothing in this decision notice alleviates the need for the applicant to comply with all relevant local, State and Commonwealth laws and to ensure appropriate tenure arrangements have been made where the use of/reliance upon land other than that owned by the applicant is involved. Without limiting this obligation, the applicant is responsible for:</p> <ol style="list-style-type: none"> <li>a Obtaining all other/further necessary approvals, licences, permits, resource entitlements etc by whatever name called required by law before the development the subject of this approval can be lawfully commenced and to carry out the activity for its duration.</li> <li>b Providing any notifications required by law (by way of example only, to notify the administering authority pursuant to the <i>Environment Protection Act 1994</i> of environmental harm being caused/threatened by the activity, and upon becoming aware the premises is being used for a 'notifiable activity').</li> <li>c Securing tenure/permission from the relevant owner to use private or public land not owned by the applicant (including for access required by conditions of approval).</li> <li>d Ensuring existing survey marks, including cadastral marks at property corners, i.e pegs or cadastral reference marks in the road reserve (permanent surveys marks, buried iron pins, and various marks in concrete or bitumen structure) are not interfered with. A Consulting Cadastral Surveyor must be contacted if survey marks are disturbed or destroyed during any works in relation to this or related approvals, to investigate and determine if any further action is required. More information on interference with survey marks is available under Section 42 of the <i>Survey and Mapping Infrastructure Act 2003</i>.</li> <li>e Ensuring the correct siting of structures on the land. An identification survey demonstrating correct siting and setbacks of structures may be requested of the applicant to ensure compliance with this decision notice and applicable codes.</li> <li>f Providing Council with proof of payment of the Portable Long Service Leave building construction levy (or proof of appropriate exemption) where the total value of the building and construction works exceeds \$150,000 (excluding GST). Acceptable proof of payment is a Q.Leave –Notification and Payment Form approved by the Authority. Proof of payment must be provided before Council can issue a development permit for the Operational works. This is a requirement of section 77(1) of the Building and Construction Industry (Portable Long Service Leave) Act 1991.</li> <li>g Making payment of any outstanding Council rates and charges applicable to the development site prior to the lodgement of subdivision plans.</li> <li>h Obtaining any necessary local government/state approvals where works require the installation of temporary ground anchoring into adjacent Road Reserves. Where ground anchoring is proposed into an adjacent private property, approval from the relevant property owners(s) is required.</li> </ol>
<b>D</b>	<p><b>Weeds, pest animals and ants</b></p> <p>Biosecurity Queensland of the Department of Agriculture and Fisheries leads the Government's efforts to prevent, respond to and recover from pests and diseases threatening agricultural prosperity, the environment, social amenity and human health.</p> <p>All landscape materials, including but not limited to, soils, mulch, grass, gravel, potted or ex-ground plants, pavers and timber used in landscape treatments must be free from weeds, pest animals and ants.</p>
<b>E</b>	<p><b>Fire ant control</b></p> <p>A significant portion of the Gold Coast is within Fire Ant Biosecurity zone 2 and must remain vigilant for the presence of fire ants. Under the <i>Biosecurity Act 2014</i> individuals and organisations whose activities involve the movement or storage of fire ant carriers have a</p>

	<p>general biosecurity obligation to take all reasonable steps to ensure they do not spread fire ants. Movement of a fire ant carrier from within the fire ant biosecurity zone may need a biosecurity instrument permit. More information is available on the Department of Agriculture and Fisheries website <a href="http://www.daf.qld.gov.au/plants/weeds-pest-animals-ants/invasive-ants/fire-ants">www.daf.qld.gov.au/plants/weeds-pest-animals-ants/invasive-ants/fire-ants</a>.</p>
<b>F</b>	<p><b>Listing of Koala under EPBC Act</b></p> <p>Koala populations in South East Queensland are listed under the Environment Protection and Biodiversity Conservation Act 1999 (<i>EPBC Act</i>) as a matter of national significance. All necessary approvals must be obtained prior to any works commencing on the site.</p>
<b>G</b>	<p><b>Species Management Program</b></p> <p>Where an animal breeding place has been identified and activities will tamper with the breeding place in order to complete the scope of works, a Species Management Program (SMP) is required.</p> <p>Further advice is found on:</p> <p><a href="https://environment.des.qld.gov.au/licences-permits/plants-animals/species-management-program/">https://environment.des.qld.gov.au/licences-permits/plants-animals/species-management-program/</a></p>

# PROPOSED ACCESS ROAD AND STORMWATER UPGRADE

LOT 1 RP174509

68 CLIFF BARRONS ROAD, ORMEAU HILLS

FOR

# BORAL LIMITED

## INDEX OF DRAWINGS

### GENERAL

G21095G-01 COVER SHEET  
G21095G-02 CIVIL NOTES AND LEGEND

### CIVIL

G21095C-01 CIVIL SITE PLAN  
G21095C-02 ACCESS ROAD LONGITUDINAL SECTION  
G21095C-03 STORMWATER CULVERT SECTION  
G21095C-04 HEADWALL ARRANGEMENT DETAILS  
G21095C-05 HEADWALL STRUCTURAL DETAILS

### EARTHWORKS

G21095E-01 EARTHWORKS PLAN

### EROSION & SEDIMENT CONTROL

G21095ESC-01 EROSION & SEDIMENT CONTROL PLAN  
G21095ESC-02 EROSION & SEDIMENT CONTROL DETAILS  
G21095ESC-03 EROSION & SEDIMENT CONTROL NOTES



LOCATION OF PROPOSED WORKS

**LOCALITY PLAN**  
NOT TO SCALE

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL  
Application No. OPW/2022/879  
Dated: 20 February 2023  
Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Approval is for change to ground level only.

		DOCUMENT CONTROL	APPROVED	SUNSHINE COAST Suite 2, Norval Corporate Centre, 13 Norval Ct, Maroochydore T: 07 5391 3777   F: 07 5466 5857 E: sunshinecoast@westerapartners.com.au		GOLD COAST Level 3 17 Walsh St, Southport T: 07 5571 1599   F: 07 5571 1530 E: goldcoast@westerapartners.com.au		SURVEYOR SCHLENCKER SURVEYING QLD PHONE (07) 5573 6744		DATUM AHD		PROJECT BORAL QUARRY ORMEAU 68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509		DRAWING STATUS FOR APPROVAL		
		DESIGNED B.J.M.		BRISBANE Level 2 Limestone, 33 Longland St, Newstead T: 07 3852 4333   F: 07 3852 4777 E: brisbane@westerapartners.com.au		NORTHERN NSW Suite 24 Level 2, 11-13 Pearl St, Kingsmill T: 02 4474 8047   F: 02 4474 8049 E: nsw@westerapartners.com.au		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THEM FOR WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		TITLE COVER SHEET		DRAWING NUMBER G21-095-G01				
C		19.10.2022		SHEETS C04 & C05 REMOVED FROM SET	DRAWN B.J.M.						CLIENT BORAL LIMITED		SHEET NUMBER 01 of 2		REVISION C	
B		8.07.2022		LOCALITY PLAN UPDATED TO SHOW LOCATION OF WORKS	CHECKED B.C.A.											
A		13.06.2022	EARTHWORKS & EROSION DRAWINGS ADDED	DATE MAY 2022												
No.	DATE	REVISIONS		FILE NAME Coversheet.dwg												

### GENERAL NOTES

- G1 WESTERA PARTNERS HAS LIMITED CONTROL OR INPUT TO LOCAL GOVERNMENT OR OTHER LEGISLATED APPROVALS UNLESS SPECIFICALLY ENGAGED BY ITS CLIENT. ANY CHANGES TO APPROVAL REQUIREMENTS (INCLUDING ORDERS FOR SUSPENSION OF WORKS ETC) SHOULD BE COMMUNICATED TO WESTERA PARTNERS AND ALL OTHER RELEVANT DESIGNERS TO ALLOW ASSESSMENT OF POTENTIAL RISKS AND ENSURE DESIGN AND SAFETY COMPLIANCE.
- G2 ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS & SPECIFICATIONS AND COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY.
- G3 UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- G4 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR MUST LOCATE ALL EXISTING SERVICES AND PROMPTLY PROVIDE THE LOCATION DATA TO THE DESIGN ENGINEER TO ASSESS IMPACTS ON THE DESIGN.
- G7 THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING SUB-SOIL TESTS OF THE SUB-GRADE MATERIAL.
- G9 ALL U.P.V.C. STORMWATER DRAINAGE PIPES ARE TO BE CLASS S18 AND ALL R.C. AND F.R.C. PIPES ARE TO BE CLASS 3 RUBBER RING JOINTED UP TO AND INCLUDING 600 DIA. PIPES OVER 600 DIA. ARE TO BE CLASS 3 AND ARE TO HAVE AN EXTERNAL RUBBER BAND JOINT GROUTED INTERNALLY.
- G11 ALL "AS CONSTRUCTED" INFORMATION IS TO BE RECORDED AS REQUIRED BY THE LOCAL AUTHORITY AND SUBMITTED TO THE SUPERINTENDENT IMMEDIATELY AFTER COMPLETION OF THE WORKS.

### EARTHWORKS NOTES

- EW1 IN CASE OF DOUBT - ASK!
- EW2 ALL LEVELS TO AHD, DIMENSIONS IN METERS U.N.O.
- EW3 ALL LIAISON WITH LOCAL, STATE & STATUTORY AUTHORITIES IS THE CONTRACTOR'S RESPONSIBILITY.
- EW4 THE LOCATION OF EXISTING SERVICES IS FOR CONTRACTOR'S INFORMATION ONLY, THE LOCATION OF SERVICES WILL BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.
- EW5 ANY DAMAGE CAUSED TO THE EXISTING SERVICE WILL BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.
- EW6 EARTHWORK PROCEDURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS 3798 - 2007 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS".
- EW7 EARTHWORKS OPERATIONS ARE TO BE CARRIED OUT IN GENERAL ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- EW8 WORKS NOT SPECIFICALLY REFERRED TO, ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL DRAWINGS AND SPECIFICATIONS OF THE LOCAL AUTHORITY (GOLD COAST CITY COUNCIL).
- EW9 THE CONTRACTOR IS TO ALLOW FOR ALL FEES AND HAULAGE COSTS ASSOCIATED WITH DISPOSAL OF MATERIAL FROM THE SITE.
- EW10 ALL COSTS ASSOCIATED WITH NOISE AND DUST SUPPRESSION FOR SITE WORKS ARE DEEMED THE CONTRACTOR'S RESPONSIBILITY.
- EW11 COMPACTION STANDARDS  
- MINIMUM RELATIVE COMPACTIONS TO AS 3798 TABLE 5.1 (REFER BELOW)

ITEM	APPLICATION	MINIMUM RELATIVE COMPACTION, %	
		MINIMUM DENSITY RATIO (COHESIVE SOILS) (SEE NOTE 1*)	MINIMUM DENSITY INDEX (COHESIONLESS SOILS) (SEE NOTE 2*)
1	RESIDENTIAL - LOT FILL, HOUSE SITES	95 std (SEE NOTE 3*)	65
2	COMMERCIAL - FILLS TO SUPPORT MINOR LOADINGS, INCLUDING FLOOR LANDINGS OF UP TO 20 kPa AND ISOLATED PAD OR STRIP FOOTINGS TO 100 kPa	98 std (SEE NOTE 4*)	70
3	PAVEMENTS (SEE NOTE 5*)		
	(a) FILL TO SUPPORT PAVEMENTS	95 std	65
	(b) SUBGRADE (TO DEPTH OF 0.3m)	98 std	80
	(c) SUB-BASE COURSES	95 mod	NOT USUALLY APPLICABLE
	(d) BASE COURSE	98 mod	NOT USUALLY APPLICABLE
	- HEAVILY LOADED	95 mod	NOT USUALLY APPLICABLE
	- OTHER	(SEE NOTE 5*)	NOT USUALLY APPLICABLE

\*REFER TO AS 3798 FOR TABLE NOTES.  
- 'MODIFIED' TO AS 1289 TEST 5.2.1.  
- 'STANDARD' TO AS 1289 TEST 5.1.1.

- EW12 PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR WILL PROVIDE SCOUR AND EROSION PROTECTION INCLUDING PROVISION OF SILT TRAPS AND FENCES TO MINIMISE DEPOSITION OF MATERIAL DOWNSTREAM OF THE PROPERTY.
- EW13 NO BLASTING WILL BE PERMITTED.
- EW14 THE LOCATION OF THE SITE SHEDS, SITE OFFICE AND AMENITIES BUILDING WILL BE LOCATED TO SUIT TEMPORARY UTILITY SERVICES OR AS AGREED WITH THE MANAGER.
- EW15 TESTING FREQUENCY AS 3798 - 2007 SECTION 8.0 OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
- EW16 AT COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT LICENSED SURVEYOR TO CARRY OUT A "WORKS AS CONSTRUCTED" SURVEY AND SUBMIT THE DETAIL PLAN TO THE MANAGER.
- EW17 THE LOCATION OF TEMPORARY STOCKPILES DURING CONSTRUCTION IS TO BE AGREED WITH THE MANAGER.

### CONCRETE NOTES

- C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CONCRETE STRUCTURES CODE AND THE REFERENCED STANDARDS THEREIN.
- C2 THE CONCRETE STRENGTH GRADE AND THE COVER TO REINFORCEMENT FOR THE VARIOUS CONCRETE ELEMENTS SHALL BE AS LISTED BELOW:  
- CLIMATE ZONE: **TROPICAL** **TEMPERATE** **AND**  
- LOCATION: **COASTAL** **NEAR COASTAL** **INLAND**

ELEMENT	EXPOSURE CLASSIFICATION	STRENGTH GRADE	MINIMUM COVER
MANHOLES	B1	N32	40
FIELD INLET PITS	B1	N32	40
DRIVEWAY	B1	N32	40
KERB/CHANNEL	B1	N32	-
FOOTPATHS	B1	N32	40

- C3 CONCRETE TO HAVE A MAXIMUM AGGREGATE SIZE OF 20mm WITH 80mm MAXIMUM SLUMP, A WATER/CEMENT RATIO OF NOT GREATER THAN 0.65 AND A MAXIMUM FINAL BASIC DRYING SHRINKAGE STRAIN OF 800 x 10<sup>-6</sup> UNLESS APPROVED OTHERWISE.
- C4 NO ADDITIVES SHALL BE ADDED OR APPLIED TO THE CONCRETE MIX WITHOUT THE APPROVAL OF THE ENGINEER.
- C5 THE MAXIMUM PERMISSIBLE TRANSPORT TIME FOR CONCRETE BETWEEN BATCHING AND PLACEMENT ON SITE SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE.

AMBIENT AIR TEMPERATURE	MAX. BATCHING TO PLACEMENT TIME
10° - 24°C	120 MINUTES
25° - 27°C	90 MINUTES
28° - 30°C	60 MINUTES
31° - 33°C	45 MINUTES
34° - 36°C	30 MINUTES
37°C+	NO PLACEMENT OF CONCRETE UNLESS CHILLED WATER OR ICE IN MIX

- C6 ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.
- C7 ALL CONCRETE SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH AS1379 ADOPTING THE PROJECT ASSESSMENT METHOD FOR COMPRESSIVE STRENGTH AND SLUMP COMPLIANCE. THE RESULTS OF ALL TESTS SHALL BE PROMPTLY SUBMITTED TO THE ENGINEER FOR REVIEW.
- C8 WHEN THE AIR TEMPERATURE EXCEEDS 30°C, ALPHATIC ALCOHOL SHALL BE APPLIED TO THE CONCRETE SURFACE OF SLABS IMMEDIATELY AFTER THE INITIAL SCREED AND AGAIN AFTER BULL FLOATING.
- C9 CURING OF ALL CONCRETE SURFACES SHALL COMMENCE IMMEDIATELY AFTER COMPLETING CONCRETE FINISHING AND SHALL CONTINUE FOR 7 DAYS. CONTRACTOR TO CONFIRM METHOD OF CURING WITH ENGINEER PRIOR TO USE.
- C10 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C11 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.
- C12 NO HOLES, CHASES OR EMBEDDED ITEMS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER. CONDUITS, PIPES ETC. SHALL NOT BE PLACED IN THE COVER THICKNESS OF THE CONCRETE.
- C13 WHERE SERVICE PIPES PENETRATE CONCRETE ELEMENTS, PROVISION SHOULD BE MADE TO ALLOW FOR MOVEMENT OF THE ELEMENT.
- C14 FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS3610 FORMWORK CODE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- C15 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION OR SCALE.
- C16 ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION ON PLASTIC BAR CHAIRS, GENERALLY AT NOT GREATER THAN 800mm CENTRES IN BOTH DIRECTIONS.
- C17 WELDING AND HEATING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT APPROVAL OF THE ENGINEER.
- C18 ALL STEEL REINFORCEMENT IN CONCRETE ELEMENTS SHALL BE INSPECTED BY THE ENGINEER AND PASSED PRIOR TO POURING OF ANY CONCRETE.
- C19 LAP REINFORCEMENT ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.
- C20 SLAB FABRIC SHALL BE LAPPED ONE FULL PANEL OF FABRIC PLUS 50mm SO THAT THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED BY 50mm.
- C21 BAR REINFORCEMENT SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING TABLE.

TYPICAL BAR REINFORCEMENT LAP LENGTHS		
BAR	LAP LENGTH UNO	HORIZONTAL BARS WITH GREATER THAN 300mm OF CONCRETE CAST BELOW THEM
N12	550	750
N16	800	1100
N20	1100	1400
N24	1250	1600
N28	1400	1800
N32	1600	2100
N36	2000	2500

WHERE LAPS ARE SHOWN ON THE DRAWINGS THE ABOVE LAP LENGTHS SHALL BE ADOPTED UNLESS NOTED OTHERWISE. WHERE BARS OF DIFFERENT DIAMETER ARE SHOWN LAPPED, ADOPT THE LAP LENGTH APPROPRIATE TO THE SMALLER DIAMETER BAR.

- C22 A VAPOUR BARRIER OF 0.2mm (200um) MINIMUM THICK POLYTHENE SHEETING SHALL BE PLACED BENEATH SLABS ON GROUND UNLESS NOTED OTHERWISE.

### GENERAL

- REINFORCED CONCRETE PAVEMENT
- TURF
- STONE PITCHING
- CEMENT GROUTED STONE PITCHING
- TELECOMMUNICATION
- GAS MAIN
- ELECTRICITY OVERHEAD
- ELECTRICITY UNDERGROUND
- LIGHT POLE
- POWER POLE
- PIT (TELSTRA/ELEC)
- EDGE OF BITUMEN
- FENCE
- EXISTING SURFACE LEVEL
- FINISHED SURFACE LEVEL

### STORMWATER DRAINAGE

- STORMWATER PIPE
- SAG GULLY PIT
- ON GRADE GULLY PIT
- MANHOLE
- 600 x 600 FIELD INLET
- 900 x 600 FIELD INLET
- 1050 DIA FIELD INLET
- HEADWALL
- KERB ADAPTER WITH ROOFWATER PIPE
- STORMWATER STRUCTURE LABEL

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL  
Application No.: OPW/2022/879  
Dated: 20 February 2023  
Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Approval is for change to ground level only.

### LEGEND

#### WATER

- NEW WATER MAIN
- EXISTING WATER MAIN
- DISUSED WATER MAIN
- NEW FIRE HYDRANT
- EXISTING FIRE HYDRANT
- DISUSED FIRE HYDRANT
- NEW DUAL OUTLET FIRE HYDRANT
- EXISTING DUAL OUTLET FIRE HYDRANT
- DISUSED DUAL OUTLET FIRE HYDRANT
- NEW SWABBING FIRE HYDRANT
- EXISTING SWABBING FIRE HYDRANT
- DISUSED SWABBING FIRE HYDRANT
- NEW ISOLATION VALVE
- EXISTING ISOLATION VALVE
- DISUSED ISOLATION VALVE
- NEW SCOUR VALVE
- EXISTING SCOUR VALVE
- DISUSED SCOUR VALVE
- NEW AIR VALVE
- EXISTING AIR VALVE
- DISUSED AIR VALVE
- NEW DEAD END
- EXISTING DEAD END
- DISUSED DEAD END
- NEW TEST/CHLORINATION POINT
- EXISTING TEST/CHLORINATION POINT
- DISUSED TEST/CHLORINATION POINT
- NEW REDUCER
- EXISTING REDUCER
- DISUSED REDUCER
- NEW PIPE MATERIAL CHANGE
- EXISTING PIPE MATERIAL CHANGE
- DISUSED PIPE MATERIAL CHANGE
- NEW WATER SERVICE PRE-TAPPED TEE
- EXISTING WATER SERVICE PRE-TAPPED TEE
- DISUSED WATER SERVICE PRE-TAPPED TEE
- NEW WATER SERVICE PIPE & CONDUIT
- EXISTING WATER SERVICE PIPE & CONDUIT
- DISUSED WATER SERVICE PIPE & CONDUIT
- NEW FLOW METER
- EXISTING FLOW METER
- DISUSED FLOW METER
- NEW FLUSHING POINT
- EXISTING FLUSHING POINT
- DISUSED FLUSHING POINT

#### SEWERAGE

- NEW GRAVITY SEWER MAIN
- EXISTING GRAVITY SEWER MAIN
- DISUSED GRAVITY SEWER MAIN
- NEW SEWER RISING MAIN
- EXISTING SEWER RISING MAIN
- DISUSED SEWER RISING MAIN
- NEW SEWER VACUUM MAIN
- EXISTING SEWER VACUUM MAIN
- DISUSED SEWER VACUUM MAIN
- NEW MAINTENANCE HOLE & END OF LINE
- EXISTING MAINTENANCE HOLE & END OF LINE
- DISUSED MAINTENANCE HOLE & END OF LINE
- NEW END OF LINE
- EXISTING END OF LINE
- DISUSED END OF LINE
- NEW MAINTENANCE SHAFT
- EXISTING MAINTENANCE SHAFT
- DISUSED MAINTENANCE SHAFT
- NEW HORIZONTAL/VERTICAL BEND
- EXISTING HORIZONTAL/VERTICAL BEND
- DISUSED HORIZONTAL/VERTICAL BEND
- NEW COMPOUND BEND
- EXISTING COMPOUND BEND
- DISUSED COMPOUND BEND
- NEW STUB / TEMPORARY END
- EXISTING STUB / TEMPORARY END
- DISUSED STUB / TEMPORARY END
- NEW RODDING END
- EXISTING RODDING END
- DISUSED RODDING END
- NEW PROPERTY CONNECTION
- EXISTING PROPERTY CONNECTION
- DISUSED PROPERTY CONNECTION
- NEW OVERFLOW MAINTENANCE HOLE
- EXISTING OVERFLOW MAINTENANCE HOLE
- DISUSED OVERFLOW MAINTENANCE HOLE
- NEW ISOLATION VALVE
- EXISTING ISOLATION VALVE
- DISUSED ISOLATION VALVE
- NEW SCOUR VALVE AND CHAMBER
- EXISTING SCOUR VALVE AND CHAMBER
- DISUSED SCOUR VALVE AND CHAMBER
- NEW GAS RELEASE VALVE
- EXISTING GAS RELEASE VALVE
- DISUSED GAS RELEASE VALVE
- NEW FLUSHING POINT
- EXISTING FLUSHING POINT
- DISUSED FLUSHING POINT
- NEW DISCHARGE MAINTENANCE HOLE
- EXISTING DISCHARGE MAINTENANCE HOLE
- DISUSED DISCHARGE MAINTENANCE HOLE
- NEW NON-RETURN/REFLUX VALVE
- EXISTING NON-RETURN/REFLUX VALVE
- DISUSED NON-RETURN/REFLUX VALVE
- NEW VENT POLE / ODOUR CONTROL UNIT
- EXISTING VENT POLE / ODOUR CONTROL UNIT
- DISUSED VENT POLE / ODOUR CONTROL UNIT

DOCUMENT CONTROL		APPROVED		SUNSHINE COAST		GOLD COAST		SURVEYOR		DATUM		PROJECT		DRAWING STATUS	
DESIGNED B.J.M.				Suite 2, Norval Corporate Centre, 13 Norval Ct, Maroochydore T: 07 5391 3777   F: 07 5464 5867 E: sunshincoast@westerapartners.com.au		Level 3 17 Walsh St, Southport T: 07 5571 1599   F: 07 5571 1530 E: goldcoast@westerapartners.com.au		SCHLENCKER SURVEYING QLD PHONE (07) 5573 6744		AHD		68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509		FOR APPROVAL	
DRAWN B.J.M.				BRISBANE		NORTHERN NSW		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THEM FOR WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		TITLE		DRAWING NUMBER			
CHECKED B.C.A.		B. ARTHUR RPE/C.384. NER.494962 For and on behalf of WESTERA PARTNERS PTY. LTD.		Level 2 Limestone, 33 Langland St, Newstead T: 07 3852 4333   F: 07 3852 4777 E: brisbane@westerapartners.com.au		Level 24 Level 2, 11-13 Pearl St, Kingsgill T: 02 4674 8047   F: 02 4674 8049 E: nsw@westerapartners.com.au		CIVIL NOTES AND LEGEND		G21-095-G02		SHEET NUMBER		REVISION	
DATE APRIL 2022		FILE NAME Civil_Notes.dwg		www.westerapartners.com.au   ABN 52 097 417 975				CLIENT		BORAL LIMITED		02 OF 02		A	



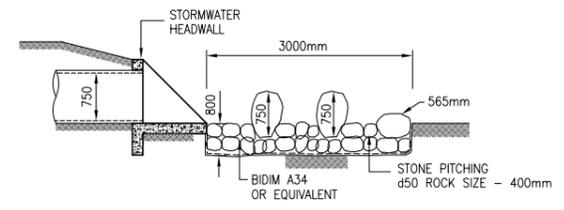
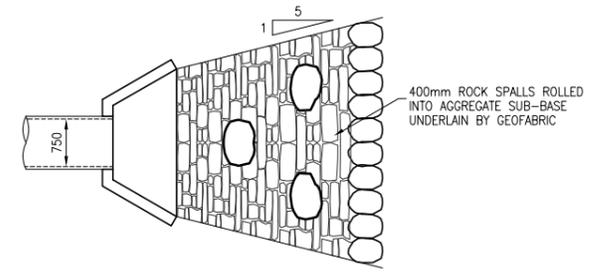
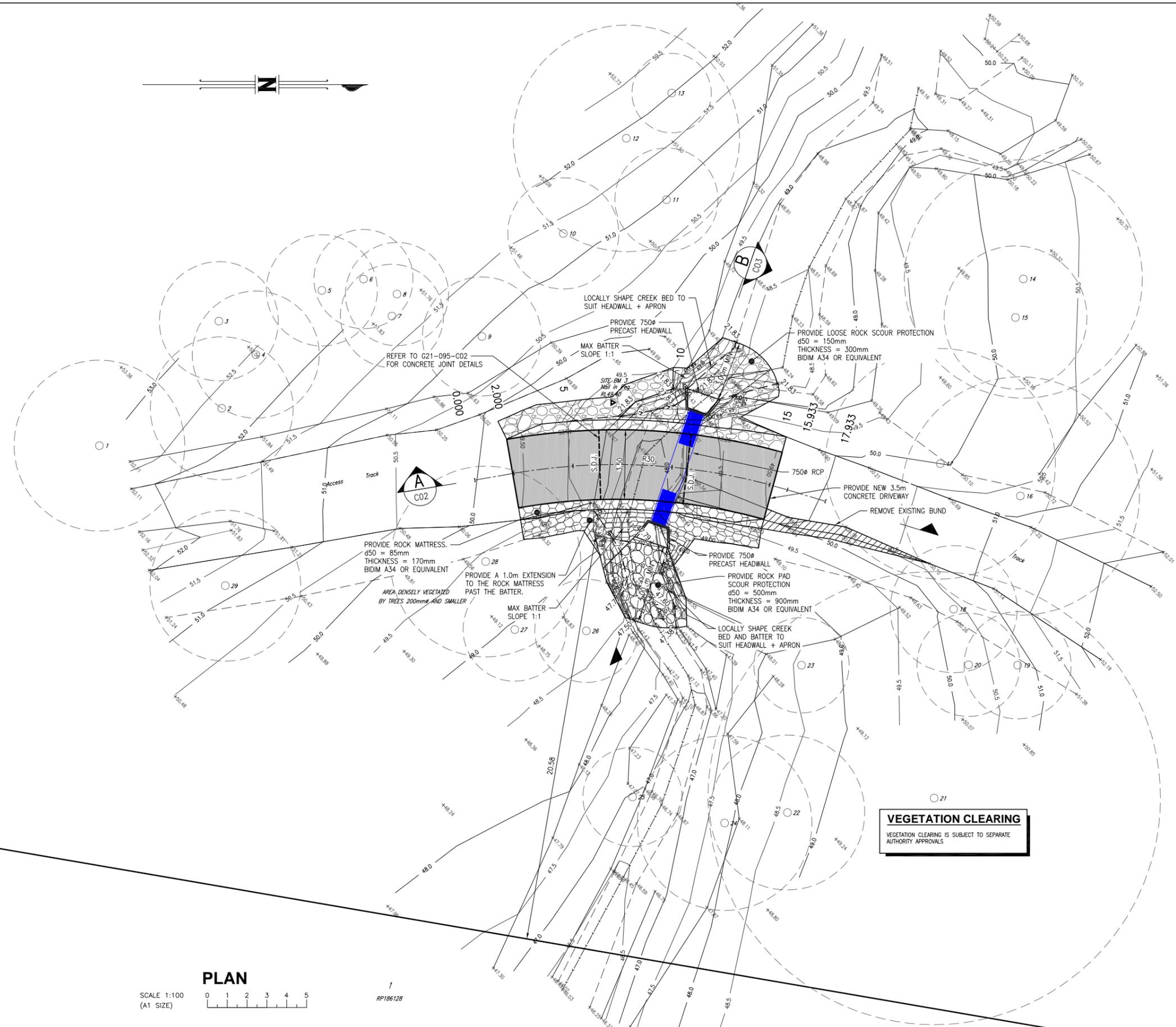
PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2022/879

Dated: 20 February 2023

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Application only endorses change to ground level. **Internal driveway** is considered accepted development as it is certified by an RPEQ. RPEQ is responsible for ensuring an necessary flood safety treatments are implemented



**STONE PITCHING DETAIL**  
NOT TO SCALE



**PLAN**

		DOCUMENT CONTROL		APPROVED		SUNSHINE COAST		GOLD COAST		SURVEYOR		DATUM		PROJECT		DRAWING STATUS	
		DESIGNED B.J.M.				Suite 2, Norval Corporate Centre, 13 Norval Ct, Maroochydore		17 Walsh St, Southport		SCHLENCKER SURVEYING QLD		AHD		LOCATION		FOR APPROVAL	
C		15.11.2022		DS HEADWALL SCOUR REVISED		T: 07 5391 3777   F: 07 5464 5467		T: 07 5571 1599   F: 07 5571 1330		PHONE (07) 5573 6744				DRAWING NUMBER		G21-095-C01	
B		19.10.2022		LAYOUT REVISED		E: sunshinecoast@westerapartners.com.au		E: goldcoast@westerapartners.com.au						TITLE		SHEET NUMBER	
A		13.06.2022		BATTERS & SCOUR PROTECTION AMENDED		BRISBANE		NORTHERN NSW		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		CIVIL SITE PLAN		REVISION			
No.		DATE		REVISIONS		Level 2 Limestone, 33 Longland St, Newstead		Level 2, 11-13 Pearl St, Kingsmill		CLIENT		BORAL LIMITED		01 of 05		C	
		FILE NAME		Civilwks.dwg		E: brisbane@westerapartners.com.au		E: nsw@westerapartners.com.au		BORAL QUARRY ORMEAU 68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509							
						www.westerapartners.com.au   ABN 52 097 417 975											

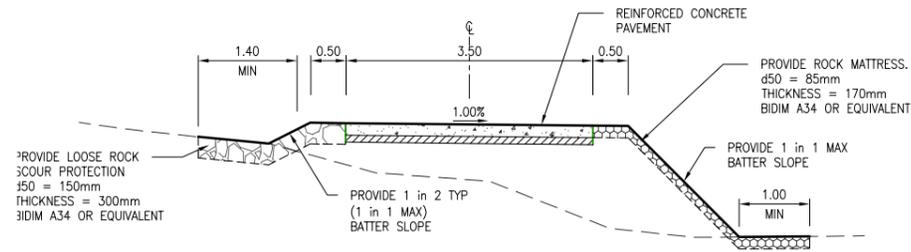
**PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL**

Application No: OPW/2022/879

Dated: 20 February 2023

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

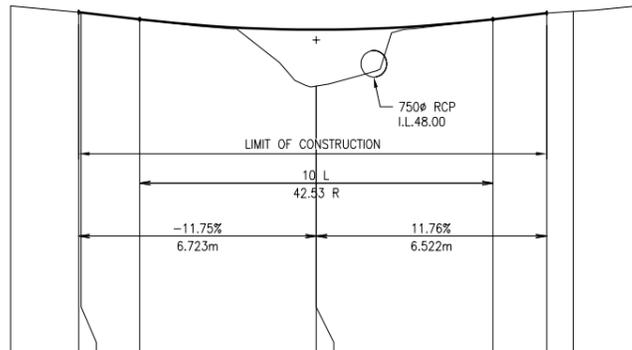
Approval is for change to ground level only.  
Stormwater is private.



**TYPICAL CROSS SECTION**  
1:50 SCALE @ A1 SIZE

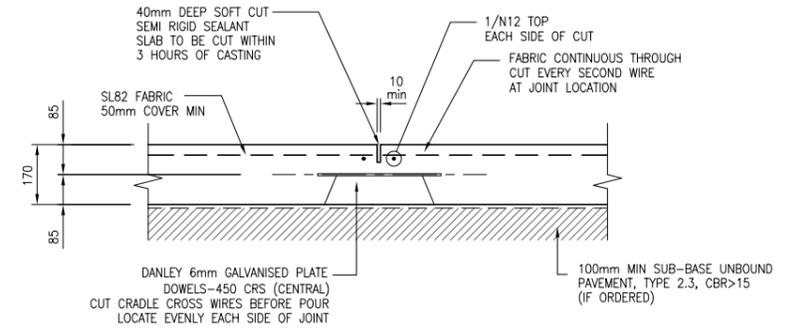
Application only endorses change to ground level. Internal driveway is considered accepted development as it is certified by an RPEQ. RPEQ is responsible for ensuring an necessary flood safety treatments are implemented

TP CH:3.656 RL 49.634  
IP CH:8.656 RL 49.047 SAC CH:8.655 RL 49.341  
TP CH:13.656 RL 49.635



DATUM R.L.40.0									
EDGE OF CONCRETE LEVELS LHS		49.863	49.863	49.863	49.863	49.358	49.358	49.652	49.795
EDGE OF CONCRETE LEVELS RHS		49.790	49.783	49.617	49.323	49.323	49.358	49.617	49.750
CUT / FILL		-0.000	-0.000	-0.001	1.597	1.596	-0.003	0.000	
PAVEMENT LEVELS		49.837	49.829	49.634	49.341	49.341	49.635	49.814	
NATURAL SURFACE LEVELS	50.010	49.837	49.829	49.635	47.744	47.744	49.638	49.814	49.860
CHAINAGE		0.000	1.933	2.000	3.656	8.655	8.656	13.656	15.178
									15.933
									17.933

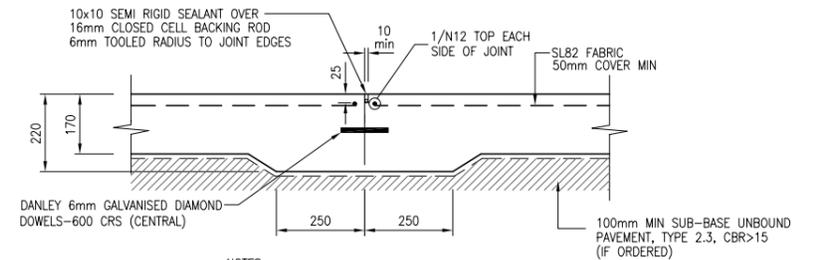
**ACCESS ROAD LONGITUDINAL SECTION A**  
1:100 SCALE @ A1 SIZE C01



NOTES:  
1. CONCRETE STRENGTH TO BE N32  
2. THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING CBR TESTS OF THE SUBGRADE MATERIAL

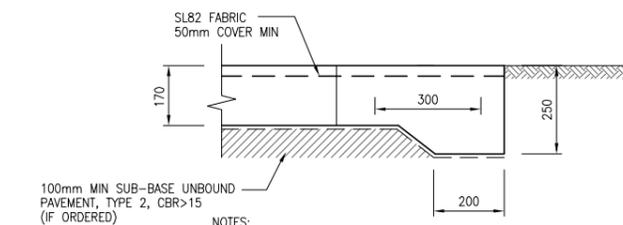
**SAWN DOWELLED JOINT (S.D.J.)**

MARK PROPOSED JOINT LOCATIONS CLEARLY ON EDGE FORMS PRIOR TO POURING



NOTES:  
1. CONCRETE STRENGTH TO BE N32  
2. THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING CBR TESTS OF THE SUBGRADE MATERIAL

**POUR BREAK (P.B.)**



NOTES:  
1. CONCRETE STRENGTH TO BE N32  
2. THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING CBR TESTS OF THE SUBGRADE MATERIAL

**TYPICAL EDGE TREATMENT**

SCALE 1:100

DOCUMENT CONTROL		APPROVED		SUNSHINE COAST		GOLD COAST		SURVEYOR		DATUM		PROJECT		DRAWING STATUS	
DESIGNED B.J.M.				Suite 2, Norval Corporate Centre, 13 Norval Ct, Maroochydore T: 07 5391 3777   F: 07 5466 5867 E: sunshinecoast@westerapartners.com.au		Level 3 17 Walsh St, Southport T: 07 5571 1999   F: 07 5571 1330 E: goldcoast@westerapartners.com.au		SCHLENCKER SURVEYING QLD PHONE (07) 5573 6744		AHD		BORAL QUARRY ORMEAU 68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509		FOR APPROVAL	
DRAWN B.J.M.				BRISBANE		NORTHERN NSW		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		PROJECT LOCATION		DRAWING NUMBER			
CHECKED B.C.A.		B. ARTHUR RPEQ 4384, NER 494962 For and on behalf of WESTERA PARTNERS PTY. LTD.		Level 2 Limostore, 33 Longland St, Newcastle T: 07 3852 4333   F: 07 3852 4777 E: brisbane@westerapartners.com.au		Level 2, 11-13 Pearl St, Kingsmill T: 02 8474 8047   F: 02 8474 8049 E: nsw@westerapartners.com.au		TITLE		CLIENT		G21-095-C02		SHEET NUMBER	
DATE MAY 2022		FILE NAME Road_Lsec.dwg		www.westerapartners.com.au   ABN 52 097 417 975				ACCESS ROAD LONGITUDINAL SECTION		BORAL LIMITED		02 of 05		REVISION	
No.		DATE		REVISIONS										A	

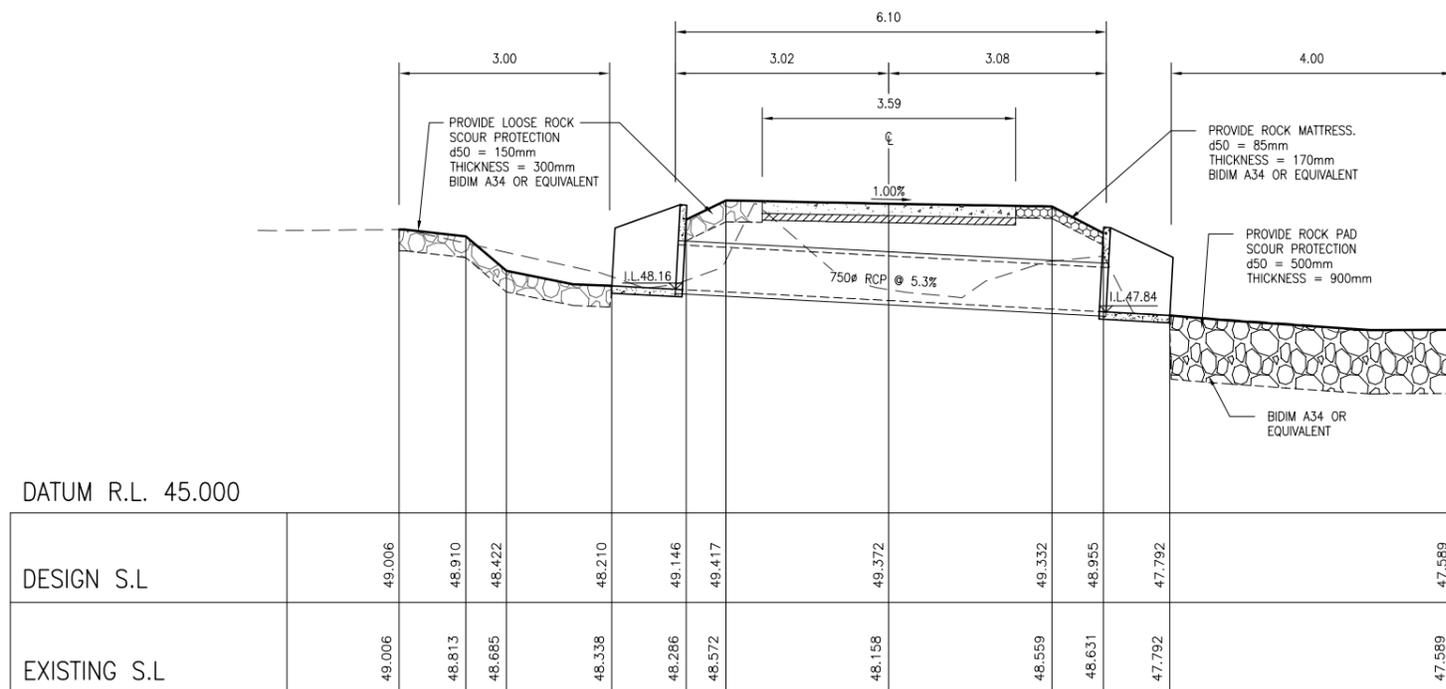
PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2022/879

Dated: 20 February 2023

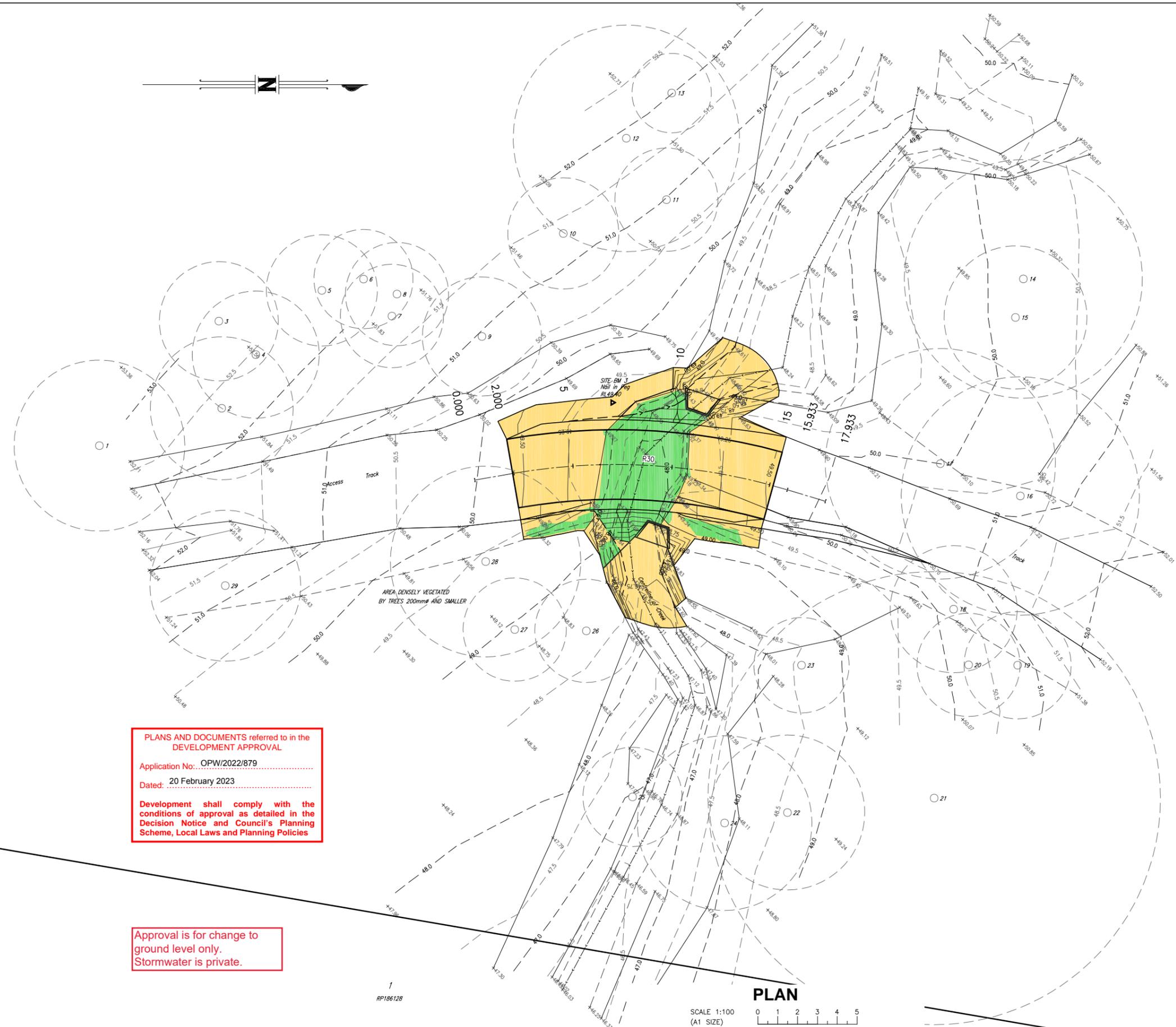
Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Application only endorses change to ground level. **Internal driveway** is considered accepted development as it is certified by an RPEQ. RPEQ is responsible for ensuring an necessary flood safety treatments are implemented



SECTION B  
1:50 SCALE @ A1 SIZE C01

		DOCUMENT CONTROL	APPROVED	SUNSHINE COAST Suite 2, Nonval Corporate Centre, 13 Nonval Ct, Maroochydore T: 07 5391 3777   F: 07 5466 5887 E: sunshinecoast@westerapartners.com.au		GOLD COAST Level 3 17 Walsh St, Southport T: 07 5571 1599   F: 07 5571 1330 E: goldcoast@westerapartners.com.au		SURVEYOR SCHLENCKER SURVEYING QLD PHONE (07) 5573 6744		DATUM AHD		PROJECT BORAL QUARRY ORMEAU 68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509		DRAWING STATUS FOR APPROVAL		
C	15.11.2022	DS HEADWALL SCOUR REVISED	DESIGNED B.J.M.	 B. ARTHUR RPEQ 4384, NER 494962 For and on behalf of WESTERA PARTNERS PTY. LTD.	<b>WESTERA PARTNERS</b> STRUCTURAL + CIVIL + ENVIRONMENTAL ENGINEERS www.westerapartners.com.au   ABN 52 097 417 975		BRISBANE Level 2 Limestone, 33 Longland St, Newstead T: 07 3852 4333   F: 07 3852 4777 E: brisbane@westerapartners.com.au		NORTHERN NSW Suite 24 Level 2, 11-13 Pearl St, Kingsmill T: 02 4474 8047   F: 02 4474 8049 E: nsw@westerapartners.com.au		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED. IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		DRAWING NUMBER G21-095-C03			
B	19.10.2022	CULVERT SECTION REVISED	DRAWN B.J.M.										SHEET NUMBER 03 of 05		REVISION C	
A	13.06.2022	US & DS SCOUR PROTECTION AMENDED	CHECKED B.C.A.										DATE MAY 2022		FILE NAME Culvert_Lsec.dwg	
No.	DATE	REVISIONS	FILE NAME													



PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL  
 Application No: OPW/2022/879  
 Dated: 20 February 2023  
 Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Approval is for change to ground level only.  
 Stormwater is private.

**EARTHWORKS SUMMARY**

AREA OF FILL - 31 m<sup>2</sup>  
 AREA OF CUT - 90 m<sup>2</sup>  
 VOLUME OF FILL - 22 m<sup>3</sup>  
 VOLUME OF CUT - 23 m<sup>3</sup>

THE EARTHWORKS VOLUMES SHOWN ARE INDICATIVE NETT FIGURES ONLY BETWEEN THE EARTHWORKS SURFACE AND AN EXISTING SURFACE STRIPPED 150mm AND DO NOT ALLOW FOR DEMOLITION WORKS, UNSUITABLE MATERIAL AND VEGETATION OR COMPACTION LOSSES.

ROAD SUBGRADE LEVELS SHOWN ARE 270mm BELOW F.S.L.  
 ROCK SCOUR SUBGRADE LEVELS ARE:  
 - LOOSE ROCK d50 = 150mm: 300mm BELOW F.S.L.  
 - LOOSE ROCK d50 = 500mm: 900mm BELOW F.S.L.  
 - ROCK MATTRESS: 170mm BELOW F.S.L.

EARTHWORK LEVELS MAY BE ADJUSTED TO SUIT FSL'S AND CONCRETE THICKNESS BASED ON STRUCTURAL DESIGN AS APPROVED BY SUPERINTENDENT.

AREA OF FILL -   
 AREA OF CUT -

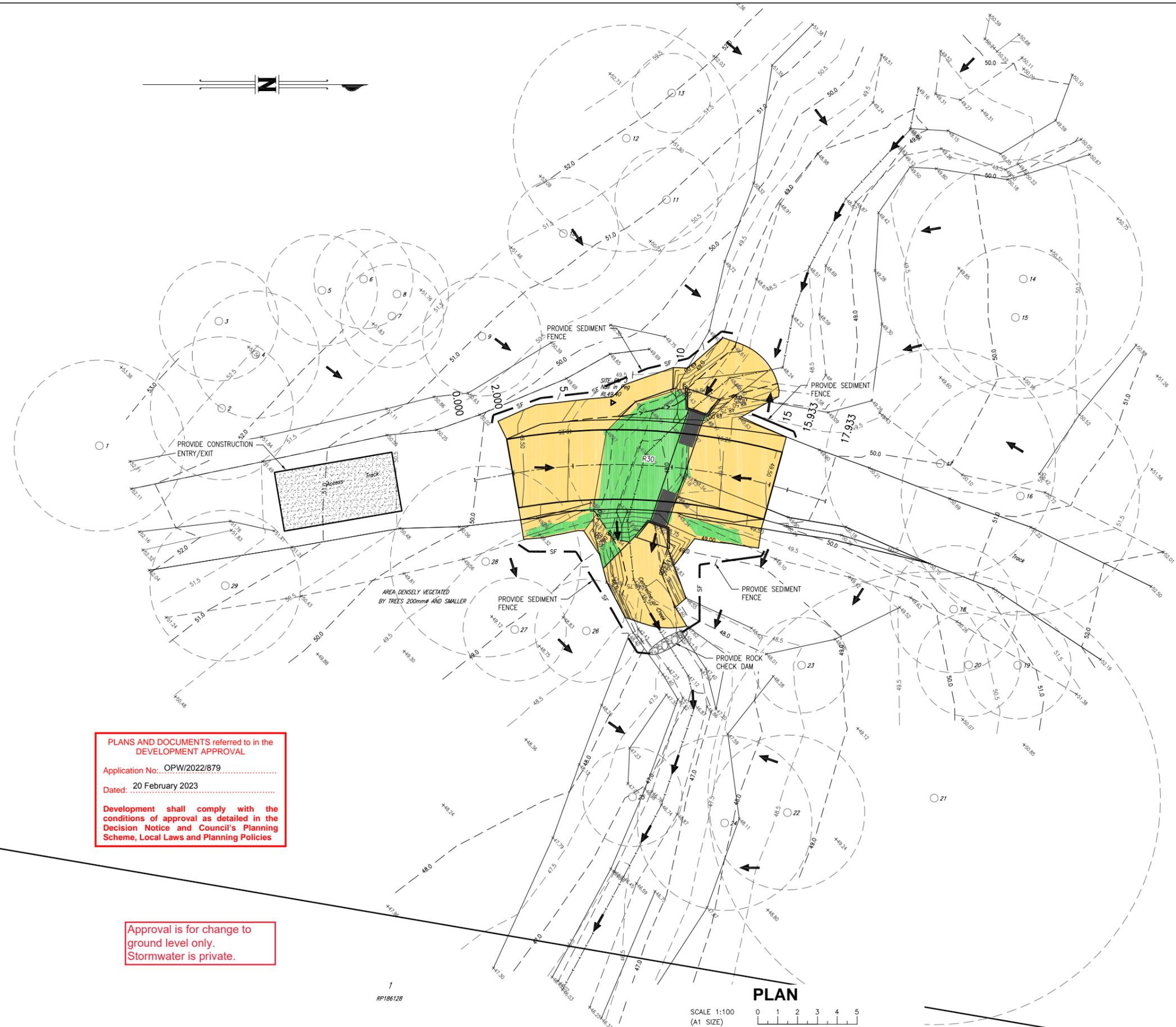
**EARTHWORKS NOTES**

- EW1 IN CASE OF DOUBT - ASK!
- EW2 ALL LEVELS TO AHD, DIMENSIONS IN METERS U.N.O.
- EW3 ALL LIAISON WITH LOCAL, STATE & STATUTORY AUTHORITIES IS THE CONTRACTOR'S RESPONSIBILITY.
- EW4 THE LOCATION OF EXISTING SERVICES IS FOR CONTRACTOR'S INFORMATION ONLY, THE LOCATION OF SERVICES WILL BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.
- EW5 ANY DAMAGE CAUSED TO THE EXISTING SERVICE WILL BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.
- EW6 EARTHWORK PROCEDURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS 3798 - 2007 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS".
- EW7 EARTHWORKS OPERATIONS ARE TO BE CARRIED OUT IN GENERAL ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- EW8 WORKS NOT SPECIFICALLY REFERRED TO, ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL DRAWINGS AND SPECIFICATIONS OF THE LOCAL AUTHORITY (GOLD COAST CITY COUNCIL).
- EW9 THE CONTRACTOR IS TO ALLOW FOR ALL FEES AND HAULAGE COSTS ASSOCIATED WITH DISPOSAL OF MATERIAL FROM THE SITE.
- EW10 ALL COSTS ASSOCIATED WITH NOISE AND DUST SUPPRESSION FOR SITE WORKS ARE DEEMED THE CONTRACTOR'S RESPONSIBILITY.
- EW11 COMPACTION STANDARDS  
 - MINIMUM RELATIVE COMPACTIONS TO AS 3798 TABLE 5.1 (REFER BELOW)

ITEM	APPLICATION	MINIMUM DENSITY RATIO (COHESIVE SOILS) (SEE NOTE 1*)	MINIMUM RELATIVE COMPACTION, % (COHESIONLESS SOILS) (SEE NOTE 2*)
1	RESIDENTIAL - LOT FILL, HOUSE SITES	95 std (SEE NOTE 3*)	65
2	COMMERCIAL - FILLS TO SUPPORT MINOR LOADINGS, INCLUDING FLOOR LANDINGS OF UP TO 20 kPa AND ISOLATED PAD OR STRIP FOOTINGS TO 100 kPa	98 std (SEE NOTE 4*)	70
3	PAVEMENTS (SEE NOTE 5*)	95 std	65
	(a) FILL TO SUPPORT PAVEMENTS	98 std	80
	(b) SUBGRADE (TO DEPTH OF 0.3m)	95 mod	NOT USUALLY APPLICABLE
	(c) SUB-BASE COURSES	95 mod	NOT USUALLY APPLICABLE
	(d) BASE COURSE	95 mod	NOT USUALLY APPLICABLE
	- HEAVY LOADED	98 mod	NOT USUALLY APPLICABLE
	- OTHER	95 mod (SEE NOTE 5*)	NOT USUALLY APPLICABLE

- \*REFER TO AS 3798 FOR TABLE NOTES.  
 - 'MODIFIED' TO AS 1289 TEST 5.2.1.  
 - 'STANDARD' TO AS 1289 TEST 5.1.1.
- EW12 PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR WILL PROVIDE SCOUR AND EROSION PROTECTION INCLUDING PROVISION OF SILT TRAPS AND FENCES TO MINIMISE DEPOSITION OF MATERIAL DOWNSTREAM OF THE PROPERTY.
- EW13 NO BLASTING WILL BE PERMITTED.
- EW14 THE LOCATION OF THE SITE SHEDS, SITE OFFICE AND AMENITIES BUILDING WILL BE LOCATED TO SUIT TEMPORARY UTILITY SERVICES OR AS AGREED WITH THE MANAGER.
- EW15 TESTING FREQUENCY AS 3798 - 2007 SECTION 8.0 OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
- EW16 AT COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT LICENSED SURVEYOR TO CARRY OUT A "WORKS AS CONSTRUCTED" SURVEY AND SUBMIT THE DETAIL PLAN TO THE MANAGER.
- EW17 THE LOCATION OF TEMPORARY STOCKPILES DURING CONSTRUCTION IS TO BE AGREED WITH THE MANAGER.

		DOCUMENT CONTROL	APPROVED	SUNSHINE COAST Suite 2, Norval Corporate Centre, 13 Norval Ct, Maroochydore T: 07 5391 3777   F: 07 5464 5067 E: sunshincoast@westerapartners.com.au	GOLD COAST Level 3 17 Walsh St, Southport T: 07 5571 1599   F: 07 5571 1330 E: goldcoast@westerapartners.com.au	SURVEYOR SCHLENCKER SURVEYING QLD PHONE (07) 5573 6744	DATUM AHD	PROJECT LOCATION BORAL QUARRY ORMEAU 68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509	DRAWING STATUS FOR APPROVAL DRAWING NUMBER G21-095-E01
B	15.11.2022	DS HEADWALL SCOUR REVISED	CHECKED B.C.A.	B. ARTHUR RPE/C 4384, NER 494962 For and on behalf of WESTERA PARTNERS PTY. LTD.	NORTHERN NSW Suite 24 Level 2, 11-13 Pearl St, Kingscliff T: 07 3852 4333   F: 07 3852 4777 E: nsw@westerapartners.com.au	USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THEM FOR WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		TITLE EARTHWORKS PLAN	SHEET NUMBER 01 of 01
A	19.10.2022	LAYOUT REVISED	DATE JUNE 2022	www.westerapartners.com.au   ABN 52 097 417 975				CLIENT BORAL LIMITED	REVISION B
No.	DATE	REVISIONS	FILE NAME Earthwks.dwg						



LEGEND	
	GEOFABRIC SCOUR PROTECTION
	AREA OF CUT MATERIAL
	AREA OF FILL MATERIAL
	BASE OF SEDIMENT BASIN
	SCOUR PROTECTION
	INLET PROTECTION
	SDB -> STRAW BALE FLOW DIVERSION BANK
	DB -> DIVERSION BANK
	DC -> DIVERSION CHANNEL
	MB -> MULCH BERM
	SF -> SEDIMENT FENCE
	ROCK CHECK DAM
	CATCH DRAIN TYPE 1
	CATCH DRAIN TYPE 2
	SURFACE FLOW ARROW
	CH -> CHUTE
	LS -> LEVEL SPREADER
	SD -> SLOPE DRAIN
	OS -> OUTLET STRUCTURE
	ON GRADE GULLY PIT
	SAG GULLY PIT
	600 x 600 FIELD INLET
	900 x 600 FIELD INLET
	1050 DIA FIELD INLET
	STORMWATER LINE
	STORMWATER HEADWALL
	STORMWATER NUMBER
	ROCK FILTER DAM
	SEDIMENT FENCE WEIR

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2022/879

Dated: 20 February 2023

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Approval is for change to ground level only. Stormwater is private.

1  
RP186128

PLAN

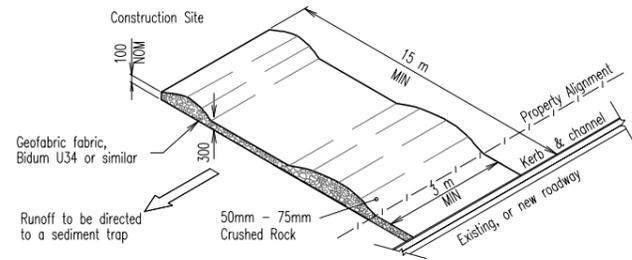
SCALE 1:100 (A1 SIZE)

		DOCUMENT CONTROL		APPROVED		SUNSHINE COAST		GOLD COAST		SURVEYOR		DATUM		PROJECT		DRAWING STATUS	
		DESIGNED G.G.J.				Suite 2, Norval Corporate Centre, 13 Norval Ct, Maroochydore T: 07 5391 3777   F: 07 5466 5067 E: sunshinecoast@westerapartners.com.au		Level 3 17 Walsh St, Southport T: 07 5571 1599   F: 07 5571 1330 E: goldcoast@westerapartners.com.au		Schlencker Surveying QLD PHONE (07) 5573 6744		AHD		BORAL QUARRY ORMEAU 68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509		FOR APPROVAL	
B		15.11.2022		DS HEADWALL SCOUR REVISED		CHECKED B.C.A.		BRISBANE		NORTHERN NSW		TITLE		EROSION AND SEDIMENT CONTROL PLAN		DRAWING NUMBER	
A		19.10.2022		LAYOUT REVISED		DATE JUNE 2022		Level 2 Limestone, 33 Longland St, Newstead T: 07 3852 4333   F: 07 3852 4777 E: brisbane@westerapartners.com.au		Level 2, 11-13 Pearl St, Kingscliff T: 02 4474 8047   F: 02 4474 8049 E: nsw@westerapartners.com.au		CLIENT		BORAL LIMITED		G21-095-ESC01	
No.		DATE		REVISIONS		FILE NAME Erosion.dwg		www.westerapartners.com.au   ABN 52 097 417 975		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THEM FOR WITHOUT PERMISSION IS STRICTLY PROHIBITED. IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.				SHEET NUMBER		REVISION	
														01 of 03		B	

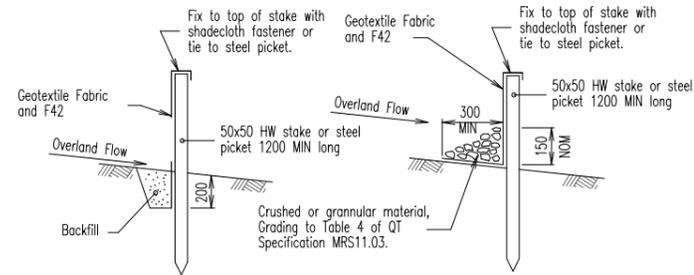
PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No.: OPW/2022/879  
 Dated: 20 February 2023

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

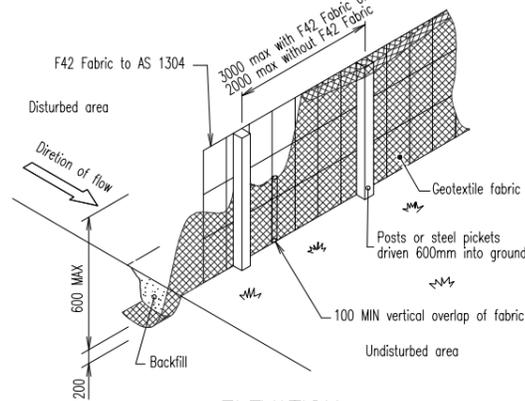


CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP



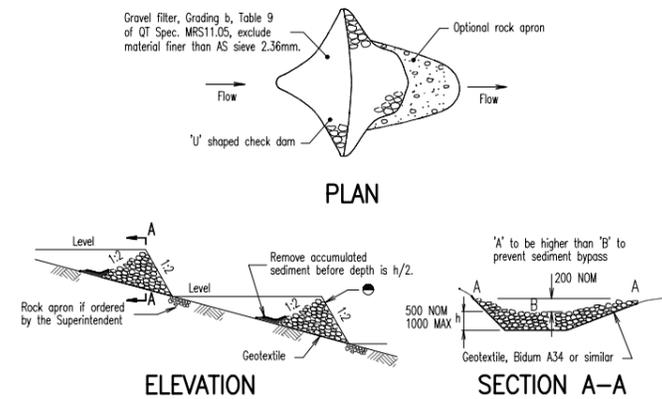
ALTERNATIVE 1

ALTERNATIVE 2



ELEVATION

SEDIMENT FENCE DETAILS



PLAN

ELEVATION

SECTION A-A

CHECK DAMS

DOCUMENT CONTROL		APPROVED		SUNSHINE COAST		GOLD COAST		SURVEYOR		DATUM		PROJECT		DRAWING STATUS			
DESIGNED G.G.J.		 B. ARTHUR RIPEO 4384, NER 494962 For and on behalf of WESTERA PARTNERS PTY. LTD.		Suite 2, Nonval Corporate Centre, 13 Nonval Ct, Maroochydore T: 07 5391 3777   F: 07 5646 5867 E: sunshinecoast@westerapartners.com.au		Level 3 17 Walsh St, Southport T: 07 5571 1599   F: 07 5571 1330 E: goldcoast@westerapartners.com.au		Schlencker Surveying QLD PHONE (07) 5573 6744		AHD		LOCATION		FOR APPROVAL			
DRAWN G.G.J.				BRISBANE		NORTHERN NSW		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		Level 2 Limestone, 33 Longland St, Newstead T: 07 3852 4333   F: 07 3852 4777 E: brisbane@westerapartners.com.au		Level 2, 11-13 Pearl St, Kingsgill T: 02 4674 8047   F: 02 4674 8049 E: nsw@westerapartners.com.au		TITLE		DRAWING NUMBER	
CHECKED B.C.A.				STRUCTURAL + CIVIL + ENVIRONMENTAL ENGINEERS		Level 2, 11-13 Pearl St, Kingsgill T: 02 4674 8047   F: 02 4674 8049 E: nsw@westerapartners.com.au		EROSION AND SEDIMENT CONTROL DETAILS		G21-095-ESC02							
DATE JUNE 2022		www.westerapartners.com.au   ABN 52 097 417 975		EROSION AND SEDIMENT CONTROL DETAILS		CLIENT		BORAL LIMITED		SHEET NUMBER		REVISION					
FILE NAME Erosion_Det.dwg										02 OF 03							

**PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL**

Application No.: OPW/2022/879  
 Dated: 20 February 2023

**Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies**

**GENERAL NOTES**

- THE CONSULTING ENGINEER AND/OR COUNCIL INSPECTOR MAY ISSUE INSTRUCTIONS TO THE CONTRACTOR REGARDING EROSION AND SEDIMENT CONTROL THAT MAY VARY TO THE MEASURES SHOWN ON THIS DRAWING DUE TO CONSTRUCTION METHODOLOGIES AND VARYING SITE CONDITIONS.
- A SITE SPECIFIC GEOTECHNICAL INVESTIGATION SHALL BE CARRIED OUT PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE GEOTECHNICAL INVESTIGATION SHALL BE COMPLETED IN ACCORDANCE WITH GOLD COAST CITY COUNCILS SOIL SAMPLING AND TESTING GUIDELINE FOR EROSION POTENTIAL. THE EROSION AND SEDIMENT CONTROL MEASURES ON THIS DRAWING MAY BE ALTERED TO SUIT THE RESULTS OF THE GEOTECHNICAL INVESTIGATION AS DIRECTED BY THE CONSULTING ENGINEER.
- THIS ESCP DOES NOT OUTLINE ACID SULPHATE SOIL (ASS) MANAGEMENT REQUIREMENTS. IF ENCOUNTERED, ASS SHALL BE MANAGED IN ACCORDANCE WITH AN APPROVED ASS MANAGEMENT PLAN.
- TREATMENT AND DOSING RATES FOR APPROVED FLOCCULATING AGENTS TO BE DETERMINED FOLLOWING GEOTECHNICAL INVESTIGATION OF ON SITE SOILS.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT CONTROL DEVICES IN A FUNCTIONAL ORDER.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED AND A REVISED EROSION AND SEDIMENT CONTROL PROGRAM (ESCP) MUST BE SUBMITTED FOR APPROVAL BY THE SUPERINTENDENT AND INSPECTING ENGINEER IF CONSTRUCTION METHODOLOGIES OR SITE CONDITIONS VARY FROM THOSE CONSIDERED WITHIN THE ESCP. A REVISED ESCP IS ALSO REQUIRED IN THE EVENT THAT THE IMPLEMENTED WORKS FAIL TO ACHIEVE THE STATED "OBJECTIVE" OF THE ESCP, THE LOCAL GOVERNMENT ESC STANDARD, OR THE STATE'S ENVIRONMENTAL PROTECTION REQUIREMENTS.
- IN CIRCUMSTANCES WHERE IT IS CONSIDERED NECESSARY TO PREPARE AN AMENDED ESCP, AND WHERE THE DELIVERY OF SUCH AN AMENDED ESCP IS NOT IMMINENT, THEN ALL NECESSARY NEW OR MODIFIED EROSION AND SEDIMENT CONTROL WORKS MUST BE IN ACCORDANCE WITH THE I.E.C.A. TECHNICAL NOTES AND DRAWINGS AS DIRECTED BY THE SUPERINTENDENT AND INSPECTING ENGINEER. UPON APPROVAL OF THE AMENDED ESCP, ALL WORKS MUST BE IMPLEMENTED IN ACCORDANCE WITH THE AMENDED PLAN.
- ALL CONSTRUCTION AND MAINTENANCE IS TO BE CARRIED OUT IN ACCORDANCE WITH THE LOCAL AUTHORITIES SPECIFICATIONS AND THE I.E.C.A. TECHNICAL NOTES AND DRAWINGS TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. THIS ESCP IS BASED ON THE WORKS OUTLINED IN THE CIVIL ENGINEERING DRAWINGS BY WESTERA PARTNERS DATED MAY 2022, PROJECT No. G21/095.

**LAND CLEARING**

- ANY BULK CLEARING AND GRUBBING OF THE SITE MUST BE IMMEDIATELY FOLLOWED BY SPECIFIED STABILISATION MEASURES (e.g. TEMPORARY GRASSING OR MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS.
- DISTURBANCE TO NATURAL WATERCOURSES (INCLUDING BED AND BANKS) AND THEIR ASSOCIATED RIPARIAN ZONES MUST BE LIMITED TO THE MINIMUM PRACTICABLE.
- NO LAND CLEARING SHALL BE UNDERTAKEN UNLESS PRECEDED BY THE INSTALLATION OF ADEQUATE DRAINAGE AND SEDIMENT CONTROL MEASURES.
- LAND CLEARING MUST BE LIMITED TO 5M FROM THE EDGE OF PROPOSED CONSTRUCTED WORKS, 2M OF ESSENTIAL CONSTRUCTION TRAFFIC ROUTES, AND A TOTAL OF 10M WIDTH FOR CONSTRUCTION ACCESS, UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
- PRIOR TO LAND CLEARING, AREAS OF PROTECTED VEGETATION MUST BE CLEARLY IDENTIFIED AND PROTECTED FROM CONSTRUCTION ACTIVITY FOR THE PURPOSE OF MINIMISING THE RISK OF UNNECESSARY LAND CLEARING.
- LAND CLEARING SHALL BE LIMITED TO THE MINIMUM PRACTICABLE DURING PERIODS WHEN SOIL EROSION DUE TO WIND, RAIN OR SURFACE WATER IS POSSIBLE.

**SITE ACCESS**

- PRIOR TO THE COMMENCEMENT OF SITE WORKS, THE LOCATION OF THE SITE ACCESS POINT MUST BE VERIFIED WITH THE SUPERINTENDENT.
- SITE EXIT POINTS MUST BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDIMENT BEING TRACKED ONTO SEALED, PUBLIC ROADWAYS.
- THE PUBLIC ROAD AT THE SITE ENTRY/EXIT POINT MUST BE KEPT CLEAN OF SEDIMENT. DIRTY ROADS MUST BE BROOMED IMMEDIATELY, NOT WASHED OFF INTO COUNCILS STORMWATER SYSTEM.
- STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS MUST DRAIN TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
- WHEEL – WASH OR SPRAY UNIT MAY BE REQUIRED DURING WET WEATHER.

**SOIL AND STOCKPILE MANAGEMENT**

- STOCKPILES OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, MUST BE:
  - APPROPRIATELY PROTECTED FROM WIND, RAIN, CONCENTRATED SURFACE FLOW AND EXCESSIVE UP-SLOPE STORMWATER SURFACE FLOWS.
  - LOCATED AT LEAST 2M FROM ANY HAZARDOUS AREA, RETAINED VEGETATION, OR CONCENTRATED DRAINAGE LINE.
  - LOCATED UP-SLOPE OF AN APPROPRIATE SEDIMENT CONTROL SYSTEM.
  - PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 28 DAYS.
  - PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK.
  - PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 5 DAYS DURING THOSE MONTHS THAT HAVE A EXTREME EROSION RISK.
- A SUITABLE FLOW DIVERSION SYSTEM MUST BE ESTABLISHED IMMEDIATELY UP-SLOPE OF A STOCKPILE OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, IF THE UP-SLOPE CATCHMENT AREA DRAINING TO THE STOCKPILE EXCEEDS 1500M2.

**SITE MANAGEMENT**

- SEDIMENT (INCLUDING CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT AND CERAMIC WASTE) DEPOSITED OFF THE SITE AS A DIRECT RESULT OF AN ON-SITE ACTIVITY, MUST BE COLLECTED AND THE AREA APPROPRIATELY CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE, AND IN A MANNER THAT GIVES APPROPRIATE CONSIDERATION TO THE SAFETY AND ENVIRONMENTAL RISKS ASSOCIATED WITH THE SEDIMENT DEPOSITION.
- ADEQUATE WASTE COLLECTION BINS MUST BE PROVIDED ON-SITE AND MAINTAINED SUCH THAT POTENTIAL AND ACTUAL ENVIRONMENTAL HARM RESULTING FROM SUCH MATERIAL WASTE IS MINIMISED.
- CONCRETE WASTE AND CHEMICAL PRODUCTS, INCLUDING PETROLEUM AND OIL-BASED PRODUCTS, MUST BE PREVENTED FROM ENTERING AN INTERNAL WATER BODY, OR AN EXTERNAL DRAIN, STORMWATER SYSTEM, OR WATER BODY.
- ALL FLAMMABLE AND COMBUSTIBLE LIQUIDS, INCLUDING ALL LIQUID CHEMICALS IF SUCH CHEMICALS COULD POTENTIALLY BE WASHED OR DISCHARGED FROM THE SITE, ARE STORED AND HANDLED ON-SITE IN ACCORDANCE WITH RELEVANT STANDARDS SUCH AS AS1940 THE STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.
- TRENCHES NOT LOCATED WITHIN ROADWAYS MUST BE BACKFILLED, CAPPED WITH TOPSOIL, AND COMPACTED TO A LEVEL AT LEAST 75MM ABOVE ADJOINING GROUND LEVEL AND APPROPRIATELY STABILISED.
- ALL STORMWATER, SEWER LINE AND OTHER SERVICE TRENCHES, NOT LOCATED WITHIN ROADWAYS, MUST BE MULCHED AND SEEDED, OTHER OTHERWISE APPROPRIATELY STABILISED WITHIN 7 DAYS AFTER BACKFILL.
- NO MORE THAN 150M OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH MUST BE OPEN AT ANY ONE TIME.
- SITE SPOIL MUST BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

**DRAINAGE CONTROL**

- ALL DRAINAGE CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.
- WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF EXPOSING THE SITE FROM EXTERNAL AREAS, AND NON-SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR AREA OF SOIL DISTURBANCE, MUST BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.
- DURING THE CONSTRUCTION PERIOD, ALL REASONABLE AND PRACTICABLE MEASURES MUST BE IMPLEMENTED TO CONTROL FLOW VELOCITIES IN SUCH A MANNER THAN PREVENTS SOIL EROSION ALONG DRAINAGE PATHS AND AT THE ENTRANCE AND EXIT OF ALL DRAINS AND DRAINAGE PIPES DURING ALL STORMS UP TO THE RELEVANT DESIGN STORM DISCHARGE.
- TO THE MAXIMUM DEGREE REASONABLE AND PRACTICABLE, ALL WATERS DISCHARGED DURING THE CONSTRUCTION PHASE MUST DISCHARGE ONTO STABLE LAND, IN A NON-EROSIVE MANNER, AND AT A LEGAL POINT OF DISCHARGE.
- WHEREVER REASONABLE AND PRACTICABLE, "CLEAN" SURFACE WATERS MUST BE DIVERTED AWAY FROM SEDIMENT CONTROL DEVICES AND ANY UNTREATED, SEDIMENT-LADEN WATERS.
- DURING THE CONSTRUCTION PERIOD, ROOF WATER MUST BE MANAGED IN A MANNER THAT MINIMISES SOIL EROSION THROUGHOUT THE SITE, AND SITE WETNESS WITHIN ACTIVE WORK AREAS.
- DEWATERING DURING EXCAVATION MUST BE CARRIED OUT IN ACCORDANCE WITH GCOCC AND I.E.C.A. STANDARD DRAWINGS AND SPECIFICATIONS. ALL WATER DISCHARGED FROM SITE MUST BE TREATED FOR SEDIMENT AND BE APPROPRIATELY MANAGED IN A MANNER THAT DOES NOT CAUSE ENVIRONMENTAL HARM, FLOODING, DAMAGE OR NUISANCE TO NEIGHBOURING PROPERTIES.

**EROSION CONTROL**

- ALL EROSION CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.
- THE APPLICATION OF LIQUID-BASED DUST SUPPRESSION MEASURES MUST ENSURE THAT SEDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD.
- ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND EMBANKMENTS ASSOCIATED WITH CONSTRUCTED SEDIMENT BASINS MUST BE MACHINE-COMPACTED, SEEDED AND MULCHED FOR THE PURPOSE OF ESTABLISHING A TEMPORARY VEGETATIVE COVER WITHIN 10 DAYS AFTER GRADING.
- THE CONSTRUCTION AND STABILISATION OF EARTH BATTERS STEEPER THAN 6:1 (H:V) MUST BE STAGED SUCH THAT NO MORE THAN 3 VERTICAL-METRES OF ANY BATTER IS EXPOSED TO RAINFALL AT ANY INSTANT.
- SYNTHETIC REINFORCED EROSION CONTROL MATS AND BLANKETS MUST NOT BE PLACED WITHIN, OR ADJACENT TO, RIPARIAN ZONES AND WATERCOURSES IF SUCH MATERIALS ARE LIKELY TO CAUSE ENVIRONMENTAL HARM TO WILDLIFE OR WILDLIFE HABITATS.

**SEDIMENT CONTROL**

- ALL SEDIMENT CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.
- OPTIMUM BENEFIT MUST BE MADE OF EVERY OPPORTUNITY TO TRAP SEDIMENT WITHIN THE WORK SITE, AND AS CLOSE AS PRACTICABLE TO ITS SOURCE.
- SEDIMENT TRAPS MUST BE INSTALLED AND OPERATED TO BOTH COLLECT AND RETAIN SEDIMENT.
- THE POTENTIAL SAFETY RISK OF A PROPOSED SEDIMENT TRAP TO SITE WORKERS AND THE PUBLIC MUST BE GIVEN APPROPRIATE CONSIDERATION, ESPECIALLY THOSE DEVICES LOCATED WITHIN PUBLICLY ACCESSIBLE AREAS.
- ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT FROM THE SITE.
- SUITABLE ALL-WEATHER MAINTENANCE ACCESS MUST BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
- SEDIMENT CONTROL DEVICES MUST BE DE-SILTED AND MADE FULLY OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER A SEDIMENT-PRODUCING EVENT, WHETHER NATURAL OR ARTIFICIAL, IF THE DEVICE'S SEDIMENT RETENTION CAPACITY FALLS BELOW 75% OF ITS DESIGN RETENTION CAPACITY.
- MATERIALS, WHETHER LIQUID OR SOLID, REMOVED FROM SEDIMENT CONTROL DEVICES DURING MAINTENANCE OR DECOMMISSIONING, MUST BE DISPOSED OF IN A MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
- AS-CONSTRUCTED PLANS MUST BE PREPARED FOR ALL CONSTRUCTED SEDIMENT BASINS AND ASSOCIATED EMERGENCY SPILLWAYS. SUCH PLANS MUST APPROPRIATELY VERIFY THE BASIN'S DIMENSIONS, LEVELS AND VOLUMES, AND MUST BE SUBMITTED TO THE SUPERINTENDENT WITHIN 14 CALENDAR DAYS OF THE CONSTRUCTION OF EACH BASIN.
- SEDIMENT BASINS AND CONTROL DEVICES MUST BE MAINTAINED AND FULLY OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL EACH DEVICE'S CATCHMENT AREA ACHIEVES 70% GROUND COVER ON ALL SOIL SURFACES.
- SETTLED SEDIMENT MUST BE REMOVED FROM SEDIMENT BASINS WHEN THE VOLUME OF THE SEDIMENT EXCEEDS THE DESIGNATED SEDIMENT STORAGE VOLUME, OR THE DESIGN MAXIMUM SEDIMENT STORAGE ELEVATION.
- IN AREAS WHERE RUNOFF TURBIDITY IS TO BE CONTROLLED, EXPOSED SURFACES ARE TO BE EITHER MULCHED, COVERED WITH EROSION CONTROL BLANKETS OR TURFED IF EARTHWORKS ARE EXPECTED TO BE DELAYED FOR MORE THAN 14 DAYS.
- STRAW BALE SEDIMENT TRAPS ARE A SECONDARY OPTION WHICH GENERALLY SHOULD NOT BE USED IF OTHER OPTIONS ARE AVAILABLE.
- SEDIMENT FENCE
  - NOT TO BE LOCATED IN AREAS OF CONCENTRATED FLOW.
  - NORMALLY LOCATED ALONG THE CONTOUR WITH A MAXIMUM CATCHMENT AREA 0.6 HA PER 100M LENGTH OF FENCE.
  - ONLY WOVEN FABRICS ARE TO BE USED, NON-WOVEN FABRICS ARE TO BE AVOIDED UNLESS OTHERWISE DIRECTED BY THE SUPERVISING ENGINEER.
  - WHERE FENCES NEED TO BE LOCATED ACROSS THE CONTOUR THE LAYOUT SHALL BE AS DIRECTED BY THE MANAGER.
  - FENCES ARE REQUIRED 2M MIN FROM THE TOE OF CUT AND FILL BATTERS, WHERE NOT PRACTICAL ONE FENCE CAN BE AT THE TOE WITH A SECOND FENCE 1M MIN AWAY. FENCE SHOULD NOT BE LOCATED PARALLEL WITH TOE IF CONCENTRATION OF FLOW WILL OCCUR BEHIND THE FENCE.
- ALL STORMWATER INLET STRUCTURES IN THE IMMEDIATE DOWNSTREAM VICINITY OF THE WORK AREA SHALL HAVE APPROVED INLET PROTECTION TO PREVENT INGRESS OF WATER BORNE SEDIMENTS.
- SANDBAGS TO BE INSTALLED AT REGULAR INTERVALS ON ROAD PROFILE TO REDUCE EROSION & STEM FLOWS BY ACTING AS SMALL CHECK DAMS.
- EXTRA CATCH DRAINS MAY BE CONSTRUCTED BY CONTRACTOR IN ACCORDANCE WITH THESE DRAWINGS & I.E.C.A. TECHNICAL NOTES & DRAWINGS.

**SITE MONITORING AND MAINTENANCE**

- ALL WATER QUALITY DATA, INCLUDING DATES OF RAINFALL, DATES OF TESTING, TESTING RESULTS AND DATES OF WATER RELEASE, MUST BE KEPT IN AN ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY THE LOCAL AUTHORITY ON REQUEST.
- AT NOMINATED INSTREAM WATER MONITORING SITES, A MINIMUM OF 3 WATER SAMPLES MUST BE TAKEN AND ANALYSED, AND THE AVERAGE RESULT USED TO DETERMINE QUALITY.
- SEDIMENT BASIN WATER QUALITY SAMPLES MUST BE TAKEN AT A DEPTH NO GREATER THAN 200MM ABOVE THE LEVEL OF SETTLED SEDIMENT.
- ALL ENVIRONMENTALLY RELEVANT INCIDENTS MUST BE RECORDED IN A FIELD LOG THAT MUST REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES.
- ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THEIR OPERATIONAL LIVES.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE FULLY OPERATIONAL AND MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THE MAINTENANCE PERIOD AS SPECIFIED BY THE LOCAL AUTHORITY.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE REMOVED AFTER THE SITE HAS BEEN ADEQUATELY STABILISED OR AS DIRECTED BY THE SUPERINTENDENT.
- ALL DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED:
  - AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE);
  - AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE);
  - WITHIN 24 HOURS OF EXPECTED RAINFALL; AND
  - WITHIN 18 HOURS OF A RAINFALL EVENT OF SUFFICIENT INTENSITY AND DURATION TO CAUSE RUNOFF ON-SITE).
- WASHING/FLUSHING OF SEALED ROADWAYS MUST ONLY OCCUR WHERE SWEEPING HAS FAILED TO REMOVE SUFFICIENT SEDIMENT AND THERE IS A COMPELLING NEED TO REMOVE THE REMAINING SEDIMENT (E.G. FOR SAFETY REASONS). IN SUCH CIRCUMSTANCES, ALL REASONABLE AND PRACTICABLE SEDIMENT CONTROL MEASURES MUST BE USED TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT INTO RECEIVING WATERS. ONLY THOSE MEASURES THAT WILL NOT CAUSE SAFETY AND PROPERTY FLOODING ISSUES SHALL BE EMPLOYED. SEDIMENT REMOVED FROM ROADWAYS MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
- SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
- MAINTENANCE MOWING OF ALL ROAD SHOULDERS, TABLE DRAINS, BATTERS AND OTHER SURFACES LIKELY TO EXPERIENCE ACCELERATED SOIL EROSION MUST AIM TO LEAVE THE GRASS LENGTH NO SHORTER THAN 50MM WHERE REASONABLE AND PRACTICABLE.
- MAINTENANCE MOWING MUST BE DONE IN A MANNER THAT WILL NOT DAMAGE THE PROFILE OF FORMED, SOFT EDGES, SUCH AS THE CREST OF EARTH EMBANKMENTS.

**SITE REHABILITATION**

- ALL DISTURBED AREAS IDENTIFIED AS VERY LOW, LOW, MEDIUM, HIGH OR EXTREME RISK MUST BE SUITABLE WITHIN 30, 30, 20, 10 OR 5 DAYS RESPECTIVELY, OR PRIOR TO ANTICIPATED RAINFALL, WHICHEVER IS THE GREATER, FROM THE DAY THAT SOIL DISTURBANCES ON THE AREA HAVE BEEN FINALISED.
- A MINIMUM 60% GROUND COVER MUST BE ACHIEVED ON ALL COMPLETED EARTHWORKS EXPOSED TO ACCELERATED SOIL EROSION WITHIN 30 DAYS DURING THOSE MONTHS WHEN THE EXPECTED RAINFALL IS LESS THAN 30mm; MINIMUM 70% COVER WITHIN 30 DAYS IF BETWEEN 30 AND 45mm; MINIMUM 70% COVER WITHIN 20 DAYS IF BETWEEN 45 AND 100mm; MINIMUM 75% COVER WITHIN 10 DAYS IF BETWEEN 100 AND 225mm; AND MINIMUM 80% COVER WITHIN 5 DAYS IF GREATER THAN 225mm.
- DURING TIMES OF DECLARED WATER RESTRICTIONS, REFER TO GOLD COAST CITY COUNCIL'S "DROUGHT CONDITIONS SPECIFICATION V2" FOR A DEEMED TO COMPLY SOLUTION TO ACHIEVING 70% GROUND COVERAGE.
- THE TYPE OF GROUND COVER APPLIED TO COMPLETED EARTHWORKS IS COMPATIBLE WITH THE ANTICIPATED LONG-TERM LAND USE, ENVIRONMENTAL RISK, AND SITE REHABILITATION MEASURES.
- UNLESS OTHERWISE DIRECTED BY THE SUPERINTENDENT OR WHERE DIRECTED BY THE APPROVED REVEGETATION PLAN, TOPSOIL MUST BE PLACED AT A MINIMUM DEPTH OF 75mm ON SLOPES 4:1 (H:V) OR FLATTER, AND 50mm ON SLOPES STEEPER THAN 4:1.
- TEMPORARY SITE STABILISATION PROCEDURES MUST COMMENCE AT LEAST 30 DAYS PRIOR TO THE NOMINATED SITE SHUTDOWN DATE. AT LEAST 70% STABLE COVER OF ALL UNSTABLE AND/OR DISTURBED SOIL SURFACES MUST BE ACHIEVED PRIOR TO COMPLETION OF WORKS. THE STABILISATION WORKS MUST NOT RELY UPON THE LONGEVITY OF NON-VEGETATES EROSION CONTROL BLANKETS, OR TEMPORARY SOIL BINDERS.
- ALL UNSTABLE OR DISTURBED SOIL SURFACES MUST BE ADEQUATELY STABILISED AGAINST EROSION (MINIMUM 70%) PRIOR TO COMMENCEMENT OF USE, OR SURVEY PLAN ENDORSEMENT.

		DOCUMENT CONTROL	APPROVED	SUNSHINE COAST Suite 2, Nonval Corporate Centre, 13 Nonval Ct, Maroochydore T: 07 5391 3773   F: 07 5466 5887 E: sunshincoast@westerapartners.com.au		GOLD COAST Level 3 17 Walsh St, Southport T: 07 5571 1599   F: 07 5571 1330 E: goldcoast@westerapartners.com.au		SURVEYOR SCHLENCKER SURVEYING QLD PHONE (07) 5573 6744		DATUM AHD	PROJECT LOCATION BORAL QUARRY ORMEAU 68 CLIFF BARRONS ROAD ORMEAU HILLS LOT 1 RP174509	DRAWING STATUS FOR APPROVAL			
		DESIGNED G.G.J.		WESTERA PARTNERS STRUCTURAL + CIVIL + ENVIRONMENTAL ENGINEERS		NORTHERN NSW Suite 24 Level 2, 11-13 Pearl St, Kingscliff T: 02 4474 8047   F: 02 4474 8049 E: nsw@westerapartners.com.au		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		TITLE CLIENT EROSION AND SEDIMENT CONTROL NOTES BORAL LIMITED		DRAWING NUMBER G21-095-ESCO3			
		DRAWN G.G.J.										BRISBANE Level 2 Limestone, 33 Langford St, Newstead T: 07 3852 4333   F: 07 3852 4777 E: brisbane@westerapartners.com.au		DRAWING NUMBER G21-095-ESCO3	
		CHECKED B.C.A.										B. ARTHUR RPEQ 4384, NER 494962 For and on behalf of WESTERA PARTNERS PTY. LTD.		SHEET NUMBER REVISION 03 OF 03	
No.	DATE	REVISIONS		FILE NAME	Erosion_Notes.dwg										