



Annual Compliance Report – EPBC 2016/7797

03 February 2025 to 02 February 2026

Ormeau Quarry Expansion, 12 km north-west of
Oxenford, Queensland

Prepared for Boral Resources (QLD) Pty Ltd

Our Reference: 10233 E

1 May 2026

**Saunders
Havill**

PATHWAYS TO SUCCESS

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Signed



Full name	Megan McKinney
Position	Principal Ecologist
Organisation	Saunders Havill ABN 24 144 972 949
Date	1 May 2026



Document Control

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Document Issue

Issue	Date	Prepared By	Checked By
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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 (Cth)</i>
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 (Qld)</i>
PMAV	Property Map of Assessable Vegetation
PMR	Protected Matters Report
RE	Regional Ecosystem
SH	Saunders Havill
TEC	Threatened Ecological Community (under the EPBC Act)
VMA	<i>Vegetation Management Act 1999 (Qld)</i>

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).
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 5 (3 February 2025 – 2 February 2026) 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 *Environment 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 3 February 2025 and 2 February 2026.

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 5 reporting period is the 3 May 2026.

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

Commonwealth Reference	EPBC 2016/7797
Approval Holder	Boral Resources (Qld) Pty Ltd
ACN	009 671 809
Project Name on the Approval	Ormeau Quarry Expansion, 12km north-west of Oxenford, Queensland.



Approved Action	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].
Controlling Provision(s)	Listed threatened species and communities (sections 18 & 18A)
Approval Date	16 February 2018
Expiry Date of the Approval	8 November 2057
Date of Commencement of the Action	3 February 2021
Address	578 Upper Ormeau Road, Kingsholme, Queensland, 4208
Local Government Area	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 (LGA). 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

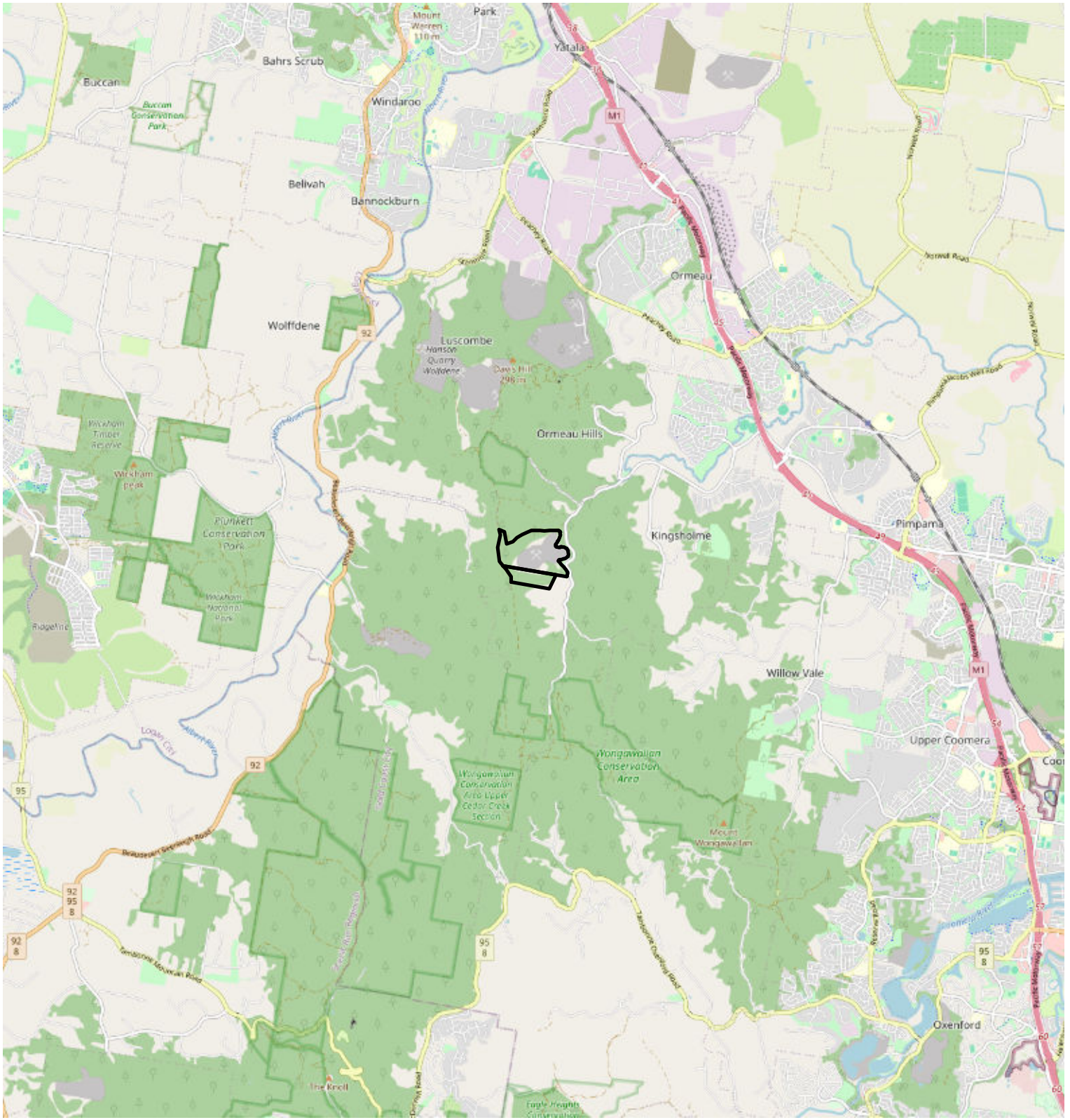
During Year 5 of the Project, the following development and environmental management activities occurred:

- Clearing of approximately 4.88 ha of Koala critical habitat (KCH) within impact area during the Year 5 reporting period, bringing the total clearing to approximately 20.44 ha of the approved 38 ha since the commencement of the action (refer Section 2.2).
- EPBC audit of compliance conducted by the Department's Environmental Audit Section, finalised 10 June 2025 (refer Section 2.4).
- Request for information from the Department's Approval Compliance Section, dated 15 October 2025 (refer Section 2.4).
- Show cause notice from the Department's Approval Compliance Section, dated 23 February 2026 (refer Section 2.4).
- Independent review of Offset Management Plan implementation by New Ground consultants (refer Section 2.5).
- Audit and review of Offset Management Plan by Saunders Havill (SH) (refer Section 2.6).
- Continued implementation of the Bushfire Management Plan, Weed Management Plan, Koala Habitat (Rehabilitation) Management Plan and Vertebrate Pest Management Plan within the 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, conducted by SH ecologists (refer Section 2.7.1).
- Weed mapping targeting Weeds of National Significant (WONS), conducted by SH ecologists across offset area (refer Section 2.7.3) and Plan 4.
- Bushcare Services completed treatment of WONS within and around the rehabilitation area, where accessible at the offset site (refer Section 2.8.1). This involved both preparation for rehabilitation works and post-establishment follow up weed management at the site (refer Section 2.8.2).
- Non-native vertebrate pest monitoring services were carried out within the offset area by Biodiversity Australia and SH separately. Monitoring surveys involved the use of passive infrared monitoring cameras and targeted management activities in accordance with the Vertebrate Pest Management Plan (VPMP) including:
 - SH conducted non-native vertebrate pest monitoring during winter (July and August) 2025. (refer Section 2.7.2), and
 - Biodiversity Australia conducted non-native vertebrate pest monitoring surveys during spring (November) 2025, followed by non-native vertebrate pest management activities during spring and summer (November and December) 2025. During the Year 5 surveys, *Vulpes vulpes* (European red fox) a target non-native pest species was recorded (refer Section 2.8.3).
- Fireland were engaged to conduct an inspection of all fire lines and perform maintenance works where identified during the Year 5 reporting period. Following the works conducted by Fireline, tracks identified by the consultancy are all traversable by light 4WD vehicles and it is reported all now conform to the standards identified in the Bushfire Management Plan (refer Section 2.8.5).
- Fireland were also engaged to prepare a prescribed burn plan during the reporting period, in accordance with the Bushfire Management Plan. A burn of the Fire Management Unit 2 area was reassessed following previous year's proposed burn. No burns were conducted during the reporting period (refer Section 2.8.5).





LEGEND
 Site DCDB

Figure 1

Site Context

CLIENT



FILE REFERENCE
 10233 E Figure 1YR5 Project Site Context A
 DATE
 1/05/2026
 Upper Ormeau Road, Ormeau

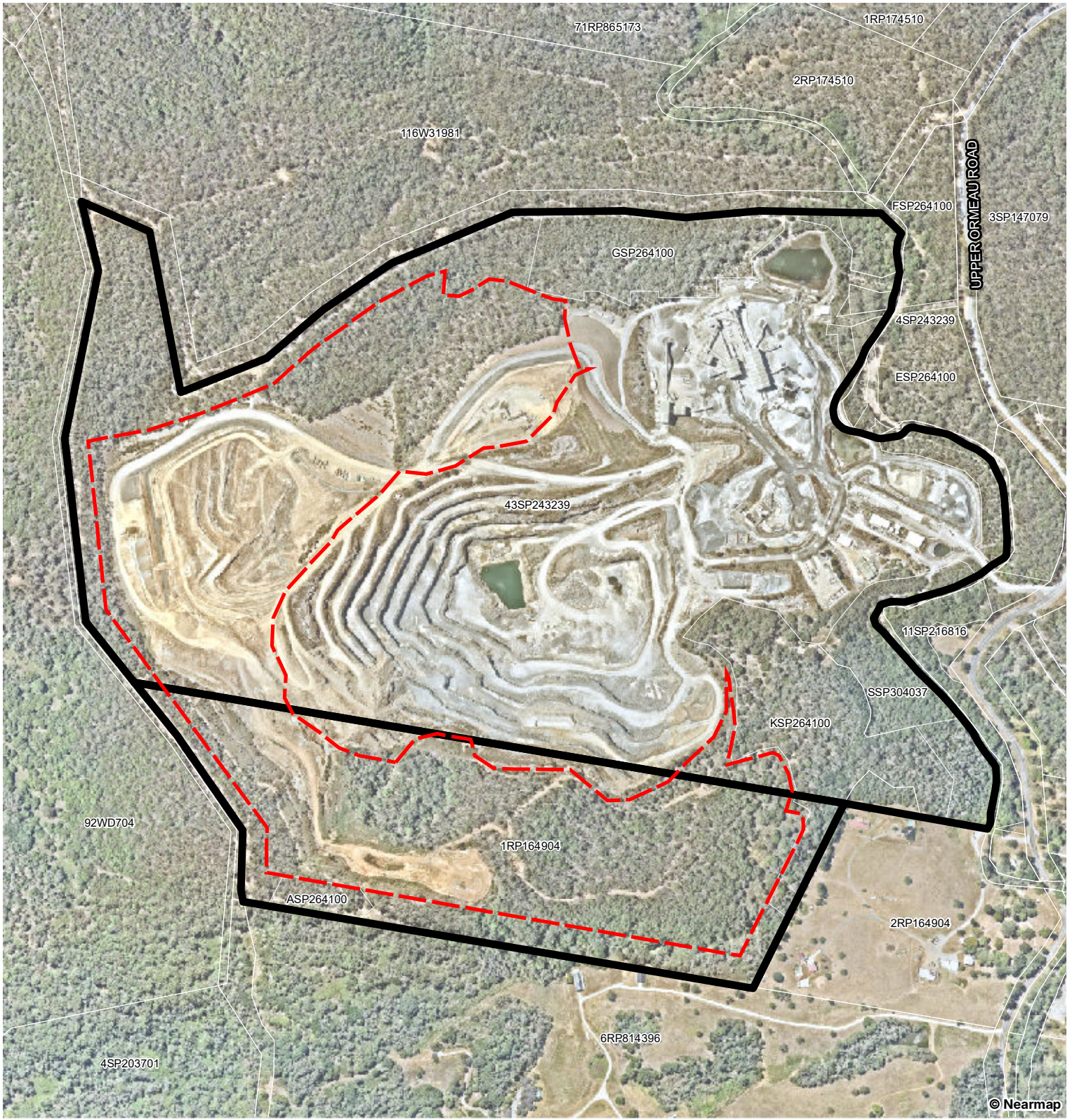
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- LEGEND**
- Qld DCDB
 - Site DCDB
 - Project Area

Figure 2

Site Aerial

CLIENT



FILE REFERENCE
10233 E Figure 2 YR5 Project Site Aerial A
DATE
1/05/2026
Upper Ormeau Road, Ormeau

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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 on 4 February 2021 as per condition 8 of EPBC Act approval 2016/7797 (refer Appendix B). During Year 5, approximately 4.88 ha of KCH was cleared, resulting in a total of approximately 20.44 ha of KCH being cleared during the life of the project. Refer Plan 1 for clearing extent.

2.3. Key Consultants and Roles

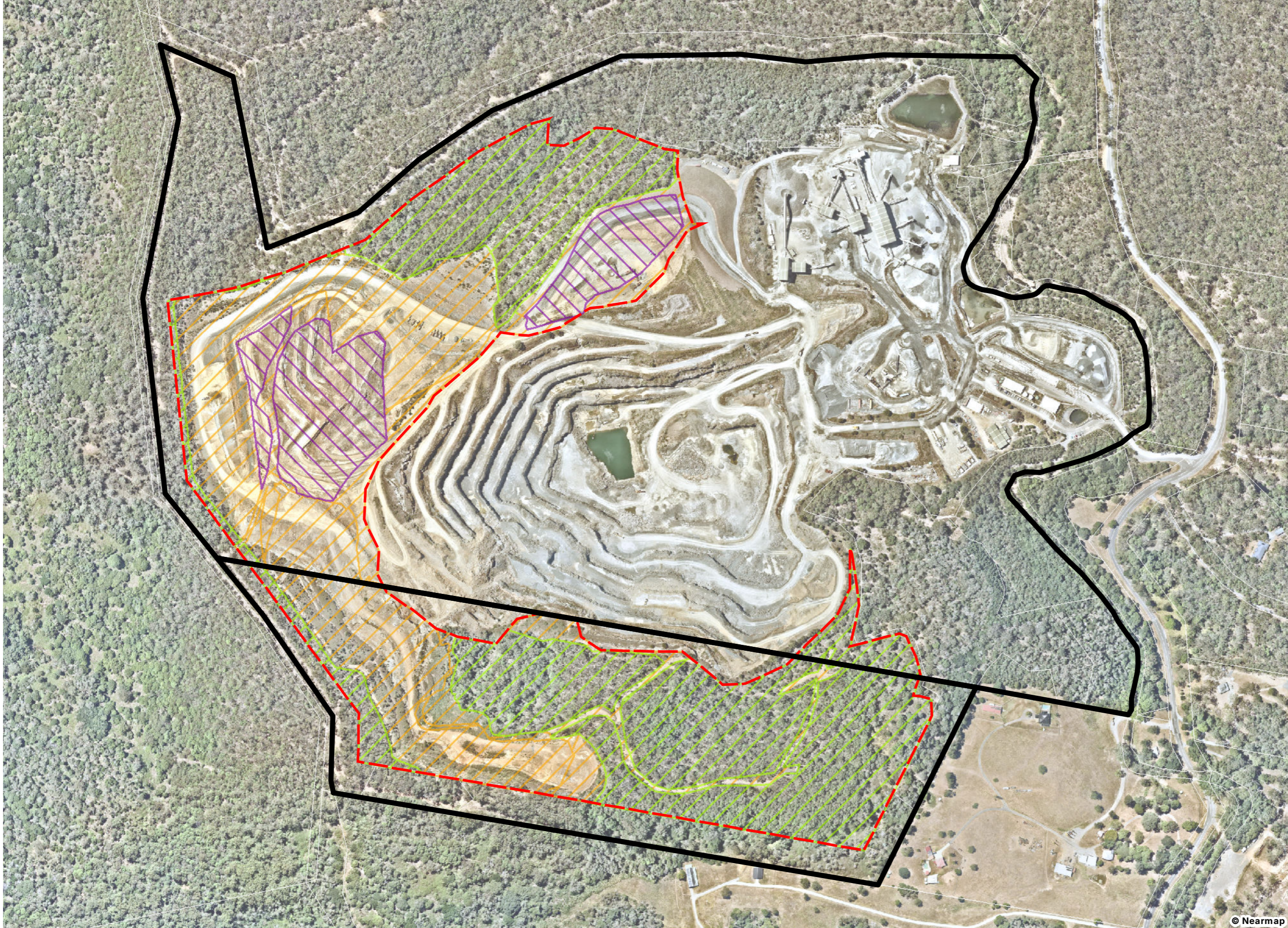
Table 2 below is a list of the key appointed contractors and their roles in the Project during Year 5.

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
Bush Regeneration Contractor	Bushcare Services
Bushfire Management Contractor	Fireland
Pest Management Contractor	Biodiversity Australia



01. KOALA CRITICAL HABITAT CLEARING - IMPACT AREA



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LEGEND

- Site DCDB
- Project Area
- Qld DCDB

Koala Critical Habitat Areas

- Previous years' KCH clearing total [15.56 ha]
- Year 5 KCH Clearing [4.88 ha]
- Remaining KCH [17.18 ha]

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	13/04/2026	Preliminary	HW	KR



2.4. External audit

On the 31 March 2025, the Department's Environmental Audit Section commenced a compliance audit to determine if Boral Resources (QLD) Pty Ltd was complying with the conditions of the EPBC Act approval. The compliance audit was enabled under condition 9 of the EPBC Act approval. The audit scope included assessment of compliance with conditions 1, 2, 3, 4, 5, 6, 8, 9 and 17 of the EPBC Act approval. Following initial contact with the proponent, the Department conducted an on-site audit on 7 May 2025. Further information in relation to the audit scope was provided to the Department on 14 May 2025, with the final compliance audit report provided to the proponent on 10 June 2025. Findings from the compliance audit included compliance with six (6) of the nine (9) conditions examined (conditions 1, 2, 3, 5, 8 and 9), two (2) conditions not applicable at the time of audit (conditions 4 and 17), and non-compliance with one (1) condition (condition 6).

The compliance of the project has been updated in **Table 11** to reflect the findings of the audit.

2.5. Independent Review of Offset Management Plan

The proponent engaged New Ground consultancy to undertake an independent review of the EPBC Act approval and offset management plan for the Ormeau Quarry Expansion. The intent of the review was to determine if the information within the OMP is effectively guiding implementation of management actions on the offset site to meet its aims and associated approval conditions. As part of the New Ground review, key goals of the OMP were reviewed in conjunction with annual compliance reports that include documentation of management efforts undertaken on the offset site, and resulting outcomes. A combination of desktop and field-based methods were employed as part of this review.

Findings from the New Ground review included two (2) minor non-compliances in relation to the weed management and rehabilitation commencement period. During site visits, it was identified that in general the site is being progressively managed in accordance with the actions of the OMP, and while some minor deviations from intended actions occurred, the overall ecological outcomes are being achieved. As reported in the Year 4 ACR, the rectification of the vehicle access tracks was recommended in order to support management efforts across majority of the offset area.

Overall, the review into the OMP by New Ground consultants found while minor non-compliances were reported in the annual compliance reporting, the rectification of vehicle access tracks demonstrates a successful adaptive management outcome. Additionally, the minor non-compliances were not attributed to shortfalls in the OMP, but rather to externalities such as weather and track conditions post OMP approval. Further, non-compliances that arose from the access issues are generally timeframe related and/or minor technicalities, and the site appears to be in overall good condition with management actions yielding positive environmental outcomes within the offset site (refer **Appendix C**).

2.6. SH Audit and Review of Offset Management Plan

An audit and review of the OMP was completed by Saunders Havill in early 2026 to determine effectiveness of listed management actions and performance outcomes, following several years of conducting works onground (refer **Appendix D** for full audit report).



The audit report reviews the outcomes captured under each ACR, from the commencement of the ACR reporting in 2022. The audit reviews the outcomes in detail against the current OMP timelines, objectives and projected outcomes to determine whether changes would be recommended within the OMP, following reflection through onground management. The resulting advice considers the first five years of onground management at the offset site and has potential to evolve following review during the ACR each year.

A number of recommendations were made regarding the management of the offset site to increase effectiveness and efficiencies.

The overarching recommendations were:

1. Increase resourcing for a period of time over the upcoming ACR year/s to manage weeds in areas of identified potential future infill planting (habitat rehabilitation areas as per the KHMP)
2. Identify areas for infill planting following the intensive weed management efforts
3. Ensure follow up monitoring of planting locations
4. Revise WMP, KHMP, VPMP and BMP where onground contractors have indicated more effective monitoring/management options
5. Consider completing a risk assessment report to ensure there is sufficient justification for considering these updates to the OMP as not constituting a *new or increased impact* on koala
6. Minor updates to OMP, under condition 12 of the approval, which do not constitute a *new or increased impact*, such as:
 - Update projected timelines for weed treatment to be completed
 - Remove references to field datasheet records for weed mapping (records best kept as GIS shapefiles and via reporting from contractors)
 - Update planting timeframes
 - Update Table 5 (OMP actions, timing and responsibilities) to specify detail around OMP auditing as part of the annual ACR

2.7. 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. SH ecologists completed onground surveys on 31 July, 5, 8, 11, 12 and 15 August 2025 (refer Plan 3).

2.7.1 Habitat Quality Surveys

SH 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 SH ecologists during Year 5.

2.7.2 Vertebrate Camera Trap Monitoring

SH ecologists completed general meander surveys and motion sensor camera trapping during the Year 5 monitoring period. These surveys were conducted within the offset area to identify koala and non-native vertebrate pest presence.



Plan 3 and Plan 6 displays the camera trap locations during the Year 5 monitoring period. The fauna equipment was deployed on 31 July 2025 and collected on 15 August 2025, resulting in an active period of 15 nights. A total of nine (9) fauna species were recorded as a result of onground field surveys and camera trapping (refer Table 3, Photo set 1 and Appendix E for camera trap images).

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

Table 3: Observed fauna and camera trapping results – SH surveys July/August 2025

Scientific Name	Common Name	Native/Introduced	Survey Method*
Birds			
<i>Alectura lathamii</i>	Australian Brush Turkey	Native	CT
Mammals			
<i>Macropus rufogriseus</i>	Red-necked Wallaby	Native	CT
<i>Perameles nasuta</i>	Long-nosed Bandicoot	Native	CT
<i>Phascolarctos cinereus</i>	Koala	Native	CT
<i>Rattus fuscipes</i>	Bush Rat	Native	CT
<i>Trichosurus caninus</i>	Mountain Brushtail Possum	Native	CT
<i>Trichosurus vulpecula</i>	Brush-tailed Possum	Native	CT
<i>Wallabia bicolor</i>	Swamp Wallaby	Native	CT
Reptile			
<i>Varanus varius</i>	Lace Monitor	Native	CT

*CT = camera trapping, S = direct sighting



Photo set 1: Koala captured on camera traps within the offset site during Year 5 field survey effort.

Biodiversity Australia conducted targeted vertebrate pest monitoring and trapping across the offset site as part of the annual monitoring during Year 5 as part of the requirements under the Vertebrate Pest Management Plan, VPMP and in accordance with the OMP (refer Year 1 ACR and Section 2.5.3).



Biodiversity Australia conducted a required camera monitoring program over a period of twenty-one (21) consecutive days, where seven (7) passive Infra-Red cameras were installed. The Year 5 camera monitoring program was established from 11 November 2025 to 1 December 2025. During the Year 5 monitoring period, the presence of *Vulpes vulpes* (European red fox) non-native vertebrate pest was recorded (refer Appendix F for Monitoring Report).

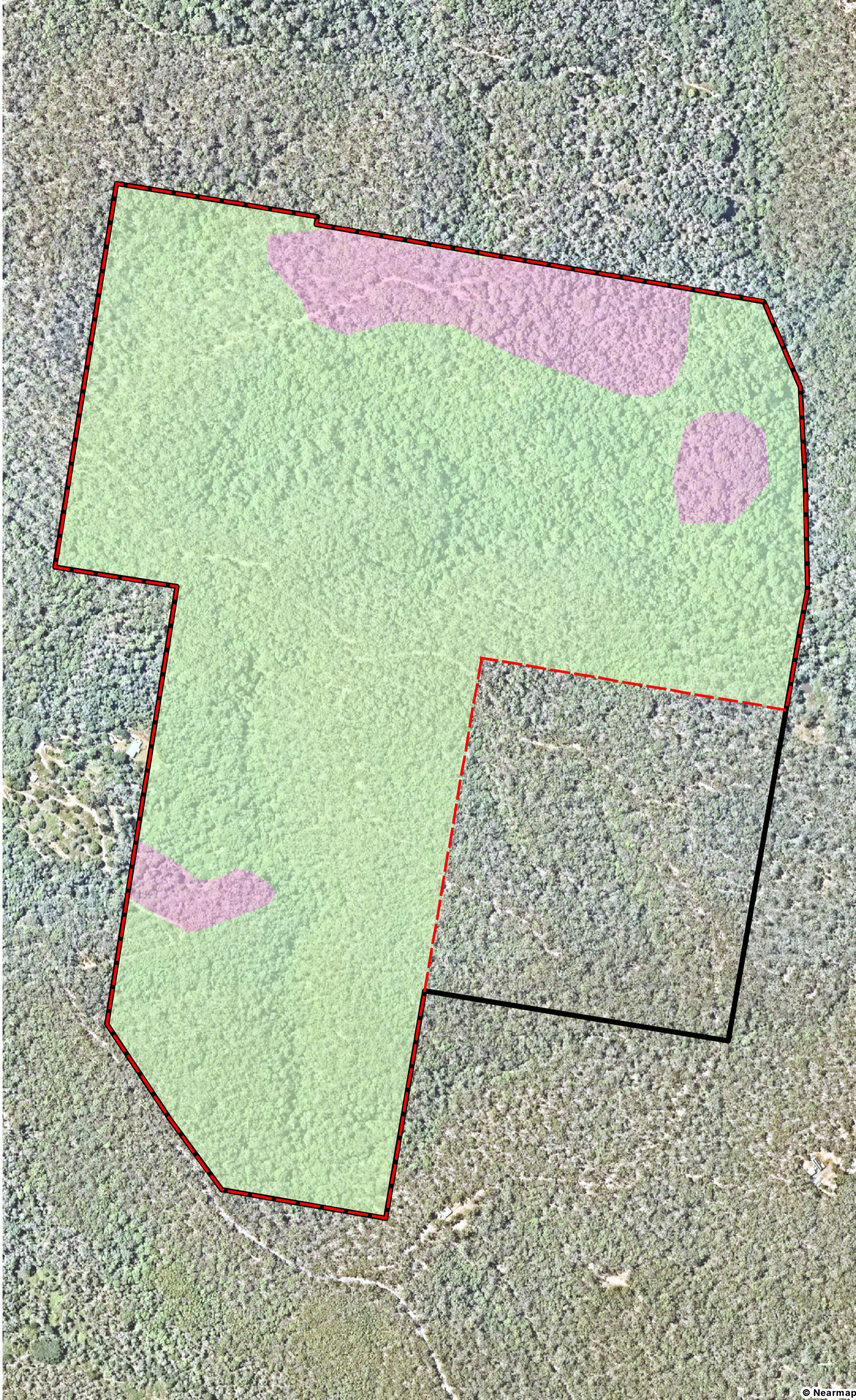
2.7.3 Weed Mapping

SH ecologists spatially recorded areas within the offset area containing WONS, specifically targeting *Lantana camara* (Lantana). Refer to Plan 4 for the Year 5 weed mapping results. As shown on the specified plan, WONS are present in varying density levels across the site (refer Photo set 2).



Photo set 2: Dense *Lantana camara* patches within offset site identified during Year 5 field survey effort.

02. OFFSET AREA MANAGEMENT ZONES





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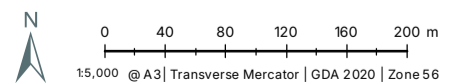
LEGEND

-  Qld DCDB
-  Site DCDB
-  Offset Area

Management Zones

-  Habitat Rehabilitation Areas
-  Remnant Vegetation Management Areas

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	30/04/2026	Preliminary	XX	XX

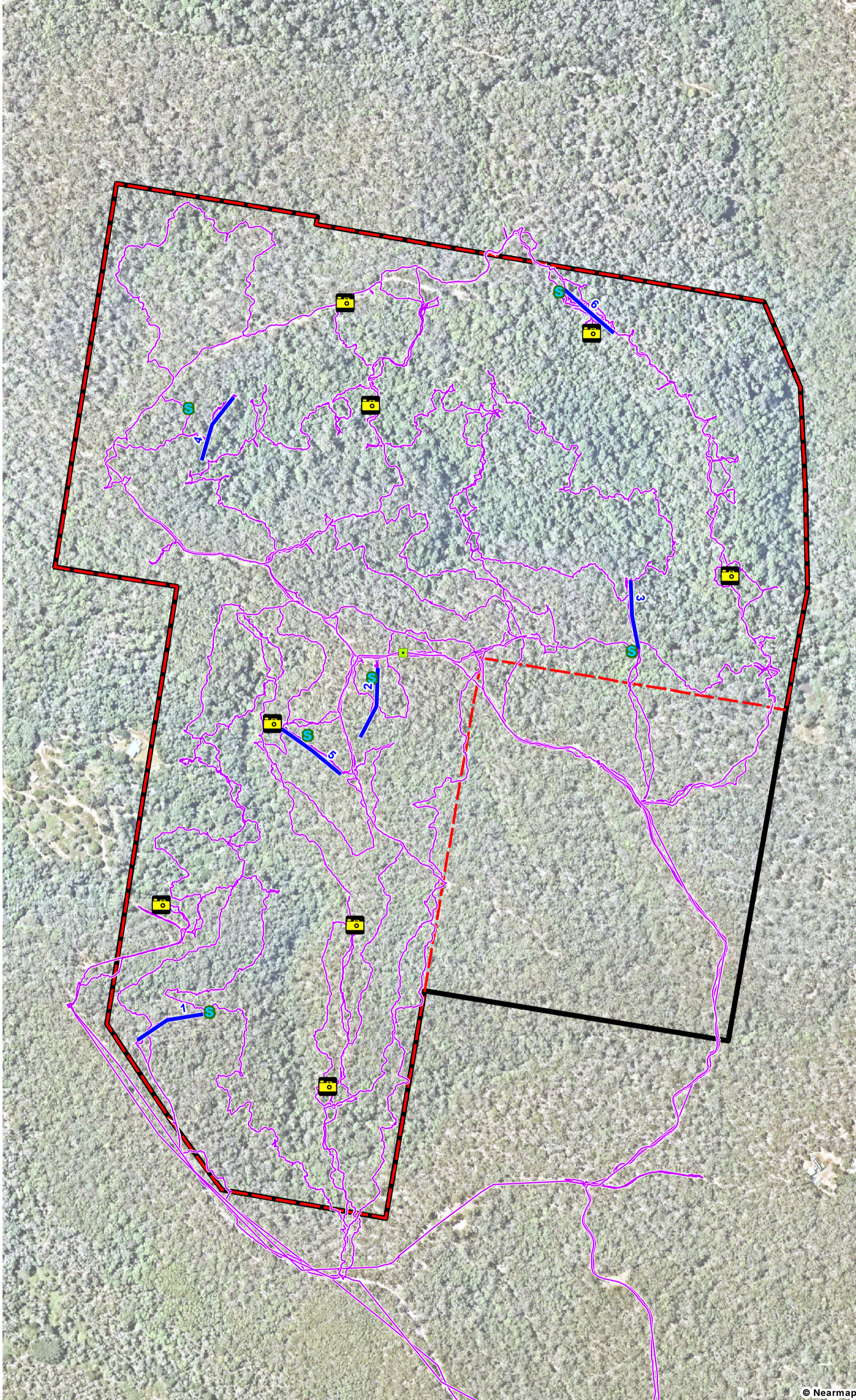


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Date: 30/04/2026

10233 E 02 YR5 Offset Area MZ A

03. FIELD SURVEY EFFORT (YEAR 5)

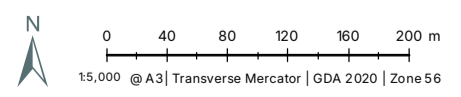


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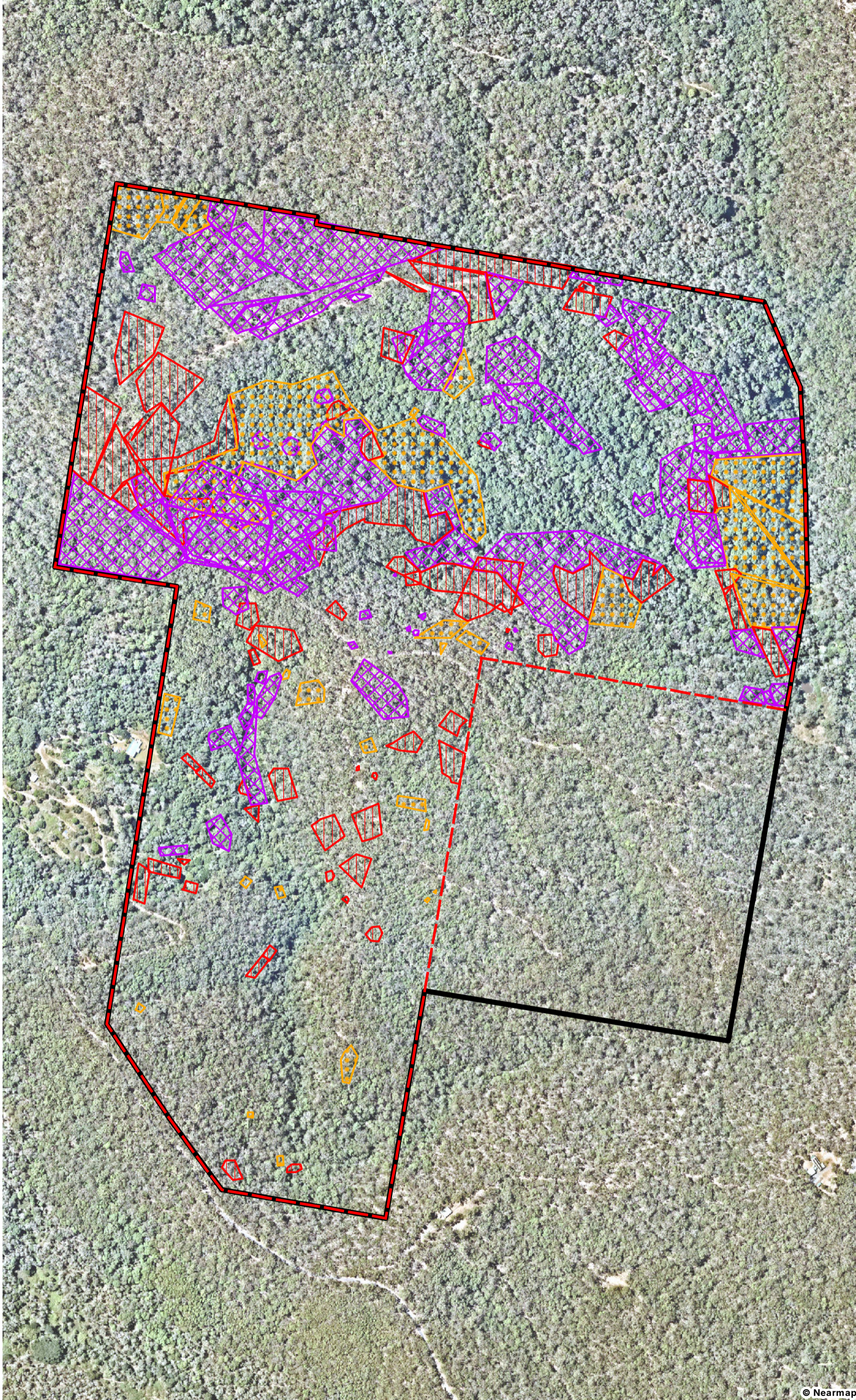
- LEGEND**
- Qld DCDB
 - Site DCDB
 - Offset Area
 - Camera Trap Locations
 - S SAT Survey Locations
 - Koala scat
 - Habitat Transects
 - GPS Track log

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	1/05/2026	Preliminary	HW	KR



Address / RPD: 2/RP15912
 Date: 1/05/2026
 10233 E 03 YR5 Offset Site Field Survey Report A

04. 4. WEED MAPPING (YEAR 5)



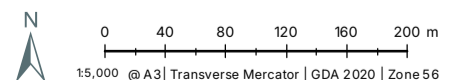
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LEGEND

- Qld DCDB
- Site DCDB
- Offset Area
- Weed Mapping Results**
- Low Density
- Medium Density
- High Density

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	30/04/2026	Preliminary	HW	KR



Address / RPD: 2/RP15912

Date: 30/04/2026

10233 E 04 YR5 Offset Site SHG Weed Mapping A

2.8. 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 5 compliance period. Weed management, bushfire management, access tracks and vertebrate pest species management were conducted across the site. The following sections detail the management actions conducted during Year 5.

2.8.1 Weeds of National Significance (WONS) treatment

As per the OMP requirements, a Weed Management Plan (WMP) was produced by SH in 2021 to comply with Management Action 1. 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 Year 1 ACR).

SH ecologists mapped the extent of WONS across the offset area during the 2025/2026 (Year 5) compliance period. WONS identified and mapped were predominantly *Lantana camara* (Lantana) (refer Plan 4).

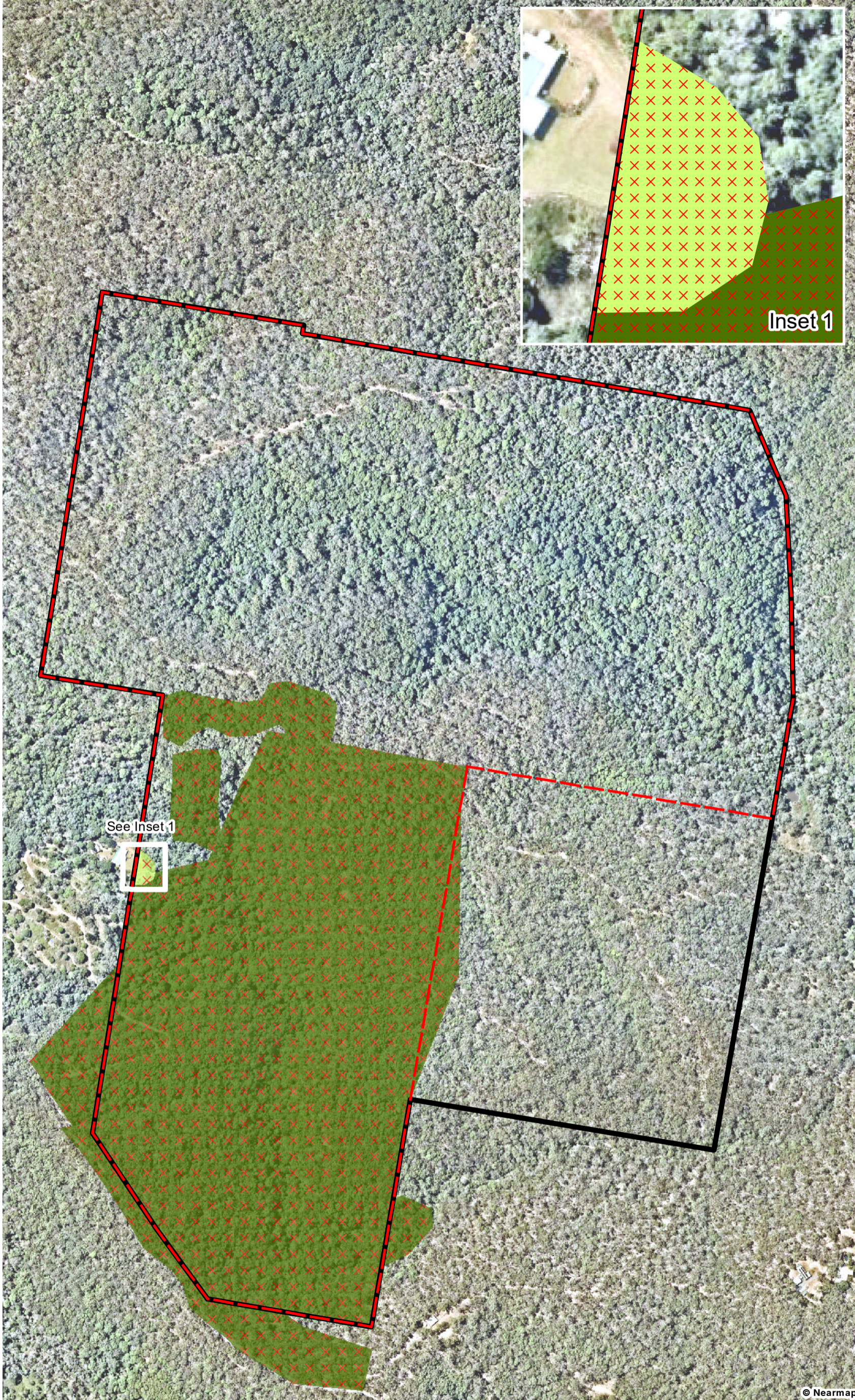
Bushcare Services continued the treatment of WONS and other weeds within the established rehabilitation areas to prepare the area for restoration on 04 November 2025. Subsequent weed management was conducted to support the plantings during the current compliance period, on 03 February and continued on 15 April 2026 (refer Appendix G). Accessibility issues occurred during Year 5, due to heavy rainfall at times across the ACR year (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 (refer to Appendix G). Weed treatment areas are demonstrated on Plan 5.

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

For a detailed review of compliance with the weed management under the OMP since commencement of the action, refer Section 2.9. It is considered that the weed management activities completed during the Year 5 ACR period formed part of required actions however, not all weeds can be treated in any one year, with sustained difficulties in effectively reaching the northern sections of the site. As such, the minor non-compliance of not treating all weeds across the site within the initial 12-month period, as per the approved OMP under Condition 6, remains.



05. OFFSET AREA WEED MANAGEMENT AND REHABILITATION AREAS

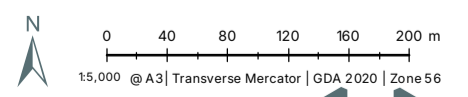


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- LEGEND**
- Qld DCDB
 - Site DCDB
 - Offset Area
 - Weed Treatment Areas (Years 1-4)
 - Weed Treatment and Rehabilitation Areas (Year 5)

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	1/05/2026	Preliminary	HW	KB



Address / RPD: 2/RP15912

Date: 1/05/2026

10233 E 05 YR5 Offset Weed Management Rehab A

2.8.2 Rehabilitation and Regeneration

As per the OMP requirements, a Koala Habitat Rehabilitation Management Plan (KHMP) was produced by SHG in 2021 to comply with Management Action 2. The KHMP details strategies that will be implemented to achieve koala habitat rehabilitation aims detailed in the OMP.

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

An area of rehabilitation was undertaken during the Year 5 reporting period, with a total of 650 native specimens established within the area shown on Plan 5 in November 2025, refer to Appendix H. Weed treatment areas were located in the rehabilitation areas to prepare the area for planting and support establishment post-planting. The planting schedule is reflective of pre-clear Regional ecosystem (RE) 12.11.5, described as open forest *Corymbia citriodora* subsp. *variegata* woodland to open forest +/- *Eucalyptus siderophloia*/*E. crebra*, *E. carnea*, *E. acmenoides*, *E. propinqua* on metamorphics +/- interbedded volcanics. The planting schedule is shown in Table 4 below, with planting density presented in Table 5.

Table 4: Rehabilitation Planting Schedule

Species planted	Number of specimens
<i>Corymbia citriodora</i>	30
<i>Eucalyptus acmenoides</i>	20
<i>Eucalyptus siderophloia</i>	20
<i>Eucalyptus crebra</i>	20
<i>Eucalyptus propinqua</i>	20
<i>Allocasuarina torulosa</i>	20
<i>Araucaria cunninghamii</i>	10
<i>Lophostemon confertus</i>	30
<i>Acacia disparrima</i>	50
<i>Acacia leiocalyx</i>	50
<i>Acacia concurrens</i>	50
<i>Melaleuca viminalis</i>	50
<i>Eragrostis brownii</i>	120
<i>Imperata cylindrica</i>	160
Total	650

Table 5: Planting Densities

Vegetation layer	Spacing
Canopy	1 per 10 m ²
Shrub	3 per 10 m ²
Groundcover	1 per 2 m ²ⁱ



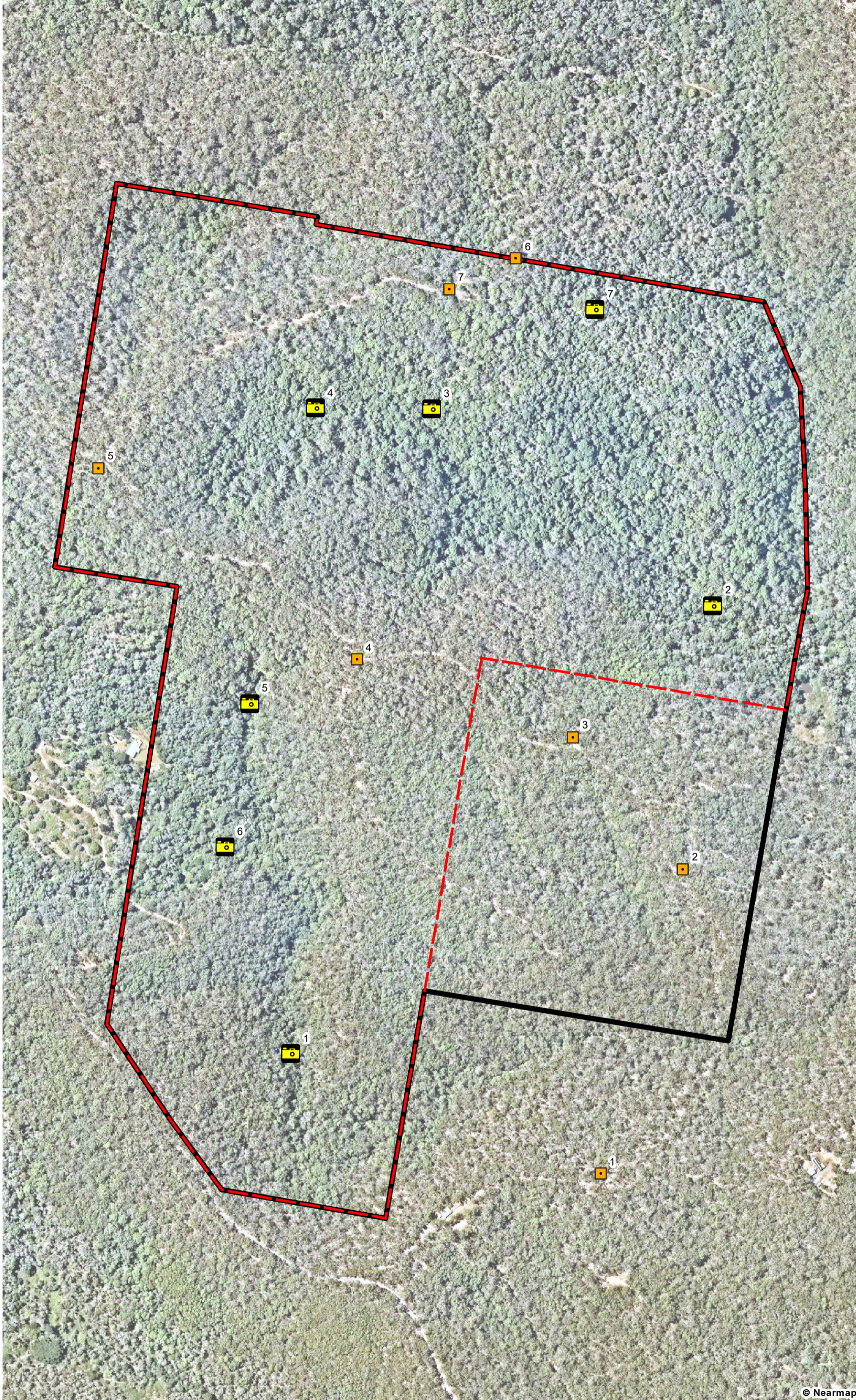
Based on a visual inspection during weed management works in February 2026, it was considered that the plantings conducted in November 2025 had a 85-90% success rate, noting this is not yet at the 12 months post-planting timeframe.

Details on weed management to support these rehabilitation works, completed by the weed management contractor, are provided at **Appendix G**.

For a detailed review of compliance with the OMP since commencement of the action, refer **Section 2.9**. It is considered that the rehabilitation and regeneration management activities completed during the Year 5 ACR period achieved compliance under the OMP and therefore EPBC Act approval condition 6.



06. PEST MONITORING AND MANAGEMENT LOCATIONS (YEAR 5)





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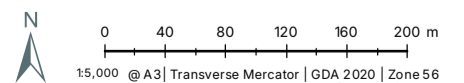
LEGEND

-  Qld DCDB
-  Site DCDB
-  Offset Area

SJT Locations

-  Camera Locations
-  Trap Locations

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	1/05/2026	Preliminary	HW	KR



Address / RPD: 2/RP15912

Date: 1/05/2026

10233 E 06 YR5 Offset Site Pest Monitoring and Management A

2.8.3 Vertebrate Pest Species Management

As per the OMP requirements, a Vertebrate Pest Management Plan (VPMP) was produced by SHG in 2021 to comply with Management Action 4. The VPMP details strategies that will be implemented to achieve aims detailed in the OMP.

Non-native vertebrate pest monitoring and management activities were conducted across the offset site within the Year 5 compliance period by Biodiversity Australia. The aim of this monitoring is to identify the presence of any feral or domestic dogs, red fox, and/or feral cats within the offset area. During the non-native pest monitoring period two (2) *Vulpes vulpes* (European Red Fox) sightings were recorded. Following the non-native pest monitoring surveys, targeted non-native pest management was conducted over a twelve (12) day period. The traps (targeting wild dogs and foxes) were installed on 1 December 2025 and collected on 12 December 2025. No fauna were captured during the Year 5 trapping program.

Biodiversity Australia Pest Management Report has been provided at **Appendix F**.

For a detailed review of compliance with the VPMP since commencement of the action, refer **Section 2.9**. It is considered that the vertebrate pest management activities completed during the Year 5 ACR period achieved compliance under the VPMP, OMP and therefore EPBC Act approval condition 6.

2.8.4 Koala Habitat Quality Management

As per the OMP requirements a Koala Habitat Management Plan (KHMP) was produced by SHG in 2021 to comply with Management Action 5. The KHMP details strategies that will be implemented to achieve koala habitat rehabilitation aims detailed in the OMP.

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 2.8.1** was not able to be completed across the entirety of the offset site due to ongoing access issues and wet weather. However, rehabilitation works involving planting were completed within the offset site, where previous encroachment from neighbouring property had caused some habitat degradation, as reported in previous ACRs.

SH ecologists conducted annual habitat quality monitoring of koala habitat utilising the MHQA methodology at six (6) permanent transect locations across the offset site during the Year 5 compliance period (refer **Plan 3**). Habitat quality scores remained relatively stable from Year 1 to Year 5, with only minor variation. Koala scats were recorded during SAT surveys within the current ACR year at two (2) of the transect locations, demonstrating that koala continue to use the offset site (refer **Section 2.9** and **Photo set 3**).





Photo set 3: *Koala scat identified at SAT locations within offset site identified during Year 5 field survey effort.*

Performance criteria prescribed under the OMP in association with Year 5 of the project include:

- *Baseline mapping of rehabilitation areas completed for the offset site and a rehabilitation strategy developed within 12 months of the commencement of the action.*
- *Rehabilitation to commence within 12 months of weeds being treated in non-remnant and remnant areas.*
- *Rehabilitation areas will have a 90% plant survival rate after 12 months of planting being carried out.*
- *Areas allowed to regenerate will display signs of native vegetation regrowth at rates expected for those species.*
- *Habitat quality monitoring will be completed annually for the first three years after commencement of the operation and every five years ongoing.*
- *Habitat quality will not reduce from the values identified in the baseline report. If a reduction occurs monitoring will continue annually until the values return to the baseline level.*

For a detailed review of compliance with the OMP since commencement of the action, refer Section 2.9. It is considered that the koala habitat management activities completed during the Year 5 ACR period achieved compliance under the OMP and therefore EPBC Act approval condition 6. Refer to Section 2.8.2 for further details on the rehabilitation planting conducted.

2.8.5 Bushfire Management

As per the OMP requirements, a Bushfire Management Plan (BMP) was produced by suitably qualified Land and Environment Consultants in 2021 to comply with 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.



A Burn Plan was developed by Fireland, in accordance with the requirements under the Bushfire Management Plan for the site. The Burn Plan was deemed to remain applicable to the site conditions during the Year 5 reporting period (refer **Appendix I**).

The Burn Plan incorporates a burn map, complexity ratings, pre-burn works order, a risk assessment and contingency maps. Onground fire management of the offset site 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 the inability for vehicle access to much of the offset site in previous reporting years, significant deterioration of firelines was detailed in the Fireline Maintenance Report, prepared by Fireland Consultancy, dated August 2025 (refer to **Appendix J**). Following the identification of un-trafficable firelines, works were undertaken to provide basic drainage to minimise runoff and to provide access to allow a comprehensive inspection to determine further works required. Clearing of debris from tracks, restoration of carriageways to allow vehicle access and reinstatement of drainage features works were undertaken during the Year 5 reporting period. Following these works, firelines were reported as being traversable by light 4WD vehicles and to broadly conform the standards identified in the Bushfire Management Plan (refer **Figure 3**). Timing of these fire lines being installed was August 2025, being somewhat delayed due to unsuitable weather and issues with neighbouring properties preventing these works for a period of time. Given this timing, burn conditions were thereafter unsuitable for conducting safe burns.

Refer to **Appendix I** for current Burn Plan and **Appendix J** for Fireline Maintenance Report.

Objectives prescribed under the Bushfire Management Plan in association with Year 5 of the project include:

- *Fuel levels and burning regime maintained in accordance with Offset Area Bushfire Management Plan.*
- *Vegetation composition not negatively affected by fire regime.*
- *Offset area is legally secured as an area of High Conservation Value under section 19F of the Vegetation Management Act 1999*

For a detailed review of compliance with the OMP since commencement of the action, refer **Section 2.9**. It is considered that the bushfire management activities completed during the Year 5 ACR period achieved compliance under the OMP and therefore EPBC Act approval condition 6.



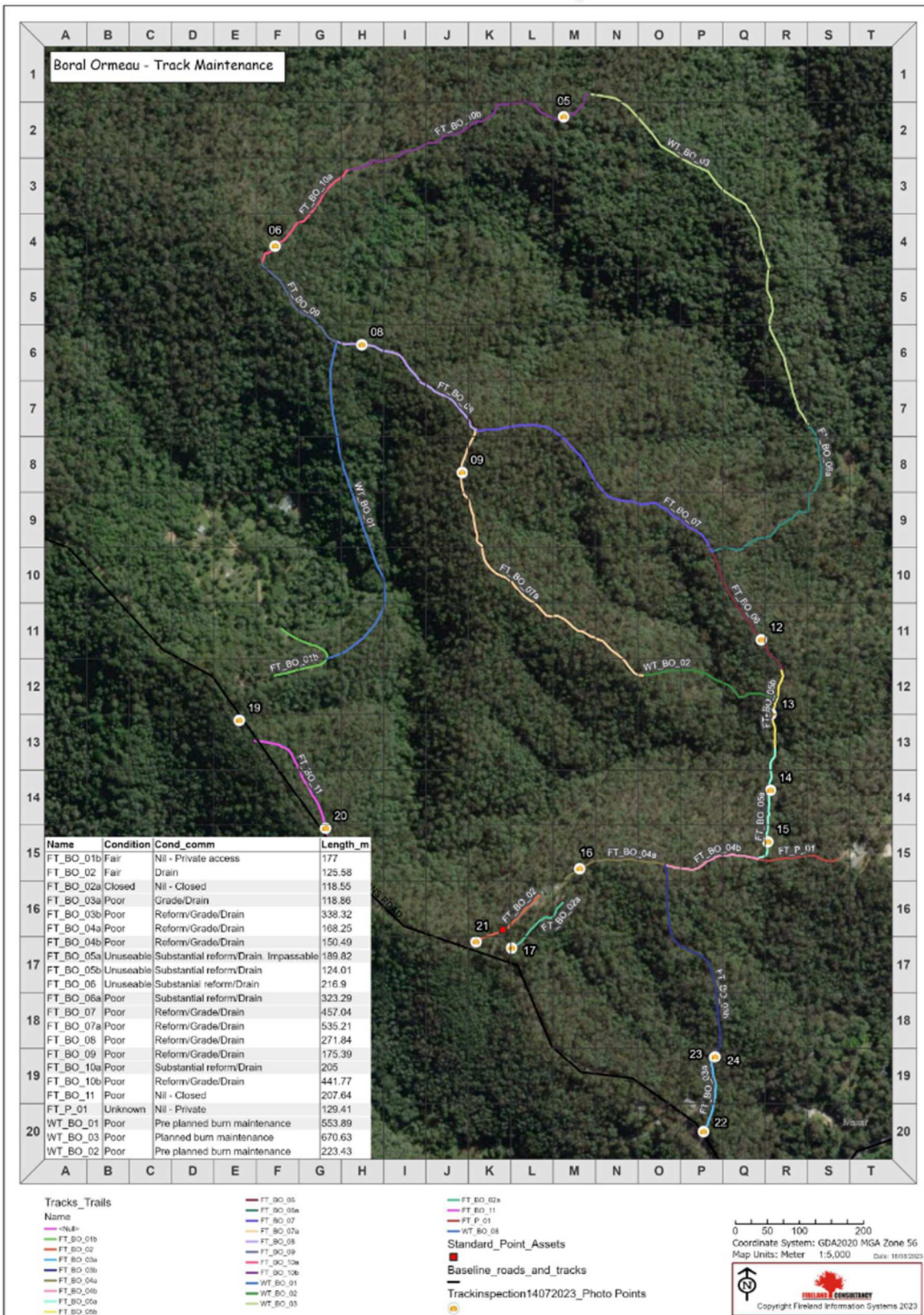


Figure 3: Extract from Fireland Consultancy, Fireline Maintenance Report – Boral Ormeau – Track Maintenance.



2.8.6 Ongoing Access Track Issues

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 tasks 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 Queensland Accepted Development Clearing Codes 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 regarding 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, also incorporating delays on materials and contractors during Covid 19 hold ups. However, heavy rainfall was received in South East Queensland during December 2023 and January 2024 which resulted in significant impacts to the construction of the crossing, and damage to the crossing. **Table 6** demonstrates the rainfall received for the month compared to the long-term average.

Further, severe storms hit the Gold Coast and other LGAs on 25 December 2023. Heavy rainfall and strong winds were recorded in South East Queensland, resulting in extensive damage across the Gold Coast, Logan and Scenic Rim LGAs. A total of 138.6 mm of rainfall was recorded overnight and a maximum wind gust of 106 km/hr was recorded (data was extracted from Gold Coast Seaway (Station ID 040764, BOM 2024)). In addition, the Ormeau site rain gauge recorded 339mm rain on a 24-hour period and a total of 1036mm rainfall fell across 52 individual days between December 2023 and April 2024. Much of South East Queensland was subject to high levels of rainfall through February and March 2024 with moderate levels of precipitation persisting throughout most of 2024 before increasing in October 2024 (refer **Table 7**).



Table 6: Rainfall received compared to the mean rainfall data – November 2023 to March 2024.

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
February 2024	113.0 mm	158.4 mm
March 2024	111.0 mm	140.7 mm

Luscombe Alert (Station 040345) extracted from the Bureau of Meteorology 2024

Table 7: Rainfall received compared to the mean rainfall data – October 2024 to February 2025.

Month Year	Rainfall Received	Mean Rainfall
October 2024	114.0 mm	89.7 mm
November 2024	188.5 mm	81.8 mm
December 2024	260.5 mm	121.2 mm
January 2025	124.0 mm	173.0 mm

Windaroo (Station 040973) 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 Photo set 4).



Photo set 4: 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 resulted in the crossing being damaged again, requiring a complete re-build once the rainfall had ceased (refer Photo set 5).





Photo set 5: Damage to crossing, dated 8 January 2024.

The crossing was inspected on the 18 February 2024 following significant rainfall received on the 16 February 2024, and the crossing was damaged again, requiring re-construction.

Boral had construction contractors ready to commence the rebuild of this crossing from June 2024. It is expected that following the most recent construction, the design of the crossing will hold against such weather events, providing functional access to expedite the planned management actions safely and effectively.

During the Year 4 reporting period the crossing was completed at the (end of June 2024) which allowed access into the offset area by vehicle.

Fireland were commissioned to undertake an assessment of the fire lines and access tracks in August 2024 following the completion of the crossing. The assessment was to understand the condition of the tracks for fire management purposes but also accessibility for implementation of offset management requirements. The previously established tracks had not been inspected nor maintained for over 10 years and, as detailed, the site has been subject to significant weather events over recent years.



On completion of this inspection, it was identified that significant works were required to reconstruct the fire lines and access tracks due to severe erosion and vegetation growth. As well as clearing of some regrowth vegetation, for which additional local approvals applied.

Fireland were engaged in September 2024 to begin reconstruction of the fire lines. Works continued until October 2024, when they were paused due to a neighbour's complaint to regulatory authorities regarding reconstruction activities within the offset area. Works ceased until the matter was resolved with regulatory authority. Due to the delay in resolution (e.g. regulatory inspection etc.), the work was further delayed and ceased due to the onset of the wet season in Queensland (November to April).

During the Year 5 reporting period, the vehicle access track was able to be predominantly reinstated, and an assessment of fire line tracks was able to be conducted (refer Section 2.8.5).

2.8.7 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 a dam completed by the adjacent landholder. Refer to Figure 4 and Figure 5 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 (Year 5) reporting period. The management of these areas are occurring in accordance with the processes guided by the Koala Habitat Management Plan and specified management methods within the encroached area (refer Section 2.8.2). As such, the minor non-compliance is considered to have been sufficiently addressed and resolved. Rehabilitation to remediate any impacts from the encroachment were undertaken during the current Year 5 ACR period, with ongoing follow up to ensure success of the plantings in accordance with the OMP.



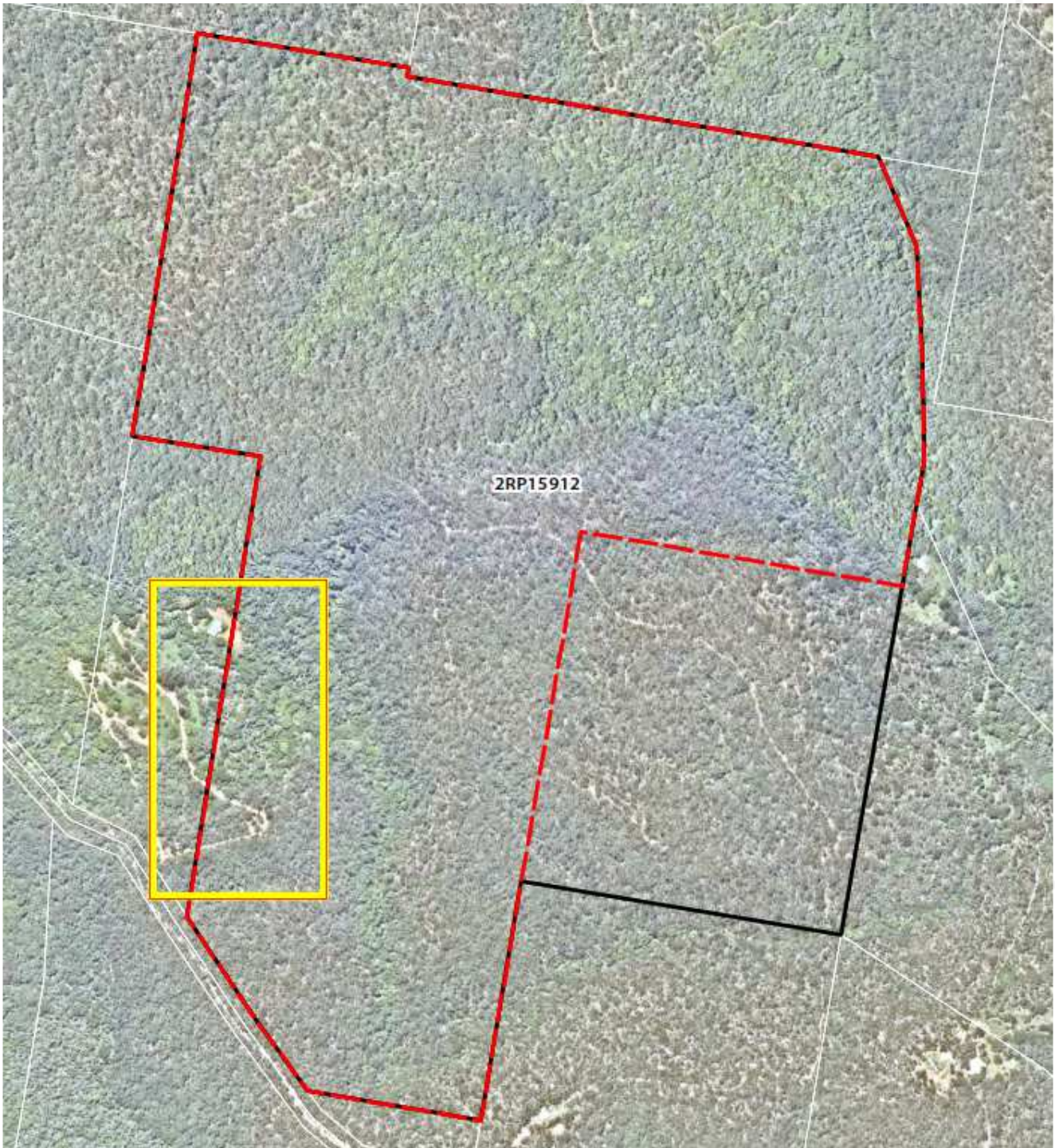


Figure 4: Location of accidental historical encroachment by neighbour, discovered during surveying of offsets site boundary.



Figure 5: Aerial showing the western boundary of the offsets site and the prior encroachment into the site unknowingly by neighbouring landholders.



2.9. Offset Management Plan

A review of the OMP commitments and implementation is provided in **Table 8**.

Table 8: Offset Management Plan implementation

Management Action	Commitment	Evidence / Comments / Status
OMP 1	<p>WONS Management</p> <p>Management measures for the control of WONS, specifically <i>Lantana camara</i> will include;</p> <ul style="list-style-type: none"> • Baseline weed mapping for WONS will be completed in 2019 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. • All identified WONS will be treated within 12 months of commencement of the action. • 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"> ○ Comprehensive monitoring for WONS will be conducted. ○ WONS that are reported or detected by comprehensive monitoring will be treated. • A suitably qualified bush regeneration contractor will be engaged to undertake the necessary weed control. • Control of infestations will utilise techniques that avoid disturbance to surrounding area. 	<p>The OMP specified 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 non-compliance.</p> <p>Baseline weed mapping was completed in June 2021, within 6 months of commencement of the action which occurred on 3 February 2021. The results of the baseline weed mapping were integrated into the Weed Management Plan (WMP), developed by SHG in July 2021, within 6 months of commencement of the action (3 February 2021). The WMP developed by SHG in 2021 to fulfil the requirements of the OMP, 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 onsite as well as regular and annual monitoring techniques.</p> <p>An additional non-compliance was identified, relating to the ongoing safe vehicle access issues to the offset site by weed</p>



Management Action	Commitment	Evidence / Comments / Status
		<p>management contractors. All identified WONS were not able to be treated within 12 months of commencement of the action (3 February 2021). Track repair and rebuild design underwent the approval process under the Gold Coast City Planning Scheme for an operational works application throughout the Year 2 and Year 3 ACR period. This approval was obtained in the Year 3 reporting period (April 2023) and Boral progressed through track works in May 2023 to increase access and safety across the site. The crossing was inspected on the 18 February 2024 following significant rainfall received on the 16 February 2024. The crossing was damaged, requiring further re-construction. Construction contractors were engaged by Boral to commence the rebuild of this crossing, with completion of the access track and crossing in June 2024. It is anticipated that the design of the crossing will hold against such weather events, providing functional access to expedite the planned management actions safely and effectively. The track was established during the Year 5 reporting period, allowing safe vehicle access to majority of the offset site.</p> <p>SH Ecologists have mapped the extent of WONS across the offset area annually, including the most recent Year 5 reporting period (July/August 2025). WONS identified and mapped were predominantly <i>Lantana camara</i> (Lantana) (refer Plan 4).</p> <p>Suitably qualified Bushcare Services consultants were engaged to complete ongoing weed management across the offset site annually, including the most recent Year 5 reporting</p>



Management Action	Commitment	Evidence / Comments / Status
		<p>period. Despite the contractor providing continual management services across the offset area, the extent of weed treatment work was significantly limited by safe accessibility during previous years. As discussed in Section 2.8.6, a combination of lack of vehicle access tracks and severe track damage /erosion limited access across the site. While large areas of the offset site have been treated annually for WONS, the inability to treat the entirety of the offset area has been identified as a non-compliance for reporting periods associated with Years 1 – 4. As a result, weed treatment was limited to more accessible portions of the offset area located within the central and southern portions of site.</p> <p>During the most recent reporting period (Year 5), the reinstatement of the vehicle access tracks to a large portion of the offset site has allowed the Bushcare Services team safe access to the once inaccessible northern areas of the site. Bushcare Services undertook targeted treatment for WONS within the identified rehabilitation area, to prepare the site for successful planting and subsequent to the planting, to support the establishment of the plantings (refer Plan 5).</p>
<p>OMP 2</p>	<p>Rehabilitation and Regeneration Management Plan</p> <p>Management measures for rehabilitation and regeneration include:</p> <ul style="list-style-type: none"> • 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. 	<p>The action commenced 3 February 2021, baseline mapping to identify rehabilitation and regeneration areas was completed June 2021, followed by the preparation of the Koala Habitat Management Plan (KHMP) by SHG in September 2021, within 12 months of commencement of the action.</p>



Management Action	Commitment	Evidence / Comments / Status
	<ul style="list-style-type: none"> Rehabilitation areas are to consist of one canopy tree per 10m², three shrubs per 10m² and one groundcover per 2m². Where natural regeneration is the preferred approach, infill planting will be implemented where regeneration has been unsuccessful after three years. All rehabilitation activities are to be carried out by a suitably qualified bush regeneration contractor. The plants reinstated in any particular location must be consistent with the mapped regional ecosystem or pre-clear regional ecosystem over that area. 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. 	<p>Given the delay to the commencement of rehabilitation, this has been considered as a non-compliance however, this has been completed and is part of ongoing maintenance and monitoring to ensure success of the plantings long-term.</p> <p>Bushcare Services, the suitably qualified bush regenerator contractor, has been engaged to carry out rehabilitation and infill planting actions where necessary during the Year 5 reporting period, as the recently established vehicle tracks now allow safe access to a large portion of the offset site. The reinstated plants are consistent with the mapped regional ecosystem and pre-clearance mapping, being RE 12.11.5 (refer to Table 4). Plantings were spaced appropriately and comply with the requirements of one canopy tree per 10m², three shrubs per 10m² and one groundcover per 2m² (refer to Table 5). Where natural regeneration is the preferred approach, infill planting will be implemented where regeneration has been unsuccessful after three years.</p>
<p>OMP 3</p>	<p>Legally securing the offset area</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 February 2021. Evidence was provided in the Year 1 ACR.</p>
<p>OMP 4</p>	<p>Pest Management Plan</p> <p>Management measures for the control of feral or unwanted domestic dogs, foxes, and cats across the offset site include:</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 <i>Canis lupus familiaris</i> (wild dogs), dog prints were observed across</p>



Management Action	Commitment	Evidence / Comments / Status
	<ul style="list-style-type: none"> • 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. • 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. • 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. • Install appropriate signage informing the area is under feral control. 	<p>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>Annual pest monitoring has been conducted by SH Ecologists during Years 1 – 5. For reasons previously mentioned Site access during Years 1 – 4 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. As discussed in Section 2.8.6, 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 construction of access tracks throughout the offset site have allowed for increased access, affording the efficient and appropriate use of pest management techniques across the offset site.</p> <p>Pest management activities were able to commence within the offset area in the Year 5 reporting period, with only monitoring surveys being completed previously. Pre-trapping monitoring was conducted by Biodiversity Australia from 11 November</p>



Management Action	Commitment	Evidence / Comments / Status
OMP 5	<p>Koala Habitat Quality Management Plan</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>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"> • 32.6 ha of RE12.11.3 • 37.5 ha of RE12.11.5 • 1.6 ha of RE12.11.10 • 5.3 ha of non-remnant vegetation 	<p>2025 to 1 December 2025. During this pre-trapping program two (2) observations of <i>Vulpes vulpes</i> (European Red Fox) non-native vertebrate pests were identified within the offset area. Following this survey effort, a soft jaw tapping program was conducted from 1 December 2025 to 12 December 2025 both within the offset area and within the large land holdings. No fauna were captured as part of this program (refer Appendix F for monitoring report).</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' (refer to Plan 2).' 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 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.</p> <p>Annual habitat quality monitoring of koala habitat utilising the MHQA methodology was conducted at six (6) permanent transect locations across the offset area in September 2025. MHQA scores for the offset area are reported within this ACR. This includes five (5) transects within the Remnant vegetation</p>



Management Action	Commitment	Evidence / Comments / Status
	<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>area and one transect within the non-remnant vegetation area (refer Plan 3).</p> <p>Habitat quality scores remained relatively steady between Year 2, Year 3, Year 4 and Year 5 (refer Table 9 and Table 10).</p> <p>Koala scats were recorded during SAT surveys at two (2) of the transect locations during the Year 5 monitoring period, demonstrating koalas continue to utilise the offset site.</p>
<p>OMP 6</p>	<p>Bushfire Management Plan</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"> • Installation of firebreaks and fire trails. • Annual inspection and maintenance of firebreaks and access tracks required to achieve compliance with Offset Area Bushfire Management Plan. 	<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 2025 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 is included at Appendix I.</p> <p>The Burn Plan incorporates a burn map, complexity ratings, pre-burn works order, a risk assessment and contingency maps. Onground fire management of the offset site has not commenced at present due to unsuitable weather conditions</p>



Management Action	Commitment	Evidence / Comments / Status
	<ul style="list-style-type: none">• 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.• 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 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.	<p>and issues during the Year 5 reporting period. Previous approvals and the issues with obtaining them are detailed in Section 4.</p> <p>The reinstatement of firebreaks was conducted during the Year 5 reporting period, refer to Sections 2.8.5 and 2.8.6 for further details.</p>



Table 9: Modified Habitat Quality Assessment Scores – Year 5

Condition characteristics	Max. score	Score (RE12.11.3)	Score (RE12.11.5)	Score (RE12.11.10)	Score (non-remnant)
Site Condition (30%)					
Recruitment of woody perennial species	5	5	5	5	5
Native plant species richness - trees	5	5	5	2.5	2.5
Native plant species richness - shrubs	5	2.5	2.5	2.5	2.5
Native plant species richness - grasses	5	2.5	2.5	5	5
Native plant species richness - forbs	5	2.5	2.5	2.5	2.5
Tree canopy height	5	5	5	5	3
Tree canopy cover	5	5	5	5	5
Shrub canopy cover	5	5	3	5	3
Native perennial grass cover	5	5	5	5	5
Organic litter	5	3	3	3	5
Large trees	15	5	15	5	5
Coarse woody debris	5	2	5	2	2
Weed cover	10	3	5	3	3
Quality and availability of food and foraging habitat	10	10	10	10	10
Quality and availability of shelter	10	10	10	10	10
Site condition score	100	69.5	82.5	67.16	69.5
Site condition score (out of 3)	3	2.09	2.48	2.01	2.09
Site Context (30 %)					
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



Condition characteristics	Max. score	Score (RE12.11.3)	Score (RE12.11.5)	Score (RE12.11.10)	Score (non-remnant)
Site context score	56	48	48	48	48
Site context score (out of 3)	3	2.57	2.57	2.57	2.57
Species Stocking Rate (40 %)					
Species stocking rate score	70	45	45	45	45
Species stocking rate score (out of 4)	4	2.57	2.57	2.57	2.57
Unit Scores Total		7.23	7.62	7.16	7.23

Table 10 Comparison of MHQA Scores between baseline, Year 1, Year 2, Year 3, Year 4 and Year 5.

Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Year 4 (2024)	Year 5 (2025)	Comment
RE 12.11.3 – AU1							
Site Condition	2.13	2.12	2.12	2.18	2.18	2.09	Baseline survey transects were completed in different locations, resulting in variations to the MHQA scores. However, the Year 1, Year, Year 3, Year 4 and Year 5 transect locations were consistent.
Site Context	2.57	2.57	2.57	2.57	2.57	2.57	
Species Stocking Rate	2.57	2.57	2.57	2.57	2.57	2.57	
Overall Assessment Unit Score	7.27	7.26	7.26	7.32	7.32	7.23	

The Year 1 and Year 2 site condition scores remained stable, before increasing slightly during Year 3 and again in Year 4. During Year 5 site condition scores slightly decreased from baseline which may be attributed to the lack of organic litter and coarse woody debris recorded during the field effort.

The overall assessment unit score remained relatively stable through Baseline, Year 1 and Year 2, before increasing in Year 3 and Year 4. During Year 5 the overall assessment unit score decreased slightly which as mentioned above was due to the slight decrease in the site condition score. From baseline to Year 5 all overall site unit scores maintain a consistent rounded score of 7.



Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Year 4 (2024)	Year 5 (2025)	Comment
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Note: previously reported Year 3 and Year 4 species stocking rate had been reported in error, affecting the overall assessment unit score. Scat presence in the Year 3 and Year 4 ACR species stocking rate had been assessed per assessment unit, not as an overall as per baseline and Year 1 results. The results displayed for species stocking rate for Year 3 and Year 4 have been rectified. See the Year 4 ACR for previous data analysis.

RE 12.11.5 – AU2							
Site Condition	2.26	2.33	2.45	2.54	2.48	2.48	Baseline survey transects were completed in different locations, resulting in variations to the MHQA scores. However, the Year 1, Year, Year 3, Year 4 and Year 5 transect locations were consistent.
Site Context	2.57	2.57	2.57	2.57	2.57	2.57	
Species Stocking Rate	2.57	2.57	2.57	2.57	2.57	2.57	
Overall Assessment Unit Score	7.40	7.47	7.59	7.68	7.62	7.62	

Site condition scores increased from baseline to Year 3, before slightly decreasing in Year 4 and remaining stable in Year 5. There was a slight error in site condition calculations reported in Year 4, for AU2 (2.54), the correct value is 2.48. This slight decrease in site condition score in Year 4 and Year 5 from Year 3 may be attributed to variations in native grass cover.

The overall assessment unit score steadily increased from Baseline to Year 3, before decreasing slightly in Year 4. During Year 5 the overall assessment unit score remained stable with Year 4 scored which as mentioned above was due to the slight decrease in the site condition score. From Baseline and Year 1 when the rounded overall assessment



Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Year 4 (2024)	Year 5 (2025)	Comment
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unit score was 7, there was an increase in the overall rounded score to 8 in Year 3 which has been maintained through Year 4 and Year 5.

Note: previously reported Year 2 species stocking rate had been reported in error, affecting the overall assessment unit score. Scat presence in the Year 2 ACR species stocking rate had been assessed per assessment unit, not as an overall as per baseline and Year 1 results. The results displayed for species stocking rate for Year 2 have been rectified. See the Year 4 ACR for previous data analysis.

RE 12.11.10 – AU3							
Site Condition	2.15	1.97	1.95	2.10	1.95	2.01	Baseline survey transects were completed in different locations, resulting in variations to the MHQA scores. However, the Year 1, Year, Year 3, Year 4 and Year 5 transect locations were consistent.
Site Context	2.57	2.57	2.57	2.57	2.57	2.57	
Species Stocking Rate	2.57	2.57	2.57	2.57	2.57	2.57	
Overall Assessment Unit Score	7.29	7.11	7.10	7.25	7.10	7.16	

Site condition scores remained relatively stable from Year 1 to Year 5. There was a slight error in site condition calculations reported in Year 4, for AU3 (2.10), the correct value is 1.95.

The overall assessment unit score remained relatively stable through Year 1 and Year 2, before increasing slightly in Year 3, and decreasing slightly again in Year 4. During Year 5 the overall assessment unit score increased slightly which was due to the increase in the site condition score. From baseline to Year 5 all overall site unit scores maintain a consistent rounded score of 7.



Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Year 4 (2024)	Year 5 (2025)	Comment
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Note: previously reported Year 2, Year 3 and Year 4 species stocking rate had been reported in error, affecting the overall assessment unit score. Scat presence in the Year 2, Year 3 and Year 4 ACR species stocking rate had been assessed per assessment unit, not as an overall as per baseline and Year 1 results. The results displayed for species stocking rate for Year 2, Year 3 and Year 4 have been rectified. See the Year 4 ACR for previous data analysis.

Non-remnant							
Site Condition	-	1.82	1.79	1.79	2.01	2.09	No surveys were completed during Baseline surveys, thus results from the Year 1 surveys are used as the baseline comparison. This transect will monitor the rehabilitation efforts within the non-remnant areas.
Site Context	-	2.57	2.57	2.57	2.57	2.57	
Species Stocking Rate	-	2.29	2.57	2.57	2.57	2.57	
Overall Assessment Unit Score	-	6.67	6.93	6.93	7.15	7.23	

The Species Stocking Rate from Year 1 to Year 2 increased due to the growth in vegetation and therefore potential species usage of the site from dispersal to foraging. Site condition scores have steadily increased from Year 1 to Year 5. There was a slight error in site condition calculations reported in Year 4, for AU4 (1.95), the correct value is 2.01.

The overall assessment unit score has steadily increase from Year 1 to Year 5. Despite this overall site unit scores maintain a consistent rounded score of 7.

Note: previously reported Year 3 and Year 4 species stocking rate had been reported in error, affecting the overall assessment unit score. Scat presence in the Year 3 and Year



Biocondition Score	Baseline	Year 1 (2021)	Year 2 (2022)	Year 3 (2023)	Year 4 (2024)	Year 5 (2025)	Comment
							<i>4 ACR species stocking rate had been assessed per assessment unit, not as an overall as per baseline and Year 1 results. The results displayed for species stocking rate for Year 3 and Year 4 have been rectified. See the Year 4 ACR for previous data analysis.</i>



3. EPBC Conditions and Compliance

Table 11 details the Conditions attached to the Ormeau Quarry Approval (EPBC 2016/7797). Section 2 above provides details on process, steps and methodologies used to achieve the Conditions under the approval.

Table 11: *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	Plan 1 shows the clearing of Koala critical habitat that has occurred within the impact area. A total of 20.44 ha has been cleared in total which includes 4.88 ha cleared during Year 5.
3	The person taking the action must implement the Offset Strategy.	Compliant	The Project is compliant with implementing the Offset Management Plan, refer Table 8.
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	The Project is compliant with implementing the Offset Management Plan, refer Table 8.
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.



Condition Number	Condition	Is The Project compliant with this condition?	Evidence
6	<p>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 Environmental Management Plan Guidelines, and the EPBC Act Environmental Offsets Policy (2012) and include:</p>	Non-compliant	<p>The action commenced on 3 February 2021.</p> <p>The Offset Management Plan was prepared by SHG in December 2018 and approved by DCCEEW on 10 December 2018. The action commenced 3 February 2021.</p> <p>Implementation of the offset management plan commenced during Year 1 of the action. However, given the vehicle access issues identified by engaged contractors, works across the entirety of the offset area could not be completed, specifically, the WONS were unable to be effectively accessed and treated within the first 12-months following commencement of the action, given the accessibility issues. Given the OMP committed to the initial treatment of all WONS across the site within the first 12 months following commencement of the action, this has been considered a non-compliance with condition 6 of the EPBC Act approval.</p>
6a	<p>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;</p>	Compliant	
6b	<p>detail of the proposed legal mechanism and timeframes for securing the offset area(s);</p>	Compliant	



Condition Number	Condition	Is The Project compliant with this condition?	Evidence
6c	a map of the offset area(s) in relation to other habitats and biodiversity corridors;	Compliant	
6d	information about how the offset area(s) provide connectivity with other koala habitat and biodiversity corridors;	Compliant	
6e	a description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data;	Compliant	
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	
6g	performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions;	Compliant	
6h	a detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;	Compliant	
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	
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	Compliant	An Environmental Management Plan was completed by Saunders Havill in November 2018.



Condition Number	Condition	Is The Project compliant with this condition?	Evidence
	Act listed species on the project site. The Environmental Management Plan must include:		
7a	Details of the mitigation and management measures that will be implemented on the Project Site including, but not limited to:	Compliant – as per Condition 7	
7a. i.	all vehicles within the Project Site be restricted to travel at 40km/hr or less except in an emergency;	Compliant – as per Condition 7	
7a. ii.	signage alerting drivers to the risk of collisions with koalas;	Compliant – as per Condition 7	
7a. iii.	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 – as per Condition 7	
7a. iv.	measures to avoid or minimise impacts to the Grey-Headed Flying Fox (<i>Pteropus poliocephalus</i>) during clearing or operations.	Compliant – as per Condition 7	
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.	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.
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	Compliant	Boral Resources and Saunders Havill are responsible for maintaining accurate records of all activities associated with the action. An audit by the Department was conducted during the Year 5 reporting period. A



Condition Number	Condition	Is The Project compliant with this condition?	Evidence
	<p>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.</p>		<p>Compliance Audit Report was provided by the Department's Environmental Audit Section on 10 June 2025.</p>
10	<p>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.</p>	Compliant	<p>The final day of Year 5 was 2 February 2026, the ACR is due to be published to Boral's website by no later than the 3 May 2026 at the below weblink:</p> <p>https://www.boral.com.au/locations/boral-quarries-ormeau-kingsholme</p> <p>Documentary evidence of publication of the ACR will be provided to the Department.</p>
11	<p>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.</p>	Not applicable	<p>No request from the Minister was made to complete an independent audit during the Year 5 reporting period.</p>



Condition Number	Condition	Is The Project compliant with this condition?	Evidence
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 during the Year 5 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 during the Year 5 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 during the Year 5 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 during the Year 5 reporting period.
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 during the Year 5 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,	Not applicable	No revisions to the management plans were made during the Year 5 reporting period.



Condition Number	Condition	Is The Project compliant with this condition?	Evidence
	<p>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.</p>		
15	<p>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:</p>	Not applicable	No revisions to the management plans were made during the Year 5 reporting period.
15 i.	<p>Condition 12 does not apply, or ceases to apply, in relation to the revised plan; and</p>	Not applicable	No revisions to the management plans were made during the Year 5 reporting period.
15 ii.	<p>The person taking the action must implement the plan approved by the Minister.</p>	Not applicable	No revisions to the management plans were made during the Year 5 reporting period.
	<p>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.</p> <p>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.</p>		
16	<p>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.</p>	Not applicable	No revisions to the management plans were made during the Year 5 reporting period.
17	<p>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</p>	Not applicable	The action commenced on 3 February 2021.



Condition Number	Condition	Is The Project compliant with this condition?	Evidence
	<p>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 (1) 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 this commitment was unable to be complied within during the Year 1 ACR time period, due to ongoing access issues, this became non-compliant, as reported in Year 1 of the ACR, at 12-months post commencement of the action. Given this is a singular timeframe and has since passed, this non-compliance remains and this commitment requires amending given it cannot be complied with after the 12-month initial period. Areas of weed management have been completed by the weed management contractor, within the rehabilitation area (refer to Plan 4).

The approval process required under the local legislation 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 2.8.6, 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, January, February, March, October, November, December 2024 and January 2025, 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.

Construction contractors were engaged by Boral to commence the rebuild of this crossing, with completion of the access track and crossing in June 2024. 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.

As demonstrated in Plan 5, the rehabilitation area was treated and managed for WONS by Bushcare Services.

A large area of WONS was treated during Year 4, 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).

Options to address this have been discussed within the OMP audit report completed during the Year 5 ACR period (Appendix D).



4.2. Bushfire Management

The OMP stated that a Bushfire Management Plan (BMP) would be developed within 12 months of the offset being legally secured. This was interpreted incorrectly and the BMP was developed focussing on a target date of 12 months from the commencement of the action. As such, this was recently deemed a non-compliance under Condition 6.

A Bushfire Management Plan was completed for the offset site, within 12- months of the commencement of the action, as 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.

In the Year 2 ACR, a non-compliance under Condition 6 was reported in regards to the inaccessibility of the site resulting in onground 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. However, this was not a non-compliance under the OMP's specific requirements, but rather should have referred to the OMP-specified annual inspection and maintenance of firebreaks and access tracks not being able to be completed during the ACR year. This remains a minor non-compliance under Condition 6 from Year 2.

Refer to **Appendix I** for Burn Plan.



5. Appendices

Appendix A

EPBC Approval (EPBC 2016/7797)

Appendix B

Commencement of the Action Correspondence

Appendix C

New Ground Outcomes

Appendix D

SH OMP Audit Report

Appendix E

SH camera trapping images – Year 5

Appendix F

Non-native Vertebrate Pest Monitoring Report Year 5 – Biodiversity Australia

Appendix G

Weed Management Record Sheets Year 5 – Bushcare Services

Appendix H

Rehabilitation Management Record Sheets Year 5 – Bushcare Services

Appendix I

Burn Plan Year 5 – Fireland

Appendix J

Maintenance Report Year 5 - Fireland



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

person to whom the approval is granted	BORAL RESOURCES (QLD) PTY. LIMITED
proponent's ACN	009 671 809
proposed action	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

name and position	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 Project Site as shown in <u>Attachment A</u> .
2. The person taking the action must not clear more than 38 hectares of koala habitat in the Project Site as shown in <u>Attachment A</u> .
3. The person taking the action must implement the Offset Strategy .
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.
5. The person taking the action must not commence the action until the offset area is legally secured .
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 Environmental Management Plan Guidelines , and the EPBC Act Environmental Offsets Policy (2012) and include: <ol style="list-style-type: none">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;detail of the proposed legal mechanism and timeframes for securing the offset area(s);a map of the offset area(s) in relation to other habitats and biodiversity corridors;information about how the offset area(s) provide connectivity with other koala habitat and biodiversity corridors;a description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data;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;performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions;a detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;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.

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.

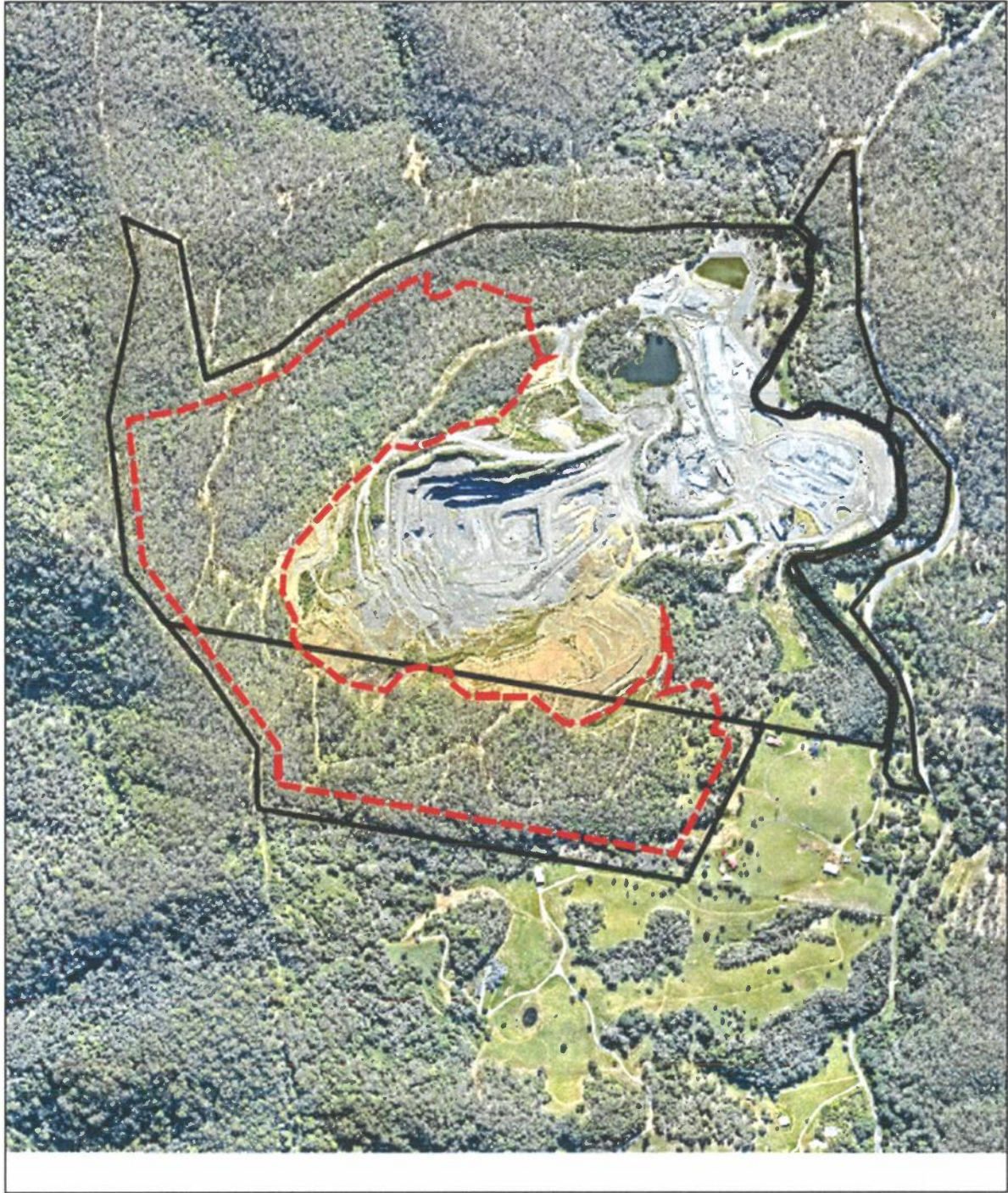
Legally secured: to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against development incompatible with conservation.

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)



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Appendix B

Commencement of the Action Correspondence





Australian Government
**Department of Agriculture,
Water and the Environment**

Ref: 17/008014

Email: epbcmonitoring@awe.gov.au

Megan McKinney
Principal Ecologist
Saunders Havill Group
9 Thompson St
BOWEN HILLS QLD 4006

Dear Ms McKinney,

**Commencement of Action – Ormeau Quarry Expansion, 12 km north-west of Oxenford,
QLD (EPBC 2016/7797)**

I refer to your email of 4 February 2021 on behalf of Boral Resources (QLD) Pty Ltd notifying the Department of Agriculture, Water and the Environment (the Department) of commencement of the Ormeau Quarry Expansion in accordance with condition 8 the *Environment Protection and Biodiversity Conservation Act 1999* (the Act) approval EPBC 2016/7797.

I note that the action commenced on 3 February 2021.

Condition 10 – Annual Compliance Reporting

Condition 10 of the approval states that the approval holder must prepare an Annual Compliance Report for each 12-month period following the date of commencement of the action. The approval holder must continue to publish each report and notify the Department of publication until the expiry of this approval on 8 November 2057. The reports must be published within 3 months of every 12-month anniversary of commencement. Documentary evidence providing the date of publication must be provided to the Department at the same time the report is published.

Please notify the Department of publication of the reports by email, including a link to where the report is publicly available to epbcmonitoring@awe.gov.au. Please note the first Annual Compliance Report is due by 3 May 2022.

When preparing the report please refer to the Department's Annual Compliance Report Guidelines available on the Department's website at <http://www.environment.gov.au/epbc/publications/annual-compliance-report-guidelines>

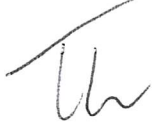
Please note that the conditions of approval require the approval holder to maintain accurate records of all activities associated with, or relevant to, the approval conditions so that they can be made available to the Department on request. These documents may be subject to audit and be used to verify compliance. Summaries of audits may be published by the Department.

More information about the Department's Monitoring and Audit program is available on the Department's website at <http://www.environment.gov.au/epbc/compliance-and-enforcement/auditing>.

Section 142 of the Act requires an approval holder to comply with conditions attached to an approval. Penalties may apply to approval holders who contravene conditions.

If you would like to discuss this matter further, please contact Michaela Ballard at epbcmonitoring@awe.gov.au

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Th' or 'TL', written in a cursive style.

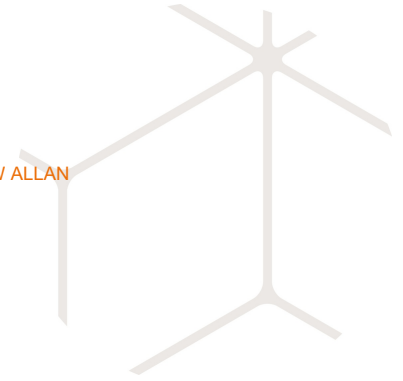
Thomas Long
A/g Assistant Director
Environmental Audit Section

09 February 2021

Appendix C

New Ground Outcomes





22 JANUARY 2026

Via email: matthew.allan@boral.com.au

REVIEW OF EPBC ACT (EPBC 2016/7797) OFFSET MANAGEMENT PLAN: ORMEAU QUARRY EXPANSION, LOT 2 ON RP15912

Dear Matthew,

New Ground Environmental Pty Ltd (New Ground) was engaged by Boral Property Group Pty Ltd (Boral) to review the EPBC Act-approved (EPBC 2016/7797) Ormeau Quarry Expansion Offset Management Plan (OMP) for Lot 2 RP15912 prepared by Saunders Havill Group and dated 6 December 2018. This letter report summarises the review of the OMP by New Ground which has been initiated at request of Boral. The review is triggered by the OMP which includes a requirement for periodic review of the OMP.

The intent of the review by New Ground was to determine if the information within the OMP is effectively guiding implementation of management actions on the offset site to meet its aims and associated approval conditions. The key goals of the OMP were reviewed in conjunction with annual compliance reports that include documentation of management effort (in accordance with OMP) undertaken progressively on the formal offset site and outcomes. Using a combination of desktop and field-based methods, New Ground was able to evaluate the suitability of the OMP, including determining if any aspects of the OMP may need to be updated or significantly altered.

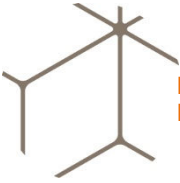
1) DESKTOP REVIEW

A desktop review was undertaken to provide background regarding management obligations formulated for the offset site, and to review outcomes of annual compliance reports since February 2021. The review included the following documentation.

- Offset Management Plan. Ormeau Quarry Expansion. Prepared by Saunders Havill Group for Boral Resources (QLD) Pty Limited. Dated 6 December 2018 (the 'OMP'). EPBC Act-approved: EPBC 2016/7797.
- Environmental Management Plan. Ormeau Quarry Expansion. Prepared by Saunders Havill Group for Boral Resources (QLD) Pty Limited. Dated 5 December 2018. EPBC 2016/7797.
- Annual Compliance Report. Ormeau Quarry Expansion. 03 February 2021 to 02 February 2022. EPBC 2016/7797. Prepared by Saunders Havill Group for Boral Resources (QLD) Pty Limited. Dated 29 April 2022.
- Annual Compliance Report. Ormeau Quarry Expansion. 03 February 2022 to 02 February 2023. EPBC 2016/7797. Prepared by Saunders Havill Group for Boral Resources (QLD) Pty Limited. Dated 28 April 2023.
- Annual Compliance Report. Ormeau Quarry Expansion. 03 February 2023 to 02 February 2024. EPBC 2016/7797. Prepared by Saunders Havill Group for Boral Resources (QLD) Pty Limited. Dated 1 May 2024.
- Annual Compliance Report. Ormeau Quarry Expansion. 03 February 2024 to 02 February 2025. EPBC 2016/7797. Prepared by Saunders Havill Group for Boral Resources (QLD) Pty Limited. Dated 30 April 2025.

2) SITE VISIT

Prior to the site visit undertaken by New Ground, key findings identified from the review of consecutive Annual Compliance Reports were summarised. This information was used to inform field planning, including identifying areas or aspects to check onsite regarding progression of management outcomes. The site visit was undertaken



by New Ground (2 people) on 18 November 2025 during fine weather conditions. The site visit included meander transects undertaken within and proximate to targeted areas identified via the literature review including maps provided in the OMP and Annual Compliance Reports (Refer **ATTACHMENT 1**). The following matters were the focus of the meanders:

- Weed treatment and vegetation rehabilitation areas including looking for occurrence of Weeds of National Significance (WoNS),
- General observation of the regional ecosystems onsite and habitat for Koalas;
- Evidence of pests and pest management; and
- Evidence of bushfire management.

In addition, the site visit included ground-truthing key internal access tracks and recording track logs using handheld GPS.

3) FINDINGS

Desktop Review

The desktop review identified the following Key Goals of the OMP:

- Removal of Weeds of National Significance (WoNS);
- Rehabilitation and regeneration of Regional Ecosystem Values;
- Legal securing of an offset area;
- Pest management (feral and unwanted dog usage);
- Koala habitat quality management;
- Bushfire management.

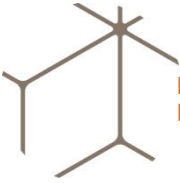
Following review of the Annual Compliance Reports and New Ground site visit, it was identified that in general the site is being progressively managed in accordance with the actions of the OMP. While some non-compliance was identified, the few items identified were noted as minor deviations from intended actions and the overall ecological outcomes are being achieved. Any non-compliance was reported as being attributed to deterioration of internal access (particularly at a creek crossing) which was exacerbated by delayed council approval (for the crossing upgrade) and inclement weather events post OMP approval.

Prior to rectification, the identified access issue limited vehicular access which subsequently impeded full implementation of certain management actions. For example, the restricted access hampered full initiation of the intended weed management actions and prevented vehicular access to some areas, thereby reducing the total areas where weed treatment was able to be undertaken. The OMP requires that the entire offset site be subject to weed treatment (Condition 6), and therefore the access issue led to a minor-noncompliance. Similarly, the restricted vehicular access limited the extent and capability of the rehabilitation and revegetation works being implemented onsite. As rehabilitation was not commenced within three years of commencement of the action, this is considered a non-compliance, albeit minor, under the requirements of the OMP (Condition 6).

The latest Annual Compliance Report (03 February 2024 to 02 February 2025) notes that rectification of access issues including rebuilding the creek crossing was completed in June 2024. That report noted once the vehicular access was enabled, management works under the OMP were ramped up onsite to catch up on management actions that were restricted by the access issue.

Site Visit

Following the site visit by New Ground in 2025, it was confirmed that the primary location where internal vehicular access was impeded has been upgraded and currently provides suitable vehicular access. New



Ground has identified and mapped a series of tracks onsite that would facilitate vehicular access (**ATTACHMENT 1**). It is expected that the site could be traversed by a 4WD vehicle in most conditions, other than perhaps during or too soon after prolonged heavy rain.

The site visit noted evidence of various management actions in certain locations of the site as per OMP. The field visit noted that *Lantana camara* and *Lantana montevidensis* were the most prevalent weed species observed in various densities across the site. *Lantana camara* is a WoNS and has been specifically targeted by the ongoing weed management per the OMP. Priority areas for future treatment have been identified (refer **ATTACHMENT 1**).

4) OVERVIEW

Given that the few minor non-compliance matters identified in the Annual Compliance Reports were reported as being attributed to internal access issues, the rectification of the access (confirmed by New Ground) is considered a positive and important outcome for the management of the site. This demonstrates a successful adaptive management outcome (consistent with the OMP), in that, a matter identified as impeding delivery of the OMP has been rectified via the Annual Compliance Report process. The subsequent occurrence of some minor non-compliance items in the Annual Compliance Reports is not due to short falls of the OMP itself, but externalities such as weather and track conditions post OMP approval. It is expected that management actions can be completed in full as intended now that internal access issues have been resolved. As such, the implementation of the OMP ought to be able to continue without the need for major amendment or overhaul. The non-compliances that arose from the access issue are generally timeframe related and/or minor technicalities. The site appears to be overall in good condition and management actions that have been undertaken are yielding positive environmental outcomes within the offset site.

The following is provided for consideration:

- Continue implementing actions of the OMP.
 - » Prioritise target areas for weed treatment (refer maps in the OMP, Annual Compliance Report (03 February 2024 to 02 February 2025), and **ATTACHMENT 1**.
 - » Identify and implement adaptive strategies as required.
- Continue with OMP Annual Compliance Reports.
- Continue with OMP review every three (3) years or upon failure to meet performance criteria.
- Utilise track mapping provided by New Ground (**ATTACHMENT 1**). Avoid traversing the site during or soon after heavy rain.

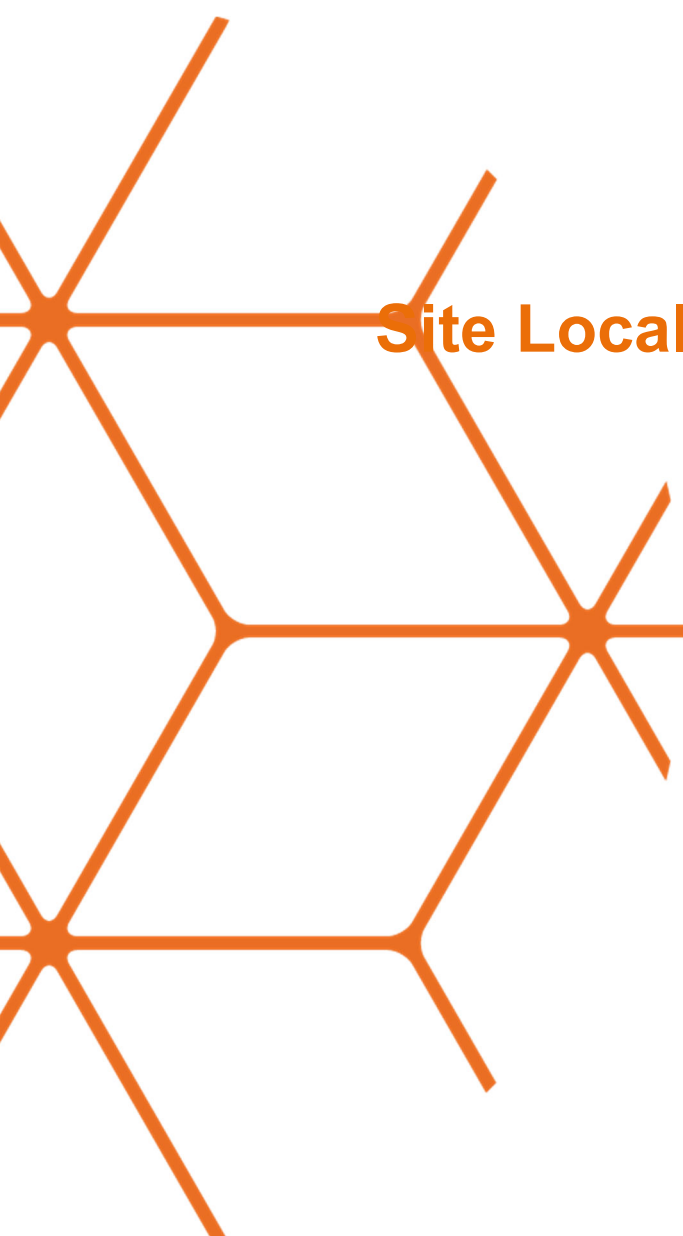
Please don't hesitate to contact the undersigned should further detail be required.

Yours faithfully

New Ground

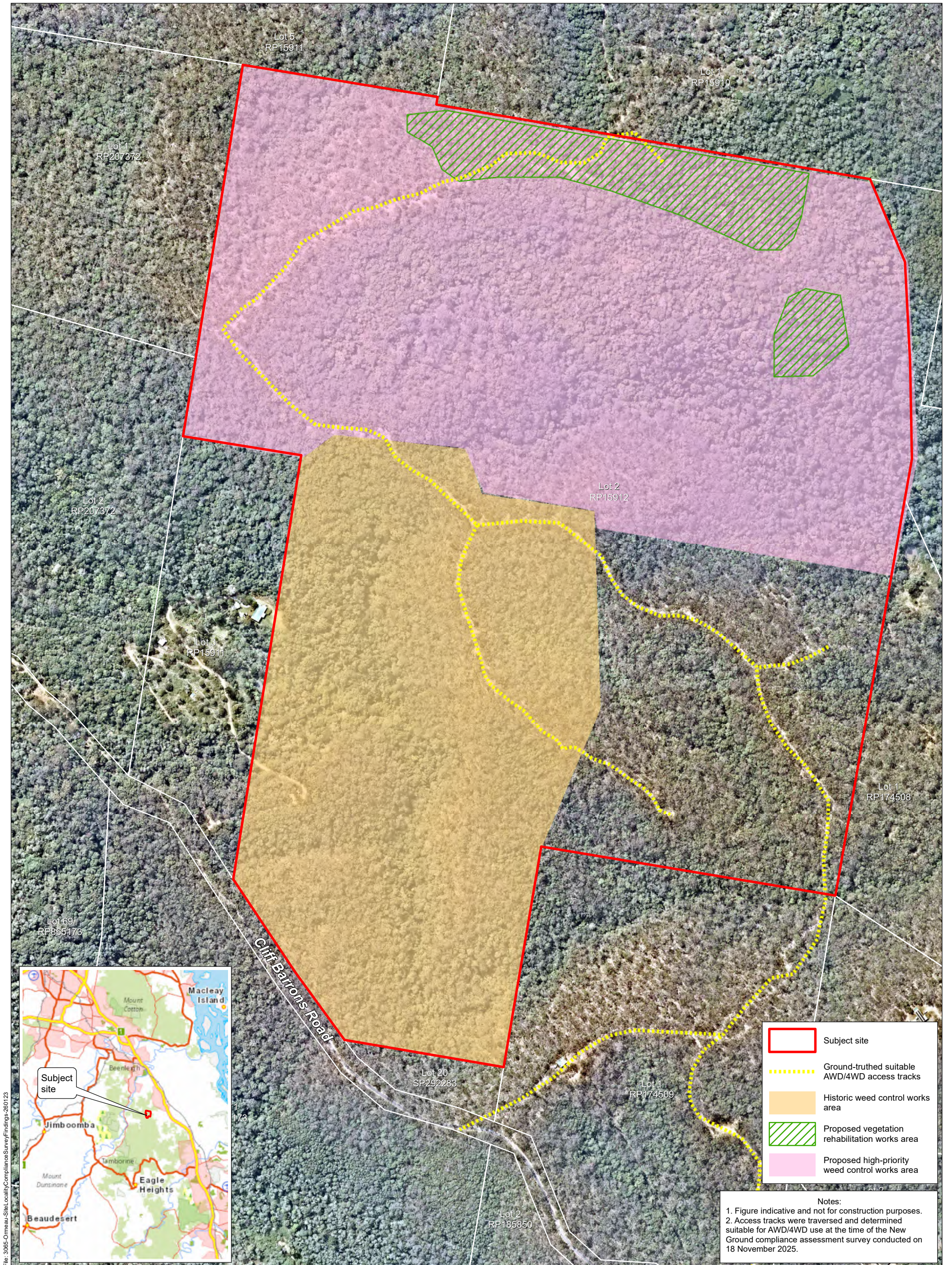
Nelson Wills

Director



ATTACHMENT 1

Site Locality & Observations Plan



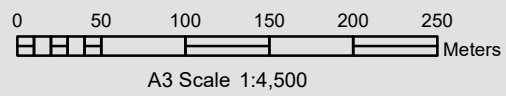
File: 3085-Ormeau-Site-LocaltyComplianceSurveyFindings-260123

- Subject site
- Ground-truthed suitable AWD/4WD access tracks
- Historic weed control works area
- Proposed vegetation rehabilitation works area
- Proposed high-priority weed control works area

Notes:
 1. Figure indicative and not for construction purposes.
 2. Access tracks were traversed and determined suitable for AWD/4WD use at the time of the New Ground compliance assessment survey conducted on 18 November 2025.



SITE LOCALITY AND OBSERVATIONS PLAN - LOT 2 ON RP15912



NEW GROUND | Mail: PO Box 713, Mermaid Beach QLD 4218 |
 T: 07 5530 7283 E: info@newground.com.au



Sheet Number: 1 of 1
 Project: 3085
 Version: 1
 Date: 23/01/2026
 Sources: Cadastral boundaries: QLD DCDB DNRME 2025
 Aerial photo: NearMap 30/08/2025

SH OMP Audit Report

Appendix D





Offset Management Plan Audit and Review

Ormeau Quarry Expansion
Prepared for Boral Resources (QLD) Pty Limited
30 January 2026

EPBC 2016/7797
Job No. 10233

**Saunders
Havill**

PATHWAYS TO SUCCESS

Document Control

Document: Offset Management Plan – Audit and Review, prepared by Saunders Havill for Boral Resources (QLD) Pty Ltd, dated 30 January 2026.

Document Issue

Issue	Date	Prepared By	Checked By
A	30/01/2026	KR	MM

Prepared by

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ABN 24 144 972 949

www.saundershavill.com

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Executive summary

The Ormeau Quarry Expansion was referred under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 13 October 2016 and subsequently declared a “Controlled Action” requiring assessment by “Preliminary Documentation” pursuant to section 18 and 18A (listed threatened species and communities) (EPBC Act reference 2016/7797). The trigger for the controlling provision was due to potential impacts on the Koala (*Phascolarctos cinereus*), which at the time was listed as Vulnerable under the EPBC Act. A copy of the EPBC Act approval is available at **Appendix A**.

As part of the application process and in consultation with the now **Department of Climate Change, Energy, the Environment and Water** (DCCEEW) (former **Department of the Environment and Energy** (DoEE)), an offset strategy was developed to compensate for the impacts from clearing 38 hectares (ha) of habitat critical to the survival of the Koala (Environmental Offset Strategy dated 31 January 2018 by Saunders Havill Group).

Condition 6 of the approval required that the approval holder must submit an Offset Management Plan (OMP) for the Minister's written approval. The Offset Management Plan was prepared in accordance with the now DCCEEW (former DoEE) Environmental Management Plan (EMP) Guidelines, and the EPBC Act Environmental Offset Policy (2012) and include:

- a) Detail of the offset area(s) required to address the loss of 38 hectares of koala habitat consistent with the Offset Strategy (Environmental Offset Strategy dated 31 January 2018 by Saunders Havill Group) or subsequent Offset Strategy described in Condition 4.
- b) Detail of the proposed legal mechanism and timeframes for securing the offset area(s).
- c) A map of the offset area(s) in relation to other habitats and biodiversity corridors.
- d) Information about how the offset area(s) provide connectivity with other koala habitat and biodiversity corridors.
- e) A description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data.
- f) 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.
- g) Performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions.
- h) A detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria.
- i) 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 bushfire management plan and a pest species management plan.



The offset proposal included the dedication and rehabilitation of 77 ha of vegetation constituting Koala habitat.

The OMP was prepared in accordance with the **Department’s Environmental Management Plan Guidelines**, and the **EPBC Act Environmental Offsets Policy (2021)**. This OMP had the purpose of providing high level guidance for the creation and implementation of offset mechanisms. The primary offset mechanisms include:

- The dedication as an offset of 77 ha of vegetation constituting Koala habitat within the land identified on Cliff Barrons Road, Kingsholme.
- Rehabilitation and revegetation works to improve the condition of the offset area.
- Implementation of management plans for:
 - Weeds of national significance
 - Pest management (feral and unwanted dog usage)
 - Maintaining koala habitat
 - Bush fire
- Monitoring and reporting to ensure that the offset area achieves and maintains the completion criteria.
- Adaptive management is applied to mitigate unforeseen risks and incorporate new information as it becomes available.
- Putting in place legal mechanisms available through Queensland legislation to secure the offset area by a Voluntary Declaration.

The OMP was submitted to the Minister for approval to offset the loss of 38 ha of koala habitat in December 2018. A copy of the OMP provided to the Minister for approval is available at **Appendix B**. Written approval from the Minister of OMP approval was granted on the 10 December 2018. A copy of the written approval is provided at **Appendix C**. Commencement of the action began on the 3 February 2021 and implementation of the OMP began in June 2021 within the baseline mapping of WONS across the offset site by SH ecologists, followed by preliminary assessments by Bushcare consultants..

Condition 12 of the EPBC Approval states:

*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.*

Minor updates to the OMP are recommended under the outcomes of the audit. Given the small nature of the changes, it is not considered necessary to submit an updated OMP to the minister for approval however, under Condition 12 of the approval, the Department must be notified in writing and provided with an electronic copy of the revised plan.

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**.

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**.



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1. Introduction

1.1. EPBC Act approval background

The *Environmental Management Division* of **Saunders Havill (SH)** was engaged by **Boral Resources (QLD) Pty Limited** (Boral) to undertake an audit of the **Offset Management Plan (OMP)** for the Ormeau Quarry Expansion, located at Kingsholme in Southeast Queensland. The Ormeau Quarry Expansion (38 ha) was referred under the *Environment Protection and Biodiversity Conservation Act* (EPBC Act) on 13 October 2016 and subsequently declared a “Controlled Action” requiring assessment by “Preliminary Documentation” pursuant to section 18 and 18A (*listed threatened species and communities*) (EPBC Act reference 2016/7797) on 16 February 2018. The trigger for the controlling provision was due to potential impacts on the Koala (*Phascolarctos cinereus*), which was listed as Vulnerable under the EPBC Act at the time of approval. As part of the now **Department of Climate Change, Energy, the Environment and Water** (DCCEEW) Preliminary Documentation requirements, a proposal was developed to compensate for the impacts from clearing 38 ha of habitat critical to the survival of the Koala.

This offset was approved by a delegate of the Minister as part of the EPBC Act approval for 2016/7797 (refer **Appendix A**). The offset includes the dedication and rehabilitation of 77 hectares of vegetation constituting Koala habitat. A copy of the OMP provided to the Minister for approval is available at **Appendix B**. Written approval from the Minister of OMP approval was granted on the 10 December 2018. A copy of the written approval is provided at **Appendix C**. Commencement of the action began on the 3 February 2021 and implementation of the OMP begun in June 2021.

1.2. Purpose of this report

This report reviews the previous years outcomes, captured under each Annual Compliance Report (ACR) and reviews these in detail against the current OMP timelines, objectives and projected outcomes to determine whether changes would be recommended within the OMP, following reflection through on-ground management. This advice stems from the first five years of on ground management at the offset site and has potential to evolve following review during the Annual Compliance Reporting each year.

As per the qualitative risk assessment conducted during the OMP preparation in accordance with the EPBC Act Environmental Management Plan Guidelines (2014), where the risk of failure to achieve the OMPs management objectives was analysed, all returned a ‘low’ risk level, apart from in the unlikely event of a unplanned fire which was determined to have a ‘medium’ risk level. It was proposed that during the first five (5) years of monitoring and annual compliance reporting, Boral (or suitably qualified environmental consultant engaged by Boral) will review management commitments in this plan, and if the review results in the need to revise the OMP, the plan will be revised and the Department (now DCCEEW) will be informed in writing, where necessary, in accordance with the condition 12 of the approval. It is noted that events are only addressed once in the risk assessment under the most relevant management objective, however some events are likely to impact on multiple management objectives.



1.3. Offset site summary

The offset area will conserve freehold land within the SEQ biodiversity corridor, linking habitat incorporating legally bound environmental offset areas associated with adjacent quarrying activities to the north and east with National Parks and reserves to the south. Without this linkage, the offset site is likely to have been developed into a quarry and would have further fragmented the SEQ regional biodiversity corridor. Further, this linkage provides a valuable contiguous habitat corridor, ensuring the possibility of habitat fragmentation is minimised and improving the connectivity of koala habitat within SEQ. The offset area possesses high conservation value and through the management actions proposed in the OMP, the property will provide biodiversity offsets that ensure an ecological gain on the residual impacts resulting from the impact site. The offset site is located on Boral-owned land at Cliff Barrons Road, Kingsholme (described as Lot 2 on RP15912), approximately 1.7 km north of the expansion site. Properties details are listed in **Table 1**.

Table 1: Offset site property details summary

Address	Cliff Barrons Road, Kingsholme
Lot/Plan	Lot 2 on RP15912
Area	77 ha
Tenure	Freehold
Local Government Area	Gold Coast City Council
Action Commencement Date	Second half of 2018

Evidence of koala was identified during ecological surveys utilising the Spot Assessment Technique (SAT) survey and scat meander as per Phillips & Callaghan (2011). The offset site is within a contiguous polygon of regional ecosystems mapped by the Department of Environment, Tourism, Science and Innovation (DETSI). The regional ecosystems (RE) within the offset site consists of 'least concern' RE12.11.5, RE12.11.3 and RE12.11.10. Refer to **Table 2** for the short technical descriptions of the regional ecosystems. The offset site is predominantly mapped as 'remnant' vegetation, with the dominance of eucalyptus, corymbia and angophora species ensuring the presence of suitable koala food and shelter trees.

Table 2: Regional ecosystem descriptions

RE Community	VM Act Status	Description
12.11.3	Least Concern	<i>Eucalyptus siderophloia</i> , <i>E. propinqua</i> +/- <i>E. microcorys</i> , <i>Lophostemon confertus</i> , <i>Corymbia intermedia</i> , <i>E. acmenoides</i> open forest on metamorphics +/- interbedded volcanics.
12.11.5	Least Concern	<i>Corymbia citriodora</i> subsp. <i>variegata</i> woodland to open forest +/- <i>Eucalyptus siderophloia</i> / <i>E. crebra</i> , <i>E. carnea</i> , <i>E. acmenoides</i> , <i>E. propinqua</i> on metamorphics +/- interbedded volcanics.
12.11.10	Least Concern	<i>Notophyll</i> vine forest +/- <i>Araucaria cunninghamii</i> on metamorphics +/- interbedded volcanics.

Ecological field surveys were undertaken by Saunders Havill (SH) over 2 days in September and October 2015. Field surveys identified that non remnant areas contained vegetation in good condition that would



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be considered critical koala habitat as defined by the EPBC Act. The survey also found that, while generally in good condition, the site had been impacted in areas by logging, and weed incursion.



2. Offset management plan (OMP)

2.1. Environmental outcomes and objectives

In accordance with the EPBC Act approval, the environmental outcomes to be achieved through implementing the Offset Management Plan (OMP) for the offset area are:

- Maintain koala habitat quality across the offset site which is measured as a condition value of 8 out of 10.
- Rehabilitation and revegetation of disturbed non-remnant areas within the offset area.
- Implementation of a vegetation management plan to ensure the integrity of existing remnant vegetation is maintained.
- Facilitate adaptive management of the offset area including the nomination of milestone targets and a monitoring program.
- Annual compliance reporting detailing the implementation of management measures and achievement towards, and maintenance of, performance and completion criteria.

The management objectives for the offset area, in alignment with the EPBC Act Environmental Offsets Policy will:

- Deliver an overall conservation outcome that improves the viability of habitat for the koala.
- Provide a direct offset that is in proportion to the level of statutory protection that applies to koala habitat.
- Be of a size and scale proportionate to the residual impacts on koala habitat.
- Effectively account for and manage the risks of the offset not being successful with the required management timeframe.
- Provide a conservation gain additional to what is already required by a duty of care or to any environmental planning laws at any level of government.
- Be efficient, effective, timely, transparent, scientifically robust and reasonable with appropriate transparent governance arrangements in place for measuring, monitoring, auditing and enforcing the management of the offset area.

2.2. Offset Area Management Requirements

2.2.1 Offset area management measures

This section describes the management actions and measures necessary to meet the identified environmental outcomes of the offset area. The management measures are designed to minimise the risks



associated with key threatening processes to the koala and maintain the quality of the habitat within the offset area.

Although the management measures have been developed to achieve the required koala offset environmental outcomes as a priority, they will bring an overall improvement in the condition and quality of a wide range of native species present within the offset area.

The measures outlined below are deemed to be suitable given the listed status of the koala at the time of EPBC Act approval, the size and scale of the offset and the focus on priority management actions, which are efficient, effective, timely and transparent (i.e. able to be monitored and are auditable). Additionally, a number of these measures correspond to the then Priority Management Actions outlined in the *Approved Conservation Advice for Phascolarctos cinereus (combined populations of Queensland, New South Wales and the Australian Capital Territory) (koala Northern Designatable Unit)* (Conservation Advice).

This initial report consolidates the findings from the first four (4) ACR's and presents an initial overview of the management actions in regards to the current progress of each as of Year 5 of the action with any recommendations presented in the following subsections. An overview of the management actions is listed below:

- Management Action 1: Weeds of National Significance (WONS) Management Plan
- Management Action 2: Rehabilitation and Regeneration Management Plan
- Management Action 3: Legally securing the offset area
- Management Action 4: Pest Management (feral and unwanted dog usage) Plan
- Management Action 5: Koala Habitat Quality Management Plan
- Management Action 6: Bushfire Management Plan

2.2.2 Management Action 1 – Weeds of National Significance (WONS) Management Plan

The control of weeds is fundamental to improving biodiversity and the ecological condition of the koala habitat within the offset area. The historical land uses across the offset area have resulted in the introduction, spread and persistence of a variety of environmental weeds, prior to the declaration of the offset site. Whilst there have been a wide variety of environmental weeds recorded across the site, the key species to be controlled in the offset area in regard to koala habitat values is *Lantana camara* (Lantana), a Weed of National Significance (WONS). The listing and prioritisation of WONS is a joint initiative of the States, Territories and Australian Government and their long-term control is of national interest. This weed is a known environmental barrier and movement restrictor for the koala, placing constraints on use of habitat where it is prevalent. As such, the control, reduction and subsequent eradication of *Lantana camara* is a high priority for koala conservation.

Baseline weed mapping will be conducted before the weed removal program is initiated. Weed mapping is then to be conducted annually and reported in the Annual Compliance Report (ACR). The measures for the control of WONS, specifically Lantana will include:



- Baseline weed mapping for WONS 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.
- All identified WONS will be treated within 12 months of commencement of the action.
- 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:
 - comprehensive monitoring for WONS will be conducted;
 - WONS that are reported or detected by comprehensive monitoring will be treated.
- A suitably qualified bush regeneration contractor will be engaged to undertake the necessary weed control.
- Control of infestations will utilise techniques that avoid disturbance to surrounding areas.

2.2.3 Management Action 2 – Rehabilitation and Regeneration Management Plan

Rehabilitation and regeneration is a key action that will improve existing koala habitat values within the offset area, while also expanding habitat values in areas that have been subject to weed infestation issues. It also is a Priority Management Action listed under “Habitat Loss, Disturbance and Modification” of the Conservation Advice for the koala. Rehabilitation aims to reinstate existing degraded areas and areas exposed as a result of management action 1 (weed removal), with koala food and shelter trees consistent with the mapped regional ecosystem in that specific location.

Within the mapped Category B (remnant) areas, natural regeneration is preferred to reconstruction of the vegetation community (i.e. importation of soil, dense planting, etc). Where natural regeneration is unsuccessful minor infill planting will be implemented to facilitate recovery. Barbed wire will also be removed from fences located in areas of koala habitat, or areas where koala are likely to traverse. Evidence of rehabilitation and the success and survival rate will be reported annually within the ACR.

Management measures for rehabilitation and regeneration include:

- 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.
- Rehabilitation areas are to consist of one canopy tree per 10 m², three shrubs per 10 m² and one groundcover per 2 m². Where natural regeneration is the preferred approach, infill planting will be implemented where regeneration has been unsuccessful after three years.
- All rehabilitation activities are to be carried out by a suitably qualified bush regeneration contractor.
- The plants reinstated in any particular location must be consistent with the mapped regional ecosystem or pre-clear regional ecosystem over that area.



- 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.

2.2.4 Management Action 3 – legally securing the offset area

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. Legally securing the offset area is listed in the Conservation Advice as a Priority Management Action, under “Habitat Loss, Disturbance and Modification”.

2.2.5 Management Action 4 – Pest Management (feral and unwanted dog usage) Plan

Feral or unwanted domestic dogs have been identified as a key threatening process under the EPBC Act and are confirmed as a direct predation risk to Koalas. Managing animal predation is listed as a Priority Management Action under the koala Conservation Advice. The control and prevention of invasive animal incursions is to be undertaken in accordance with the relevant legislation (such as the *Commonwealth Biosecurity (Consequential Amendments and Transitional Provisions) Act 2015* and the *Queensland Biosecurity Act 2014*) and to include the control of pest animals by legal methods by suitably qualified pest management contractor(s). Any required hazardous materials must be handled and stored in accordance with the material’s safety data sheets and the Approved Code of Practice for the Storage and Handling of Dangerous Goods. Pest animal control is to be undertaken in a humane manner. Annual pest monitoring is to be reported and included in the ACR.

Management measures for the control of feral or unwanted domestic dogs across the offset area include:

- 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.
- 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.
- 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.
- Install appropriate signage informing the area is under feral control.

2.2.6 Management Action 5 – Koala Habitat Quality Management Plan

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.

A habitat quality monitoring assessment, including koala specific habitat attributes will be conducted in accordance with the published methodology (DEHP 2017) and by a suitably qualified environmental consultant. 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.

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.

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. These locations are shown in **Appendix B**.

Rehabilitation and regeneration is a key action that will improve existing koala habitat values within the offset area, while also expanding habitat values in areas that have been previously cleared or subject to weed infestation issues. It also is a Priority Management Action listed under “Habitat Loss, Disturbance and Modification” of the Conservation Advice for the koala. The offset area has been separated into three zones for implementation of koala habitat improvement measures; remnant vegetation, habitat rehabilitation and habitat revegetation. All areas within the offset site will be subject to management actions 1 through 4 (voluntary declaration, WONS management, feral and pest fauna species management and bush fire management) however additional management measure will be implemented for each zone. These are:

Remnant vegetation

- Stop activities reducing habitat values, specifically selective logging and grazing.
- Assisted natural regeneration practices where removed weeds leave open areas – replanting with locally endemic species.
- Maintain and manage the land for the life of the offset, including direct monitoring of Koala usage.

Habitat rehabilitation

- Assisted regeneration, seeding, or planting of endemic canopy tree species specifically selected to provide Koala habitat.
- Removal of impediments to Koala movement such as old fences.
- Maintain and manage the land for the life of the offset, including direct monitoring of Koala usage.

Habitat revegetation

- Implementation of rehabilitation techniques that aim to promote the regeneration of native vegetation and improve habitat values:



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- Where natural regeneration is ineffective, implementation soil amelioration and seeding with native endemic seeds,
- Where natural regeneration and / or seeding is ineffective, planting of endemic trees and shrubs specifically selected to provide Koala habitat
- Management of the revegetated areas to ensure habitat density requirements are achieved.
- Removal of impediments to Koala movement such as old fences.
- Protecting revegetated areas from cattle and horses through the implementation of fauna friendly fencing.
- Maintain and manage the land for the life of the offset, including direct monitoring of Koala usage.

A rehabilitation plan specifying techniques and species is to be utilised as well as ongoing monitoring measures to assess rehabilitation success will be completed within 12 months of the commencement of the corresponding quarry extension stage. All rehabilitation activities are to be carried out by a suitably qualified bush regeneration contractor.

2.2.7 Management Action 6 – Bush Fire Management Plan

An Offset Area Bushfire Management Plan (BMP) will be developed within 12 months of the offset being legally secured, for the purpose of protecting the offset area from high intensity wildfires as well as for conducting ecological burns with the aim to enhance biodiversity in line with the Regional Ecosystem Description Database fire management guideline.

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.

Management measures will be outlined in the BMP for the control of bush fire across the offset area but will include:

- Installation of firebreaks and fire trails.
- Annual inspection and maintenance of firebreaks and access tracks required to achieve compliance with Offset Area Bushfire Management Plan.
- 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.
- 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 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.



2.3. Completion Criteria

Completion criteria for the offset site are as follows:

- WONS eradicated from the offset area.
- Rehabilitated areas are established and regenerate and mapped as remnant vegetation under the Vegetation Management Act 1999 or successor legislation.
- Dogs or evidence of dog presence are not detected on the offset area for a period of three years.
- Koala habitat quality remains at baseline levels or better for two consecutive five year monitoring events.



3. Offset Area Management – Year 5 Review

The following subsection details the ongoing management of the offset site against the management actions. A review of the annual offset area management actions conducted are reported on within each year's ACR.



3.1. OMP actions, timing and responsibilities

The timing of management actions, performance review, risk management and responsibilities for the offset area will be undertaken in accordance with **Table 3**.

Table 3: OMP actions, timing and responsibilities

Action	Frequency and timing of action(s)	Actions completed
Baseline monitoring	Within 12 months of the action commencing.	Baseline monitoring was conducted by SH ecologists during the Year 1 compliance period (3 February 2021 – 2 February 2022). As detailed in the Year 1 Annual Compliance Report, publicly available on the approval holder’s website. The action commenced 3 February 2021.
OMP monitoring reporting as part of the ACR	Annually	Compliance with the OMP conditions is reported on annually within each corresponding year’s ACR. Each ACR is publicly available on the approval holder’s website.
OMP review	Every three years or upon failure to meet performance criteria	Given condition 6 of the EPBC Act details the implementation of the OMP, an ongoing review of the offset activities against the OMP criteria is conducted annually and detailed within the corresponding ACR period.
OMP auditing	Annually	As mentioned above, condition 6 of the EPBC Act details the implementation of the OMP, an ongoing audit of the offset activities against the OMP criteria is conducted annually and detailed within the corresponding ACR period..



Action	Frequency and timing of action(s)	Actions completed
Risk management implementation	Annually	<p>A section within each ACR prepared by SH has been dedicated to the offset area management action activities conducted within the corresponding year by suitably qualified contractors. This level of detail provided within the ACR, provides a step-by-step progress report of activities carried out across the offset area.</p> <p>As detailed in the OMP, risk assessment for the management objectives, the risk levels were predominately assessed as being 'low', with the exception of an unplanned fire which returned a 'medium' risk score.</p>
Adaptive implementation program and contingency response	Annually	<p>A section within each ACR prepared by SH has been dedicated to the offset area management action activities conducted within the corresponding year by suitably qualified contractors. This level of detail provided within the ACR, provides a step-by-step progress report of activities carried out across the offset area. Given management activities have been conducted annually within the offset area as detailed within each corresponding ACR, the risk level has not been adjusted from baseline.</p> <p>Given management actions have been implemented within the offset area by suitably qualified contractors, an adaptive management program and contingency response have not been applied. Following this review, adaptive management of actions outlined in the OMP may become apparent.</p>



3.1.1 Management Action 1 – WONS Management Plan

Management measures for the control of WONS, specifically *Lantana camara* (Lantana) are included within **Table 4**.

Table 4: Audit of offset area Management Action 1.

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
Baseline weed mapping for WONS 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	The presence of WONS in the offset area will be monitored annually commencing in 2019 until they are not observed, at which point monitoring will be carried out every 2 years.	WONS eradicated from the offset area.	<p>The OMP specified 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 know commencement date (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 and was reported within the first ACR.</p> <p>A Weed Management Plan (WMP) was produced by SH within 6-months of the commencement of the action 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</p>	<p>Current outcomes</p> <ul style="list-style-type: none"> • Baseline weed mapping completed within 6 months of the commencement of the action • WMP completed in specified timeframes • WMP includes comprehensive details on proposed weed control methods • Plan-sized (A3) summary WMP report produced to provide overview for everyday reference for on ground teams, while overarching WMP document remains accessible for review and



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
			control of weeds on-site as well as regular and annual monitoring techniques.	<p>available for all contractors and staff</p> <p><u>Recommendations</u></p> <ul style="list-style-type: none"> Experienced rehabilitation contractors to review and confirm weed control methods best suited to lantana and other weeds at the offset site, for inclusion in addendum to the WMP if necessary. Update WMP to produce refined version 2 (V2) including refined weed control techniques and methods
<p>All identified WONS will be treated within 12 months of commencement of the action.</p>			<p>SH Ecologists mapped the extent of WONS coverage as part of the preparation of the WMP. Weed monitoring efforts are publicly available on the proponent’s website in each ACR compliance period. This data was then provided to Bushcare Services and used to inform the next planned weed management activity.</p>	<p><u>Current outcomes</u></p> <ul style="list-style-type: none"> Not achieved within timeframes On-ground management deemed this to be infeasible, given the lack of tracks/access for



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
			<p>The weed management effort conducted by Bushcare Services was detailed in the Year 1 ACR, which is publicly available on the proponent’s website. As detailed in the Year 1 ACR the main access track was severely eroded, preventing use by any type of vehicle, thus restricting management efforts to those which could be carried in by foot. This increased the timeframes required to complete management actions.</p> <p>As a result of the identified access safety issues, weed treatment was limited to more accessible portions of the offset area located within the central and southern areas. A minor non-compliance has been recognised 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>vehicles to transport the required weed control equipment.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • Consider revision of OMP: <ul style="list-style-type: none"> ○ Management Action 1 updated to include feasible timelines for weed management and control in consultation with weed management contractor. ○ Consider an addendum to provide detail on ground conditions and history of track and access works.



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>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:</p> <ul style="list-style-type: none"> comprehensive monitoring for WONS will be conducted; WONS that are reported or detected by comprehensive monitoring will be treated. 	<p>The monitoring will be undertaken during the same time of year, each year, to ensure that the timing is consistent and aligns with the baseline assessment. The following procedures will be implemented to ensure that the annual monitoring event aligns with the baseline monitoring methodology:</p> <ul style="list-style-type: none"> GPS locate the presence of weeds either via a GPS waypoint or where a large weed infestation is present, create 		<p>SH Ecologists have mapped the extent of WONS across the offset area during the Winter and Spring months of each reporting period (Years 1-5) via the use of a GPS with the previous years weed mapping data as a reference. WONS identified and mapped were predominantly <i>Lantana camara</i> (Lantana). Weed monitoring efforts are publicly available on the proponent's website in each ACR.</p> <p>The weed mapping effort is then detailed in the associated years ACR. Bushcare Services were engaged to complete ongoing weed management across the offset site. This data is then provided to Bushcare Services and used to inform the next years weed management activities. Despite the contractor providing continual management services across the offsets site throughout Year 1 – 5 compliance periods, this work was significantly limited by continued damage to access tracks.</p> <p>The main access track was severely eroded, preventing use by any type of vehicle, thus restricting management</p>	<p><u>Current outcomes</u></p> <ul style="list-style-type: none"> WONS were not treated in 2019 WONS currently treated across the offset site in accordance with on ground management efforts Not all areas of the offset site are currently able to be accessed for effective WONS treatment (via vehicle) Comprehensive monitoring occurs annually, but not all can/have been treated <p><u>Recommendations</u></p> <ul style="list-style-type: none"> Management Action 1 updated to include feasible timelines for weed management and control



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
	<p>a GPS polyline and walk the extent of the infestation.</p> <ul style="list-style-type: none"> On a field datasheet, detail the time of year of the monitoring event, list of observed WONS, photo location and direction and notes of any notable positive and/or negative changes in weed density and coverage. Carry the previous year's weed survey mapping, field datasheet and photos for noting changes 		<p>efforts to those which could be carried in by foot. This increased the timeframes required to complete management actions.</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 has very recently been obtained (April 2023) and thus Boral will begin track works in May 2023 to increase access and safety across the site.</p> <p>The crossing was inspected on the 18 February 2024 following significant rainfall received on the 16 February 2024. The crossing was damaged, requiring further re-construction.</p> <p>As a result of the ongoing access safety issues, weed treatment was limited to more accessible portions of the offset area located within the central and southern areas.</p>	<ul style="list-style-type: none"> Treatment timeline to be determined via consultation between experienced weed management contractors, Boral and consultants Tabulated timeline of weed area access and control/management to be included within proposed updated WMP (V2) Consider removal of monitoring measure to capture details on field data sheet given outcomes are captured more effectively using GPS and GIS mapping



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
	<p>in weed infestations and densities.</p> <ul style="list-style-type: none"> • Transfer GPS data to the necessary programs to generate weed survey mapping extent and collate all data in excel spreadsheets and save all digital photos to file for ongoing monitoring purposes. 			
<p>A suitably qualified bush regeneration contractor will be engaged to undertake the necessary weed control.</p>			<p>Bushcare Services were engaged to complete ongoing weed management across the offset site.</p>	<p><u>Current outcomes</u></p> <ul style="list-style-type: none"> • Completed and ongoing <p><u>Recommendations</u></p> <ul style="list-style-type: none"> • Continue engagement
<p>Control of infestations will utilise techniques</p>			<p>Control of identified WONS infestation identified are managed by Bushcare</p>	<p><u>Current outcomes</u></p>



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
that avoid disturbance to surrounding areas.			services. Techniques involved with the treatment of WONS includes methods which avoid disturbance to surrounding areas.	<ul style="list-style-type: none"> Ongoing <p><u>Recommendations</u></p> <ul style="list-style-type: none"> Continue utilising minimally invasive techniques for weed control



3.1.2 Management Action 2 – Rehabilitation and Regeneration Management Plan

Management measures for the rehabilitation and regeneration are included within **Table 5**.

Table 5: Audit of offset area Management Action 2.

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>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.</p>	<p>Photo point monitoring is to be undertaken annually at the same time of the year, post the rehabilitation works. The photos provide the baseline imagery to compare future photo point monitoring and to ensure the integrity of the fence. A record of the photos will be maintained which includes:</p> <ul style="list-style-type: none"> • GPS co-ordinates of the photo point. 	<p>Rehabilitated areas are established and regenerate and mapped as remnant vegetation under the <i>Vegetation Management Act 1999</i> or successor legislation.</p>	<p>A Koala Habitat Management Plan (KHMP) was completed by SH to guide rehabilitation efforts across the offset area. This was addressed in the Year 1 ACR.</p> <p>Baseline mapping across the site identified areas suitable for different restoration management techniques. Annual Compliance Reporting is publicly available on the proponent’s website.</p> <p>The site was assessed and mapped according to two (2) offset area management zones including, habitat rehabilitation areas and remnant vegetation management areas. Given the offset area was predominately consists of remnant vegetation management areas, the treatment</p>	<p><u>Current outcomes</u></p> <ul style="list-style-type: none"> • Baseline mapping of rehabilitation and regeneration areas was completed during Year 1 of the action. • A KHMP was prepared detailing rehabilitation techniques to be utilised within specified timeframes. • Plan-sized (A3) summary KHMP report produced to provide overview for everyday reference for on ground teams, while overarching KHMP document remains accessible for review and available for all contractors and staff. <p><u>Recommendations</u></p>



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>Rehabilitation areas are to consist of one canopy tree per 10m², three shrubs per 10m² and one groundcover per 2m². Where natural regeneration is the preferred approach, infill planting will be implemented where</p>	<ul style="list-style-type: none"> • Date, time and number of each photo. • Direction in which the photo was taken (north, south, east and west). <p>After each photo monitoring event, a GPS waypoint of the location of the rehabilitation and a GPS polyline of the extent will be recorded. The following elements will be noted on a field datasheet:</p> <ul style="list-style-type: none"> • The success of the rehabilitation stock (a physical count of alive plants in the ground). 		<p>of WONS through this area was prioritised.</p> <p>Once completion of weed management has been completed, areas identified for rehabilitation can commence, including infill plantings within the habitat rehabilitation areas.</p> <p>Given the on-going access issues to the northern portion of the offset area since commencement of the action, this has delayed the</p>	<ul style="list-style-type: none"> • Experienced rehabilitation contractors to review and confirm rehabilitation and regeneration methods best suited to the offset site. These details will be included in the V2 of the KHMP if updates required. • Update KHMP to produce contemporary version 2 (V2) including refined regeneration and rehabilitation techniques and methods, if required. <p>Current outcomes</p> <ul style="list-style-type: none"> • Given the difficulties in the weed management contractors being able to access the entirety of the offset site to manage weeds, rehabilitation has not been possible. On-ground management deemed weed management to be



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>regeneration has been unsuccessful after three years.</p> <hr/> <p>All rehabilitation activities are to be carried out by a suitably qualified bush regeneration contractor.</p>	<ul style="list-style-type: none"> The average health of the rehabilitation stock. The average height of the rehabilitation stock. The presence of weeds within the rehabilitation extent. Natural regeneration of native species. <p>Evidence of koala habitat rehabilitation and the success and survival rate will be monitored annually for at least the first 3 years after commencement of regeneration works.</p>		<p>completion of weed management and therefore the commencement of habitat rehabilitation and infill plantings. The lack of access resulting in the rehabilitation areas not having sufficient safety access to import the tube-stock to the planting areas as well as water the planting whereby the tube-stock was able to be planted.</p> <p>Planting was proposed for the Year 5 compliance period in areas identified as being illegally cleared by an adjoining property owner during Year 1 of the project. This planting will be reported on during the Year 5 ACR.</p> <hr/> <p>Bushcare Services were engaged to complete ongoing weed management across the offset site.</p>	<p>infeasible, given the lack of tracks/access for vehicles to transport the required weed control equipment.</p> <p><u>Recommendations</u></p> <ul style="list-style-type: none"> Consider minor revision to OMP to include: <ul style="list-style-type: none"> feasible timelines for weed management and control to be discussed in consultation with weed management contractor. updates to on ground conditions, history of track and access works. <hr/> <p><u>Current outcomes</u></p> <ul style="list-style-type: none"> Ongoing <p><u>Recommendations</u></p> <ul style="list-style-type: none"> Continue engagement



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>The plants reinstated in any particular location must be consistent with the mapped regional ecosystem or pre-clear regional ecosystem over that area.</p>	<p>If vegetation establishment is confirmed after three years monitoring will be carried out 5 yearly to ensure control measures are effective.</p>		<p>The proposed plantings will be consistent with the mapped regional ecosystems.</p>	<p><u>Current outcomes</u></p> <ul style="list-style-type: none"> • Ongoing <p><u>Recommendations</u></p> <ul style="list-style-type: none"> • Ongoing
<p>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.</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. Due to the on-going access issues Weed Management has been being limited to the southern and central portions of the site.</p>	<p><u>Current outcomes</u></p> <ul style="list-style-type: none"> • WONS treatment across the entirety of the offset area has not been completed. • WONS treatment was the main focus of the sites rehabilitation and regeneration outcome, as only small polygons were identified to be lacking canopy vegetation. <p><u>Recommendations</u></p> <ul style="list-style-type: none"> • OMP to be revised and updated to reflect refined WONS treatment timeline, relative to on ground



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
				<p>conditions and upcoming projected planting plans.</p> <ul style="list-style-type: none"> • Weed management contractors should be advised to prioritise activities within the areas identified as proposed revegetation. In doing so, once control of weed species within these areas have been managed, natural revegetation is more likely. • Treatment timeline to be determined via consultation between experienced weed management contractors, Boral and consultants • timeline for specific infill planting identification and program to be update within OMP (minor change) • Tabulated timeline of regeneration and rehabilitation areas and management to be included



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
				<p>within proposed updated KHMP (V2)</p> <ul style="list-style-type: none"> • Ensure details captured on page 20 of the OMP are included on monitoring data sheets during each monitoring visit to infill planting sites. • It is recommended that Boral engage extra resources to increase weed control focus on the areas identified for potential infill planting during the upcoming ACR year. The objectives will be to heavily reduced weeds and begin infill planting following weed reduction, where it is identified as being needed to increase habitat quality. • Risk memorandum report recommended to ensure proposed updates to OMP (planting timeline and WONS treatment timeline) do not



■ Offset Management Plan – audit and review

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
				constitute a “new or increased impact” to koala.



■ Offset Management Plan – audit and review

3.1.3 Management Action 3 – legally securing the offset area

Management measures for the legal securement of the offset area are included within **Table 6**.

Table 6: Audit of offset area Management Action 2.

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
A Voluntary Declaration will be placed over the offset area to legally secure the conservation use on the land prior to the action commencing.	This management action does not require any specific monitoring as the securing of the site as a legal offset is to be completed via a VDEC, and that registration date of the VDEC will be reported in each annual compliance report.	VDEC securement	The proponent legally secured the offset area via a Voluntary Declaration under the <i>Vegetation Management Act 1999</i> on the 22 February 2019. In accordance with EPBC Act approval Condition 5, the offset area was legally secured prior to the official commencement of the action on the 3 March 2021. Evidence of this management action is publicly available in the Year 1 ACR on the proponent’s website.	<p><u>Current Outcomes</u></p> <ul style="list-style-type: none"> Completed and detailed in the Year 1 ACR.



3.1.4 Management Action 4 – Pest Management Plan

Management measures for the pest management plan are included within **Table 7**.

Table 7: Audit of offset area Management Action 4.

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>Baseline pest monitoring including motion 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.</p>	<p>GPSs will be used to locate the presence of pest animals, in particular feral dogs via notable tracks or scats.</p> <p>Field datasheet will detail the time of year of the monitoring event, record observed pest animal scats or tracks, photo location and notes of any evidence of positive and/or negative changes in pest animal occurrence.</p> <p>Carry the previous year's pest animal</p>	<p>Dogs or evidence of dog presence are not detected on the offset area for a period of three years.</p>	<p>Baseline pest monitoring was conducted by SH Ecologists in 2021 which involved the installation of motion sensor camera traps across the offset area.</p> <p>During this baseline monitoring which photographic evidence of <i>Canis familiaris</i> (Feral Dog) was not detected, the identification of prints were observed. Additionally, <i>Vulpes vulpes</i> (European Red Fox) was detected utilising the site via the motion sensor camera trapping program.</p> <p>The results of the baseline monitoring program are detailed in the Vertebrate Pest Management Plan (VPMP)</p>	<p>Current outcomes</p> <ul style="list-style-type: none"> • Baseline pest monitoring was completed within 12 months of the commencement of the action. • VPMP completed in specified timeframe. • VPMP includes comprehensive details on proposed pest control methods. • Plan-sized (A3) summary VPMP report produced to provide overview for everyday reference for on ground teams, while overarching VPMP document remains accessible for review and available for all contractors and staff.



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>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</p>	<p>survey mapping, field datasheet and photos for noting positive and/or negative changes in pest animal occurrences.</p> <p>Transfer GPS data to spatial data programs to generate pest animal occurrences and collate all data in excel spreadsheets and save all digital photos to file for ongoing monitoring and reporting purposes.</p> <p>Where pest animal presence is detected, targeted trapping and baiting programs will be implemented on completion of the monitoring program.</p>		<p>prepared by SH which is publicly available on the proponent’s website. This 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, Year 3 and Year 4 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</p>	<p><u>Recommendations</u></p> <ul style="list-style-type: none"> Experienced feral animal management contractors to review and confirm pest animal control methods best suited to the offset site, for inclusion in V2 of the VPMP, where required. Update VPMP to produce refined version 2 (V2) including refined pest animal control techniques and methods, where required. <p><u>Current outcomes</u></p> <ul style="list-style-type: none"> Annual pest monitoring has been conducted by suitability qualified pest management contractor in the form of motion sensor camera monitoring. Feral animal management was conducted during the Year 5 compliance period.



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>independent qualified management contractor. annual monitoring does not identify any feral or pest species monitoring will reduce to 2 yearly.</p>	<p>Where pest monitoring will reduce to 2 yearly Annual pest monitoring will be reported and outcomes of that monitoring included in the ACR. The annual pest management report is to provide detail on detected pests, control efforts, and total trapped/baited individuals during the given management period and identified trends of the population of pest animals within the offset area.</p>		<p>for management purposes, placing limitations on work which could be completed, while prioritising compliance with animal ethics requirements for pest management.</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>While during Years 1 – 4 of the action motion sensor camera monitoring was conducted annually by SH and a suitably qualified feral animal management contractors, pest management activities were not able to commence until the Year 5 compliance period due</p>	<p>Recommendations</p> <ul style="list-style-type: none"> • Update VPMP to reflect qualified pest management operators recommendations from on ground findings. • Note that permanent monitoring locations are installed for EPBC monitoring purposes and vertebrate pest management contractors should install management and monitoring sites where suitable for best practice for each management event.



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
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to the reasons mentioned above.

Pest animal management was conducted during the Year 5 compliance period, where for a period of twelve (12) days in December 2025, traps were set with the offset area and the larger land holdings.

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.

Current Outcomes

- Currently not able to engage with surrounding landholders however, intermittent engagement will continue when possible.
- Ongoing

Recommendations

- Continue engagement when possible



■ Offset Management Plan – audit and review

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
Install appropriate signage informing the area is under feral control.				<ul style="list-style-type: none">• Check installed signage for required replacements annually, or prior to management events (if more than one per year)



3.1.5 Management Action 5 – Koala Habitat Quality Management Plan

Management measures for the pest management plan are included within **Table 8**.

Table 8: Audit of offset area Management Action 5.

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<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</p>	<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)).</p> <p>The habitat quality monitoring is to be reported in the ACR every five (5) years or the subsequent year</p>	<p>Habitat quality will not reduce from the values identified in the baseline report. If a reduction occurs monitoring will continue annually until the values return to the baseline level.</p> <p>Koala habitat quality remains at baseline levels or better for two (2) consecutive five (5) year monitoring events.</p>	<p>The monitoring efforts for each reporting period have been detailed in the associated ACR. Baseline surveys transects were conducted in different locations, resulting in variations to the scores. Annual habitat quality monitoring was conducted at the six (6) permanent transect locations during the SH survey effort during Years 1-5. Habitat quality scores remained relatively stable between Years 1 – 5.</p> <p>Slight variation has been identified between the scores since Year 1, which may be attributed to weather conditions.</p>	<p><u>Current Outcomes</u></p> <ul style="list-style-type: none"> • Baseline surveys of the offset area were conducted utilising the habitat quality assessment methodology at six (6) transect locations. • The Year 1 habitat quality transects were conducted at six (6) different locations to those used during baseline surveys. These Year 1 transect locations have been utilised for habitat monitoring for the following years (Years 2 – 5). • Habitat quality scores remained relatively stable between Years 1 – 5. <p><u>Recommendations</u></p>



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>method to score habitat quality.</p> <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>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>			<ul style="list-style-type: none"> • Ongoing at 5 yearly intervals. • Minor update/addendum to the OMP relaying the on ground permanent monitoring locations. Current figure (Figure 4 in the OMP) specifies “indicative locations”. This should constitute a minor change and will not have a “new or increased impact” to koala or EPBC matters.



3.1.6 Management Action 6 – Bush Fire Management Plan

Management measures for the bushfire management plan are included within **Table 9**.

Table 9: Audit of offset area Management Action 6.

Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
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	Monitoring requirements will be informed by the bush fire management plan and include regular review of access tracks, fire breaks, fuel loads and outcomes of controlled burns or other management techniques such as use of livestock.	Fuel levels and burning regime maintained in accordance with Offset Area Bushfire Management Plan. Vegetation composition not negatively affected by fire regime. Offset area is legally secured as an area of High Conservation Value under section 19F of the <i>Vegetation Management Act 1999</i> .	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. Burn Plans have been prepared by Fireland in accordance with the requirements under the Bushfire Management Plan for the site.	Current outcomes <ul style="list-style-type: none"> BMP prepared and implemented within the offset area. BMP includes comprehensive details on proposed actions. Plan-sized (A3) summary BMP report produced to provide overview for everyday reference for on ground teams, while overarching BMP document remains accessible for review and available for all contractors and staff. The suitably qualified bushfire consultants have continued inspect the offset area and provide proposed burn plans. On-ground fire



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<p>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"> • Installation of firebreaks and fire trails. • Annual inspection and maintenance of firebreaks and access tracks required to achieve compliance with Offset Area Bushfire Management Plan. 				<p>management has not commenced due to unsuitable weather conditions and neighbour complaints.</p> <p><u>Recommendations</u></p> <ul style="list-style-type: none"> • Ongoing • Experienced bushfire contractors to review and confirm bushfire vegetation management methods best suited for the offset site, for inclusion in V2 of the BMP. • Update BMP to produce refined version 2 (V2) including refined bushfire techniques and methods.



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
<ul style="list-style-type: none"> • 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. • 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 Fire Service) and a suitably qualified environmental scientist deem 				



Management Measures	Monitoring Measures	Performance & Completion Criteria	Actions completed	Review of Effectiveness & Recommended Revision
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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.



4. Conclusions and Recommendations

Management activities have been conducted across the site in accordance with the management actions outlined in the Offset Management Plan (OMP) during the five (5) years of monitoring, where practicable. Weed management, bushfire management and vertebrate pest species management activities have been progressed in areas where deemed safe to do so. It is noted that the entirety of the offset area has not been treated for WONS due to safety and access restrictions, and recommendations to amend this in the OMP is advised for consideration as part of this audit report. Once access tracks have been re-instated, associated consultants will be able to complete activities efficiently and safely across the full extent of the site.

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.

In order to ensure safety for all 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 late 2023 – October 2024 further delayed the access track works through the offset site.

The following subsections provide a brief conclusion of the works conducted for each management action as well as recommendations.

WONS Management

Annual weed mapping completed by Saunders Havill across the offset site is used to inform the following years weed management efforts conducted by Bushcare services. Given the safety concerns raised by the land care consultants regarding site access, the offset site has not entirely been treated for WONS.



A number of recommendations have been suggested below to assist in the treatment of WONS across the offset site, including,

- Involving an experienced rehabilitation contractor to review and confirm weed control methods best suited to lantana and other weeds at the offset site, for inclusion in V2 of the WMP.
- Update WMP to produce refined version 2 (V2) including refined weed control techniques and methods and include,
 - updated on ground conditions,
 - history of track and access works,
 - feasible timelines for weed management and control,
 - Treatment timeline to be determined via consultation between experienced weed management contractors, Boral and consultants, and
 - Tabulated timeline of weed area access and control/management.

Rehabilitation and Regeneration

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 is to be supported by safe access for efficient management and to ensure high survival rates of any planted specimens.

A number of recommendations have been suggested below to assist in the rehabilitation and regeneration efforts across the offset site, including,

- Experienced rehabilitation contractors to review and confirm rehabilitation and regeneration methods best suited to the offset site. These details will be included in the V2 of the KHMP.
- Update KHMP to produce refined version 2 (V2) including refined regeneration and rehabilitation techniques and methods and include,
 - updated on ground conditions,
 - history of track and access works, and
 - include feasible timelines for weed management and control

Feral Animal Management

Non-native vertebrate pest monitoring services has been conducted annually by Biodiversity Australia and Saunders Havill within the offset site. Monitoring surveys involved the use of passive infrared monitoring cameras in accordance with the Vertebrate Pest Management Plan (VPMP). During the Year 5 ACR compliance period, Biodiversity Australia conducted targeting pest management services across the offset site.

A number of recommendations have been suggested below to assist in the feral animal management efforts across the offset site, including,



- Experienced feral animal management contractors to review and confirm pest animal control methods best suited to the offset site, for inclusion in V2 of the VPMP.
- Update VPMP to produce refined version 2 (V2) including refined pest animal control techniques and methods and include,
 - updated on ground conditions,
 - history of track and access works,
 - reassessment of motion sensor camera monitoring locations via consultation between experienced feral animal management contractors, Boral and consultants,
 - Tabulated timeline of feral animal monitoring and management.

Koala Habitat Quality Management

The Koala Habitat Management Plan (KHMP) developed by Saunders Havill for the offset area details strategies that will be implemented to achieve koala habitat rehabilitation aims detailed in the OMP, under Management Action 5. Management of WONS has not been completed across the entirety of the offset site due to ongoing access issues. Further, rehabilitation works including proposed planting could also not be completed due to access issues. Saunders Havill ecologists conducted annual habitat quality monitoring of koala habitat utilising the MHQA methodology at six (6) permanent transect locations across the offset site during the Year 4 compliance period. Habitat quality scores remained relatively steady between Year 1, Year 2, Year 3 and Year 4 with only minor variation.

Bushfire Management

Fireland annually completes an inspection of all fire lines across the offset site. The reconstruction of all fire lines was also contracted and commenced in October 2024 however, complaints from neighbouring land to Gold Coast City Council and other regulators enforced a temporary stoppage of fire line work. Following this, wet weather prevented additional work on reconstructing fire lines. While burn plans have been developed by specialised bushfire management consultants, in accordance with the Bushfire Management Plan, no burns have been conducted over the five (5) years of offset area management.

A number of recommendations have been suggested below to assist in the Bushfire management efforts across the offset site, including,

- Experienced bushfire contractors to review and confirm bushfire vegetation management methods best suited for the offset site, for inclusion in V2 of the BMP.
- Update BMP to produce refined version 2 (V2) including refined bushfire techniques and methods.

The overarching recommendations resulting from the audit are:

- 1. Increase resourcing for a period of time over the upcoming ACR year/s to manage weeds in areas of identified potential future infill planting (habitat rehabilitation areas as per the KHMP)**
- 2. Identify areas for infill planting following the intensive weed management efforts**



3. Ensure follow up monitoring of planting locations, as per the timelines specified in KHMP
4. Revise WMP, KHMP, VPMP and BMP where on ground contractor has indicated more effective monitoring/management options
5. Consider completing a risk assessment memo report to ensure there is sufficient justification for considering these updates to the OMP as not constituting a *new or increased impact* on koala.
6. Minor updates to OMP, under condition 12 of the approval, with these minor updates not constituting a *new or increased impact*. Suggested OMP minor updates include:
 - Update projected timelines for weed treatment to be completed across the entire site
 - Remove references to field datasheet records for weed mapping (records best kept as GIS shapefiles and via reporting from contractors)
 - Update planting timeframes
 - Update Table 5 (OMP actions, timing and responsibilities) to specify detail around OMP auditing as part of the annual ACR



5. Appendices

Appendix A

EPBC Act Approval

Appendix B

Approved Offset Management Plan

Appendix C

Minister's Written Approval



Appendix A

EPBC Act approval





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

person to whom the approval is granted	BORAL RESOURCES (QLD) PTY. LIMITED
proponent's ACN	009 671 809
proposed action	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

name and position	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 Project Site as shown in <u>Attachment A</u> .
2. The person taking the action must not clear more than 38 hectares of koala habitat in the Project Site as shown in <u>Attachment A</u> .
3. The person taking the action must implement the Offset Strategy .
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.
5. The person taking the action must not commence the action until the offset area is legally secured .
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 Environmental Management Plan Guidelines , and the EPBC Act Environmental Offsets Policy (2012) and include: <ol style="list-style-type: none">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;detail of the proposed legal mechanism and timeframes for securing the offset area(s);a map of the offset area(s) in relation to other habitats and biodiversity corridors;information about how the offset area(s) provide connectivity with other koala habitat and biodiversity corridors;a description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data;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;performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions;a detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;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.

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.

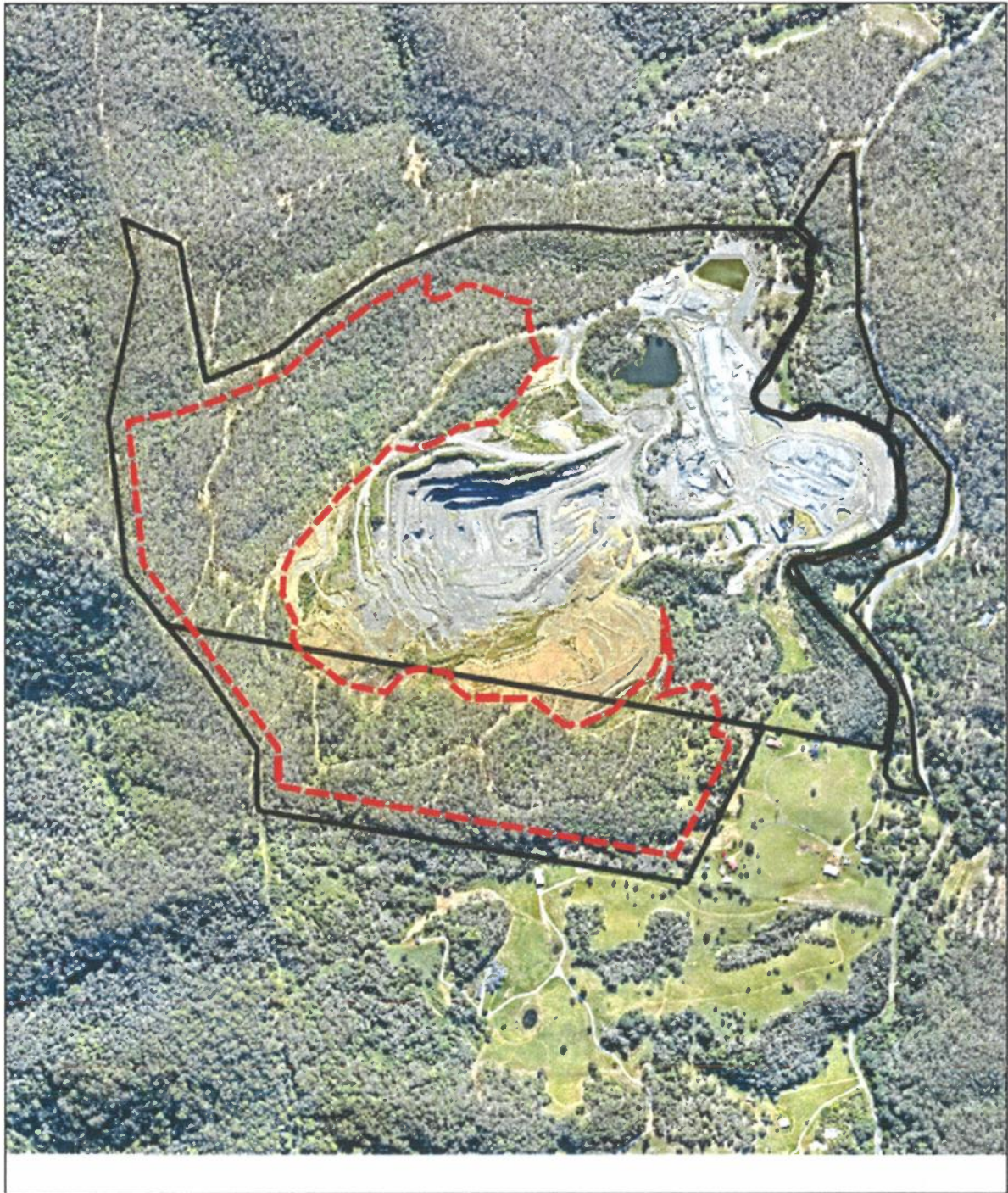
Legally secured: to secure a covenant or similar legal agreement in relation to a site, to provide enduring protection for the site against development incompatible with conservation.

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 1994MGA 256)



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Appendix B

Approved Offset Management Plan





Offset Management Plan

Ormeau Quarry Expansion
Prepared for Boral Resources (QLD) Pty Limited
6 December 2018

EPBC 2016/7797
Job No. 8354

Build something great™



Declaration of Accuracy

In making this declaration, I am aware that section 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth).

The offence is punishable on conviction by imprisonment or a fine, or both.

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.

An extract of section 491 of the EPBC Act is attached.

Signed: 

Full Name: Russel Wilson

Organisation: Boral Resources (Qld) Ltd Pty

Date: 09/11/2018

491 Providing false or misleading information to authorised officer etc.

- (1) A person is guilty of an offence if the person:
 - (a) provides information or a document to another person (the *recipient*); and
 - (b) knows the recipient is:
 - (i) an authorised officer; or
 - (ii) the Minister; or
 - (iii) an employee or officer in the Department; or
 - (iv) a commissioner;
performing a duty or carrying out a function under this Act or the regulations; and
 - (c) knows the information or document is false or misleading in a material particular.
- (2) The offence is punishable on conviction by imprisonment for a term not more than 1 year, a fine not more than 60 penalty units, or both.

Note: Subsection 4B(3) of the *Crimes Act 1914* lets a court fine a body corporate up to 5 times the maximum amount the court could fine a person under this subsection.

Executive summary

The Ormeau Quarry Expansion was referred under the *Environment Protection and Biodiversity Conservation Act* (EPBC Act) on 13 October 2016 and subsequently declared a “Controlled Action” requiring assessment by “Preliminary Documentation” pursuant to section 18 and 18A (*listed threatened species and communities*) (EPBC Act reference 2016/7797). Approval was issued on 14 February 2018. The trigger for the controlling provision was due to potential impacts on the Koala (*Phascolarctos cinereus*), which is listed as ‘vulnerable’ under the EPBC Act.

As part of the application process and in consultation with **Department of the Environment and Energy** (DoEE), an offset strategy was developed to compensate for the impacts from clearing 38 hectares of habitat critical to the survival of the Koala (Environmental Offset Strategy dated 31 January 2018 by Saunders Havill Group).

Condition 6 of the approval requires that the approval holder must submit an Offset Management Plan for the Minister's written approval. The Offset Management Plan must be prepared in accordance with the DoEE's Environmental Management Plan Guidelines, and the EPBC Act Environmental Offset Policy (2012) and include:

- a) Detail of the offset area(s) required to address the loss of 38 hectares of koala habitat consistent with the Offset Strategy (Environmental Offset Strategy dated 31 January 2018 by Saunders Havill Group) or subsequent Offset Strategy described in Condition 4.
- b) Detail of the proposed legal mechanism and timeframes for securing the offset area(s).
- c) A map of the offset area(s) in relation to other habitats and biodiversity corridors.
- d) Information about how the offset area(s) provide connectivity with other koala habitat and biodiversity corridors.
- e) A description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data.
- f) 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.
- g) Performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions.
- h) A detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria.
- i) 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 bushfire management plan and a pest species management plan.

The offset proposal included the dedication and rehabilitation of 77 hectares of vegetation constituting Koala habitat.

This Offset Management Plan has the purpose of providing high level guidance for the creation and implementation of offset mechanisms. The primary offset mechanisms include:

- The dedication as an offset of 77 hectares of vegetation constituting Koala habitat within the land identified on Cliff Barrons Road, Kingsholme.
- Rehabilitation and revegetation works to improve the condition of the offset area.
- Implementation of management plans for:
 - Weeds of national significance
 - Pest management (feral and unwanted dog usage)
 - Maintaining koala habitat
 - Bush fire
- Monitoring and reporting to ensure that the offset area achieves and maintains the completion criteria.
- Adaptive management is applied to mitigate unforeseen risks and incorporate new information as it becomes available.
- Putting in place legal mechanisms available through Queensland legislation to secure the offset area by a Voluntary Declaration.

The implementation of these offset mechanisms will create a self-sustaining, continuous conservation area of high quality Koala habitat.

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1. Introduction

The *Environmental Management Division* of **Saunders Havill Group** was engaged by **Boral Resources (QLD) Pty Ltd** to prepare an Offset Management Plan for the Ormeau Quarry Expansion, located at Kingsholme in South East Queensland. The proposal is for the 38 hectare expansion of the Ormeau Quarry.

The Ormeau Quarry Expansion was referred under the *Environment Protection and Biodiversity Conservation Act* (EPBC Act) on 13 October 2016 and subsequently declared a “Controlled Action” requiring assessment by “Preliminary Documentation” pursuant to section 18 and 18A (*listed threatened species and communities*) (EPBC Act reference 2016/7797). The trigger for the controlling provision was due to potential impacts on the Koala (*Phascolarctos cinereus*), which is listed as ‘vulnerable’ under the EPBC Act.

As part of the **Department of the Environment and Energy’s** (DoEE) Preliminary Documentation requirements, a proposal was developed to compensate for the impacts from clearing 38 hectares of habitat critical to the survival of the Koala. This offset was approved by a delegate of the Minister as part of the EPBC Act approval for 2016/7797. The offset includes the dedication and rehabilitation of 77 hectares of vegetation constituting Koala habitat.

The project was approved under the EPBC Act subject to conditions on 16 February 2018 with effect until 8 November 2057. Condition 6 of the approval requires that the approval holder must submit an Offset Management Plan for the Minister’s written approval. The Offset Management Plan must be prepared in accordance with the DoEE’s Environmental Management Plan Guidelines, and the EPBC Act Environmental Offset Policy (2012) and include:

- a) Detail of the offset area(s) required to address the loss of 38 hectares of koala habitat consistent with the Offset Strategy (Environmental Offset Strategy dated 31 January 2018 by Saunders Havill Group) or subsequent Offset Strategy described in Condition 4.
- b) Detail of the proposed legal mechanism and timeframes for securing the offset area(s).
- c) A map of the offset area(s) in relation to other habitats and biodiversity corridors.
- d) Information about how the offset area(s) provide connectivity with other koala habitat and biodiversity corridors.
- e) A description of the current condition (prior to any management activities) of the offset area(s), including baseline survey data.
- f) 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.
- g) Performance and completion criteria for evaluating the management of the offset area(s), and detailed criteria that will trigger corrective actions.
- h) A detailed program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria.

- i) 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 bushfire management plan and a pest species management plan.

The action cannot commence until the Offset Management Plan is approved by the Minister in writing and the offset area is legally secured.

This Offset Management Plan (OMP) has been developed to satisfy the requirements of the conditions of approval accompanying the controlled action determination and the *EPBC Act Environmental Offsets Policy (2012)* to guide the implementation and management of offset activities.

1.1. Offset site summary

The offset site is located on Boral-owned land at Cliff Barrons Road, Kingsholme (Lot 2 on RP15912) approximately 1.7 km north of the expansion site. The site context in relation to the expansion is shown Figure 1 and an aerial shown on Figure 2.

Table 1: Offset site summary

Address	Cliff Barrons Road, Kingsholme
Lot / Plan	L2/RP15912
Area	77 hectares
Tenure	Freehold
Local government area	Gold Coast City Council
Action commencement date	Third or Fourth Quarter 2018

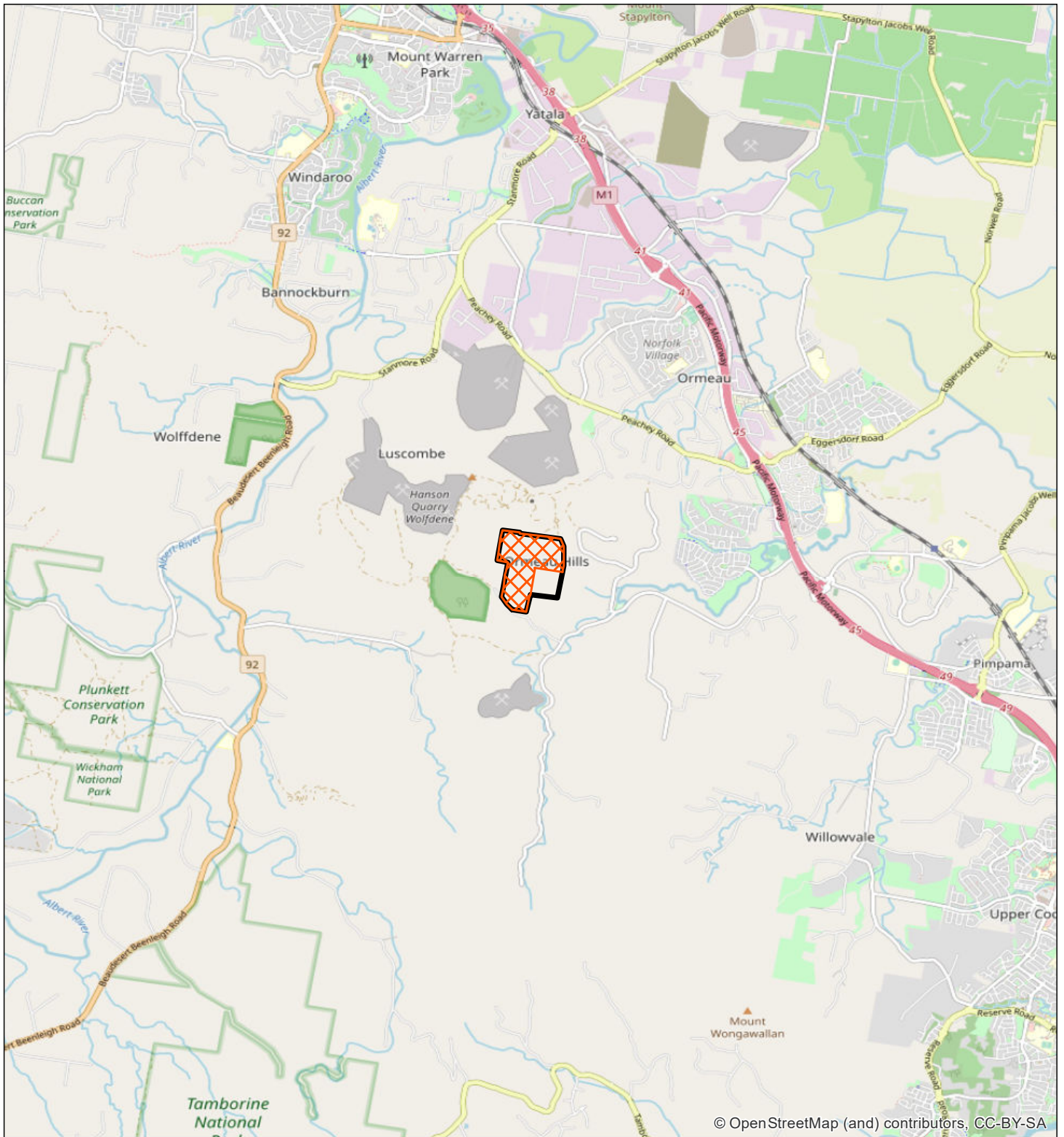
1.2. Environmental outcomes and objectives

In accordance with the EPBC Act approval, the environmental outcomes to be achieved through implementing the Offset Management Plan (OMP) for the offset area are:

- Maintain koala habitat quality across the offset site which is measured as a condition value of 8 out of 10.
- Rehabilitation and revegetation of disturbed non-remnant areas within the offset area.
- Implementation of a vegetation management plan to ensure the integrity of existing remnant vegetation is maintained.
- Facilitate adaptive management of the offset area including the nomination of milestone targets and a monitoring program.
- Annual compliance reporting detailing the implementation of management measures and achievement towards, and maintenance of, performance and completion criteria.

The management objectives for the offset area, in alignment with the EPBC Act Environmental Offsets Policy will:

- Deliver an overall conservation outcome that improves the viability of habitat for the koala.
- Provide a direct offset that is in proportion to the level of statutory protection that applies to koala habitat.
- Be of a size and scale proportionate to the residual impacts on koala habitat.
- Effectively account for and manage the risks of the offset not being successful with the required management timeframe.
- Provide a conservation gain additional to what is already required by a duty of care or to any environmental planning laws at any level of government.
- Be efficient, effective, timely, transparent, scientifically robust and reasonable with appropriate transparent governance arrangements in place for measuring, monitoring, auditing and enforcing the management of the offset area.



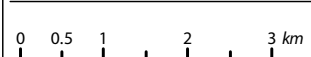
© OpenStreetMap (and) contributors, CC-BY-SA

Legend

-  Offset site
-  Offset area

Figure 1
Site Context

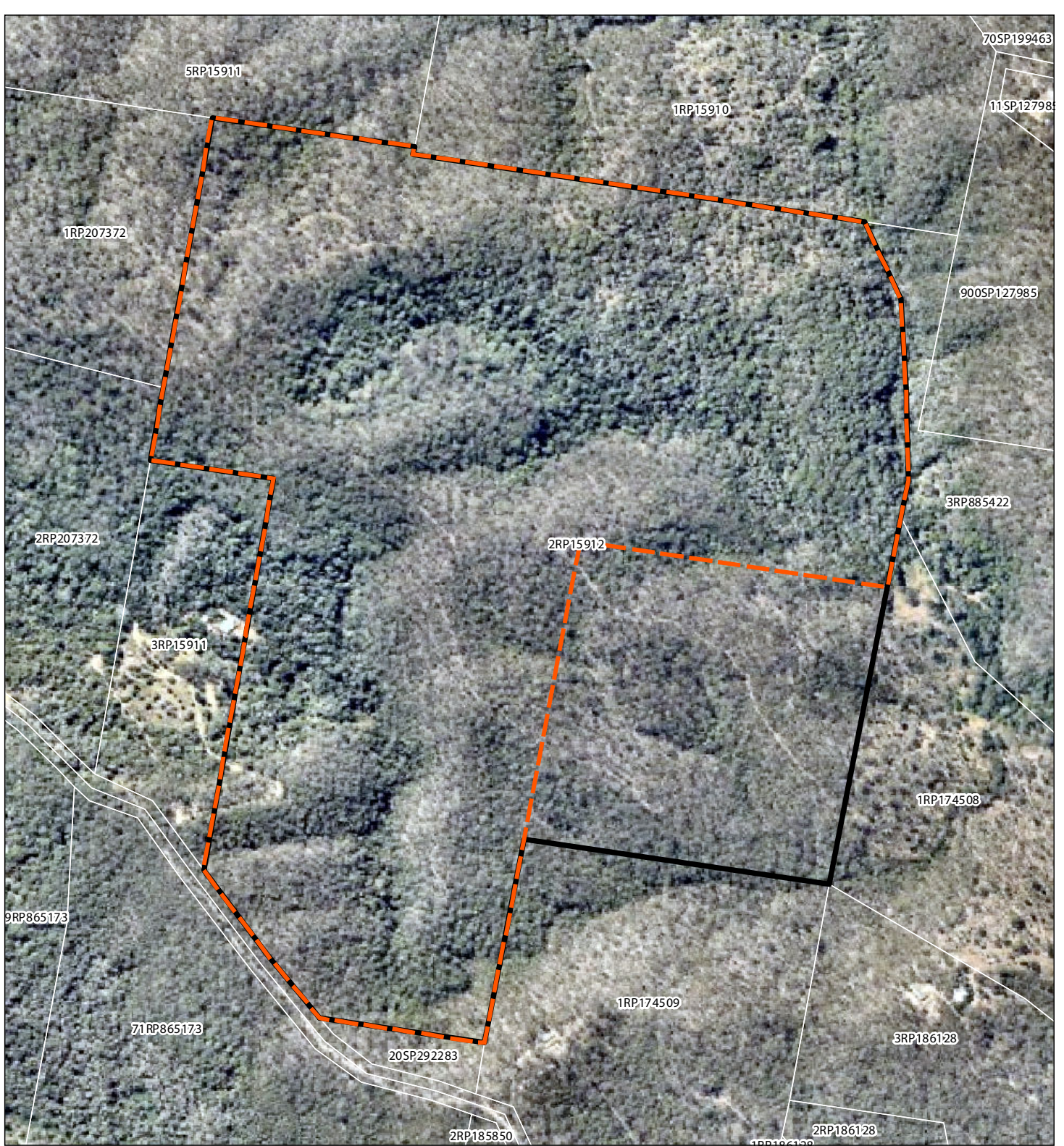
File ref. 8354 E Figure 1 Site Context B
Date 26/10/2018
Project Ormeau Quarry (EPBC No. 2016/7797)



Scale (A4): 1:90,000 [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 DRAWING BY ANY THIRD PARTY.

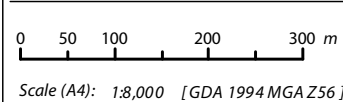


Legend

-  Offset site
-  Offset area
-  Qld DCDB

Figure 2
Site Aerial

File ref. 8354 E Figure 2 Site Aerial B
Date 26/10/2018
Project Ormeau Quarry (EPBC No. 2016/7797)



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2. Offset property values

2.1. Bioregional context

Queensland has been sub-divided into thirteen (13) biogeographical areas to identify biodiversity features at a regional scale. The offset area is located in the south-east Queensland (SEQ) Bioregion. The SEQ Bioregion shares its western boundary with the Brigalow Belt Bioregion, and extends from the Border Ranges on the New South Wales border, north to the dry coastal corridor between Gladstone and Rockhampton (DEHP 2016). The McPherson Range borders the southern boundary of the bioregion while the Great Dividing Range is to the west. Ranges extend north south through the central region creating an altitudinal gradient from the coast. Small volcanic plugs remain in the landscape offering distinctive conditions for taxa and ecosystems (DEHP 2016). Large sand islands off the coast offer unique environments and create sheltered bays and passages within which marine and coastal plants and animals thrive (DEHP 2016).

2.2. Offset area values

The offset area forms part of the SEQ regional biodiversity corridor which spans from the Noosa headland in the north, down to Mount Barney and Lamington National Park on the Queensland border. The SEQ regional biodiversity corridor aims to encompass large tracts of vegetation, terrestrial connectivity, aquatic connectivity, species richness, diversity and refugia, ecosystem representation and uniqueness and climate resilience areas (Queensland Government 2017).

The SEQ biodiversity corridor forms part of the Great Eastern Ranges (GER) terrestrial corridor which extends from the mountains of Victoria to the Atherton Tablelands in far north Queensland (Mackay, Watson & Worboys 2010). The GER corridor provides habitat and movement for a range of species that have Federal, State and Local significance, supports significant cultural heritage values and offers scenic amenity and outdoor recreation opportunities (Mackay *et al.* 2010).

The offset area will conserve freehold land within the SEQ biodiversity corridor, linking habitat incorporating legally bound environmental offset areas associated with adjacent quarrying activities to the north and east with National Parks and reserves to the south. Without this linkage, the offset site is likely to have been developed into a quarry and would have further fragmented the SEQ regional biodiversity corridor. Further, this linkage provides a valuable contiguous habitat corridor, ensuring the possibility of habitat fragmentation is minimised and improving the connectivity of koala habitat within SEQ. The offset area possesses high conservation value and through the management actions proposed in this OMP, the property will provide biodiversity offsets that ensure an ecological gain on the residual impacts resulting from the impact site which aligns with offset principle 1 of the EPBC Act Environmental Offsets Policy.

2.3. Koala offset area calculation

As per condition 2 of the EPBC approval (2016/7797), the proponent must not clear more than 38 hectares of koala habitat within the project site. The Offset Assessment Guide calculator (DoEE 2012) was used in consultation with DoEE to identify 77 hectares of habitat critical to the survival of the koala is required to offset

the impact. The details of how this offset area was identified is outlined in the Environmental Offset Strategy which has been included as **Appendix A**.

The offset area calculation has been determined through the use of the Koala Habitat Assessment Tool (KHAT) scores for the impact site and proposed offset site, derived according to methodology in 'EPBC Act referral guidelines for the vulnerable koala' (DoEE 2014). The key indicators for determining a koala habitat score of a land based impact site or an offset site are:

- Koala occurrence – Evidence of koala activity.
- Vegetation composition – Forest or woodland with two (2) or more known koala food tree species.
- Habitat connectivity – The area forms part of a contiguous landscape.
- Key existing threats – Evidence of koala mortality from vehicle strike or dog attack.
- Recovery value – Likelihood that the area is important for achieving the interim recovery objectives.

Implementation of the KHAT (DoEE 2014) to determine the quality of koala habitat at the impact and offset sites resulted in a score of 7 out of 10 for the impact site and a score of 8 out of 10 for the offset site. The offset site is expected to maintain a habitat quality score of 8 out of 10 for the lifetime of the offset through the implementation of rehabilitation and management measures over the period of EPBC Act approval and legally binding the land via a voluntary declaration (VDEC).

2.4. Koala habitat offset area

Evidence of koala was identified during ecological surveys utilising the Spot Assessment Technique (SAT) survey and scat meander as per Phillips & Callaghan (2011). The offset site is within a contiguous polygon of regional ecosystems mapped by the Department of Environment and Science (DES). The regional ecosystems within the offset site consist of two (2) 'least concern' (RE12.11.5 and RE12.11.3) regional ecosystems. Refer to **Table 2** for the short technical descriptions of the regional ecosystems and **Figure 3** regional ecosystem mapping. The offset site is predominantly mapped as 'remnant' vegetation, with the dominance of *eucalyptus*, *corymbia* and *angophora* species ensuring the presence of suitable koala food and shelter trees.

Ecological field surveys were undertaken by Saunders Havill Group over 2 days in September and October 2015. Findings from the field surveys include:

The majority of the site is mapped as containing remnant vegetation consistent with the regional ecosystem mapping. Three regional ecosystems (RE12.11.3, RE12.11.5 and RE12.11.10) are mapped as occurring within the subject site.

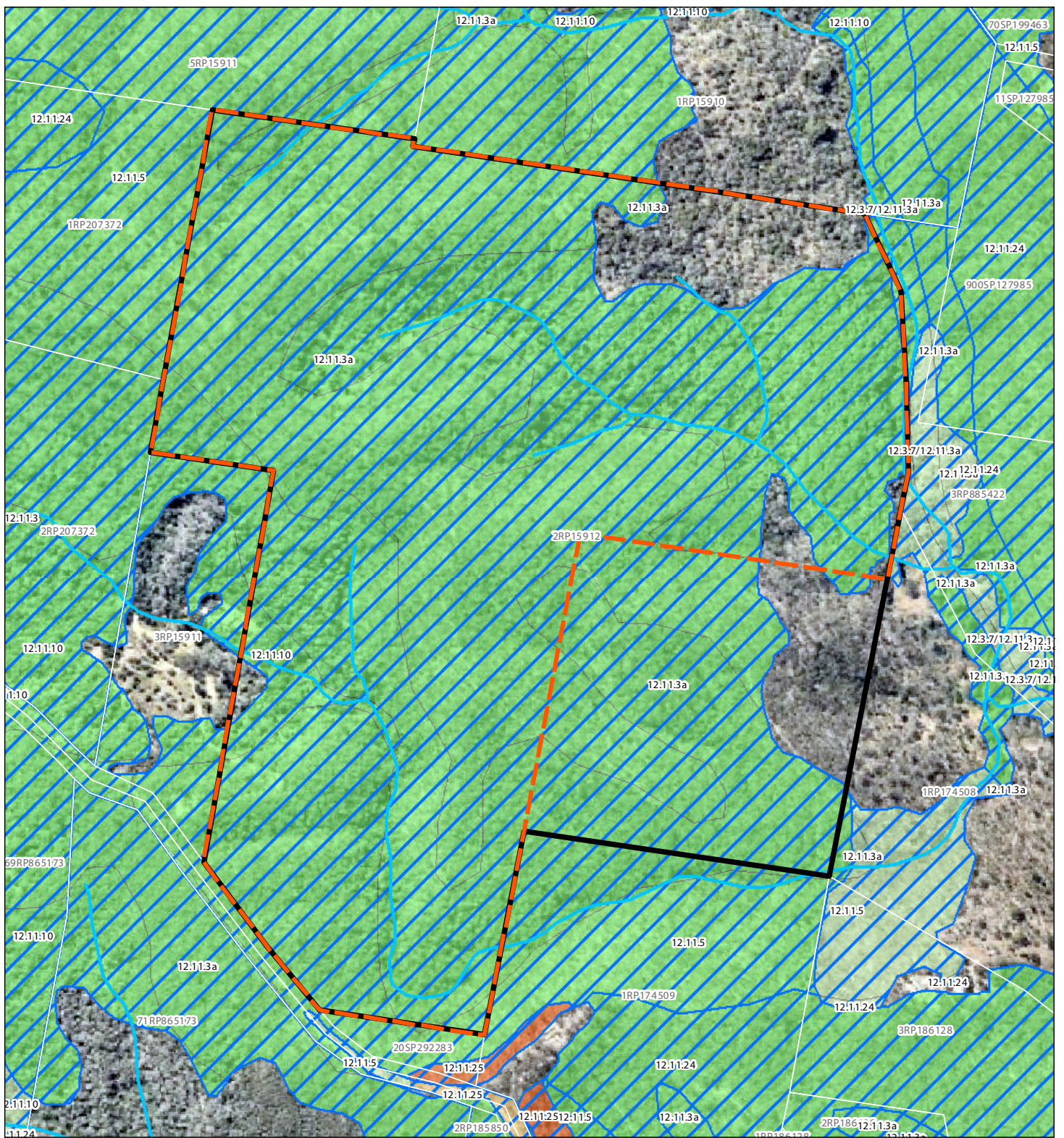
- Vegetation was dominated by Eucalyptus and Corymbia species and made up the largest proportion of vegetation within the assessment area.
- RE 12.11.10 was observed in the south western portion of the site. RE 12.11.10 is described as Notophyll vine forest +/- Araucaria cunninghamii on metamorphics +/- interbedded volcanics. This regional ecosystem is also associated with the "Lowland rainforest of Subtropical Australia" threatened ecological community.

- The area mapped as RE 12.11.10 also contained specimens of *Brachychiton sp.* (Mt Ormeau bottle tree) which is protected under the EPBC Act and *Macadamaia integrifolia* (Macadamia Nut) which is protected under State legislation.
- In general, the majority of the site is consistent with Eucalypt and Corymbia woodlands/forests that would be generally utilised by *Phascolarctos cinereus* (Koala). No koalas were spotted during surveys however numerous scats were observed in low densities throughout the site suggesting that resident koalas may be located within the investigation area.
- Weed infestation within the site was relatively low however patches of *Lantana camara* (Lantana) were observed in places which would impede koala movement.
- A number of old overgrown and eroded tracks traverse the ridgelines throughout the property. Evidence of historical logging was also observed in some locations.
- A number of these tracks and other areas through the site contain barbed wire fencing, which would impede fauna movement.
- Two (2) bitumen roads are located to the south and the east of the property.
- A few areas throughout the property contain non-remnant vegetation. The regrowth vegetation observed was consistent with vegetation associated with RE 12.11.3/12.11.5.







Field surveys identified that non remnant areas contained vegetation in good condition that would be considered critical koala habitat as defined by the EPBC Act. The survey also found that, while generally in good condition, the site had been impacted in areas by logging, and weed incursion. Refer to **Appendix B** for the Offset Site Baseline Report including data from terrestrial habitat transects carried out at the site.

Table 2: Regional ecosystem short descriptions

Regional ecosystem community	VMA status	Short description
12.11.5	Least Concern	<i>Corymbia citriodora subsp. variegata</i> woodland to open forest +/- <i>Eucalyptus siderophloia</i> / <i>E. crebra</i> , <i>E. carnea</i> , <i>E. acmenoides</i> , <i>E. propinqua</i> on metamorphics +/- interbedded volcanics.
12.11.3	Least Concern	<i>Eucalyptus siderophloia</i> , <i>E. propinqua</i> +/- <i>E. microcorys</i> , <i>Lophostemon confertus</i> , <i>Corymbia intermedia</i> , <i>E. acmenoides</i> open forest on metamorphics +/- interbedded volcanics.
12.11.10	Least Concern	<i>Notophyll vine forest</i> +/- <i>Araucaria cunninghamii</i> on metamorphics +/- interbedded volcanics.
Non Remnant	None	None



Legend

-  Offset site
-  Offset area
-  Qld DCDB
-  VM Watercourses
-  VM Essential Habitat
-  VM Wetland

Regional Ecosystems mapping







-  Category A or B area containing endangered regional ecosystems
-  Category A or B area containing of concern regional ecosystems
-  Category A or B area that is a least concern regional ecosystem
-  Category C area containing endangered regional ecosystems
-  Category C area containing of concern regional ecosystems
-  Category C area that is a least concern regional ecosystem

Figure 3
Regulated Vegetation Supporting Map

File ref. 8354 E Figure 3 RVSM B
Date 26/10/2018
Project Ormeau Quarry (EPBC No. 2016/7797)

0 50 100 200 300 m

Scale (A4): 1:8,000 [GDA 1994 MGA Z56]



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3. Offset area management

3.1. Offset area management measures

This section describes the management actions and measures necessary to meet the identified environmental outcomes of the offset area. The management measures are designed to minimise the risks associated with key threatening processes to the koala and maintain the quality of the habitat within the offset area.

Although the management measures have been developed to achieve the required koala offset environmental outcomes as a priority, they will bring an overall improvement in the condition and quality of a wide range of native species present within the offset area.

The measures outlined below are deemed to be suitable given the listed status of the koala, the size and scale of the offset and the focus on priority management actions, which are efficient, effective, timely and transparent (i.e. able to be monitored and are auditable). Additionally, a number of these measures correspond to Priority Management Actions outlined in the *Approved Conservation Advice for Phascolarctos cinereus (combined populations of Queensland, New South Wales and the Australian Capital Territory) (koala Northern Designatable Unit)* (Conservation Advice).

3.1.1 Management Action 1 – weeds of national significance (WONS) management plan

The control of weeds is fundamental to improving biodiversity and the ecological condition of the koala habitat within the offset area. The historical land uses across the offset area have resulted in the introduction, spread and persistence of a variety of environmental weeds (SHG 2017). Whilst there have been a wide variety of environmental weeds recorded across the site, the key species to be controlled in the offset area in regard to koala habitat values is *Lantana camara* (Lantana), a Weed of National Significance (WONS). The listing and prioritisation of WONS is a joint initiative of the States, Territories and Australian Government and their long-term control is of national interest.

It is not possible to remove lantana from the offset area on a single occasion, as there will be a persistent seed bank that can remain viable for long periods of time. Germination can occur rapidly after the parent plant has been removed due to increases in light and resource availability. It is therefore important that the offset area is revisited following the initial treatment for follow-up weed control and to prevent seed set and dispersal. Baseline weed mapping will be conducted before the weed removal program is initiated. Weed mapping is then to be conducted annually and reported in the Annual Compliance Report (ACR). The measures for the control of WONS, specifically Lantana will include:

- Baseline weed mapping for WONS 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.
- All identified WONS will be treated within 12 months of commencement of the action.

- 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:
 - comprehensive monitoring for WONS will be conducted;
 - WONS that are reported or detected by comprehensive monitoring will be treated.
- A suitably qualified bush regeneration contractor will be engaged to undertake the necessary weed control.
- Control of infestations will utilise techniques that avoid disturbance to surrounding areas.

3.1.2 Management Action 2 – rehabilitation and regeneration management plan

Rehabilitation and regeneration is a key action that will improve existing koala habitat values within the offset area, while also expanding habitat values in areas that have been subject to weed infestation issues. It also is a Priority Management Action listed under “Habitat Loss, Disturbance and Modification” of the Conservation Advice for the koala. Rehabilitation aims to reinstate existing degraded areas and areas exposed as a result of management action 1 (weed removal), with koala food and shelter trees consistent with the mapped regional ecosystem in that specific location.

Within the mapped remnant areas, natural regeneration is preferred to reconstruction of the vegetation community (i.e. importation of soil, dense planting, etc). Where natural regeneration is unsuccessful minor infill planting will be implemented to facilitate recovery. Barbed wire will also be removed from fences located in areas of koala habitat, or areas where koala are likely to traverse. Evidence of rehabilitation and the success and survival rate will be reported annually within the ACR.

Management measures for rehabilitation and regeneration include:

- 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.
- Rehabilitation areas are to consist of one canopy tree per 10m², three shrubs per 10m² and one groundcover per 2m². Where natural regeneration is the preferred approach, infill planting will be implemented where regeneration has been unsuccessful after three years.
- All rehabilitation activities are to be carried out by a suitably qualified bush regeneration contractor.
- The plants reinstated in any particular location must be consistent with the mapped regional ecosystem or pre-clear regional ecosystem over that area.
- 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.

3.1.3 Management Action 3 – legally securing the offset area

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.

Legally securing the offset area is listed in the Conservation Advice as a Priority Management Action, under “Habitat Loss, Disturbance and Modification”.

3.1.4 Management Action 4 – pest management (feral and unwanted dog usage) plan

Feral or unwanted domestic dogs have been identified as a key threatening process under the EPBC Act, and are confirmed as a direct predation risk to Koalas. Managing animal predation is listed as a Priority Management Action under the koala Conservation Advice. The control and prevention of invasive animal incursions is to be undertaken in accordance with the relevant legislation (such as the Commonwealth *Biosecurity (Consequential Amendments and Transitional Provisions) Act 2015* and the Queensland *Biosecurity Act 2014*) and to include the control of pest animals by legal methods by suitably qualified pest management contractor(s). Any required hazardous materials must be handled and stored in accordance with the material's safety data sheets and the Approved Code of Practice for the Storage and Handling of Dangerous Goods. Pest animal control is to be undertaken in a humane manner. Annual pest monitoring is to be reported and included in the ACR.

Management measures for the control of feral or unwanted domestic dogs across the offset area include:

- 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.
- 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.
- 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.
- Install appropriate signage informing the area is under feral control.

3.1.5 Management Action 5 – koala habitat quality management plan

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.

A habitat quality monitoring assessment, including koala specific habitat attributes will be conducted in accordance with the published methodology (DEHP 2017) and by a suitably qualified environmental consultant. 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 (refer to Appendix B).

The habitat quality assessment methodology suggests locations for transects should be selected considering mapped Regional Ecosystem (RE) polygons, and size of isolated vegetation patches (assessment units), etc. Sampling sites should be located in areas typical of the assessment unit. The size of the assessment unit guides the number of transects required, as follows:

- Assessment unit size: 0-50 ha = at least two sampling units
- Assessment unit size: 50-100 ha = three sampling units
- Assessment unit size: 100-500 ha = four sampling units
- Assessment unit size: 500-1,000 ha = five sampling units
- Assessment unit size: more than 1,000 ha = six sampling units

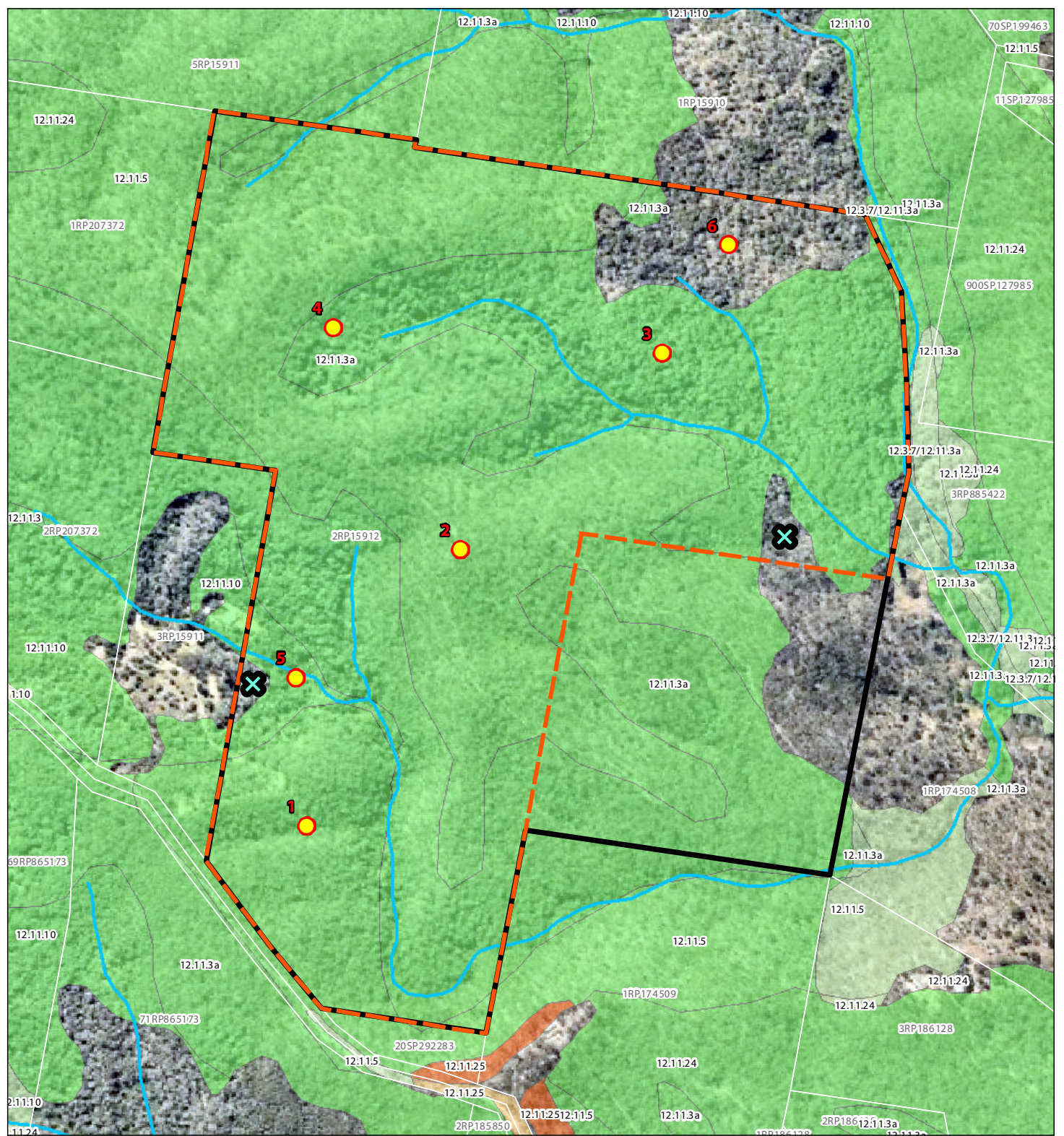
The total area of the offset site is 77 ha consisting of non-remnant vegetation and three REs, which are sized as follows:

- 32.6 ha of RE12.11.3
- 37.5 ha of RE12.11.5
- 1.6 ha of RE12.11.10
- 5.3 ha of non-remnant vegetation

The regional ecosystems and non-remnant vegetation would each form assessment units. While the guidelines suggest two sample sites for each assessment unit RE 12.11.10 and non-remnant vegetation cover a small portion of the site making it impractical to have more than 1 habitat transect in these assessment units. Non-remnant vegetation is split over three separate geographic locations within the offset area therefore observation sites will be carried out in areas

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.

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. Indicative transect and SAT locations are shown on **Figure 4**.



Legend

- Offset site
 - Offset area
 - Qld DCDB
 - Habitat transects and koala SAT locations
 - Habitat observation site
 - VM Watercourses
- Regional Ecosystems mapping**
- Category A or B area containing endangered regional ecosystems
 - Category A or B area containing of concern regional ecosystems
 - Category A or B area that is a least concern regional ecosystem
 - Category C area containing endangered regional ecosystems
 - Category C area containing of concern regional ecosystems
 - Category C area that is a least concern regional ecosystem

Figure 4

Regulated Vegetation Supporting Map and Koala Transects

File ref. 8354 E Figure 4 RVSM and Koala B
Date 26/10/2018
Project Ormeau Quarry (EPBC No. 2016/7797)

0 50 100 200 300 m

Scale (A4): 1:8,000 [GDA 1994 MGA Z56]



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3.1.6 Management Action 6 – bush fire management plan

An Offset Area Bushfire Management Plan (BMP) will be developed within 12 months of the offset being legally secured, for the purpose of protecting the offset area from high intensity wildfires as well as for conducting ecological burns with the aim to enhance biodiversity in line with the Regional Ecosystem Description Database fire management guideline.

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.

Management measures will be outlined in the BMP for the control of bush fire across the offset area but will include:

- Installation of firebreaks and fire trails.
- Annual inspection and maintenance of firebreaks and access tracks required to achieve compliance with Offset Area Bushfire Management Plan.
- 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.
- 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 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 re-assessed by the aforementioned professionals following the grazing event.

3.2. Risk assessment

A qualitative risk assessment which considers the risks of achieving the objectives and outcomes for the offset site is presented in **Table 3**. The risk assessment is completed in accordance with the EPBC Act Environmental Management Plan Guidelines (2014) and characterises risk as low, medium, high or severe, as derived from the likelihood (highly likely, likely, possible, unlikely, rare) and consequence (minor, moderate, high, major and critical) risk matrix.

The risk analysis assesses the risk of failure to achieve the OMPs management objectives. It is necessary to re-evaluate and modify the risk analysis and contingency measures throughout the period of EPBC Act approval, particularly if any unforeseen risks emerge or any negative outcomes identified are greater than expected.

During the first five (5) years of monitoring and annual compliance reporting, **SHG/Boral** will review management commitments in this plan, and if the review results in the need to revise the OMP, the plan will be revised and the DoEE informed in writing in accordance with the condition 12 of the approval. It is noted that events are only addressed once in the risk assessment under the most relevant management objective, however some events are likely to impact on multiple management objectives.

Table 3: Risk assessment for the management objectives

Management objective	Event or consequence*	Likelihood	Consequence	Risk level	Trigger	Contingency/s	Related monitoring activity
Maintain or improve habitat quality score	Unplanned fire causing degradation of habitat quality through the loss of native plant diversity and abundance within the offset area.	Unlikely	High	Medium	Unplanned fire outbreaks.	In the event of an unplanned fire adversely impacting the offset area, fire management measures will be reviewed in consultation with GCCC and Queensland Fire Services.	Ongoing during the monitoring and maintenance of the offset area and the annual monitoring of the replanting and regeneration.
	Unauthorised access and use of the offset area by 4WD, trail bikes and ATVs, resulting in degradation of habitat within the offset area.	Unlikely	Minor	Low	Evidence of unauthorised access, such as tracks, soil disturbances, rubbish, damaged barrier fencing or degradation to native vegetation.	Investigate the entry location, with GPS points and photographs noting tyre tracks and damage circumventing barrier structures. Repairable damage is to be remediated as soon as possible, however where a barrier is in disrepair and unable to prevent access, the barrier is to be replaced within 30 days of detection. Review and audit the control measures and the timing and frequency of the management actions.	Ongoing during the monitoring and maintenance of the offset area and the annual monitoring of the replanting and regeneration.
	Habitat quality score decreases from baseline score	Unlikely	Moderate	Low	Monitoring and ACR identifies that the habitat quality score has decreased from the baseline score, or an unplanned event causes significant damage to offset area.	Investigate cause of decrease in score. Repairable damage is to be remediated. Review and audit the control measures and the timing and frequency of the management actions. Replanting of lost stock to ensure specified densities are met.	Ongoing during the monitoring and maintenance of the offset area and annual monitoring.

Management objective	Event or consequence*	Likelihood	Consequence	Risk level	Trigger	Contingency/s	Related monitoring activity
Control WONS	Increase in WONS infestations, specifically Lantana.	Unlikely	Minor	Low	Annual weed mapping indicates that weed coverage percentage has increased by Year 5.	Investigate cause of WONS infestation. Remedial action will include revising the control measures for the species and revising the timing and frequency of the management action.	Annual weed monitoring.
	WONS infestations inhibiting the maintenance of ecological condition and habitat quality score.	Unlikely	Minor	Low	Annual weed mapping indicates that weed coverage percentage has increased by Year 5.	Investigate cause of WONS infestation. Remedial action will include revising the control measures for the species and revising the timing and frequency of the management action.	Annual weed monitoring.
Replanting and regeneration	High rainfall or flood events create exacerbated areas of erosion and degradation habitat quality in rehabilitation areas.	Possible	Minor	Low	Evidence of new sheet or gully erosion within the offset area. Or, the loss of revegetation stock utilised to stabilise identified erosion points.	Promote vegetation establishment and stabilisation through the use of alternative rehabilitation measures (i.e. jute matting). Replanting of lost stock to ensure specified densities are met.	Inspect access tracks, creek line crossings and internal creek lines within seven (7) days following high rainfall or flood events and when it is safe to do so.
	Newly planted areas do not establish as expected	Unlikely	Moderate	Low	Monitoring and ACR identifies that replanted areas are not achieving establishment criteria, or an unplanned event causes significant damage to vegetation.	Investigate cause of issue. Repairable damage is to be remediated as soon as possible. Review and audit the control measures and the timing and frequency of the management actions. Replanting of lost stock to ensure specified densities are met.	Ongoing during the monitoring and maintenance of the offset area and the annual monitoring of the replanting and regeneration.
Control predation	Presence of foxes, feral and unwanted dog usage within the offset area.	Unlikely	Moderate	Low	Annual pest monitoring indicates the presence of feral or unwanted dogs.	Increase the level of targeted trapping and baiting by a suitably qualified pest management	Annual pest monitoring and reporting.

■ Offset Management Plan

Management objective	Event or consequence*	Likelihood	Consequence	Risk level	Trigger	Contingency/s	Related monitoring activity
						contractor. Review and audit the invasive animal control measures to evaluate their effectiveness and revise the measures accordingly.	
	Predation of koalas by feral or unwanted dogs.	Unlikely	Moderate	Low	Evidence of predation on Koala by dog, or annual pest monitoring indicates the presence of feral or unwanted dogs.	Increase the level of targeted trapping and baiting by a suitably qualified pest management contractor. Review and audit the invasive animal control measures to evaluate their effectiveness and revise the measures accordingly.	Annual monitoring and pest reporting.

3.3. Monitoring

The following program describes the monitoring activities that will occur within the offset area. The monitoring approach has been developed to assess success of the management actions to maintain the overall biodiversity and habitat values of the offset area.

The following monitoring methodologies have been designed to measure the effectiveness of the management actions in maintaining koala habitat quality.

The monitoring objectives directly relate to determining whether the management objectives are being achieved, that is, whether there has been:

- Ecological gain or maintenance within the koala offset area.
- WONS and pest animal activity as per **Section 3.4.1** and **Section 3.4.4**, successful controlling actions and subsequent benefit to the koala offset area.
- Increased habitat quality and if it has been maintained or improved, as per **Section 3.4.5**.

3.3.1 Management Action 1 monitoring

The presence of WONS in the offset area will be monitored annually commencing in 2019 until they are not observed, at which point monitoring will be carried out every 2 years. The monitoring will be undertaken during the same time of year, each year, to ensure that the timing is consistent and aligns with the baseline assessment. The following procedures will be implemented to ensure that the annual monitoring event aligns with the baseline monitoring methodology:

- GPS locate the presence of weeds either via a GPS waypoint or where a large weed infestation is present, create a GPS polyline and walk the extent of the infestation.
- On a field datasheet, detail the time of year of the monitoring event, list of observed WONS, photo location and direction and notes of any notable positive and/or negative changes in weed density and coverage.
- Carry the previous year's weed survey mapping, field datasheet and photos for noting changes in weed infestations and densities.
- Transfer GPS data to the necessary programs to generate weed survey mapping extent and collate all data in excel spreadsheets and save all digital photos to file for ongoing monitoring purposes.

3.3.2 Management Action 2 monitoring

The progress and success of the koala habitat rehabilitation will be monitored annually. The monitoring timing is dependent on the planting cycle of the engaged bush regeneration contractor. Once planting has been completed, the engaged suitably qualified environmental consultant will be notified. Photo point monitoring and GPS locational and extent survey will be utilised.

The co-ordinates of the initial photo monitoring will be recorded using the handheld GPS which will assist to locate the monitoring point when undertaking subsequent monitoring. Photo point monitoring is to be undertaken annually at the same time of the year, post the rehabilitation works.

The photos provide the baseline imagery to compare future photo point monitoring and to ensure the integrity of the fence. A record of the photos will be maintained which includes:

- GPS co-ordinates of the photo point.
- Date, time and number of each photo.
- Direction in which the photo was taken (north, south, east and west).

After each photo monitoring event, a GPS waypoint of the location of the rehabilitation and a GPS polyline of the extent will be recorded. The following elements will be noted on a field datasheet:

- The success of the rehabilitation stock (a physical count of alive plants in the ground).
- The average health of the rehabilitation stock.
- The average height of the rehabilitation stock.
- The presence of weeds within the rehabilitation extent.
- Natural regeneration of native species.

3.3.3 Management Action 3 monitoring

Management action 3 does not require any specific monitoring as the securing of the site as a legal offset is to be completed via a VDEC, and that registration date of the VDEC will be reported in each annual compliance report.

3.3.4 Management Action 4 monitoring

Pest animal management and monitoring will be undertaken in accordance with the *Biosecurity (Consequential Amendments and Transitional Provisions) Act 2015* (Cwlth) and the *Biosecurity Act 2014* (Qld), which, in general, require all reasonable and practical steps to prevent or minimise biosecurity risks; minimise the likelihood of causing a 'biosecurity event'; and the limitation of consequences if such an event is caused. The control of pest animals will be undertaken using legal methods, by suitably qualified pest management contractor(s). Pest animal control is to be undertaken in a humane manner.

The following pest animal monitoring methodology will be implemented:

- GPSs will be used to locate the presence of pest animals, in particular feral dogs via notable tracks or scats.
- Field datasheet will detail the time of year of the monitoring event, record observed pest animal scats or tracks, photo location and notes of any evidence of positive and/or negative changes in pest animal occurrence.

- Carry the previous year's pest animal survey mapping, field datasheet and photos for noting positive and/or negative changes in pest animal occurrences.
- Transfer GPS data to spatial data programs to generate pest animal occurrences and collate all data in excel spreadsheets and save all digital photos to file for ongoing monitoring and reporting purposes.
- Where pest animal presence is detected, targeted trapping and baiting programs will be implemented on completion of the monitoring program.

Annual pest monitoring will be reported and outcomes of that monitoring included in the ACR. The annual pest management report is to provide detail on detected pests, control efforts, and total trapped/baited individuals during the given management period and identified trends of the population of pest animals within the offset area.

3.3.5 Management Action 5 monitoring

For the first three (3) years and then every five (5) years after that a habitat quality monitoring assessment, including koala specific habitat attributes, will be conducted in accordance with the published methodology (DEHP 2017).

Thirteen field-based ecological condition indicators will be monitored to track the effectiveness and success of the management plan for the koala offset, including:

1. Recruitment of woody perennial species – includes koala canopy feed and shelter tree species.
2. Native plant species richness (trees, shrubs and grasses) – as an indicator of ecological succession and regeneration progress after mitigating ecosystem threats.
3. Tree canopy height – indicates progress towards ecological maturity and increases in Koala habitat availability.
4. Tree canopy cover – indicates progress towards ecological maturity and increases in Koala habitat availability.
5. Shrub canopy cover – indicates progress towards ecological maturity and increases in Koala habitat availability.
6. Native perennial grass cover – which suppresses weeds and thereby encourages recruitment of juvenile eucalypt feed and shelter trees.
7. Organic litter cover – important for surface soil moisture retention, cycling of nutrients and providing interstitial spaces to enhance tree seed germination and growth and recruitment of canopy species including actively-growing Koala feed and shelter species.
8. Large trees per hectare – as a measure of important as shelter trees for Koalas and the production of seeds for recruitment.
9. Coarse woody debris per hectare – an increase relative to the benchmark could indicate a decline in canopy tree health / increase in senescence.

10. Invasive plant cover – which can compete with native plants for light, moisture and nutrients, especially recruiting koala food and shelter tree canopy species. Invasive plants can increase fuel load and change fire regimes and susceptibility to unplanned fires.
11. Quality and availability of food and foraging – e.g., Number, size and health of feed trees.
12. Quality and availability of shelter – e.g., Density and health of shelter trees.
13. Threats to species – e.g., Wild dog activity and the documented number of culled dogs.

Koala SAT surveys will also be carried out as part of this assessment.

3.3.6 Management action 6 monitoring – bush fire management plan

Monitoring requirements will be informed by the bush fire management plan and include regular review of access tracks, fire breaks, fuel loads and outcomes of controlled burns or other management techniques such as use of livestock.

3.4. Timeline for management, monitoring and reporting actions

The timing of management actions, performance review, risk management and responsibilities for the offset area will be undertaken in accordance with **Table 4** and **Table 5**.

Table 4: Timeline for the management actions, monitoring and reporting

Management action	Frequency and timing of action(s)	Monitoring	Responsible person(s) for activity
Management Action 1 - weeds of national significance (WONS) management plan			
WONS, including <i>Lantana camara</i> (Lantana) control	Baseline weed mapping for WONS will be completed and treatment will commence in 2019. WONS will continue to be monitored and treated annually until they are not observed on the property.	Once the target has been achieved reviews will be carried out 2 yearly to ensure control measures are effective.	Suitably qualified bush regeneration contractor and Suitably qualified environmental consultant, as directed by the proponent (boral).
Management Action 2 - Rehabilitation and regeneration management plan			
Replanting and regeneration	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.	Evidence of koala habitat rehabilitation and the success and survival rate will be monitored annually for at least the first 3 years after commencement of regeneration works.	Suitably qualified bush regeneration contractor and Suitably qualified environmental

Management action	Frequency and timing of action(s)	Monitoring	Responsible person(s) for activity
	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.	If vegetation establishment is confirmed after three years monitoring will be carried out 5 yearly to ensure control measures are effective.	consultant, as directed by the proponent (Boral).
Management Action 3 – legally secure the offset area			
Legally securing the offset area	A Voluntary Declaration (VDEC) will be placed over the offset area to legally secure the conservation use on the land. The VDEC will be secured before the action is to commence.	Not required.	Proponent (Boral).
Management Action 4 - pest management (feral and unwanted dog usage) plan			
Feral and unwanted dog control	Baseline monitoring to identify evidence of feral or unwanted dogs and development of a property wide feral animal management program will be completed within 12 months of commencement of the action.	Annual pest activity monitoring is to be reported and included in the ACR. Where there is evidence of pest animals, targeted trapping and baiting programs will be implemented by an independent suitably qualified pest management contractor.	Suitably qualified pest management contractor and environmental consultant as directed by offset area manager.
	Annual pest monitoring, with evidence of pest animals GPS recorded.	Where annual monitoring does not identify any feral or pest species monitoring will reduce to 2 yearly.	
	Where there is evidence of feral or unwanted dog activity trapping or baiting by a suitably qualified pest management contractor will be conducted.		
Management Action 5 - koala habitat quality management plan			
Maintain koala habitat	Habitat quality monitoring is to be undertaken annually for the first three years and then once every five years to determine if the target quality score has been maintained for the offset area over the period of approval.	The habitat quality monitoring is to be reported in the ACR every five (5) years for the period of the EPBC Act approval.	Suitably qualified environmental consultant, as directed by the offset area manager.
Management Action 6 – bush fire management plan			
Protect the offset area from high intensity wild fires	Develop an Offset Area Bushfire Management Plan within 12 months of the offset being legally secured. Prescribed burning or other techniques undertaken in consultation with the Queensland Rural Fire Brigade to manage fuel loads.	Monitoring requirements will be informed by the bush fire management plan and include regular review of access tracks, fire breaks, fuel loads and outcomes of controlled burns or other	Proponent (Boral)

Management action	Frequency and timing of action(s)	Monitoring	Responsible person(s) for activity
		management techniques such as use of livestock.	

Table 5: OMP actions, timing and responsibilities

Action	Frequency and timing of action(s)	Responsible person(s) for activity
Baseline monitoring	Within 12 months of the action commencing	Suitably qualified environmental professional as directed by the Offset Area Manager.
OMP monitoring reporting as part of the ACR	Annually	Suitably qualified environmental professional as directed by the Offset Area Manager.
OMP review	Every three years or upon failure to meet performance criteria	Suitably qualified environmental professional as directed by the Offset Area Manager.
OMP auditing	Annually	Suitably qualified environmental professional as directed by the Offset Area Manager.
Risk management implementation	Annually	Suitably qualified environmental professional as directed by the Offset Area Manager.
Adaptive implementation program and contingency response	Annually	Suitably qualified environmental professional as directed by the Offset Area Manager.

3.5. Performance and completion criteria

3.5.1 Performance criteria

Monitoring results will be used to determine if the following performance criteria are met, as interim outcomes and targets, prior to completion criteria being achieved. These criteria provide an indication of the success of the management measures being implemented for koala habitat offsets, and serve as trigger values where failure to achieve will result in the implementation of corrective actions. Performance criteria are provided for each of the management actions, although it is noted management action 3 – legally securing the offset does not have any specific performance criteria:

Management Action 1 – weeds of national significance (WONS) management plan

- Baseline weed mapping completed for the offset site and a weed management strategy developed and implemented in 2019.

■ Offset Management Plan

- All WONS identified on site to be treated within 12 months of the commencement of the action.
- WONS are treated until they are not observed on the Offset Site.

Management Action 2 - rehabilitation and regeneration management plan

- Baseline mapping of rehabilitation areas completed for the offset site and a rehabilitation strategy developed within 12 months of the commencement of the action.
- Rehabilitation to commence within 12 months of weeds being treated in non-remnant and remnant areas.
- Rehabilitation areas will have a 90% plant survival rate after 12 months of planting being carried out.
- Areas allowed to regenerate will display signs of native vegetation regrowth at rates expected for those species.

Management Action 3 - legally securing the offset

- A voluntary declaration will be placed over the offset prior to commencement of the action.

Management Action 4 – pest management (feral and unwanted dog usage) plan

- Baseline monitoring of feral or unwanted dogs completed for the offset site within 12 months of the commencement of the action and a management strategy developed.
- Feral or unwanted dogs will be minimised through ongoing monitoring and management.
- The pest management strategy will be updated annually based on the outcomes of monitoring.

Management Action 5 – maintain koala habitat quality

- Habitat quality monitoring will be completed annually for the first three years after commencement of the operation and every five years ongoing.
- Habitat quality will not reduce from the values identified in the baseline report. If a reduction occurs monitoring will continue annually until the values return to the baseline level.

Management Action 6 – bush fire management plan

- Fuel levels and burning regime maintained in accordance with Offset Area Bushfire Management Plan.
- Vegetation composition not negatively affected by fire regime.
- Offset area is legally secured as an area of High Conservation Value under section 19F of the Vegetation Management Act 1999

3.5.2 Completion criteria

Completion criteria for the offset site are as follows:

- WONS eradicated from the offset area.
- Rehabilitated areas are established and regenerate and mapped as remnant vegetation under the Vegetation Management Act 1999 or successor legislation.
- Dogs or evidence of dog presence are not detected on the offset area for a period of three years.
- Koala habitat quality remains at baseline levels or better for two consecutive five year monitoring events.

3.5.3 Corrective actions

If progression towards the completion criteria identified above are not met following annual compliance inspections and five (5) yearly habitat quality monitoring, the following corrective actions will be implemented:

- If pest animals are detected, the control measures and the timing and frequency of management measures will be increased and maintained at a higher rate of control until the completion criteria have been attained.
- Where unplanned fires or flooding occurs during the monitoring interval, any negative impacts to ecological score will be noted and compared to unaffected monitoring sites of previously the same quality and resulting potential weed infestations following disturbance will be managed to ensure the weed control completion criteria are achieved.
- Where koala habitat rehabilitation has a success rate below 90%, the active regeneration measures will be repeated until the completion criteria are achieved.

3.6. Adaptive management

An adaptive implementation program will be used to ensure uncertainty is reduced over time, and that completion criteria are attained and maintained over the period of approval. As more information becomes available following ongoing performance monitoring, the management and monitoring regime will be reviewed and revised to maximise the likelihood of attaining and maintaining the outcomes to be achieved by implementing the OMP. Any updates to the OMP which do not result in a material change to the environmental outcomes, performance and completion criteria will be made by **SHG/Boral** without the requirement of informing the DoEE. If material amendments likely to alter the environmental outcomes, or performance and completion criteria are proposed to the OMP, the amendments and justification for the contingency measures will be provided to the DoEE in writing.

Adaptive management will be used to incorporate changes in any of the following areas:

1. Assimilation of new data or information - such as, updates to conservation advice or new threat abatement plans relevant to the koala.

2. Project coordination and scheduling – to manage unforeseen disruptions to schedule such as inclement weather on contractor works for management actions and environmental consultant monitoring events.
3. Annual review of risks – to refresh the mitigation measures should new threats be identified or stochastic events such as unplanned fires or floods occur.
4. Annual review of management measure effectiveness – to increase the frequency or change the method of management actions where monitoring performance criteria are not met.
5. Contingency for unplanned incidents – such as stochastic events including unplanned fires or floods.

3.7. Annual compliance reporting

In accordance with EPBC Approval (EPBC 2016/7797), an annual compliance report will be prepared and published on the **Boral** website. The report will address the compliance with each of the conditions of approval, including any incident reports of undesirable impacts upon koalas (including Koala habitat), and any monitoring and management milestones achieved during the previous 12 months, including progress on key management measures, attainment of performance targets and completion criteria, and adaptive implementation outcomes. The compliance report will also address the effectiveness of the management measures and how the site is progressing against performance and completion criteria.

Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of the approval will be provided to DoEE at the time of publishing the compliance report.

4. Appendices

Appendix A: Environmental Offsets Strategy

Appendix B: Offset Site Baseline Report

Appendix A

Environmental Offsets Strategy

ENVIRONMENTAL OFFSET STRATEGY

INTRODUCTION AND DESCRIPTION OF THE ACTION

The *Environmental Management Division* of **Saunders Havill Group (SHG)** acting on behalf of **Boral Resources (QLD) Pty Limited (Boral)** have developed this **Environmental Offset Strategy** to provide details of the offset requirements under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for clearing koala habitat associated with the **Ormeau Quarry Expansion at Kingsholme (2016/7797)**.

The action relates to a 38 ha extension to the existing Ormeau Quarry, including approximately 38 ha of vegetation clearing. The existing quarry has been operating since 1979, with Boral operating it for over 20 years, and produces a range of aggregate and road base materials. The expansion is expected to allow the quarry to operate for more than 40 years and increase output from 700,000 tonnes per annum (tpa) to approximately 2,000,000 tpa, in line with recently approved State & Local Government land use approvals and Environmental Authorities.

An offset site has been identified to mitigate residual impacts on Koala habitat resulting from the expansion of Ormeau quarry. The offset site is located on Boral-owned land at Cliff Barrons Road, Kingsholme (Lot 2 on RP15912) approximately 1.7 km north of the expansion site.

This strategy assesses both the impact and offset sites using the following tools:

- EPBC Act environmental offsets policy;
- EPBC Acts referral guidelines for the vulnerable koala;
- How to use the offsets assessment guide; and
- The Offsets assessment guide spreadsheet.

The assessment of the impact and offset sites are outlined below.

IMPACT SITE

Residual Impacts

The quarry expansion is calculated as having a residual impact caused by the actual and functional loss of 38 hectares of habitat critical to the survival of the Koala. The site has been assessed as containing habitat with a value of 7 using the Habitat Assessment Tool.

Residual Impact: Removal of 38 hectares of critical habitat

Annual probability of extinction

The annual probability of extinction is an estimate of the average chance that a species or ecological community will be completely lost in the wild each year, given recent rates of decline. The annual probability of extinction is incorporated into the impact and offset calculation process as a discounting factor for aligning activities that occur at different points in time. This figure is derived from the International Union for the Conservation of Nature (IUCN) Red List for threatened species.

As the Koala is listed as 'Vulnerable' under the EPBC Act, an annual probability of extinction, based on ICUN category definitions, is 0.2%.

Impact Calculator

The Protected Matter Attribute relates to habitat critical to the survival of the Koala therefore the attribute the offset will be assessed against is "area of habitat". The impact calculator generates the total quantum of impact on habitat by multiplying the residual impact area by the quality of the habitat. As noted a residual impact of 38 hectares of critical Koala habitat will be removed as a result of the action.

The quality score for area of habitat is a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability. There are three components that contribute to the calculation of habitat quality: site condition, site context, and species stocking rates. However, the Koala Referral Guidelines include a habitat assessment tool which can be used to identify habitat values of a site specific to koalas. The Guidelines state “[the habitat assessment tool] can help you determine ‘habitat quality’ referred to in the offset calculator. [It] may be used instead of the three generic habitat quality categories found in the Offsets Assessment Guide and be applied once to the entire area of habitat being offset. [It] can also be used to calculate the starting quality of a proposed offset site and to estimate the future quality, with and without the proposed offset/management intervention”.

As a result, the assessment tool has been used to develop habitat quality scores for the start and future habitat values parameters for the offset areas by comparing them to the impact area. **Table 1** provides a summary of the habitat assessment carried out for the impact area which was originally carried out for the EPBC Act referral and preliminary documentation reports.

Table 1: Koala Habitat Assessment Summary

Attribute	Score	Description
Koala occurrence	+2 Surveys indicate one or more Koalas may have been present within 2 km of the site within the last 2 years.	<u>Desktop Surveys</u> A Wildlife Online search generated under the <i>Nature Conservation Act 1992</i> (QLD) (NCA) found 7 Koalas as being identified within a 2 km radius of the site. It is noted that wildlife online doesn’t provide dates for the sightings therefore it is unknown whether any of these occurred in the last 2 years. A search of the Koala Tracker database did not find any positive sightings within 2 km of the site. <u>Field Surveys</u> During a 2006 field survey, BAAM recorded evidence of koala within the proposed quarry expansion area. Koala scats were also observed on the eastern section of the referral area during the 2016 field surveys by Saunders Havill Group . It is noted that only evidence of usage has been found and no koalas have ever been observed on the site.
Vegetation composition	+2 The site contains forest or woodland with 2 or more known koala food tree species in the canopy.	Habitat assessments at the site identified both primary and secondary Koala food species within the expansion footprint and in surrounding areas. These primary and secondary species included <i>Eucalyptus siderophloia</i> (Grey Ironbark), <i>Eucalyptus crebra</i> (Narrow-leaved Ironbark) and <i>Eucalyptus major</i> (Grey Gum).
Habitat connectivity	+1 The impact area is an extension of the existing quarry.	The site is relatively segregated from urban development and main roads and is located within a rural context. While it is part of a contiguous landscape greater than 500 hectares, the proposal is an extension off the already existing Boral quarry with four other quarries located within a 5 km radius. From a contextual point of view, the expansion will not result in the significant fragmentation of habitat areas in the broader landscape and is unlikely to impact on connectivity surrounding the quarry area. Given that the quarry already exists, the connectivity value of the site is reduced as it is to be located adjacent to the existing quarry site.
Key existing threats	+1 Little or no evidence of koala mortality from vehicle strike or dog	Field surveys did not identify any evidence of dogs throughout the subject site, which is known to be one of the most significant threats to Koala injury and mortality. It is likely domestic dogs and other animals would occur commonly throughout adjoining properties given the rural nature of the area. The site is nearly 5 km from the nearest main road, being the Pacific

Attribute	Score	Description
	attack at present in areas that score 1 or 2 for koala occurrence.	motorway. Upper Ormeau road provides the main access from the site to the motorway and has high vehicle usage including trucks used to haul product from the quarry. Records of koala vehicle strikes within the region (for example Ormeau and Coomera – Biolink 2007) were located however there is little evidence available immediately surrounding the site. This may be a reflection of the low usage of the site by koalas and prevalence of commercial uses surrounding the site. Most reported koala sightings are in highly populated or closely monitored locations such as urban areas and environmental reserves.
Recovery value	+1 It is uncertain whether the site is important in achieving interim recovery objectives.	The interim recovery objectives for sites within the coastal geographical context are to “Protect and conserve large, connected areas of koala habitat, particularly large, connected areas that support koalas that are: genetically diverse/distinct; or free of disease or have a very low incidence of disease; or breeding (i.e. presence of back young or juveniles)”. While clearing will occur in areas providing Koala habitat, it is uncertain as to whether the protection of the vegetation will achieve the interim recovery objectives for coastal areas. This is due to the relatively high prevalence of disease of Koalas as well as the fact that these Koalas are not known to be genetically diverse from other Koalas in South East Queensland.
Total Score	7	As the habitat score is greater than or equal to 5, the impact area is considered to provide Critical Habitat for the koala as defined by the EPBC referral guidelines.

Impact area habitat quality: 7

Quantum of Impact

The residual impact area (38 hectares) and habitat quality (7/10) are multiplied to provide the total quantum of impact for the action. When the area and quality of critical habitat to be removed are combined the Total Quantum of impact is identified as 26.6 ha.

Total quantum of impact: 26.6 hectares

OFFSET SITE

Start Area and Quality of Offset

The proposed offset site is predominantly remnant vegetation with only a small area of the site mapped as non remnant. Ecological field surveys were undertaken by Saunders Havill Group over 2 days in September and October 2015. Findings from the field surveys include:

- The majority of the site is mapped as containing remnant vegetation consistent with the regional ecosystem mapping. Three regional ecosystems (RE12.11.3, RE12.11.5 and RE12.11.10) are mapped as occurring within the subject site.
- RE 12.11.3 and 12.11.5 were dominated by Eucalyptus and Corymbia species and made up the largest proportion of vegetation within the assessment area.
- RE 12.11.10 was observed in the south western portion of the site. RE 12.11.10 is described as Notophyll vine forest +/- Araucaria cunninghamii on metamorphics +/- interbedded volcanics. This regional ecosystem is also associated with the "Lowland rainforest of Subtropical Australia" threatened ecological community.
- The area mapped as RE 12.11.10 not only is a threatened ecological community but it also contained specimens of *Brachychiton* sp. (Mt Ormeau bottle tree – would need to be confirmed with the herbarium) which is protected under the EPBC Act and *Macadamaia integrifolia* (Macadamia Nut) which is protected under State legislation.
- In general, the majority of the site is consistent with Eucalypt and Corymbia woodlands/forests that would be generally utilised by *Phascolarctos cinereus* (Koala). No koalas were spotted during surveys however numerous scats were observed in low densities throughout the majority of the site suggesting that resident koalas may be located within the investigation area.
- Weed infestation within the site was relatively low and generally the vegetation was intact. Some patches of *Lantana camara* (Lantana) were observed throughout the site.
- A number of old overgrown and eroded tracks traverse the ridgelines throughout the property. Evidence of logging was also observed in some locations.
- A number of these tracks and other areas through the site contain barbed wire fencing, which would impede fauna movement.
- Two (2) bitumen roads are located to the south and the east of the property.
- A few areas throughout the property contain non-remnant vegetation. The regrowth vegetation observed was consistent with vegetation associated with RE 12.11.3/12.11.5.

Field surveys identified that non remnant areas contained vegetation in good condition that would be considered critical koala habitat as defined by the EPBC Act. The survey also found that, while generally in good condition, the site had been impacted in areas by logging, agricultural practices and weed incursion.



Photo 1: Lantana Infestation of the offset site

Table 2 provides a summary of the assessment carried out using the habitat assessment tool.

Table 2: Koala Habitat Assessment Summary

Attribute	Score
Koala occurrence	+2 Desktop investigations did not identify any koalas within 2 km of the site in the last 2 years. SAT surveys found low levels of usage throughout the site.
Vegetation composition	+2 The site contains forest or woodland with 2 or more known koala food tree species in the canopy.
Habitat connectivity	+2 The offset area currently sits within a large, contiguous patch of vegetation \geq 500 ha. The patch is surrounded by a number of uses with the potential to result in further impacts including three quarries, urban and rural residential estates and agricultural land however most of these areas do not currently have approval for clearing under the various Local, State and Federal planning and legislative frameworks. The exception to this is the Wolffdene Quarry extension (2014/7384), which has all required approvals and is located to the north of the site.

Attribute	Score
Key existing threats	+1 Field surveys did not identify any evidence of dogs throughout the subject site, which is known to be one of the most significant threats to Koala injury and mortality. It is likely domestic dogs and other animals would occur commonly throughout adjoining properties given the rural nature of the area. Records of koala vehicle strikes within the region (for example Ormeau and Coomera – Biolink 2007) were located however there is little evidence available immediately surrounding the site. This may be a reflection of the low usage of the site by koalas and prevalence of commercial uses surrounding the site. Most reported koala sightings are in highly populated or closely monitored locations such as urban areas and environmental reserves.
Recovery value	+1 It is uncertain whether the site is important in achieving interim recovery objectives, which are to <i>“Protect and conserve large, connected areas of koala habitat, particularly large, connected areas that support koalas that are: genetically diverse/distinct; or free of disease or have a very low incidence of disease; or breeding (i.e. presence of back young or juveniles)”</i> .
Total Score	8

The site is identified as having a habitat value of 8 indicating it is in good condition but shows minor signs of disturbance that could be improved through rehabilitation works.

Start area and quality: 8/10

Future Quality without the Offset

The site is mapped as a Key Resource Area under the State Planning Policy and is within the Extractive Resources – Resource Area / processing area overlay under the GCCC Planning Scheme. An EPBC Act controlled action approval (Ref No. 2007/3772) has also been obtained for the site for a proposed quarry use however it has not yet been acted upon. Furthermore an application for extractive industry has previously been lodged for local and State government approvals, however was withdrawn due to a change in ownership.

If the site is not protected through an offset agreement it is highly likely applications for resource extraction would be progressed with activities likely to commence within the next 5 – 10 years.

While there is significant potential for clearing to occur at the site as a result of extraction activities, this is addressed in the ‘risk of loss without offset’. Therefore, the future quality without the offset is likely to remain the same as the current quality.

Future quality without offset: 8/10

Future Quality with the Offset

The quality of the proposed offset area would be maintained and enhanced as it is protected and managed through initial development controls and ultimately weed management and bushland revegetation and regeneration. The importance of the offset site as a refuge and linkage area within the region will increase in the future should development pressures encroach into existing rural areas.

Land within the offset area will be proactively managed in order to enhance its ecological value. This will include rehabilitation and revegetation in certain areas through:

- Protection of existing vegetation and minimisation of risks to protected areas from adjoining operational works;
- Control of weed species; and

- Implementation of a Vegetation Management Plan to ensure the integrity of the existing vegetation is maintained.

While environmental management and monitoring programs proposed for the site will improve the habitat values for koalas by improving koala habitat on the site, when assessed using the koala assessment habitat tool no additional value is attributed for the proposed on ground works.

Future quality with offset: 8/10

Risk of loss without offset

For reasons already outlined under ‘future quality without the offset’ risk of loss without offset is considered to be high.

Remnant vegetation on the site is mapped as ‘least concern’ under the *Vegetation Management Act 1999* and located within a Key Resource Area and agricultural zoning therefore both extractive and agricultural uses would be considered a ‘relative purpose’ for clearing and allowed under the VMA. It is acknowledged that it is unlikely approval would be given for clearing of the entire site however the Commonwealth Government has provided approval for the quarry. While this approval has not been acted on it has effect until July 2045 and if the site is not used as an offset Boral are likely to progress Local and State government approvals for the quarry use within the next five years.

An application for extractive industry was previously lodged for local and State government approvals however was withdrawn due to change in ownership. Notwithstanding this, extractive industry on the Site is supported at both a State and local Council level with the site included in the Key Resource Area under the State Planning Policy and the Extractive Resources Overlay under the GCCC Planning Scheme. It is possible that approvals could be obtained in a 2 year period if extraction activities were planned.

In addition to the likely quarry use various exemptions and accepted development provisions also apply for clearing in agricultural and extractive areas that would allow clearing of several hectares of remnant vegetation without any further approval. As an example relevant exemptions under the VMA are listed in **Table 3**.

Table 3: VMA exemptions relevant to the Offset site

Clearing Purpose	Details
Establish new infrastructure	Clearing to construct necessary built infrastructure where the total clearing extent and the extent of the infrastructure does not exceed 2ha. Clearing to source construction timber to establish necessary infrastructure on the land.
Fences, roads or tracks	Clearing to establish a necessary fence, road or vehicular track to a maximum width of 10m.
Fire management line	Clearing for a necessary fire management line to a maximum width of 10m.
Firebreaks	Clearing to establish or maintain a necessary firebreak to protect infrastructure (other than fences, roads and tracks) to a maximum width of 20m or 1.5 times the height of the tallest adjacent tree, whichever is the greater.
Hazardous fuel load reduction	Clearing by fire to reduce hazardous fuel load under the Fire and Emergency Services Act 1990.
Maintain existing infrastructure	Clearing necessary to maintain existing infrastructure, including buildings, fences, roads and watering points.

Clearing Purpose	Details
	Clearing to source construction timber to maintain existing infrastructure on the land.
Risk to people or infrastructure	Clearing necessary to remove or reduce the imminent risk the vegetation poses to people or infrastructure.

As a result of the above a risk of loss without offset of 50% has been applied. This is considered conservative as if the site is not utilised as an offset the quarry use is highly likely to be progressed. The fragmentation caused by the clearing will also impact on vegetation surrounding the site reducing its habitat value for koalas. This also reflects the generally high potential for clearing to be carried out on the site whether for agricultural or extraction purposes if not protected.

Risk of loss without offset: 50%

Risk of loss with offset

As a result of the offset dedication, it is highly unlikely that the areas natural values will be lost because:

- Negotiations will be undertaken to legally secure the offset site so that land cannot be used for other purposes, including the approved extraction use; and
- The offset land is substantial in size and width and robust enough to withstand periodical impacts of bushfire, weed incursion, and native and feral species impacts.

Overall, the risk of loss with the offset is considered to be negligible therefore a value of 2% has been given to this parameter.

Risk of loss with offset: 2%

Confidence in result

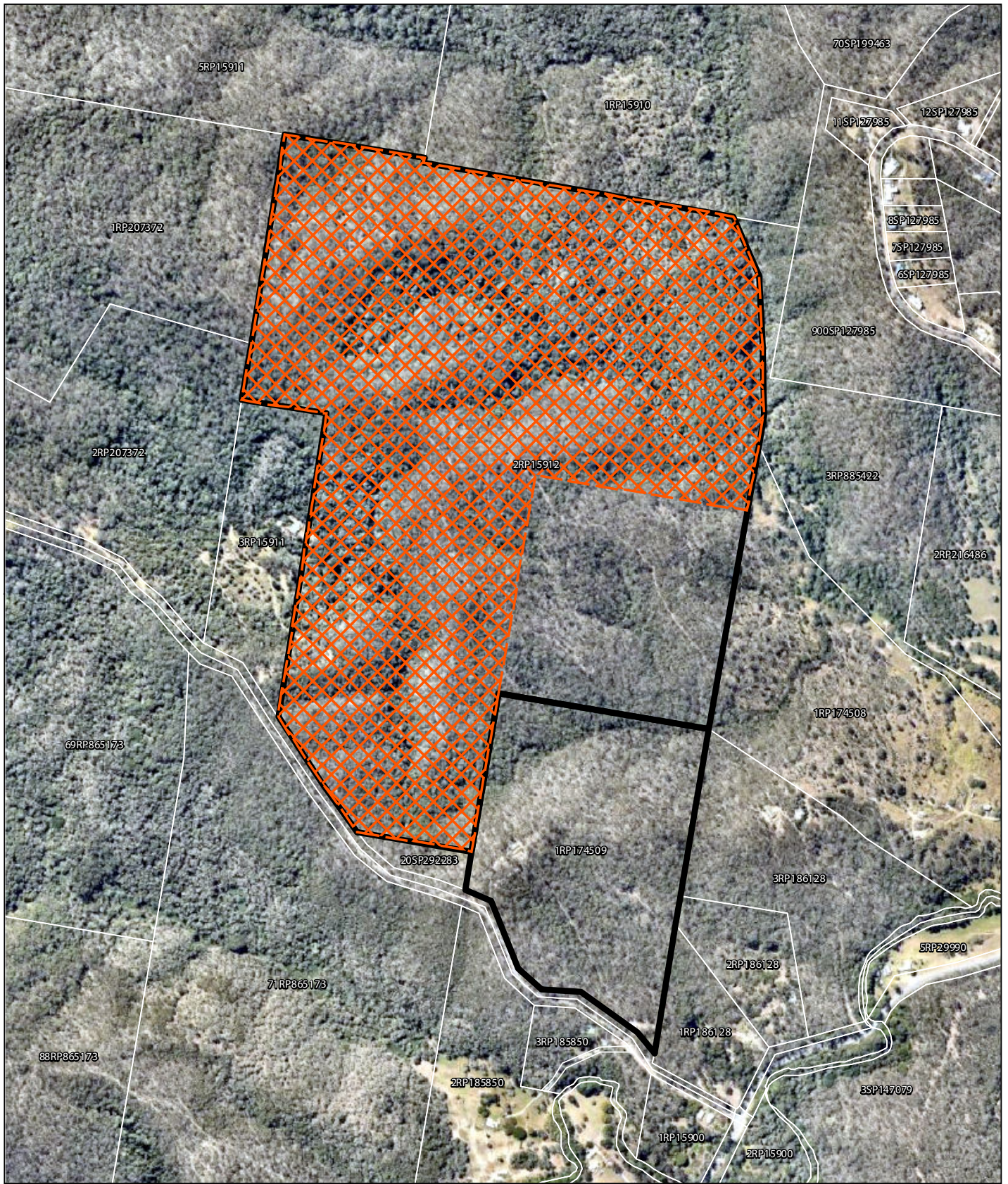
A confidence result of 90% has been given to the averted loss attributes. The ‘How to Use the Offsets Assessment Guide’ provided on DoEEs website states: “For the averted loss component, confidence in result captures the level of certainty about the strength and effectiveness of the proposed risk-mitigation measures and the capacity of these measures to mitigate the risk of loss of the site”. Protecting the offset area through a voluntary declaration or similar provides a high level of confidence that that no part of the offset site will be lost. In addition, given existing approvals over the site and the wide range of clearing that can be carried out under exemption, there can be high level of confidence that at least a portion of the site will be cleared if not protected through the offset.

A confidence result of 75% has been given to the future quality attributes. Boral is a large, viable, experienced and award winning business entity who have track record of compliance with approval conditions and in particular rehabilitation of their quarry sites and buffer land. As such there can be a high level of confidence that the measures implemented on site will be carried out effectively. Boral have no influence on clearing on surrounding land as a result of other uses such as agriculture and extraction. As the additional values are associated with the enhancement of corridors and connective habitat for Koalas confidence has been reduced to 75%. As can be seen on Plan 1 protection and enhancement of the proposed offset site will provide connectivity to existing conservation areas.

Confidence in Results – risk of loss: 90%

Confidence in Results – future quality: 75%

Based on the inputs described above, approximately 77 ha of the site at Kingsholme would provide a relative net offset for impacts at the Ormeau site using the EPBC Offset assessment guide calculator. A copy of the completed EPBC Offset Calculator is included as Attachment 1.



Legend




-  Qld DCDB
-  Offset Site DCDB
-  Proposed offset area (77 ha)

Figure 1

Ormeau Quarry - Offsite Site

File ref. 8354 E Figure 1 Offset Area Op 1 B
Date 1/02/2018
Project Ormeau Quarry

0 50 100 200 300 m
 Scale (A4): 1:10,000 [GDA 1994 MGA Z56]



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Appendix B

Offset Site Baseline Report

1. Habitat Quality Assessment Method

The habitat quality assessment methodology prepared by the Queensland Herbarium (DEHP 2017) was utilised to assess habitat values of the Kingsholme Offset Site. The methodology provides a repeatable and consistent method for determining habitat quality.

To accurately assess the habitat values the site needs to be broken into Habitat Assessment Units based on prevailing Regional Ecosystems and other ecological and topographical features. Within each Habitat Assessment Unit, Site Condition, Site Context and the Species Habitat Index are determined based on field transects and observations and desktop studies. In a general sense, it is the scores for each of these attributes that are combined to determine the site's overall Habitat Quality Score. Refer to the schematic below.

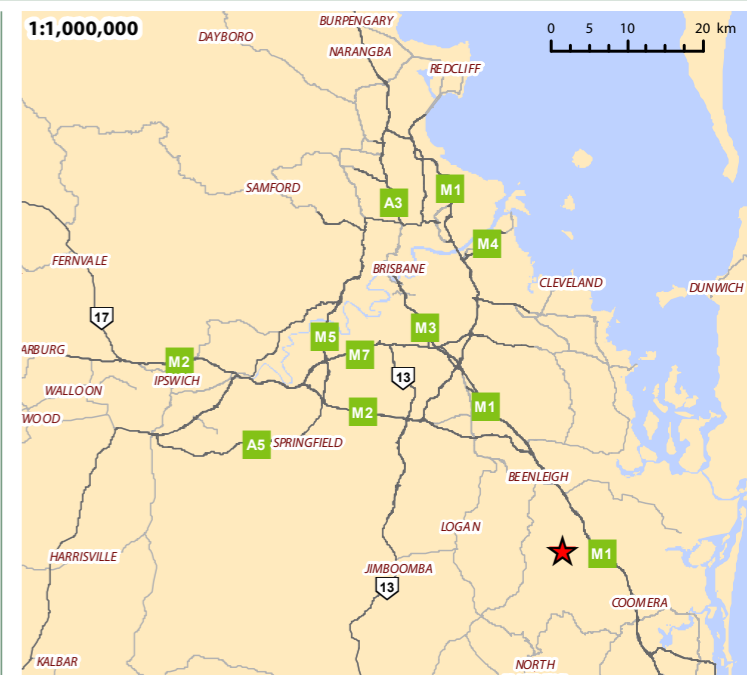
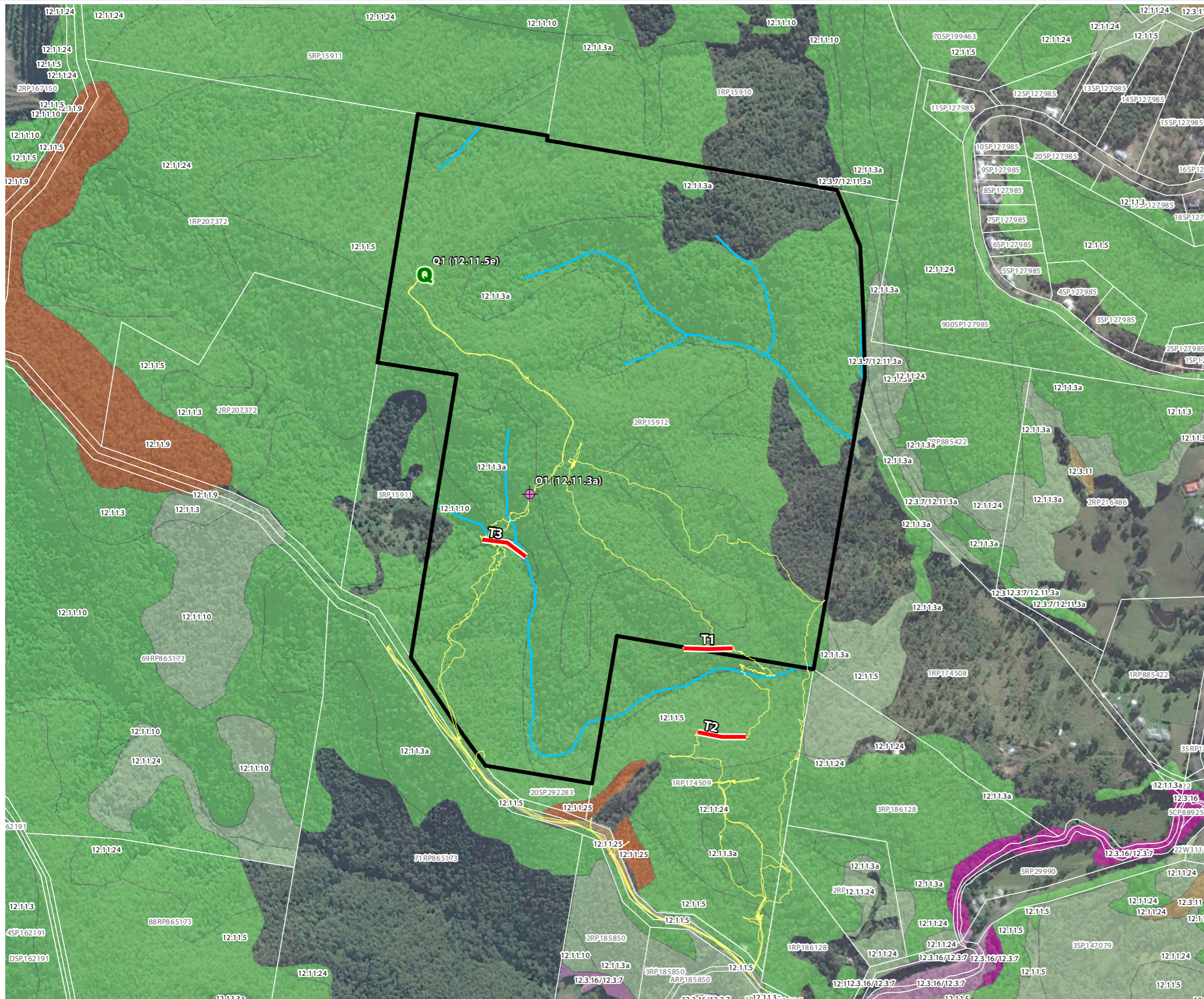








1.1. Habitat Assessment Units

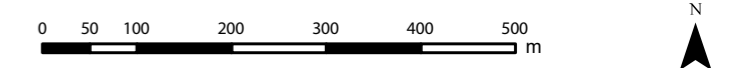
The site was divided into three Habitat Assessment Units (refer to **Table 1** and **Plan 1**). A single transect has been conducted within each Habitat Assessment Unit. The purpose of the transects are to determine attribute scores for Site Condition and to also provide the necessary information to complete additional assessments.

Table 1: Habitat Assessment Unit Descriptions

Habitat Assessment Unit	Area (ha)	Status	Regional Ecosystem	Description
AU1	32.6	Least Concern Remnant	12.11.3	Eucalyptus siderophloia, E. propinqua +/- E. microcorys, Lophostemon confertus, Corymbia intermedia, E. acmenoides open forest on metamorphics +/- interbedded volcanics
AU2	37.5	Least Concern Remnant	12.11.5	Corymbia citriodora subsp. variegata woodland to open forest +/- Eucalyptus siderophloia/E. crebra, E. carnea, E. acmenoides, E. propinqua on metamorphics +/- interbedded volcanics
AU3	1.6	Least Concern Remnant	12.11.10	Notophyll vine forest +/- Araucaria cunninghamii on metamorphics +/- interbedded volcanics



- Legend**
-  Offset Site
 -  Mapped watercourse (onsite)
 -  Vegetation Transects
 -  Quaternary Site
 -  Observation Site
 -  Tracklog



Upper Ormeau Road, Ormeau Hills

Field Survey

ISSUES:

Issue	Date	Description	Drawn	Checked
A	20/10/2015	Prelim Draft	AL	SM
B	9/12/2016	Additional Surveys	TC	SM
C	26/10/2018	Job no. changed	TC	SM

Date: 26/10/2018
 Scale: 1:8,000 @ A3
 Coordinate System: GDA 1994 MGA Zone 56
 Projection: Transverse Mercator
 Client: Boral Construction Materials Ltd
 Project: Ormeau Hills Offsets
 Address/RPD: 2RP15912
 Sources: QLD GIS Layers (QLD Gov. Info Services 2015), Aerial (Neamap, 2015)

Plan 1

SHG File
 8354 E 01 Field Survey OMH C

THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT. SAUNDERS HAVILL GROUP CANNOT ACCEPT RESPONSIBILITY FOR ANY USE OR RELIANCE UPON THE CONTENTS OF THESE DRAWINGS BY ANY THIRD PARTY.
 CONFIRM ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION AND DO NOT SCALE FROM THE DRAWINGS. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH SAUNDERS HAVILL GROUP PRIOR TO THE COMMENCEMENT OF WORK.
 PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR FURTHER UNDERGROUND SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.

1.2. Site Condition

The on-site condition is a key element of habitat quality and has a direct influence on the biodiversity it supports. Site condition is assessed using a suite of attributes to describe the structure and function of the vegetation community, compared to the expected range for a relatively undisturbed community.

The following components of Site Condition were assessed, compared to benchmarks and assigned a score within each Habitat Assessment Unit on-site:

1. Recruitment of Woody Species
2. Tree Species Richness
3. Shrub Species Richness
4. Grass Species Richness
5. Forb Species Richness
6. Tree Canopy Height
7. Tree Canopy Cover
8. Shrub Canopy Cover
9. Native Perennial Grass Cover
10. Organic Litter
11. Large Trees
12. Coarse Woody Debris
13. Weed Cover

1.3. Species Habitat Index

The Species Habitat Index measures the capacity of a site to support a species and requires field survey data, available modelling and current species records. The index represents an analysis of the quality and availability of habitat for the species, and the likelihood of continued existence of the species at the site.

The Species Habitat Index consists of the following attributes assessed and assigned a score within each Habitat Assessment Unit on-site:

1. Threats to Species
2. Quality and Availability of Food and Foraging Habitat
3. Quality and Availability of Shelter
4. Species Mobility Capacity
5. Role of Site Location to Overall Population

Koala habitat values have been assessed for the site.

1.4. Habitat Quality Score

To determine each assessment area's **Habitat Quality Score**, the scores for each attribute listed above are averaged across transects and summed to provide the *Habitat Quality Score (measured)* for each of the Habitat Assessment Units. These scores are then compared to the maximum attainable (*Habitat Quality Score max*) to calculate the *Assessment Unit Habitat Quality Score* for each assessment unit. These scores are then weighted according to the relative size of each Habitat Assessment Unit before being summed to give the overall Area **Habitat Quality Score** rounded to the nearest whole number.

2. Habitat Quality Results

2.1. Assessment Unit 1

The Habitat Quality Score (measured) for Assessment Unit 1 was derived from one data transect and an observation survey point (refer to **Plan 1** and photos below). A walkover of the site confirmed the transect was representative of RE12.11.3 condition throughout most of the site.

Assessment Unit 1 Transect

Photos



2.2. Assessment Unit 2

The Habitat Quality Score (measured) for Assessment Unit 1 was derived from one data transect and a quaternary vegetation survey point (refer to **Plan 1** and photos below). A walkover of the site confirmed the transect was representative of RE12.11.5 condition throughout most of the site.

Assessment Unit 2 Transect

Photos



2.3. Assessment Unit 3

The Habitat Quality Score (measured) for Assessment Unit 1 was derived from one data transect (refer to Plan 1 and photos below). A walkover of the site confirmed the transect was representative of RE12.11.10 condition throughout most of the site.

Assessment Unit 3 Transect

Photos



2.4. Overall Habitat Quality Score

Using the assessment template, the Habitat Quality Score for the Impact Area on site was determined to be **7.64** (refer to **Attachment A**).

Attachment A

Habitat Transect Data

Habitat Quality Site Assessment Template

PLEASE NOTE - YELLOW INDICATES AN AUTO POPULATED FIELD

- For all environmental offset applications you must:
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This form is useful for undertaking a **habitat quality analysis** of an impact and/or offset/advanced offset site. Please note that this form should be completed individually for each assessment unit under consideration.

Is this Assessment for: An Impact Site An Offset Site an Advanced Offset Site

Habitat Quality Assessment Unit Score Sheet

Part C - Site Data

Property	Kingsholme Offset Site	Date	
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Assessment Unit:	Assessment Unit Area (ha)	RE	Bioregion Number
1	32.6	12.11.3	Southeast Queensland

Landscape Photo- Please attach or insert north, south, east and west photos in the spaces provided from row 231-355 below and include details such as Time and Mapping Coordinates in the following row.

Datum	0m Mark	Zone	Easting	Northing
WGS 84	<input type="checkbox"/>	56		
GDA 94	<input checked="" type="checkbox"/>	56		
Plot bearing			Recorders	Andrew Craig

Site description and Location (including details of discrete polygons within the assessment unit)
 Eucalyptus siderophloia and E. propinqua open forest +/- E. microcorys. Lophostemon confertus, Corymbia intermedia, E. biturbinata, E. acmenoides, E. tereticornis, E. moluccana, Angophora listocarpa, Syncarpia verecunda with vine forest species and E. grandis or E. saligna in gullies. Eucalyptus pilularis and E. tindaliae sometimes present e.g. mid D'Agular Range. Conondale Range. Occurs predominantly on hills and ranges of Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

Part D - Native Species Richness: (*list species below)

Tree species richness:			
Total number of species			9
Scientific Name	<i>Lophostemon confertus</i>	Common Name	
Scientific Name	<i>E. major</i>	Common Name	
Scientific Name	<i>E. siderophloia</i>	Common Name	
Scientific Name	<i>E. carnea</i>	Common Name	
Scientific Name	<i>E. microcorys</i>	Common Name	
Scientific Name	<i>C. citriadora</i>	Common Name	
Scientific Name	<i>C. intermedia</i>	Common Name	
Scientific Name	<i>E. dura</i>	Common Name	
Scientific Name	<i>E. crebra</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Shrub species richness:			
Total number of species			14
Scientific Name	<i>Hymenosporum flavum</i>	Common Name	<i>L. confertus</i>
Scientific Name	<i>Acacia concurrens</i>	Common Name	<i>Tabernaemontana sp.</i>
Scientific Name	<i>A. littoralis</i>	Common Name	<i>C. citriadora</i>
Scientific Name	<i>Cassinia sp.</i>	Common Name	<i>C. intermedia</i>
Scientific Name	<i>A. leiocalyx</i>	Common Name	
Scientific Name	<i>A. excelsa</i>	Common Name	
Scientific Name	<i>Havea sp.</i>	Common Name	
Scientific Name	<i>A. leiocarpa</i>	Common Name	
Scientific Name	<i>A. littoralis</i>	Common Name	
Scientific Name	<i>A. disparima</i>	Common Name	

Grass species richness:			
Total number of species			1
Scientific Name	<i>Themeda triandra</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Forbs and others (non grass ground) species richness:			
Total number of species			9
Scientific Name	<i>Laxmannia compacta</i>	Common Name	
Scientific Name	<i>Lomandra multiflora</i>	Common Name	
Scientific Name	<i>Geodorum densiflorum</i>	Common Name	
Scientific Name	<i>Eustrphus latifolius</i>	Common Name	
Scientific Name	<i>Dianella caerulea</i>	Common Name	
Scientific Name	<i>Cheilanthes distans</i>	Common Name	
Scientific Name	<i>Bursaria spinosa</i>	Common Name	
Scientific Name	<i>Geitonoplesium cymosum</i>	Common Name	
Scientific Name	<i>Desmodium intortum</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Part E - Non-Native Plant Cover: (*list species below)

Total percentage cover within plot			
			5.00%
Scientific Name	<i>Lantana camara</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Part F - Coarse Woody Debris: (*list lengths of individual logs in meters)

Total Length of Coarse Woody Debris (Meters):			
			1160.00
1			26

2		27
3		28
4		29
5		30
6		31
7		32
8		33
9		34
10		35
11		36
12		37
13		38
14		39
15		40
16		41
17		42
18		43
19		44
20		45
21		46
22		47
23		48
24		49
25		50

Part G - Native perennial grass cover, organic litter: (*provide percentage cover within each quadrat, and provide average cover)

	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Average
Native perennial grass cover	9.00%	6.00%	3.00%	13.00%	7.00%	19.00%
Organic Litter	70.00%	56.00%	64.00%	63.00%	85.00%	47.00%

Part H - Number of large trees, tree canopy height, recruitment of woody perennial species:

Eucalypt Large tree DBH benchmark used :	45cm	Non- Eucalypt Large tree DBH benchmark used:	n/a
Number of large eucalypt trees:	26	Number of large non eucalypt trees:	0
Total Number Large Trees:	26		

Median Tree Canopy Height Measurements	Canopy:	26.00	Sub-canopy:	8.50	Emergent:	0.00
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Number of ecologically dominant layer species regenerating:	85
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Part I - Tree canopy cover, Shrub canopy cover

Tree canopy cover %	Canopy:	89.60%	Sub-canopy:	44.60%	Emergent:	0.00%
Shrub canopy cover %	48.40%					

Note: Only assess Emergent (E) or Subcanopy (S) layers if the benchmark document stipulates that layers are present *If trees are in the same layer and continuous along the transect you can group them

Part J - Site Context Score

ATTRIBUTE	Size of Patch	Connectedness	Context	Distance to Permanent Water	Ecological Corridors
DESCRIPTION	4 - 101-200ha	3 - 50%-75% connection	4 ->75% remnant	3 - 1-3km	2 - Within (whole or part)
SCORE	7	4	5	5	6

DOES THIS ASSESSMENT UNIT ALSO CONTAIN A SPECIES HABITAT REQUIREMENT.

YES PLEASE COMPLETE SPECIES HABITAT INDEX DETAILS BELOW AND THEN ATTACH LANDSCAPE PHOTOS AND SUBMIT AS DIRECTED

NO PLEASE ATTACH LANDSCAPE PHOTOS BELOW AND SUBMIT AS DIRECTED

Part K - Species Habitat Attributes

Species Habitat Attributes										
No	Species Name	CommonName	NCA Status	Attributes	Threats to species	Quality and availability of food and foraging habitat	Quality and availability of shelter	Species mobility capacity	Role of site location to overall population	
1	Phascolarctos cinereus	koala	SL	Description	3 - Low threat level	3 - High	3 - High	3 - Moderately restricted (26 - 50% reduction)	2 - Likely to be critical to species' survival	
				Score	15	10	10	7	4	
2				Description						
				Score						
3				Description						
				Score						
4				Description						
				Score						
5				Description						
				Score						
6				Description						
				Score						
7				Description						
				Score						
8				Description						
				Score						
9				Description						
				Score						
10				Description						
				Score						
					Maximum Score	15.00	10.00	10.00	7.00	4.00

Habitat Quality Site Assessment Template

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Is this Assessment for: An Impact Site An Offset Site an Advanced Offset Site

Habitat Quality Assessment Unit Score Sheet

Part C - Site Data

Property	Kingsholme Offset Site	Date	
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Assessment Unit:	Assessment Unit Area (ha)	RE	Bioregion Number
2	37.5	12.11.5	Southeast Queensland

Landscape Photo- Please attach or insert north, south, east and west photos in the spaces provided from row 231-355 below and include details such as Time and Mapping Coordinates in the following row.

Datum	0m Mark	Zone	Easting	Northing
WGS 84	<input type="checkbox"/>	56		
GDA 94	<input checked="" type="checkbox"/>	56		
Plot bearing			Recorders	Andrew Craig

Site description and Location (including details of discrete polygons within the assessment unit)
 Corymbia citriodora subsp. variegata open forest to woodland, usually including Eucalyptus siderophloia/E. crebra (sub coastal ranges), E. propinqua and E. acmenoides or E. carnea. Other species that may be present and abundant locally include Corymbia intermedia, C. trachyphloia subsp. trachyphloia, Eucalyptus tereticornis, E. microcorys, E. portuensis, E. helidonica, E. major, E. longirostrata, E. biturbinata, E. moluccana and Angophora leiocarpa. Lophostemon confertus often present in gullies and as a sub-canopy or understorey tree. Mixed understorey of grasses, shrubs and ferns. Occurs on hills and ranges of Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

Part D - Native Species Richness: (*list species below)

Tree species richness:			
Total number of species			9
Scientific Name	<i>Corymbia citriodora</i>	Common Name	
Scientific Name	<i>Eucalyptus major</i>	Common Name	
Scientific Name	<i>Lophostemon confertus</i>	Common Name	
Scientific Name	<i>E. acmenoides</i>	Common Name	
Scientific Name	<i>E. tinidulosa</i>	Common Name	
Scientific Name	<i>C. intermedia</i>	Common Name	
Scientific Name	<i>E. tereticornis</i>	Common Name	
Scientific Name	<i>E. siderophloia</i>	Common Name	
Scientific Name	<i>E. carnea</i>	Common Name	
Scientific Name		Common Name	

Shrub species richness:			
Total number of species			7
Scientific Name	<i>Acacia concurrens</i>	Common Name	
Scientific Name	<i>A. littoralis</i>	Common Name	
Scientific Name	unidentified <i>Acacia</i> sp.	Common Name	
Scientific Name	<i>Cassinia</i> sp.	Common Name	
Scientific Name	<i>A. leucalyx</i>	Common Name	
Scientific Name	<i>A. excelsa</i>	Common Name	
Scientific Name	<i>Howea</i> sp.	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Grass species richness:			
Total number of species			3
Scientific Name	<i>Themeda triandra</i>	Common Name	
Scientific Name	<i>Imperata cylindrica</i>	Common Name	
Scientific Name	<i>Cymbopogon refractus</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Forbs and others (non grass ground) species richness:			
Total number of species			8
Scientific Name	<i>Laxmannia compacta</i>	Common Name	<i>B. oblongifolia</i>
Scientific Name	<i>Lomandra multiflora</i>	Common Name	
Scientific Name	<i>Geodorum densiflorum</i>	Common Name	
Scientific Name	<i>Eustraphus latifolius</i>	Common Name	
Scientific Name	<i>Dianella caerulea</i>	Common Name	
Scientific Name	<i>Cheilanthes distans</i>	Common Name	
Scientific Name	<i>Bursaria spinosa</i>	Common Name	

Part E - Non-Native Plant Cover: (*list species below)

Total percentage cover within plot			
			12.50%
Scientific Name	<i>Lantana camara</i>	Common Name	
Scientific Name	<i>Bidens pilosa</i>	Common Name	
Scientific Name	<i>Passiflora suberosa</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Part F - Coarse Woody Debris: (*list lengths of individual logs in meters)

Total Length of Coarse Woody Debris (Meters):		810.00
1	26	
2	27	
3	28	
4	29	
5	30	
6	31	
7	32	
8	33	
9	34	
10	35	
11	36	
12	37	
13	38	
14	39	
15	40	
16	41	
17	42	
18	43	
19	44	

20		45	
21		46	
22		47	
23		48	
24		49	
25		50	

Part G - Native perennial grass cover, organic litter: (*provide percentage cover within each quadrat, and provide average cover)

Native perennial grass cover	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Average
						6.70%

Organic Litter	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Average
						78.30%

Part H- Number of large trees , tree canopy height, recruitment of woody perennial species:

Eucalypt Large tree DBH benchmark used :	45cm	Non- Eucalypt Large tree DBH benchmark used:	45cm
Number of large eucalypt trees:		Number of large non eucalypt trees:	
Total Number Large Trees:	24		

Median Tree Canopy Height Measurements	Canopy:	23.00	Sub-canopy:	12.00	Emergent:	0.00
--	---------	-------	-------------	-------	-----------	------

Number of ecologically dominant layer species regenerating:	64
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Part I - Tree canopy cover, Shrub canopy cover

Tree canopy cover %	Canopy:	73.10%	Sub-canopy:	37.50%	Emergent:	0.00%
Shrub canopy cover %			13.80%			

Note: Only assess Emergent (E) or Subcanopy (S) layers if the benchmark document stipulates that layers are present *If trees are in the same layer and continuous along the transect you can group them

Part J - Site Context Score

ATTRIBUTE	Size of Patch	Connectedness	Context	Distance to Permanent Water	Ecological Corridors
DESCRIPTION	4 - 101-200ha	3 - 50%-75% connection	4 - >75% remnant	3 - 1-3km	3 - Within (whole or part)
SCORE	7	4	5	5	6

DOES THIS ASSESSMENT UNIT ALSO CONTAIN A SPECIES HABITAT REQUIREMENT.

YES PLEASE COMPLETE SPECIES HABITAT INDEX DETAILS BELOW AND THEN ATTACH LANDSCAPE PHOTOS AND SUBMIT AS DIRECTED

NO PLEASE ATTACH LANDSCAPE PHOTOS BELOW AND SUBMIT AS DIRECTED

Part K - Species Habitat Attributes

Species Habitat Attributes

No	Species Name	CommonName	NCA Status	Attributes	Threats to species	Quality and availability of food and foraging habitat	Quality and availability of shelter	Species mobility capacity	Role of site location to overall population
1	Phascolarctos cinereus	koala	SL	Description	3 - Low threat level	3 - High	3 - High	4 - Minor restriction (0 - 25% reduction)	2 - Likely to be critical to species' survival
				Score	15	10	10	10	4
2				Description					
				Score					
3				Description					
				Score					
4				Description					
				Score					
5				Description					
				Score					
6				Description					
				Score					
7				Description					
				Score					
8				Description					
				Score					
9				Description					
				Score					
10				Description					
				Score					
Maximum Score					15.00	10.00	10.00	10.00	4.00

Habitat Quality Site Assessment Template

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This form is useful for undertaking a **habitat quality analysis** of an impact and/or offset/advanced offset site. Please note that this form should be completed individually for each assessment unit under consideration.

Is this Assessment for: An Impact Site An Offset Site an Advanced Offset Site

Habitat Quality Assessment Unit Score Sheet

Part C - Site Data

Property	Kingsholme offset site	Date	
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Assessment Unit:	Assessment Unit Area (ha)	RE	Bioregion Number
3	1.6	12.11.10	Southeast Queensland

Landscape Photo- Please attach or insert north, south, east and west photos in the spaces provided from row 231-355 below and include details such as Time and Mapping Coordinates in the following row.

Datum	0m Mark	Zone	Easting	Northing
WGS 84	<input type="checkbox"/>	56		
GDA 94	<input checked="" type="checkbox"/>	56		
Plot bearing			Recorders	Andrew Craig

Site description and Location (including details of discrete polygons within the assessment unit)
 Notophyll and notophyll/microphyll vine forest +/- Araucaria cunninghamii. Characteristic species include Argrodendron trifoliolatum, Argrodendron sp. (Kin Kin W.D.Francis AQ81198), Backhousia subargentea, Dissiliaria baloghoides, Brachychiton discolor, Beilschmiedia obtusifolia, Diospyros pentamera, Grevillea robusta, Gmelina leichhardtii and Ficus macrophylla forma macrophylla. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics.

Part D - Native Species Richness: (* list species below)

Tree species richness:			
Total number of species		14	
Scientific Name	<i>Macadamaia integrifolia</i>	Common Name	<i>Backhousia subargentea</i>
Scientific Name	<i>Lophastemon confertus</i>	Common Name	<i>Grevillea robusta</i>
Scientific Name	<i>Eucalyptus major</i>	Common Name	<i>Ficus macrophylla</i>
Scientific Name	<i>Eucalyptus microcarys</i>	Common Name	<i>Polyscias elegans</i>
Scientific Name	<i>Corymbia intermedia</i>	Common Name	
Scientific Name	<i>Argrodendron sp.</i>	Common Name	
Scientific Name	<i>E. propinquus</i>	Common Name	
Scientific Name	<i>E. tereticornis</i>	Common Name	
Scientific Name	<i>Argrodendron trifoliolatum</i>	Common Name	
Scientific Name	<i>Araucaria cunninghamii</i>	Common Name	

Shrub species richness:			
Total number of species		12	
Scientific Name	<i>Brachychiton sp.</i>	Common Name	<i>A. littoralis</i>
Scientific Name	<i>Findleria schottiana</i>	Common Name	<i>Cheilanthes distans</i>
Scientific Name	<i>Cordyline stricta</i>	Common Name	
Scientific Name	<i>Smilax australis</i>	Common Name	
Scientific Name	<i>Cassinia sp.</i>	Common Name	
Scientific Name	<i>A. leocalyx</i>	Common Name	
Scientific Name	<i>A. excelsa</i>	Common Name	
Scientific Name	<i>Howea sp.</i>	Common Name	
Scientific Name	<i>A. leocarpa</i>	Common Name	
Scientific Name	<i>A. littoralis</i>	Common Name	

Grass species richness:			
Total number of species		3	
Scientific Name	<i>Themeda triandra</i>	Common Name	
Scientific Name	<i>Imperata cylindrica</i>	Common Name	
Scientific Name	<i>Cymbopogon refractus</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Forbs and others (non grass ground) species richness:			
Total number of species		10	
Scientific Name	<i>Laxmannia compacta</i>	Common Name	<i>Geitonoplesium cymosum</i>
Scientific Name	<i>Lomandra multiflora</i>	Common Name	<i>Desmodium intortum</i>
Scientific Name	<i>Geodorum densiflorum</i>	Common Name	<i>Eustrephus sp.</i>
Scientific Name	<i>Eustrephus latifolius</i>	Common Name	
Scientific Name	<i>Dianella caerulea</i>	Common Name	
Scientific Name	<i>Cheilanthes distans</i>	Common Name	
Scientific Name	<i>Bursaria spinosa</i>	Common Name	

Part E - Non-Native Plant Cover: (* list species below)

Total percentage cover within plot		30.00%	
Scientific Name	<i>Lantana camara</i>	Common Name	
Scientific Name	<i>Bidens pilosa</i>	Common Name	
Scientific Name	<i>Passiflora suberosa</i>	Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	
Scientific Name		Common Name	

Part F - Coarse Woody Debris: (* list lengths of individual logs in meters)

Total Length of Coarse Woody Debris (Meters):		260.00	
1		26	
2		27	
3		28	
4		29	
5		30	
6		31	
7		32	
8		33	
9		34	
10		35	
11		36	
12		37	
13		38	
14		39	
15		40	
16		41	
17		42	
18		43	
19		44	

20		45	
21		46	
22		47	
23		48	
24		49	
25		50	

Part G - Native perennial grass cover, organic litter: (*provide percentage cover within each quadrat, and provide average cover)

Native perennial grass cover	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Average
						24.00%
Organic Litter	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Average
						36.00%

Part H- Number of large trees , tree canopy height, recruitment of woody perennial species:

Eucalypt Large tree DBH benchmark used :	45	Non- Eucalypt Large tree DBH benchmark used:	45
Number of large eucalypt trees:		Number of large non eucalypt trees:	8
Total Number Large Trees:	8		

Median Tree Canopy Height Measurements	Canopy:	22.00	Sub-canopy:	12.00	Emergent:	30.00
--	---------	-------	-------------	-------	-----------	-------

Number of ecologically dominant layer species regenerating:	57
---	----

Part I - Tree canopy cover, Shrub canopy cover

Tree canopy cover %	Canopy:	71.00%	Sub-canopy:	12.00%	Emergent:	65.00%
Shrub canopy cover %	10.00%					

Note: Only assess Emergent (E) or Subcanopy (S) layers if the benchmark document stipulates that layers are present *If trees are in the same layer and continuous along the transect you can group them

Part J - Site Context Score

ATTRIBUTE	Size of Patch	Connectedness	Context	Distance to Permanent Water	Ecological Corridors
DESCRIPTION	4 - 101-200ha	3 - 50%-75% connection	4 - >75% remnant	3 - 1-3km	3 - Within (whole or part).
SCORE	7	4	5	5	6

DOES THIS ASSESSMENT UNIT ALSO CONTAIN A SPECIES HABITAT REQUIREMENT.

YES PLEASE COMPLETE SPECIES HABITAT INDEX DETAILS BELOW AND THEN ATTACH LANDSCAPE PHOTOS AND SUBMIT AS DIRECTED

NO PLEASE ATTACH LANDSCAPE PHOTOS BELOW AND SUBMIT AS DIRECTED

Part K - Species Habitat Attributes

Species Habitat Attributes									
No	Species Name	CommonName	NCA Status	Attributes	Threats to species	Quality and availability of food and foraging habitat	Quality and availability of shelter	Species mobility capacity	Role of site location to overall population
1	Phascolarctos cinereus	koala	SL	Description	3 - Low threat level	3 - High	3 - High	3 - Moderately restricted (26 - 50% reduction)	2 - Likely to be critical to species' survival
				Score	15	10	10	7	4
2				Description					
				Score					
3				Description					
				Score					
4				Description					
				Score					
5				Description					
				Score					
6				Description					
				Score					
7				Description					
				Score					
8				Description					
				Score					
9				Description					
				Score					
10				Description					
				Score					
Maximum Score					15.00	10.00	10.00	7.00	4.00

Habitat Quality Final Summary Template

Case Reference	
Project Name	
Total Area	71.7

PART	Habitat Quality Attributes
	Assessment Unit Area (ha)
	Regional Ecosystems
	Bioregion

Requirement	Assessment Unit Number									
	1	2	3	4	5	6	7	8	9	10
Area (ha)	32.6	37.5	1.6	0	0	0	0	0	0	0
RE	12.11.3	12.11.5	12.11.10							
Bioregion	Southeast Queensland	Southeast Queensland	Southeast Queensland							

1	Site Condition Attributes	1. Recruitment of woody perennial species	Score	5	3	3							
		2. Native plant species richness	Score	5	5	5							
		- Trees	Score	5	5	5							
		- Shrubs	Score	5	5	5							
		- Grasses	Score	3	5	5							
		- Forbs	Score	3	5	3							
		3. Tree canopy height	Score	5	5	5							
		- Canopy layer	Score	5	5	5							
		- Sub-Canopy Layer	Score	5	5	5							
		- Emergent Layer	Score			5							
Average Score	Average Score	5	5	5									
4. Tree canopy cover	Score	5	5	5									
- Canopy layer	Score	3	5	5									
- Sub-Canopy Layer	Score			5									
- Emergent Layer	Average Score	4	5	5									
5. Shrub canopy cover	Score	3	5	5									
6. Native perennial grass cover	Score	5	1	5									
7. Organic litter	Score	5	5	5									
8. Large trees	Score	5	10	10									
9. Coarse woody debris	Score	2	5	5									
10. Weed cover	Score	5	5	5									

2	Site Context Attributes	11. Size of patch (fragmented)	Score	7	7	7						
		12. Connectedness (fragmented)	Score	4	4	4						
		13. Context (fragmented)	Score	5	5	5						
		14. Distance from water (intact)	Score	5	5	5						
		15. Ecological corridors	Score	6	6	6						

3	Species Habitat Index	16. Threats to species	Score	15	15	15						
		17. Quality and availability of food and foraging habitat	Score	10	10	10						
		18. Quality and availability of shelter	Score	10	10	10						
		19. Species mobility capacity	Score	7	10	7						
		20. Role of site location to overall population in the State.	Score	4	4	4						

Habitat Quality Score (measured)	128.00	140.00	139.00							
Habitat Quality Score (max)	176.00	176.00	176.00							
Assessment Unit Area (ha)	32.60	37.50	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assessment Unit Habitat Quality Score	7.27	7.95	7.90							
Size weighting	0.45	0.52	0.02							
Weighted Assessment Unit Habitat Quality Score	3.31	4.16	0.18							
FINAL TOTAL HABITAT QUALITY SCORE	7.64									

Administrative Information	
Name of Assessment Officer	Date
Organisation/Company Name	
Project Name	
Phone Number	Email

Appendix C

Minister's Written Approval





Mr Anthony Joyce
Director
Boral Resources (Qld) Pty Ltd
PO Box 125
KELVIN GROVE QLD 4059

Offset Management Plan and Environmental Management Plan, Ormeau Quarry Expansion (EPBC 2016/7797)

Dear Mr Joyce

Saunders Havill Group submitted on behalf of Boral Resources (Qld) Pty Ltd the Offset Management Plan and Environmental Management Plan required in accordance with Conditions 6 and 7 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval for EPBC 2016/7797.

Officers of this Department have advised me on the plans, and the requirements of Conditions 6 and 7 of the approval for EPBC 2016/7797. On this basis, and as a delegate of the Minister for the Environment and Energy, I have decided to approve:

- the *Offset Management Plan* dated 6 December 2018 as meeting the requirements of Condition 6 of the approval; and
- the *Environmental Management Plan* dated 5 November 2018 as meeting the requirements of Condition 7 of the approval.

The above plans must now be implemented.

Please note that the conditions of EPBC Act approval for EPBC 2016/7797 require, unless otherwise agreed in writing by the Minister, that the approved plans be published on your website within one month of the date of this approval.

The Department has an active monitoring program which includes monitoring inspections, and desktop document reviews and audits. Please ensure that you maintain accurate records of all activities associated with the conditions of approval, including implementation of approved plans, so that they can be made available to the Department on request.

Should you require further information regarding my decision please contact Vaughn Cox on 02 6274 2005, or by email: post.approvals@environment.gov.au.

Yours sincerely

Greg Manning
Assistant Secretary
Assessments (WA, SA, NT) & Post Approvals Branch
Environment Standards Division

10 December 2018

cc. Mr Sam Maynard, Saunders Havill Group

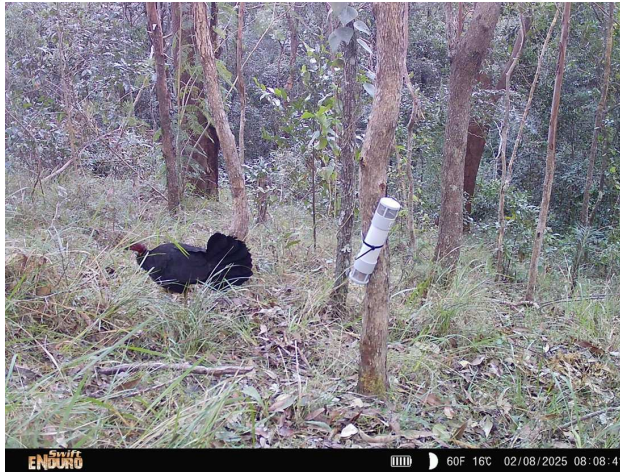
SH camera trapping images – Year 5

Appendix E





Mountain Brushtail Possum



Australian Brush Turkey



Bush Rat



Long-nosed Bandicoot

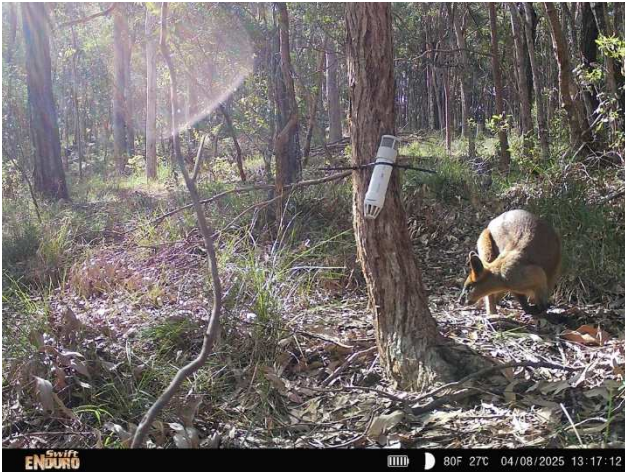


Swamp Wallaby



Common Brushtail Possum

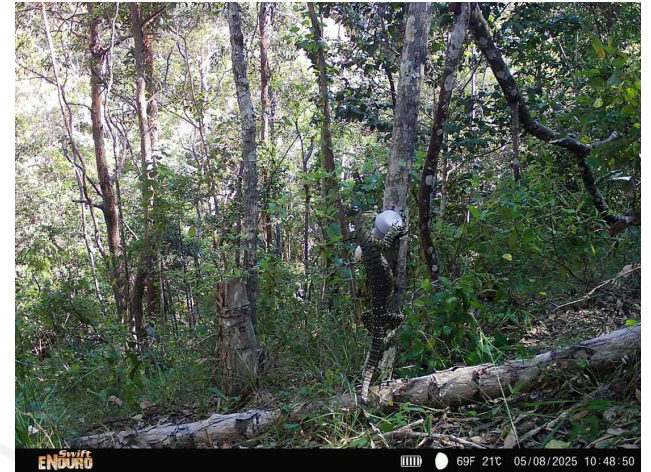
■ Annual Compliance Report – EPBC 2016/7797 (1 May 2026)



Red-necked Wallaby



Motorbike



Lace Monitor



Koala

Appendix F

Non-native Vertebrate Pest Monitoring Report Year 5 – Biodiversity Australia



LEADING THE WAY
IN ENVIRONMENTAL
MANAGEMENT



**FERAL ANIMAL
MANAGEMENT PROGRAM
REPORT**

ORMEAU QUARRY

December 2025

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Document Control Page

Version Control

Version	Purpose	Author	Reviewed / approved by	Date
0.1	Draft	Jessica Hobart	Natalie May	17/12/2025
0.2	Technical Review	Jessica Hobart	Laura Torre	17/12/2025
1.0	Final	Jessica Hobart	Steve Noy	18/12/2025

Distribution Control

Copy	Purpose	Issued to:	Name	Date
1.0	Final	Boral	Matthew Allan	18/12/2025
1.0	Final	Biodiversity Australia	Info	18/12/2025

Project Number: BSQ7605

Our Document Reference: BSQ7605-BVP-REP-Boral-OrmeauQuarryPestManagement-rev1.0

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1. Introduction

Biodiversity Australia Pty Ltd (BA) was contracted by Boral Pty Ltd (the Client) to conduct Vertebrate Pest Management at Ormeau's Quarry's Offset Area (the Site, Figure 1). Biodiversity Australia was engaged to undertake these works in line with the Saunders Havill Group *Vertebrate Pest Management Plan* (VPMP) (2021). As such, a monitoring and management program was undertaken to determine the feral/pest species present within the Offset Area and decrease their population. This program is conducted on an annual basis, with 2025 being the third year of works. This report also contains valuable post-monitoring results that will inform management strategies during future feral animal programs.

A total of seven (7) Passive infrared (PIR) cameras were installed within November 2025, as per the VPMP. As per the results of the PIR cameras, seven (7) Soft Jaw Traps (SJT) were installed within December 2025 to assist in the eradication of pest species within the Site.

1.1 Objectives

For the Offset Area to remain compliant, the Projects' objective is to assess three (3) target species, monitor and manage their presence and abundance within the Site. The VPMP provides a rating scale towards the pest species which rates them from low to high priority, as below:

- **High Priority** – Feral and unwanted domestic dogs (*Canis familiaris*).
- **Medium Priority** – Red Fox (*Vulpes vulpes*).
- **Low Priority** – Feral Cat (*Felis catus*).

As per the VPMP objectives, BA conducted a program which:

- Established the approximate population of the target species within the Site.
- Reduced the number of high priority species (Wild Dog) within the Site through trapping and humane euthanasia.
- Provide data-based recommendations for future pest animal management within the Site.

1.2 Site Location and Description

The Site is located on Upper Ormeau Road, Ormeau, approximately ten (10) kilometres (km) from Pimpama township (Figure 1). Boral's Offset Area for The Site is approximately 38 hectares (ha). The Site is surrounded by state forest, with established housing to the east. Tamborine National Park 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, which is displayed in Table 1.

Table 1: Regional Ecosystems Present Onsite

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



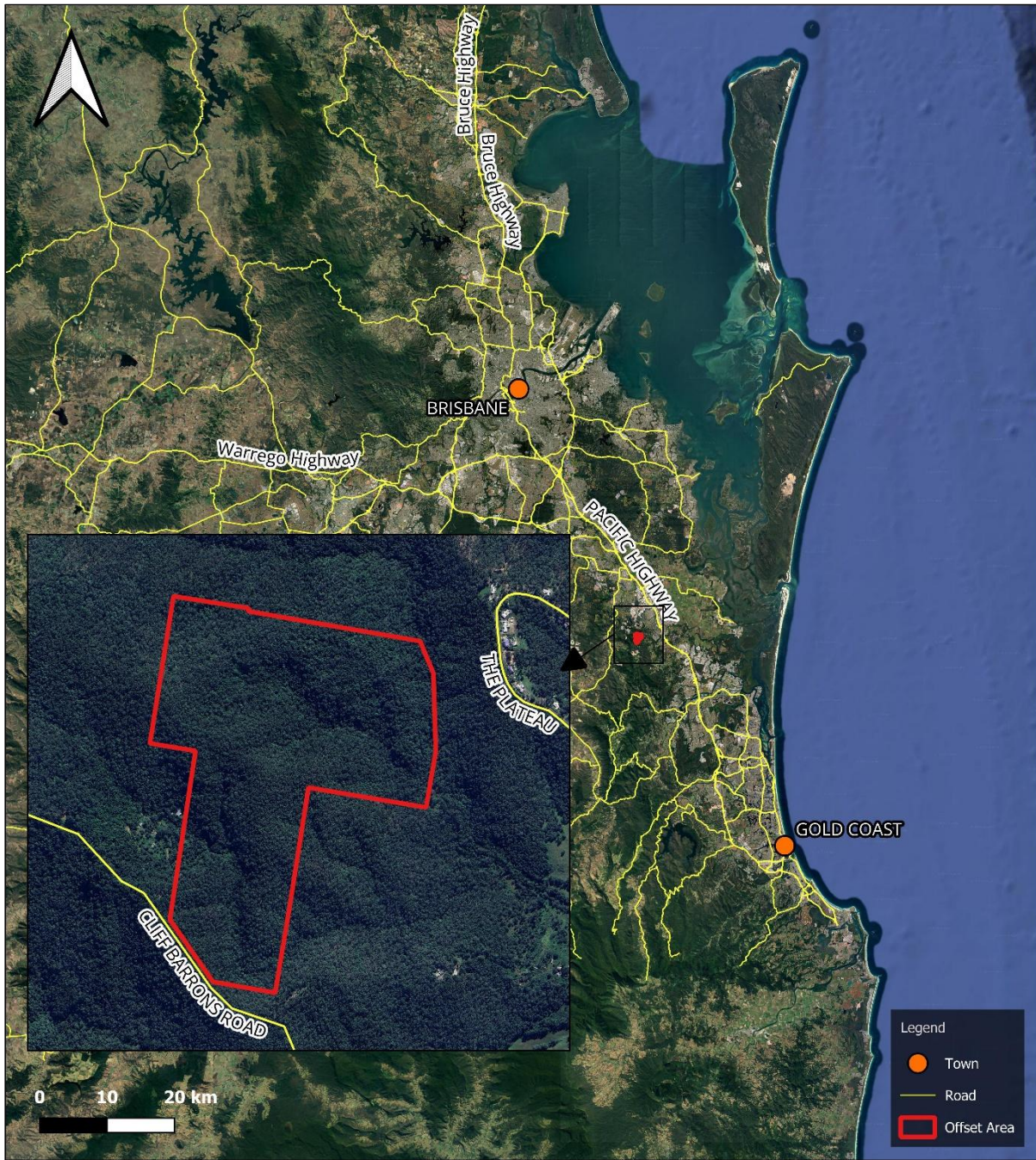



Figure Name: Site Location	Location: Ormeau Quarry	Client: Boral		
<p>This mapping is to be considered indicative only and all derivations (e.g., vegetation communities) are best approximations and subject to errors including individual interpretation and reliance on information provided to Bio Aus where were not independently verified. All information is intended to be indicative only and no reliance for extrapolation, mapping etc. should be placed upon this map without independent validation of the information by the user. Bio Aus takes no responsibility for any subsequent error losses etc. that may arise from the use of this data without independent verification.</p>		Job Number: BSQ7605		
		Date: December 2025	Spatial Reference: WGS 84 / Pseudo-Mercator	
		Scale: 1:831086		

Figure 1: Site Location



1.3 Target Species

As per the VPMP, three (3) target species are priority within the Site, to monitor and manage presence. A description of each target species is detailed below.

1.3.1 High Priority

1.3.1.1 Wild & Unwanted Domestic Dog (*Canis lupus familiaris*)

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 to medium-sized mammals, including native mice, dunnarts, bandicoots and wallabies, they will prey upon a variety of native and exotic animals, including insects, kangaroos and livestock. 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.

1.3.2 Medium Priority

1.3.2.1 Red Fox (*Vulpes vulpes*)

Red Foxes are a category 3, 4, and 6 restricted invasive animal under the *Biosecurity Act 2014*. This pest species is primarily a carnivorous scavenger and predator, however, are also opportunistic feeders and can consume an enormous variety of animal and plant material. Foxes will consume bandicoots, antechinus, frogs, birds, insects, fruit, vegetables and grain.

Red foxes will predate upon livestock, mainly lambs and goat kids, and native animals. These pest animals are managed by erecting exclusion fencing, trapping, shooting, and poisoning.

1.3.3 Low Priority

1.3.3.1 Feral Cat (*Felis catus*)

Feral Cats are a category 3, 4 and 6 restricted invasive animal under the *Biosecurity Act 2014*. Feral cats are mostly nocturnal with peak hunting activity occurring at dusk and dawn. Eyeshine from this species is a distinctive green/yellow colour making it easily distinguishable from other species of this size. During the day they will take refuge within hollow logs, dense clumps of grass, piles of debris, rabbit burrows, and hollow limbs in standing trees.

Studies on the species diets show that 375 Feral Cats on Macquarie Island can consume 56, 000 European rabbits and 58, 000 sea birds per year and Legge et al (2020) state that Feral Cats are implicated in the extinction of twenty-five (25) mammal species and causing population declines in many other species including *Pezoporus occidentalis* (night parrot) and *Psephotellus pulcherrimus* (paradise parrot). Control methods for this species include exclusion fencing, trapping, shooting, and the use of lures.



2. Methodology

Management works within the Site included pre-trapping monitoring and trapping. All Site standard protocols were followed and adhered to throughout the management period. Biodiversity Australia ensured to check in with the Client upon arrival each day throughout the management period and as required whilst moving through gates as outlined by Site protocols. Methodology for each management period is detailed in Sections 2.1 and 2.2 below.

2.1 Pre-Trapping Monitoring Period

In accordance with the VPMP, seven (7) Passive Infra Red (PIR) cameras were installed across the Site for twenty-one (21) consecutive days (11th of November 2025 – 1st of December 2025) by a suitably qualified BA Senior Vertebrate Pest Officer. In line with the VPMP, camera traps were installed at baseline recommended areas, to ensure consistency with the data. Passive Infra Red Camera trap locations were mapped using a Global Information System (GIS) method and given an identification number (Figure 2). Locations were set along established dirt tracks, animal tracks, edges of vegetation, and waterways (Photo Plate 1).



Photo Plate 1: Left – Camera Trap Placement along animal track. Right – Camera Trap Placement along established dirt track.

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.



- Time of day.

Data collected during the monitoring period provides insight on pest animal travel routes and indicated activity that the Offset Area is utilised for. Opportunistic data on other feral animal species and native species is collected throughout the data analysis, will also be used to contribute to understanding of feral animal activity levels both prior to and following control efforts.

2.2 Trapping Period

A trapping program was conducted over a twelve (12) day period within the Site. This occurred immediately after the camera trapping period. Twelve (12) traps were installed in selected areas and mapped (Figure 3).

Traps were set on the 1st of December 2025 and collected on the 12th of December 2025. During this time, BA assessed the traps on a daily basis and serviced them when required.

In consideration of Wild Dog trapping, weather conditions was recorded daily, the following was recorded:

- Humidity.
- Temperature.
- Wind speed and direction.

Wild Dogs often traverse well defined paths along topographic features, and it is expected that Wild Dogs and Red Foxes will frequent areas of well-established paths on a regular basis for convenient roaming paths. Scent lures were placed with traps near these paths to attract Wild Dogs. The interaction between the placement of traps/lures and the direction of wind was given careful consideration in order to ensure that scents of lures were propelled across expected Wild Dog travel routes.

The following data was collected for all pest animals captured:

- Species.
- Sex.
- Date of capture.
- Location, including Global Positioning System (GPS) coordinates of capture location.
- Trap type.
- Method of euthanasia.
- Pictures of animals prior to and post euthanasia.

2.2.1 Trap Preparation

Before use, traps were cleaned and treated with a tannin and wax solution to remove any scent and to give the traps a protective coating of wax. At this point, each individual trap was tested to ensure that all parts were accounted for, intact, and functioning properly.

2.2.2 Soft Jaw Trap Installation

As per the National Standard Operating Procedure for Wild Dogs (NATSOP-DOG001) (Appendix A-2), SJT's were utilised within the management program. Soft jaw traps were strategically placed, in order to minimise the exposure of trapped individuals to harsh conditions such as direct sunlight or rain. Once traps were positioned in a shallow hole in the ground, the trap was then anchored and set. The BA team member ensured that surrounding debris did not interfere with the spring mechanism.



A lure or attractant was placed in a location of high Wild Dog activity, aiming to provoke an investigation. The trap was placed at a pre-determined distance and bearing from the lure in the expectation that the target animal would step in that spot resulting in a capture. A mixture of artificial and natural lures were used.

2.2.3 Trap Monitoring

Each trap was checked every morning for animal welfare purposes. Throughout the process additional baits/scent lures were laid in or around traps as was deemed necessary by BA staff.

2.2.4 Euthanasia

The appropriate firearm and ammunition were used to ensure an instant lethal shot. For a Wild Dog, a smaller calibre rifle such as a .22 rimfire or .22 magnum rimfire with hollow/soft point ammunition is recommended. Each shot was taken at a safe distance once the animals were settled and still.

1.1.1 Bycatch

The below procedures were followed when a non-target species was caught in the SJT traps:

- Native – injured: Transport to a local carer or Wildcare.
- Native – not injured: Release.
- Domestic Pet – injured/non-injured: Transport to local vet.
- Pest/Non-native: Humanely euthanise.

1.1.2 Analysis

The interaction between the placement of traps and the direction of the wind was given careful consideration to ensure expected Wild Dog travel routes were given adequate exposure to the scents of lures accompanying traps. For example, if a trap was positioned to the western side of an expected Wild Dog travel route, wind blowing in an eastwardly direction would expose the scent of the lure to the travel route. As such, all wind was blowing in an eastward wind direction would be considered when calculating the percentage of management days, the scent of the trap was exposed to Wild Dog travel routes.

In order to calculate the percentage of management days that lures were exposed to Wild Dog travel routes, the percentage of management days that the wind blew in each direction (north, south, east, west etc.) was calculated. The number of days that each lure’s scent was blown towards paths was then calculated.

2.3 Limitations

The implementation of the pest animal trapping program was subject to limitations related to Site access, landscape changes, and weather conditions. These factors influenced camera and trap placement and timing; however, they are not considered to invalidate the overall outcomes of the program. Key limitations are summarised in Table 2.

Table 2: Limitations

Limitation	Description
Landscape and access changes	Track networks present during development of the original Vertebrate Pest Management Plan (VPMP; 2021) are no longer actively maintained or accessible, with new informal tracks established across the Site. While original VPMP trap locations were utilised where possible, access to these points was often difficult due to track degradation and vegetation overgrowth.
Weather conditions	Trapping works were delayed due to heavy rainfall events in late November, which restricted Site access and affected ground conditions.
Trap placement constraints	Due to limited vehicle access and dense, overgrown vegetation, traps were installed both within and outside the designated Site to ensure safe and effective deployment while maintaining coverage of likely pest animal movement corridors.



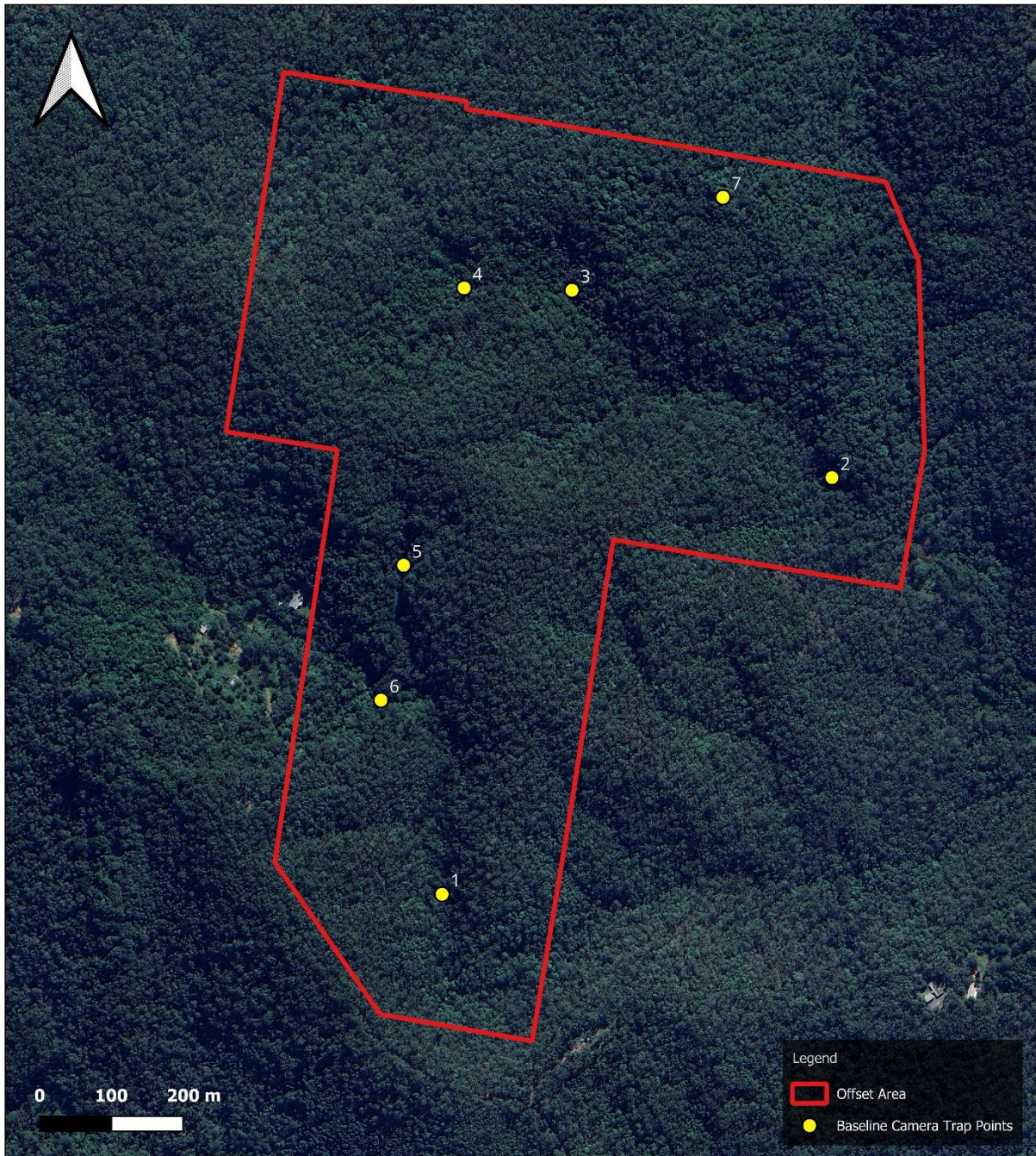



Figure Name: Camera Trap Locations	Location: Ormeau Quarry	Client: Boral		
<p>This mapping is to be considered indicative only and all derivations (e.g., vegetation communities) are best approximations and subject to errors including individual interpretation and reliance on information provided to Bio Aus where were not independently verified. All information is intended to be indicative only and no reliance for extrapolation, mapping etc. should be placed upon this map without independent validation of the information by the user. Bio Aus takes no responsibility for any subsequent error losses etc. that may arise from the use of this data without independent verification.</p>				
		Date: December 2025	Project Manager: TN	Drawn by: JH
		Scale: 1:7746	Spatial Reference: WGS 84 / Pseudo-Mercator	

Figure 2: PIR Camera Trap Locations in 2025

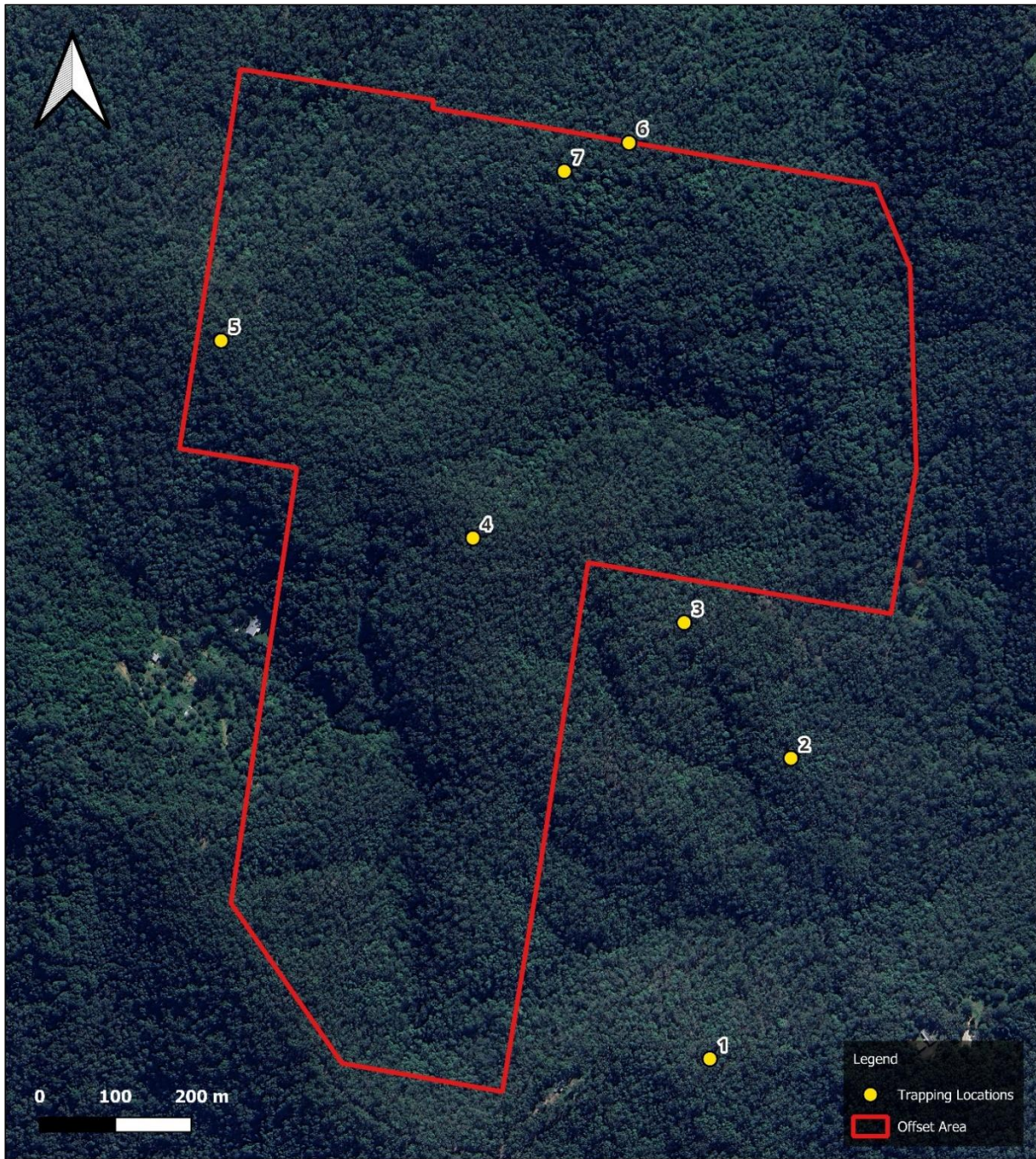



Figure Name: SJT Locations	Location: Ormeau	Client: Boral			
<p>This mapping is to be considered indicative only and all derivations (e.g., vegetation communities) are best approximations and subject to errors including individual interpretation and reliance on information provided to Bio Aus where were not independently verified. All information is intended to be indicative only and no reliance for extrapolation, mapping etc. should be placed upon this map without independent validation of the information by the user. Bio Aus takes no responsibility for any subsequent error losses etc. that may arise from the use of this data without independent verification.</p>					Job Number: ESQ7605
			Date: December 2025	Project Manager: TN	Drawn by: JH
			Scale: 1:7348	Spatial Reference: WGS 84 / Pseudo-Mercator	

Figure 3: Soft Jaw Trap Locations

3. Results

3.1 Pre-Works Monitoring

Pre-works PIR camera monitoring within the Site captured two (2) Ref Foxes. No Wild Dogs or Feral Cats were observed throughout the camera trapping event. Results for the PIR camera monitoring period is displayed in Table 3.

Table 3: PIR Camera Trapping Results (Pests Only)

Day	Time of Day (Day or Night)	Camera Trap #	Species	Number Observed	Sex (if determined)	Comment
15	Night	2	Red Fox	1	Unknown	Photo Plate 2
21	Night	1	Red Fox	1	Unknown	Photo Plate 3

Note – Separate Individuals are in bold, to determine number of each species observed.





STEALTH CAM 04:10 AM 12/01/25 60F ● CAM 01

Photo Plate 2: PIR Camera Trap 1 Red Fox Sighting



STEALTH CAM 09:02 PM 11/25/25 71F ◀ CAM 02

Photo Plate 3: PIR Camera Trap 2 Red Fox Sighting



3.1.1 Calculated Relevant Abundance Frequency

Calculated Relevant Abundance (CRA) is provided within this report to give insight into each targeted feral animals abundance onsite, compared to the other species abundance that was found throughout the monitoring period. The CRA is calculated by dividing the total number of a species caught on camera, by the total number of monitoring points over the twenty-one (21) day monitoring period. Table 4 summaries the CRA of the target species caught on camera within the Site.

Table 4: Calculated Relevant Abundance Frequency

Species	Total Number Recorded	Number of Monitoring Points	Calculated Relative Abundance	Calculated Relative Abundance (%)	2024 Calculated Relative Abundance (%)
Red Fox	2	147	0.01	1%	8%

3.1.2 Red Foxes

Within 2025, a total of two (2) Red Foxes were observed within the Site. This resulted in a 1% CRA, which compared to last year’s monitoring program (2024), was a 7% decrease. Sightings of this species was at Camera Trap 1 and 2. These are located in the south and eastern portions of the Site.

3.1.3 Opportunistic Sightings

No non-target pest species as per the VPMP were observed within the Site. Opportunistic sightings of native animals were captured throughout the camera trapping program. A total of six (6) native species were observed including Red-necked Wallabies (*Macropus rufogriseus*), Swamp Wallabies (*Wallabia bicolor*), Brush Turkey (*Alectura latham*), White-faced Heron (*Egretta novaehollandiae*), Mountain Brushtail Possum (*Trichosurus cunninghami*) and Rufous Bettong (*Aepyprymnus rufescens*).

3.2 Trapping

No animals were captured during the trapping program. Additionally, no tracks or scats attributable to wild dogs, foxes, or feral cats were observed within the Site over the duration of the works.

3.2.1 Trap Exposure

Placement of traps relative to paths was given careful consideration by BA to ensure that target species would have adequate access and exposure to traps to increase efficacy of the control program. The objective was to ensure that the trap was downwind of the lure for the greatest period of time. Weather for the trapping period is presented in Appendix A-1.

Table 4: Percentage of control days that scents of lures at each trap were exposed to nearby tracks.

Trap Number	Trap Position (relative to path)	% of Management Days Tracks were exposed to Trap Scents
1	N	66.7%
2	N	66.7%
3	N	66.7%
4	SE	50%
5	NW	25%
6	NE	66.7%
7	N	66.7%
Average exposure (% of management days):		58.4%



4. Recommendations

Recommendations for future management of each species is detailed in Table 5.

Table 5: Recommendations

Action	Recommendation
Camera Trapping	<ul style="list-style-type: none"> Biodiversity Australia recommend the reassessment of PIR camera trap locations. Due to the establishment of new tracks, and old ones abandoned, this is also likely to affect the common traversed routes of pest species. PIR camera-trapping locations should be strategically positioned along newly established tracks and in the vicinity of water sources, as these areas provide the highest likelihood of detecting target pest species moving through the landscape.
Soft Jaw Trapping Program	<ul style="list-style-type: none"> A Soft Jaw Trapping program is recommended to continue as per the VPMP requirements and locations and should target Red Foxes.



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6. Appendix

A-1 Weather Report for Trapping Period

Date	Min Temp. °C	Max Temp. °C	Rainfall per day mm	Max Wind Gust		
				Direction.	Speed	Time
01/12/2025	17.2	27.7	0	ENE	17	3pm
02/12/2025	19.2	27.3	0	SE	28	3pm
03/12/2025	17.6	25.6	0	SE	30	3pm
04/12/2025	19.9	26.1	0	NE	22	3pm
05/12/2025	18.2	29.3	0	NNE	30	3pm
06/12/2025	19.5	30.1	0	NNE	28	3pm
07/12/2025	22.3	30.7	0	NNE	26	3pm
08/12/2025	18.5	27.3	28.2	ESE	15	3pm
09/12/2025	20.5	28.9	0	NE	19	3pm
10/12/2025	21	28.2	0	ENE	17	3pm
11/12/2025	21	28.1	0	SE	20	3pm
12/12/2025	21.1	28.3	0	NNE	17	3pm



A-2 DOG001 Soft Jaw Trapping Procedure



NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE: TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS

Voluntarily adopted by the Vertebrate Pest Committee 2012 with the Invasive Plants and Animals Committee endorsing minor updates September 2017.

BACKGROUND

Wild dogs, which include feral domestic dogs, dingoes and their hybrids, prey on livestock causing significant impact on agricultural production. Methods of control include poisoning with sodium monofluoroacetate (1080), trapping, shooting, exclusion fencing, aversion and use of livestock guarding animals.

Trapping of wild dogs is often used where poison baiting is less effective, for example, in or around lambing paddocks where there is abundant food. Trapping is useful for targeting individual problem animals, or as a follow-up after 1080 baiting programs, but is regarded as an inefficient method for general population control.

Padded jaw traps are used to reduce the incidence and severity of foot injuries sustained by dogs. Traps are inspected daily and caught dogs are shot whilst still held by the trap. If the traps cannot be checked daily, lethal trap devices containing an humane toxin should be used to prevent prolonged exposure and suffering.

This National Standard Operating Procedure (NATSOP) is a guide only; it does not replace or override the legislation that applies in the relevant state or territory jurisdiction. The NATSOP should only be used subject to the applicable legal requirements (including WH&S) operating in the relevant jurisdiction.

APPLICATION

- Trapping is time-consuming and labour intensive and is therefore best suited for control of small populations or problem individuals.
- Traps have the potential to cause significant suffering and distress so should only be used when there is no suitable alternative.
- Humane and successful trapping requires extensive training and experience. Trapping by inexperienced operators can result in 'trap-shy' dogs that are difficult to catch because they have previously escaped from a carelessly prepared and presented trap.
- Selection of appropriate traps and trap of capturing of non-target animals, and to minimise the pain and distress experienced by trapped animals.
- Every effort must be made to avoid animal deaths from factors such as exposure, shock, capture myopathy and predation.
- Once trapped, wild dogs are euthanased by shooting at the site of capture.
- Traps must be used in accordance with relevant state and territory legislation (see Table 1). In some states for example, Western Australia, a permit may be required to trap within certain municipalities.
- Shooting of wild dogs in traps should only be performed by skilled operators who have the necessary experience with firearms and who hold the appropriate licences and accreditation. Storage and transportation of firearms and ammunition must comply with relevant legislation requirements.
- Unless otherwise authorised by the relevant vertebrate pest authority, where leg-hold traps cannot be checked at least once daily a lethal toxin must be applied to the jaws of the trap or a lethal trap device must be used. Use of the lethal toxin or lethal trap device is to bring about a relatively quick death of trapped animals. This is preferable to the dog suffering a prolonged death from exposure, dehydration and/or stress. New lethal trap devices using humane toxins are currently being developed for use in all states and territories.

**NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE:
TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS**

Table 1: Relevant State and Territory animal welfare and related legislation relevant to the use of traps (legislation correct 2012).

Jurisdiction	Legislation	Conditions
ACT	<u>Animal Welfare Act 1992</u>	Use of steel-jaw traps is prohibited. Trapping with padded-jaw traps, cage traps and treadle snares is permitted.
NSW	<u>Prevention of Cruelty to Animals Act 1979</u>	Use of steel-jaw traps is prohibited. Trapping with padded-jaw traps, cage traps and treadle snares is permitted.
NT	<u>Animal Welfare Act 2000</u>	Use of steel-jaw traps is prohibited. Trapping with padded-jaw traps is permitted
QLD	<u>Animal Care and Protection Act 2001</u>	Steel-jaw traps are not prohibited traps
TAS	<u>Animal Welfare Act 1993</u>	Leg-hold traps and snares are prohibited.

NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE: TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS

SA	<u>Animal Welfare Act 1985</u>	<p>Small steel-jaw traps are prohibited. Large steel-jaw traps are prohibited in most areas except for wild dog control along the dingo fence and for research purposes. The large steel-jaw traps are required to be bound with cloth soaked strychnine or modified.</p>
VIC	<u>Prevention of Cruelty to Animals Act 1986</u> <u>Prevention of Cruelty to Animals Regulations 2008</u>	<p>Mandatory features of traps, conditions of use, inspection periods and where traps may be set are specified for all trap types. All steel-jaw traps are prohibited. Padded traps are permitted for wild dogs, foxes and rabbits. Confinement traps, net traps and rodent kill traps are permitted. Lethal snares are illegal. Non-kill snares and kill traps require Ministerial approval.</p>

NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE: TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS

WA	<p>Animal Welfare Act 2002</p> <p>Agriculture and Related Resources</p> <p>Protection (Traps) Regulations 1982</p>	<p>Steel-jaw traps are permitted for wild dog control. The jaws must be bound with a cloth soaked in strychnine. Only padded steel-jawed traps are permitted for fox control and use in research programs. Permits are required to set traps in metropolitan areas. Neck snares are illegal.</p>
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ANIMAL WELFARE CONSIDERATIONS

Impact on target animals

- Traps which catch dogs on the leg or foot cause pain and distress in two ways; pressure of the trap jaws on the captured limb and restraint of the animal. Injuries will inevitably occur to some animals, especially when they struggle to escape the trap. These range from swelling of the foot and lacerations to dislocations and fractures. Wild dogs may also inflict injuries to their feet and legs by chewing on the captured limb, and to their teeth, lips and gums by gnawing at the trap jaws. To reduce capture distress, trapped dogs must be destroyed humanely and as quickly as possible.
- It is preferable to set traps at sites where vegetation can provide shade and shelter. However, sites should be avoided where there is a risk of the trapped animal becoming entangled in understorey vegetation or fences, which could result in dislocation of the limb.
- Captured animals must be approached carefully and quietly to reduce panic, further stress and risk of injury.
- To minimise the animal welfare implications of leaving dependent pups to die a slow death from starvation it is preferable not to undertake trapping when females are whelping, that is, June to August in temperate areas.
- If lactating bitches are caught in a trap, efforts should be made to find dependent pups and kill them quickly and humanely with a shot to the brain.
- Traps should be inspected at least daily. In remote and extensive areas where this may not be possible, a lethal trap device containing a humane poison should be used to prevent prolonged exposure and suffering.

Impact on non target animals

- Traps are not target specific, so a wide range of nontarget species may be caught. These can include birds (eg ravens, magpies, pied currawongs, kangaroos, wallabies, rabbits, hares, echidnas, goannas, wombats, possums, bandicoots, quolls and sheep). If there is a high risk of trapping non-target animals, traps should not be set.

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- Different groups of non-target animals suffer different levels of injury and distress. For example:
 - Wallabies often experience serious injuries (eg dislocations) due to the morphology of their limbs and because they become very agitated when restrained.
 - Goannas (eg lace monitors) also suffer from dislocations and can die from hyperthermia.
 - Birds, rabbits and hares can be preyed upon by foxes, cats and wild dogs while caught in traps.
- Traps must not be set near areas such as waterholes or gully crossings that are regularly frequented by nontarget species. Animal tracks and pads or holes in fences should also be avoided.
- If scavenging birds or goannas are known to frequent the area, food baits should not be used.
- If the trap is not checked for many days trapped nontarget animals will suffer for a prolonged period, dying from thirst, exposure and/or stress.
- Live non-target animals caught in traps must be examined for injuries and signs of illness or distress and dealt with as follows:
 - Animals which are unharmed or have only received minimal injuries such as minor cuts or abrasions should be immediately released at the site of capture.
 - Animals which have more severe injuries or which are suffering from thermal stress should receive appropriate attention. An animal suffering from thermal stress can initially be placed in a suitable quiet holding area which provides warmth or shade to allow recovery before release. Animals with treatable injuries that cannot be immediately released or those failing to recover from thermal stress should be presented to a veterinarian or a registered wildlife carer for treatment.
 - Animals that have injuries which are untreatable or which would compromise their survival in the wild should be euthanased using a technique that is suitable for the species. For more information on euthanasia techniques refer to Methods of Euthanasia.
- If a domestic pet is caught, it should be taken to the nearest animal shelter, council pound or veterinarian where it can be scanned for a microchip and the owner contacted, or assessed for suitability of re-homing.
- If foxes or feral cats are caught in the trap they must be euthanased quickly and humanely by a shot to the brain using an appropriate firearm.

HEALTH AND SAFETY CONSIDERATIONS

- Firearms are hazardous. All people should stand well behind the shooter when a dog is being shot. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets.
- Care must be taken when handling wild dog carcasses as they may carry diseases such as hydatidosis and sarcoptic mange that can affect humans and other animals. A dog with obvious mange should only be handled while wearing gloves. Routinely wash hands after handling all wild dog carcasses.
- Operators should be wary of the risks of injury when placing and setting traps. Protective clothing, boots and leather gloves may help prevent injuries from shovels, hammers and trap jaws.

NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE: TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS

EQUIPMENT REQUIRED

Traps

- Approved padded-jaw traps suitable for catching wild dogs must be used for example, padded Lanes dingo trap or Victor Soft-Catch® trap no. 3. It is illegal to use serrated, steel-jawed traps in most states and they are not recommended for use in any circumstances on animal welfare grounds.
- Traps must have the following characteristics:
 - The jaws have no teeth.
 - The jaws are offset to increase the space between them when closed (ie a distance of 6-8 mm remains when the jaws are closed).
 - Each jaw has a rubber-like pad to cushion the impact of the jaws on the limb and to prevent the limb sliding out. The padding fills the offset gap when the jaws are closed.
- Traps should also have:
 - A spring placed in the anchor chain to act as a shock absorber, reducing the chance of dislocation of the captured limb. Swivels are located on both ends of the anchor chain allowing the trap to twist as the animal struggles to escape.
- Adjustable pan tension so that a certain minimum force is required to depress the pan and trigger the trap. This minimises the chance of smaller non-target animals setting off the trap.

Lures

- Olfactory stimuli such as dog faeces and/or urine, or a commercially prepared lure (eg synthetic fermented egg) are used to lure wild dogs into the trap set.
- The attractiveness of lures will vary with season and location.

Meat baits

- A handful of meat bait (eg beef, rabbit, lamb, chicken, and kangaroo) can also be placed near the trap.
- Attractiveness and palatability of the bait will vary with season and location.

Firearms and ammunition

- Firearms no smaller than a .17 calibre rimfire with hollow/soft point ammunition are recommended for euthanasia.
- 12 gauge shotguns with shot sizes of BB or AAA may also be used.

PROCEDURES

Selection of trap sites

- Traps should be set where the dog is most likely to find and investigate the unfamiliar lure odour eg beside regularly used boundary pads, near scent pads and around scratch points. Do

NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE: TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS

not set traps near fences and other objects such as trees, bushes etc. in which the trapped dog may become entangled.

- The location of all trap sites must be accurately recorded and marked. This information should be readily available to others in case the trapper is unable to return to check traps.

Setting of traps

- It is preferable to set traps at the end of each day and check them each morning.
- Test that the trap is functioning properly before setting.
- Traps should only be anchored to stakes or fixed objects if there is a shock absorbing device such as a spring fitted to the anchor chain and a swivel attaching the chain to the trap. It is recommended to use a short length of chain (approx. 50 cm). Alternatively the trap can be tied to 'drags', objects such as rocks, solid pieces of steel or small logs that will move when the dog pulls against the trap.
- Set the trap and place into position in the hole in the ground. Ensure that surrounding shrubs or debris will not interfere with the spring mechanism.
- Camouflage the area around the trap with leaves, grass debris etc. but leave a slightly cleared area (10–15 cm) over the area of the plate.
- Place the lure on a slightly elevated clump of grass, stick or rock behind the trap. The distance from the plate of the trap to the decoy is critical and should be 45–50 cm, roughly equivalent to the distance between a dog's front feet and his nose when leaning forward to smell.

Shooting of wild dogs

- Trapped dogs should be euthanased by shooting whilst still held by the trap.
- Unnecessary people should keep away from the area to allow the dog to become less agitated. The shooter should approach the animal in a calm and quiet manner.
- To maximise the impact of the shot and to minimise the risk of misdirection the range should be as short as possible, that is around 5-20 cm from the head if using a rifle, 1–2 m if using a shotgun.
- Never fire when the dog is moving its head, be patient and wait until the dog is motionless before shooting. Accuracy is important to achieve a humane death. One shot should ensure instantaneous loss of consciousness and rapid death without resumption of consciousness. Shots must be aimed to destroy the major centres at the back of the brain near the spinal cord. This can be achieved by one of the following methods (see diagrams below):

Frontal position (front view)

The firearm is aimed at a point midway between the level of the eyes and the base of the ears, but slightly off to one side so as to miss the bony ridge that runs down the middle of the skull. The aim should be slightly across the centreline of the skull and towards the spine.

Temporal position (side view)

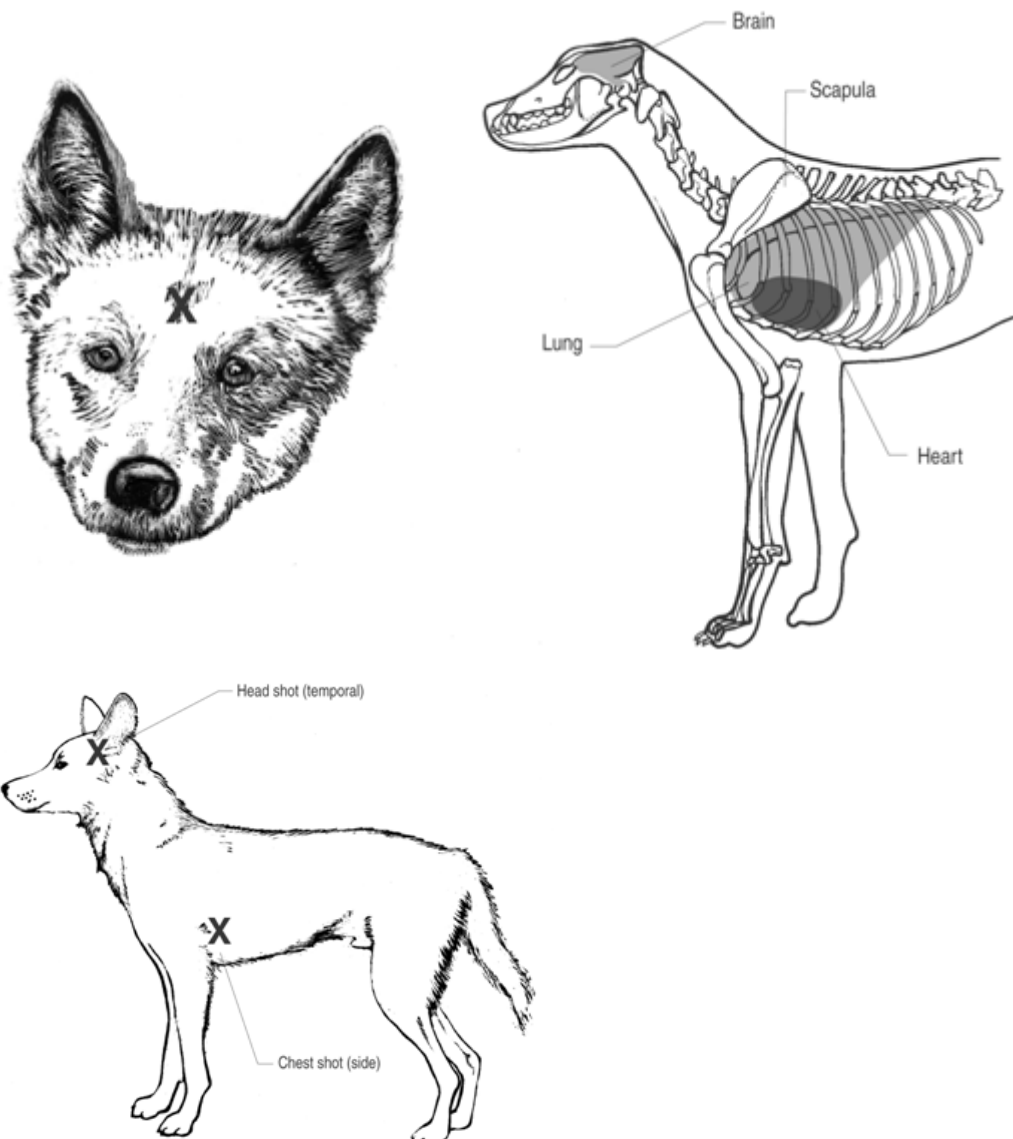
The firearm is aimed horizontally at the side of the head at a point midway between the eye and the base of the ear.

- Death of shot animals should always be confirmed by observing the following:
 - Absence of rhythmic, respiratory movements
 - Absence of eye protection reflex (corneal reflex) or 'blink'
 - A fixed, glazed expression in the eyes

NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE: TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS

- Loss of colour in mucous membranes (become mottled and pale without refill after pressure is applied). If death cannot be verified, a second shot to the head should be taken immediately.

Recommended shot placements for wild dogs



Note: Head shots (temporal or frontal) should be used for shooting wild dogs caught in traps. In order: Side view, Side view (skeleton), Head shot (frontal)

NATSOP-DOG001 NATIONAL STANDARD OPERATING PROCEDURE: TRAPPING OF WILD DOGS USING PADDED-JAW TRAPS

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The Centre for Invasive Species Solutions manages these documents on behalf of the Environment and Invasives Committee (EIC). The authors of these documents have taken care to validate the accuracy of the information at the time of writing. This information has been prepared with care but it is provided “as is”, without warranty of any kind, to the extent permitted by law.

If you have printed this document please ensure you regularly check <https://pestsmart.org.au> for the latest updates of these documents.

Reference me as: Sharp T (2012) NATSOP-DOG001 National Standard Operating Procedure: Trapping of wild dogs using padded jaw traps. PestSmart website: <https://pestsmart.org.au/toolkit-resource/trapping-of-wild-dogs-using-padded-jaw-traps/>

Appendix G

Weed Management Record Sheets Year 5 – Bushcare Services



Bushcare Services – Daily Record Sheet v 1.3

Client:	<i>Boral</i>	Project:	<i>Ormeau EPBC Weed Control Aug 24</i>	Time Allocated:	
Date of Work:	<i>04/11/25</i>	Team Size:	<i>3</i>	Supervisor:	<i>Zanem Makela</i>

Start Time:	<i>900</i>	Finish Time:	<i>330</i>	Total Working Hours:	<i>19.5</i>
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(30-minute lunch break is assumed)

Vehicle Rego:	<i>269KAG</i>
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Tasks to Be Undertaken/ Completed				
	Detail Work Area, Output and Outcomes	Output	Units	Time Taken (hours)
1	Treatment of weed grasses	650	M2	6.5
2	Treatment of woody weeds	650	M2	13
3				
4				
5				

Team Members / Hours Worked on Site											
	Name	Hours		Name	Hours		Name	Hours		Name	Hours
1	Zane Makela	6.5	2	Gabriel Willis	6.5	3	Cj Rakuraku	6.5	4		
5			6			7			8		

WHS – Toolbox Talk					
1	Steep ground	2	Weather – rain/stoms	3	Chainsaw/brushcutters
4	Chemical	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	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input checked="" type="checkbox"/>	Glyphosate	Weedmaster Due	QTY	1L	50:50	Tobacco, Devils figs, Lantana	C&P
	<input type="checkbox"/>	Other		QTY				
	<input checked="" type="checkbox"/>	Dye	TrueBlue	QTY	10ml	5ml/500ml		
	<input type="checkbox"/>	Adjuvant		QTY				
Total Volume of mixture (litres):				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 checked="" type="checkbox"/>	Glyphosate	Weedmaster duo	QTY	150	150ml/10l	Various weed grasses	FS
	<input checked="" type="checkbox"/>	Other	Genorex	QTY	2	2ml/10l		
	<input checked="" type="checkbox"/>	Dye	Trueblue	QTY	40	40ml/10l		
	<input type="checkbox"/>	Adjuvant		QTY				
Total Volume of mixture (litres):				10l				

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			
Total Volume of mixture (litres):							

Environmental Conditions:

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

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

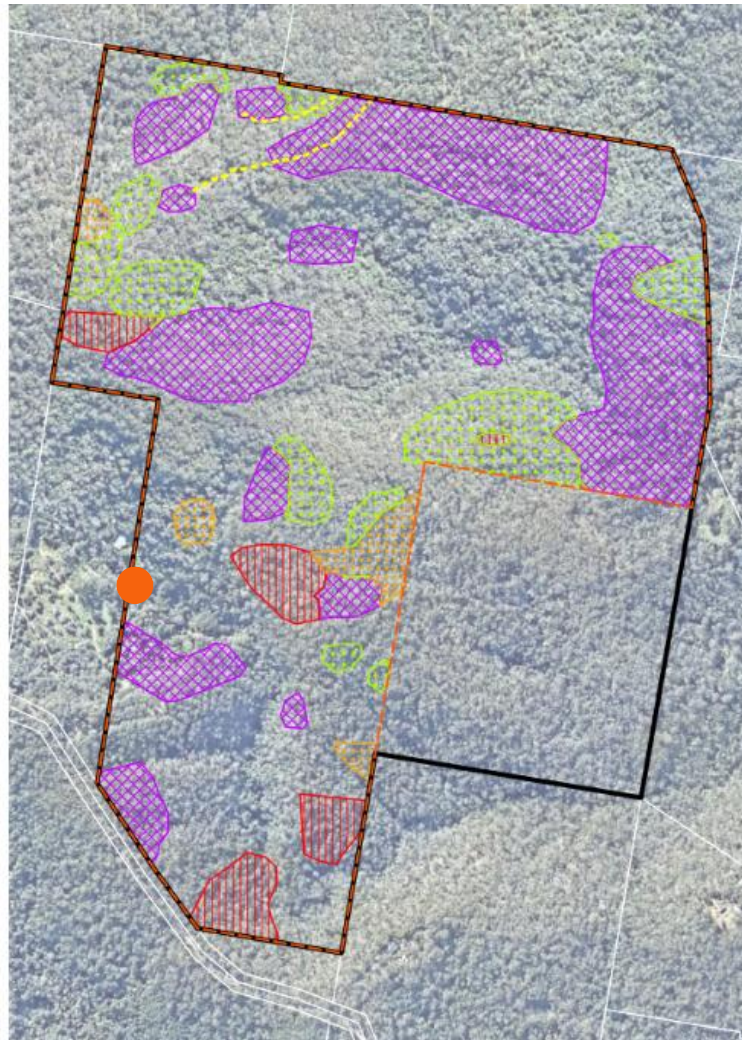
Bushcare Services – Daily Record Sheet v 1.3







Site Notes

Fauna notes: (significant sightings)		
Flora notes:	Flowering:	
	Fruiting:	
	Germinating:	
	Threatened or significant:	
Provide general comments on the work undertaken (constraints, wins etc...)		
Knock down and treat woody weeds and greases to make way for planting. Cut vegetation left in situ to breakdown		
What should be the focus for next time?		
Follow up weed treatment Planting		
Any recommendations for the management of the site?		
NA		
Are there any site-specific issues that our client should be aware of (detail and add photos if necessary)?		
NA		

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 -



Photo 2 -



Bushcare Services – Daily Record Sheet v 1.3

Photo 3 -



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

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

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

Zane Makela	4/11/25
Supervisor Signature	Date

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

Administration Signature	Date

Bushcare Services – Daily Record Sheet v 1.3

Client:	<i>Boral</i>	Project:	<i>Ormeau EPBC Weed Control Aug 24</i>	Time Allocated:	
Date of Work:	<i>30/10/24</i>	Team Size:	<i>4</i>	Supervisor:	<i>Jack Thatcher</i>

Start Time:	<i>0630</i>	Finish Time:	<i>1530</i>	Total Working Hours:	<i>34</i>
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(30-minute lunch break is assumed)

Vehicle Rego:	<i>498ZMR</i>
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Tasks to Be Undertaken/ Completed				
	Detail Work Area, Output and Outcomes	Output	Units	Time Taken (hours)
1	Treated lantana using motorised hedgers and hand tools with glyphosate	4000	M2	34
2				
3				
4				
5				

Team Members / Hours Worked on Site											
	Name	Hours		Name	Hours		Name	Hours		Name	Hours
1	Jack Thatcher	8.5	2	Hayden Stewart	8.5	3	Odin Mircic	8.5	4	CJ Rakuraku	8.5
5			6			7			8		

WHS – Toolbox Talk					
1	Steep slopes	2	Manual handling	3	Motorised machinery
4	Herbicides	5	Hot, humid weather	6	Spiked flora

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	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input checked="" type="checkbox"/>	Glyphosate	Weedmaster duo	QTY	500mL	1:1	Lantana	CSP
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
Total Volume of mixture (litres):				1L				

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				
Total Volume of mixture (litres):								

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				
Total Volume of mixture (litres):								

Environmental Conditions:

<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Dry	Wind speed (km/hr):	11
<input type="checkbox"/> Overcast	<input type="checkbox"/> Mild	Wind direction (N, E, S, W):	ENE
<input type="checkbox"/> Showers	<input checked="" type="checkbox"/> Humid	Temperature (°C):	24

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

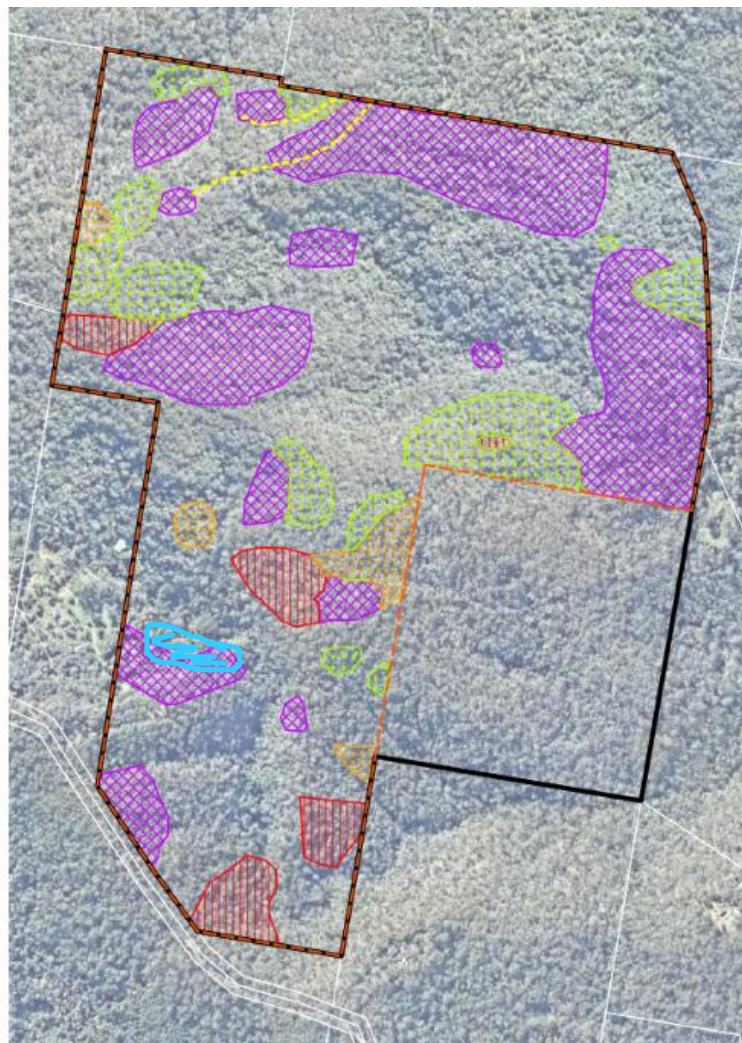
Bushcare Services – Daily Record Sheet v 1.3

Site Notes

Fauna notes: (significant sightings)		
Flora notes:	Flowering:	
	Fruiting:	
	Germinating:	
	Threatened or significant:	
Provide general comments on the work undertaken (constraints, wins etc...)		
We used hedgers to break down large lantana clumps that were otherwise too large to be treated effectively. Stumps were followed up with cut, scrape, painting. Smaller lantana was treated using hand tools in the same way.		
What should be the focus for next time?		
Continue with lantana treatment		
Any recommendations for the management of the site?		
Are there any site-specific issues that our client should be aware of (detail and add photos if necessary)?		

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 -



Photo 2 -



Bushcare Services – Daily Record Sheet v 1.3

Photo 3 -



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:

	30/10/2024
Supervisor Signature	Date

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

F Campbell	31/10/2024
Administration Signature	Date

Bushcare Services – Daily Record Sheet v 1.3

Client:	<i>Boral</i>	Project:	<i>Ormeau EPBC Weed Control Aug 24</i>	Time Allocated:	
Date of Work:	<i>26/11/2024</i>	Team Size:	<i>4</i>	Supervisor:	<i>Jack Thatcher</i>

Start Time:	<i>06:30</i>	Finish Time:	<i>15:30</i>	Total Working Hours:	<i>34</i>
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(30-minute lunch break is assumed)

Vehicle Rego:	<i>498ZMR</i>
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Tasks to Be Undertaken/ Completed				
	Detail Work Area, Output and Outcomes	Output	Units	Time Taken (hours)
1	Foliar spray cat's claw	10000	M2	18
2	CSP and handweed lantana and basket asparagus	15000	M2	16
3				
4				
5				

Team Members / Hours Worked on Site											
	Name	Hours		Name	Hours		Name	Hours		Name	Hours
1	Jack Thatcher	8.5	2	Hayden Stewart	8.5	3	Blaine Williams	8.5	4	Odin Mircic	8.5
5			6			7			8		

WHS – Toolbox Talk					
1	Steep slopes	2	Spiked flora	3	Public/neighbours
4	Herbicides	5	Falling branches	6	Isolated working

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	
	Active Ingredient	Trade Name	(ml, g, other)					
	<input checked="" type="checkbox"/>	Glyphosate	Weedmaster duo	QTY	1000mL	1:1	Lantana, basket asparagus	CSP
	<input type="checkbox"/>	Other		QTY				
	<input type="checkbox"/>	Dye		QTY				
	<input type="checkbox"/>	Adjuvant		QTY				
Total Volume of mixture (litres):				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		Cat's claw	FS	
	<input checked="" type="checkbox"/>	Other	ADAMA cutlass 500	QTY	300mL	60mL/10L		
	<input checked="" type="checkbox"/>	Dye	Tru blu	QTY	300mL	60mL/10L		
	<input checked="" type="checkbox"/>	Adjuvant	Brushwet	QTY	120mL	20mL/10L		
Total Volume of mixture (litres):				50L				

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				
Total Volume of mixture (litres):								

Environmental Conditions:

<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Dry	Wind speed (km/hr):	9
<input type="checkbox"/> Overcast	<input checked="" type="checkbox"/> Mild	Wind direction (N, E, S, W):	N
<input type="checkbox"/> Showers	<input type="checkbox"/> Humid	Temperature (°C):	26

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

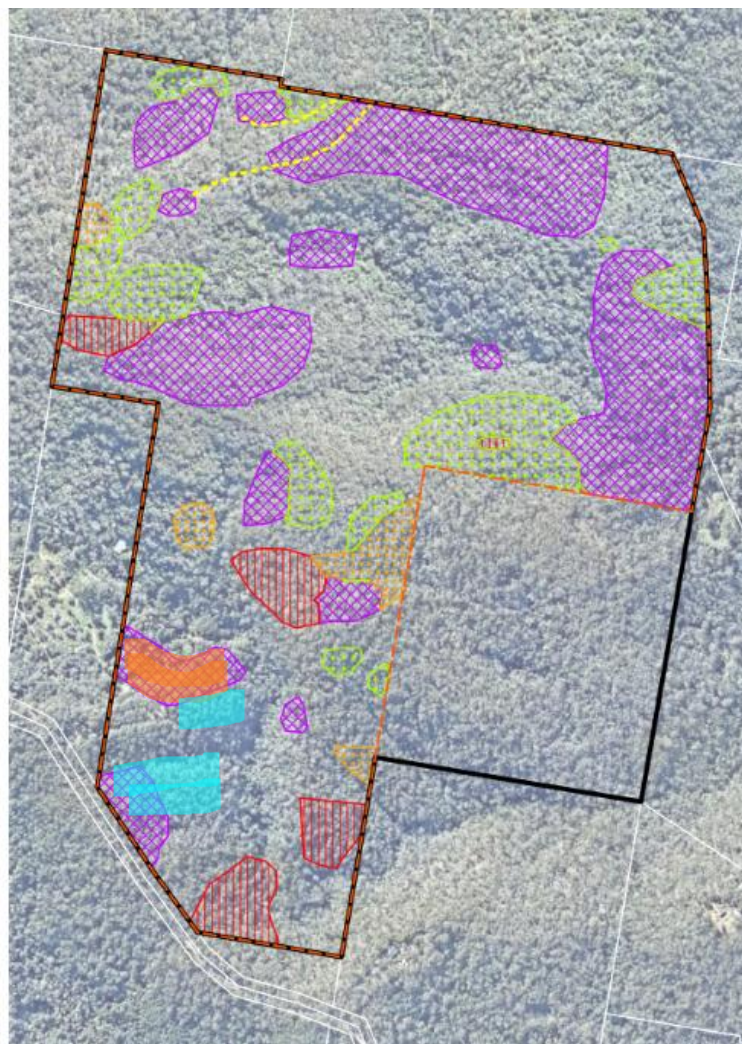
Bushcare Services – Daily Record Sheet v 1.3







Site Notes

Fauna notes: (significant sightings)		
Flora notes:	Flowering:	
	Fruiting:	
	Germinating:	
	Threatened or significant:	
Provide general comments on the work undertaken (constraints, wins etc...)		
<p>Foliar sprayed cat's claw on ground that was prepared two days ago, 24/09/2024. Continued with removal of WONS through the site.</p>		
What should be the focus for next time?		
<p>Continue with lantana treatment. Roadside and driveway frontages have been complete. The gully downhill from cliff barrons Rd is the next most accessible zone with lantana. Large clumps of lantana remain below the cat's claw area and would ideally be managed with hedgers.</p>		
Any recommendations for the management of the site?		
Empty space for recommendations		
Are there any site-specific issues that our client should be aware of (detail and add photos if necessary)?		
Empty space for site-specific issues		

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 - treated cats claw



Photo 2 – treated cat's claw



Bushcare Services – Daily Record Sheet v 1.3

Photo 3 -



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:

	26/11/2024
Supervisor Signature	Date

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

Administration Signature	Date

Rehabilitation Management Record Sheets Year 5 – Bushcare Services

Appendix H





Proposal

Bushcare Services

Client Name: Boral Shared Business Services Pty Ltd
Project Name: Boral Ormeau EPBC Offset- Encroachment Planting
Jobsite Address: 126 Cliff Barrons Road Ormeau Hills, Queensland 4208 Billing Address:
Estimate ID: EST5505332
Date: Jun 20, 2025

This quote is for the encroachment area of Boral EPBC

The area includes a mown pad and disturbed bushland edge totaling 700m2. Both areas have minimal native vegetation and a full structure planting is required.

Preliminaries & Site setup \$800.00

Includes allowance for Inductions and preparation of safety documents.

Also Includes the installation of temporary bunting along boundary to delineate zones

Initial Weed Control \$2,720.00

Initial manual weed control of planting area.

Follow Up Weed Control \$2,040.00

Follow up herbicide treatment of planting area

Supply and Install Tubestock \$3,800.00

Supply and Install Tubestock

Includes Initial Watering & Fertiliser

Qty 650

Supply and Install Weed mat \$2,960.00

Supply and Install of Weed Mat Squares to all installed plants

QTY 650

Supply and install Tree Guards \$1,400.00

Supply and Install Tree Guards to all trees and shrubs

Qty 300

Establishment Watering **\$5,040.00**

Establishment watering across 3 month establishment period

minimum 3l/plant/watering event

Qty 12 events

Establishment Maintenance **\$4,080.00**

Maintenance across 3 month Establishment period

QTY 3 visits

Maintenance - 12 Months **\$16,320.00**

Allowance for 12 months of Maintenance

Frequency of Visitations is dependent of Weed growth and plant health

Includes removal of Tree Guards and Temporary Bunting

Monitoring and Reporting **\$640.00**

Monitoring and reporting

Reports to be Generated at the end of 3 month Establishment period and after 12 months maintenance

	Subtotal	\$39,800.00
	Taxes	\$3,980.00
	Estimate Total	\$43,780.00

Estimate authorized by: _____
Company Representative

Estimate approved by: _____
Customer Representative

Signature Date: _____

Signature Date: _____

Appendix I

Burn Plan Year 5 – Fireland



S27 – C OPERATIONAL PRESCRIBED BURN PLAN

BURN NAME	Ormeau FMU2	Lot/Plan/s No.	2/RP115912
Burn No.	Bor_Orm_FMU2	(all approvals obtained) <input type="checkbox"/> Yes	1/RP174509 20/SP292283
Location	Ormeau	Road Segment No.	
LGA	City of Gold Coast	Proposed Timing	January - December
Permit Number		Actual Date	

Burn Planner	Ben Tidey	
	Name & position	Signature & date
	Burn Planning checklist complete	<input type="checkbox"/> Yes <input type="checkbox"/> No
Burn Plan Reviewer		
	Name & position	Signature & date
	Burn Plan Review checklist complete	<input type="checkbox"/> Yes <input type="checkbox"/> No
Burn Plan Peer Reviewer		
	Name & position	Signature & date
	Review checklists complete	<input type="checkbox"/> Yes <input type="checkbox"/> No
Director/delegate approval		
	Name & position	Signature & date
	Burn plan reviewed and approved	<input type="checkbox"/> Yes <input type="checkbox"/> No

Supporting Documents	
<input type="checkbox"/> Burn permit (Mandatory) <input checked="" type="checkbox"/> Burn map (Mandatory) <input checked="" type="checkbox"/> Complexity Rating (Mandatory) <input type="checkbox"/> Pre Burn Works order (if applicable) <input checked="" type="checkbox"/> Vegetation & Habitat Map (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 type="checkbox"/> Risk assessment (if applicable) <input type="checkbox"/> Contingency map/s (if applicable) <input type="checkbox"/> Other (if so what)

KEY MESSAGES FOR CREW BRIEFING

(Further details contained within Burn Plan)

- Steep tracks – Engage gear shift/park, hand brake on, Motor off.
- East ridge sector has section of cross slope. Consider SxS stability when traversing.

SITUATION (SMEACS)

PLANNING

Complexity Rating: (CR – 2), complexity [63].

SITE CHARACTERISTICS (refer to Operational Burn Map)

Area to be treated	35Ha	Percentage aim	40-60%	Last Fire type	Years since last fire
Description of site (Topography, slope and aspect)	The burn area is situated between mineral earth tracks along moderately steep ridges, with a creek running southeast to northwest through the site. The highest elevation is at the northern ridge and the lowest point is at the southern containment line. Slopes on the north, west, and south descend from the tracks toward the creek, while the eastern containment is mulched and mostly across or below slope. The elevation drops 170m from north to south.				

FUEL CHARACTERISTICS

Vegetation type (General description of vegetation & fuel type, height, fuel variability)	The primary vegetation within the burn area consists of eucalypt-derived leaf surface fuels interspersed with areas of grass-based near-surface fuels. On the eastern side, while surface leaf fuels predominate, there is a greater presence of mid-story shrubs, primarily composed of riparian and softwood species.
Sector	Fuel description within sector
North	Leaf dominated fire behaviour. Section of increased shrubs around the top of the gully head.
East	Leaf dominated fire behaviour but with an increase in lantana and ground creeping weeds and softwood shrubs.
South Gully	Riparian species around creek line with increasing leaf fuels as elevation rises.
South West	Leaf dominated fire behaviour.
West	Leaf dominated fire behaviour, areas of lantana.
Highest fuel hazard rating	<input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High <input type="checkbox"/> Extreme t/Ha

VALUES ASSESSMENT

Significant Fauna/Flora on site.

(Any values listed here that may be adversely affected by the planned fire to be included in the *Values Management* section.)

Item no.	Details
F1	<p>Species: Koala</p> <p>Source of record: <input checked="" type="checkbox"/> Veg Mgt Report <input type="checkbox"/> Atlas of Living Australia <input type="checkbox"/> Other (pls specify)</p> <p>Essential habitat present: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>NCA Status <input type="checkbox"/> CE <input checked="" type="checkbox"/> E <input type="checkbox"/> V <input type="checkbox"/> NT <input type="checkbox"/> SL <input type="checkbox"/> C</p> <p>Known identified location: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Presence identified as likely: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes – include in <i>Values Management</i>.</p>
F2	<p>Species:</p> <p>Source of record: <input type="checkbox"/> Veg Mgt Report <input type="checkbox"/> Atlas of Living Australia <input type="checkbox"/> Other (pls specify)</p> <p>Essential habitat present: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>NCA Status <input type="checkbox"/> CE <input type="checkbox"/> E <input type="checkbox"/> V <input type="checkbox"/> NT <input type="checkbox"/> SL <input type="checkbox"/> C</p> <p>Known identified location: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Presence identified as likely: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>.</p>

F3	<p>Regional Ecosystem code: 12.11.5 VMA Class: <input type="checkbox"/> Not of Concern <input checked="" type="checkbox"/> Least Concern <input type="checkbox"/> Of Concern <input type="checkbox"/> Vulnerable <input type="checkbox"/> Endangered Short Description: Corymbia citriodora subsp. variegata woodland to open forest +/- Eucalyptus siderophloia/E. crebra, E. carnea, E. acmenoides, E. propinqua on metamorphics +/- interbedded volcanics Fire Management Guidelines: SEASON: Summer to winter. INTENSITY: Low to moderate. INTERVAL: 2-7 years. INTERVAL_MIN: 2. INTERVAL_MAX: 7. STRATEGY: Aim for 40-60% mosaic burn. Burn with soil moisture and with a spot ignition strategy so that a patchwork of burnt/unburnt country is achieved</p> <p>Value at threat from planned fire activities: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>.</p>
F4	<p>Regional Ecosystem code: 12.11.3a VMA Class: <input type="checkbox"/> Not of Concern <input type="checkbox"/> Least Concern <input type="checkbox"/> Of Concern <input type="checkbox"/> Vulnerable <input type="checkbox"/> Endangered Short Description: Eucalyptus siderophloia, E. propinqua +/- E. microcorys, Lophostemon confertus, Corymbia intermedia, E. acmenoides open forest on metamorphics +/- interbedded volcanics Fire Management Guidelines: 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)</p> <p>Value at threat from planned fire activities: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>.</p>
F5	<p>Regional Ecosystem code: VMA Class: <input type="checkbox"/> Not of Concern <input type="checkbox"/> Least Concern <input type="checkbox"/> Of Concern <input type="checkbox"/> Vulnerable <input type="checkbox"/> Endangered Short Description: Fire Management Guidelines:</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>.</p>

Cultural Heritage.

(Any values listed here that may be adversely affected by the planned fire to be included in the *Values Management* section.)

Item no.	Details
C1	<p>Value: Source of record: <input type="checkbox"/> Cultural Heritage Register <input type="checkbox"/> Other (pls specify)</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>. If a potential cultural heritage value is identified during the planned works then the Cultural Heritage Chance Find protocol is to be implemented.</p>
C2	<p>Value: Source of record: <input type="checkbox"/> Cultural Heritage Register <input type="checkbox"/> Other (pls specify)</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>.</p>
C3	<p>Value: Source of record: <input type="checkbox"/> Cultural Heritage Register <input type="checkbox"/> Other (pls specify)</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i></p>

Built Assets & Utilities

(Any values listed here that may be adversely affected by the planned fire to be included in the *Values Management* section.)

Item no.	Details
A1	<p>Value: Source of record: <input type="checkbox"/> Site inspection <input type="checkbox"/> Imagery <input type="checkbox"/> Other (pls specify)</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>.</p>
A2	<p>Value: Source of record: <input type="checkbox"/> Site inspection <input type="checkbox"/> Imagery <input type="checkbox"/> Other (pls specify)</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i>.</p>
A3	<p>Value: Source of record: <input type="checkbox"/> Site inspection <input type="checkbox"/> Imagery <input type="checkbox"/> Other (pls specify)</p> <p>Value at threat from planned fire activities: <input type="checkbox"/> No <input type="checkbox"/> Yes – include in <i>Values Management</i></p>

DRAFT

Control Lines					
Control lines Refer to Operational Map	Sector	Name	Location / Alphas	Desired standard	Prep required
Critical – 2WD Urban fire truck or water tanker etc.	North Ridge	10a	2-1 – 2-2	Secondary	No
Strategic – 4WD Medium appliance	North Ridge	10b	2-2 – 2-16	Secondary	No
Secondary – 4WD Light appliance (Echo or Isuzu etc.)	East Ridge	03	2-8 – 2-16	UTV	Yes
Other - 4WD Utility	South Gully	06a	2-17 – 2-23	Secondary	No
UTV – Polaris	South West	07	2-24 – 2-29	Secondary	No
Walking trail – not vehicle trafficable	West	08	2-29 – 2-1	Secondary	No
Creek / fuel moisture differential				Select	Select
				Select	Select

Contingency control lines

(Identify where a breach of containment could possibly occur. List fallback lines in the event of a breakout)

Sector/Location comment	Name	Location / Alphas	Desired standard	Prep required
Sector North Ridge	Moisture gradient/creek	To north of track	Creek / Moisture differential	No
	Moto track	North from 2-1	Other	Yes
Sector East Ridge	Moisture gradient/creek	East of Track	Creek / Moisture differential	Select
			Select	Select
Sector South Gully	Moisture gradient/creek	South of Track	Creek / Moisture differential	Select
	Track 06	South from track 06a	Secondary	No
Sector South West	Track 07a	South of track 07	Secondary	No
	Walking track 02	South of track 07	Walking track	Yes
Sector West	Creek line/vegetation	West of track 08	Creek / Moisture differential	Select
	Moto tracks	West of track 09	Walking track	Select
			Select	Select
Control line and contingency prep works required	Track 03 requires a mulcher to re open and establish reduced fuel area to enable SxS access for ignition and containment.			

MISSION

Aim & Objectives

Aim:	Implement a planned burn as identified within the BMP and supports Offset Management values.
Objective 1	No planned burn escapes
Objective 2	Maintain and or enhance ecological values for Koala habitat
Objective 3	Na

Measurables for each objective

Objective	Measure	How assessed
Objective 1	Planned fire did not breach containment lines by more than 1ha and does not leave the property.	Map any containment line breaches and calculate hectares and identify any breaches external to the property.
Objective 2	Planned burn implemented considering PB guide and Region Ecosystem burning guidelines	Burnt extent and fire effects within tolerable range of RE burning guidelines and site objectives.
Objective 3	Na	Na

Effort required to implement and contain

Ignition and containment details	Hours	Shifts	Explanatory notes
Expected duration for ignition	6	1	Estimated hours to implement ignitions
Expected duration for containment	12	1.5	Containment occurring during ignition then swing shift crew to continue into the evening.
Expected duration for mop up till safe	36	3	Approx. 2 days post day 1 for patrol. Day 2 full day. Day 3 check pending activity.

EXECUTION

PREFERRED FIRE/FUEL PARAMETERS

Weather conditions	Max temp	30°	Max wind speed & preferred direction	15 km Not westerly	Min RH Max RH	30% 80%
Flame height	.2 - .5 m (average)		Scorch Height:	3 - 5 m (average)		
Other guidelines (List any weather and fuel moisture conditions which will prohibit or restrict burning)	Moist grass clump root zone required.					
	Max fire danger index	<High		Max KBDI	100	
Suggested ignition method	<input checked="" type="checkbox"/> Ground <input type="checkbox"/> Aerial <input type="checkbox"/> Slingshot <input type="checkbox"/> Other (if other what)					

Ignition pattern

(Describe the ignition method and sequence of lighting)

(Procedure may be modified on the day of the burn, based on conditions and test burn)

- Ignition from point 2-1 simultaneously heading along track 10a towards point 2-7 and down track 09 towards point 2-29.
- North Ridge Sector to continue lighting and holding to point 2-7 and then hold.
- North West Sector to continue lighting and holding to point 2-29, with containment secured, lighting and holding to continue from point 2-29 to 2-23 with cease lighting at 2-23.
- Once North Ridge sector has secured track 10a/10b edge, ignition in East Ridge Sector from 2-8 down hill to 2-18. Once at 2-18 secure edge and hold.
- Once East Ridge Sector has secured edge, South Gully Sector can commence ignition from 2-23 to 2-18 holding and securing edge.
- Ongoing patrol and mop up in all sectors .

RESOURCES

(Suggested resources for each sector - scale up/down pending site conditions)

Plant and Equipment

Sector	Type	Min Qty	Provider
North Ridge	LA 400	2	FC
East Ridge	ULA 300	2	FC
South Gully	LA 400	(1 from another sector)	FC
South West	LA 400	(1 from another sector)	FC
West	LA 400	3	FC
All	Water trailer	1	FC
Totals:	ULA	2	LA
		5	MA
		0	Other
			1

Human Resources

(Suggested staffing resources for each sector - scale up/down pending site conditions)

Sector	Minimum Quantity			Provider	Total	Supporting notes	
	SL	CL	CM				
North Ridge	1	2	2	SL	FC	1	
				CL	FC	2	South West resources to start here
				CM	FC	2	South West resources to start here
East Ridge			1	SL	FC	0	North Ridge SL to cover
				CL	FC		Resources to start in North Ridge Sector
				CM	FC	1	Resources to start in North Ridge Sector
South Gully				SL	FC	0	West SL to cover
				CL	FC	0	Covered by relocation of onsite crews
				CM	FC	0	Covered by relocation of onsite crews
South West				SL	FC	0	West SL to cover
				CL	FC		West sector resources to cover
				CM	FC		West sector resources to cover
West	1	2	2	SL	FC	1	
				CL	FC	2	
				CM	FC	2	
Sector Name				SL			
				CL			
				CM			
Sector Name				SL			
				CL			
				CM			
Sector Name				SL			
				CL			
				CM			
Total						11	

Specialist personnel			
Role	Tasking	Min Qty	Provider
Incident Controller	Implement and manage planned burn.	1	FC

Contingency Resources	
(Describe/list additional types/quantity/availability of resource if required)	
Plant & Equipment	
Human	

Water points	Type	Location
(Refer to operational map) (Describe the type e.g. hydrant, dam, static etc. & the location/s-grid reference)	Water trailer	TBC

Patrol (outline patrol responsibilities, timeframe & resources)	Black out to 20m ground level and 50m elevated. No active flames or closed hot logs. No unburnt available fuels within 20m.
Other (Include any other logistical arrangements. Gate keys?)	Key required to enter gate on Cliff Barrons Rd.

ADMINISTRATION

<p style="text-align: center;">Assembly area</p> <p>(Refer to Operational Burn Map) (Describe the location)</p>	TBC
<p style="text-align: center;">Catering</p> <p>(Describe location, time and supplier)</p>	Crews to be self sufficient.
<p style="text-align: center;">Fuel</p> <p>(Describe location and type)</p>	Ampol Ormeau 8/19-21 Peachey Rd, Ormeau QLD 4208

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.

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Stakeholder notification													
Agency/Neighbour	Location to burn	Immediately adjoining?	Contact type				Notification			Address	Email	Phone	Notes
			Phone	Email	Letter Box	Other	> 7 days	Day before	Day of				
City of Gold Coast	LGA	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		media@goldcoast.qld.gov.au		
C of G NAMU	Adjacent to east side	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Plateau Reserve	NAMU@goldcoast.qld.gov.au		
C of G Councillor Mark Hammel	Division One Councillor	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		division1@goldcoast.qld.gov.au		
Michael Crandon	Member for Coomera	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Coomera@parliament.qld.gov.au		
QFD Media		No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		media@fire.qld.gov.au		
Dept of Health		No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		GCHHSDisaster@health.qld.gov.au		
Dept of Health			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		SHECC@health.qld.gov.au		
Firecomm SE			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			1800 689 958	
Neighbour Campbell	Adjoins property boundary	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	420 Upper Ormeau Road.		0418799798	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

COMMAND AND COMMUNICATIONS

Organisational Structure				
Sector	Personnel	Call sign	Radio channel	Other contact
Incident Controller				
Sector Name	SL			
	CL			
	CM			
Sector Name	SL			
	CL			
	CM			
Sector Name	SL			
	CL			
	CM			
Sector Name	SL			
	CL			
	CM			
Sector Name	SL			
	CL			
	CM			
Sector Name	SL			
	CL			
	CM			
Sector Name	SL			
	CL			
	CM			

COMMUNICATIONS	
Fire command	Network/Channel: FC - UHF Channel 1
Fire ground	Network/Channel:
Aviation	Network/Channel:
Contingency communications (Describe arrangements if radio network fails)	

SAFETY

Crew briefing (Prior to lighting up all personnel are to be briefed using the SMEACS)	
Incidents	All incidents or near misses should be immediately reported to the IC and recorded in the Incident Log. Refer to Emergency and Incident Flow Chart. Start Incident Reporting as soon as practicable.
Escape routes (list locations) refer to operational burn map	Single entry exit point to burn area.
Safe areas (list locations) refer to operational burn map	Open area point 2-1
Evacuation points (List location) refer to operational burn map	Exit via point 2-23 down track 06

BRIEFING UNDERTAKEN

Date	Time	Incident Controller's signature (IC)

INCIDENT CONTROLLER HANDOVER BRIEFING

Date	Time	Outgoing IC signature	Incoming IC name & signature

DEBRIEF UNDERTAKEN

Date	Time	Incident controller's signature (IC)

SAFETY BRIEFING – to be completed all burn days

VALUES MANAGEMENT

All burn prep tasks listed below are to be copied across into the *Burn Prep Task Register*.

Table 1: Burn Area Values Management							
This section to be used to identify threats to the identified values within (or adjacent) to the burn area from the planned fire event and recommended mitigation measures.							
Value Type Select from pull-down list.	Ref No.	Name of the value	Location	Threat (from the activity)	Work type Select from pull-down list.	Mitigation – Task/Constraint Must be a task or constraint. For fauna refer to the Standard Mitigation Actions sheet and insert relevant details. Any <u>tasks</u> to be transferred to the <i>Burn Prep Works Order</i> section.	Timing Select from pull-down list.
Utility		Example: Power poles	Refer to Ops Map	Flame contact	Asset protection	Task – remove fuels from within 1m of base of poles.	> 7 days before burn
Natural	F1	Koala	Within burn area	Direct flame contact	Fauna - search	Task – Undertake perimeter search for Koalas and ongoing spotting throughout the burn implementation. Task – review and assess implementation measures and risk to any animals identified.	Day of Burn
Choose an item					Choose an item		Choose an item
Choose an item					Choose an item		Choose an item
Choose an item					Choose an item		Choose an item

Table 2: 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 Select from pull-down list.	Name of the value	Location	Threat (from the activity)	Work type Select from pull-down list.	Mitigation – Task/Constraint Must be a task or constraint. Any tasks to be transferred to the Burn Prep Works Order section.	Timing Select from pull-down list.
Person	Example: Vulnerable persons	Hospital to SE of burn	Smoke impacts - health	Scheduling	Constraint – only burn with a northerly wind.	Day of burn
Person	Persons occupying nearby properties	The Plateau Road/ Barrenjoey Rd Cliff Barrons Rd.	Health impacts	Letter box drop	Task – Undertake neighbour notifications Constraint – Suitable weather to minimise smoke impacts	> 7 days before burn
Utility	Quarry operations	North and North West	Site impacts/reduced operations/shutdown	Letter box drop	Task – Undertake notification to surrounding quarries Constraint - Suitable weather to minimise smoke impacts	> 7 days before burn
Choose an item				Choose an item		Choose an item
Choose an item				Choose an item		Choose an item
Choose an item				Choose an item		Choose an item

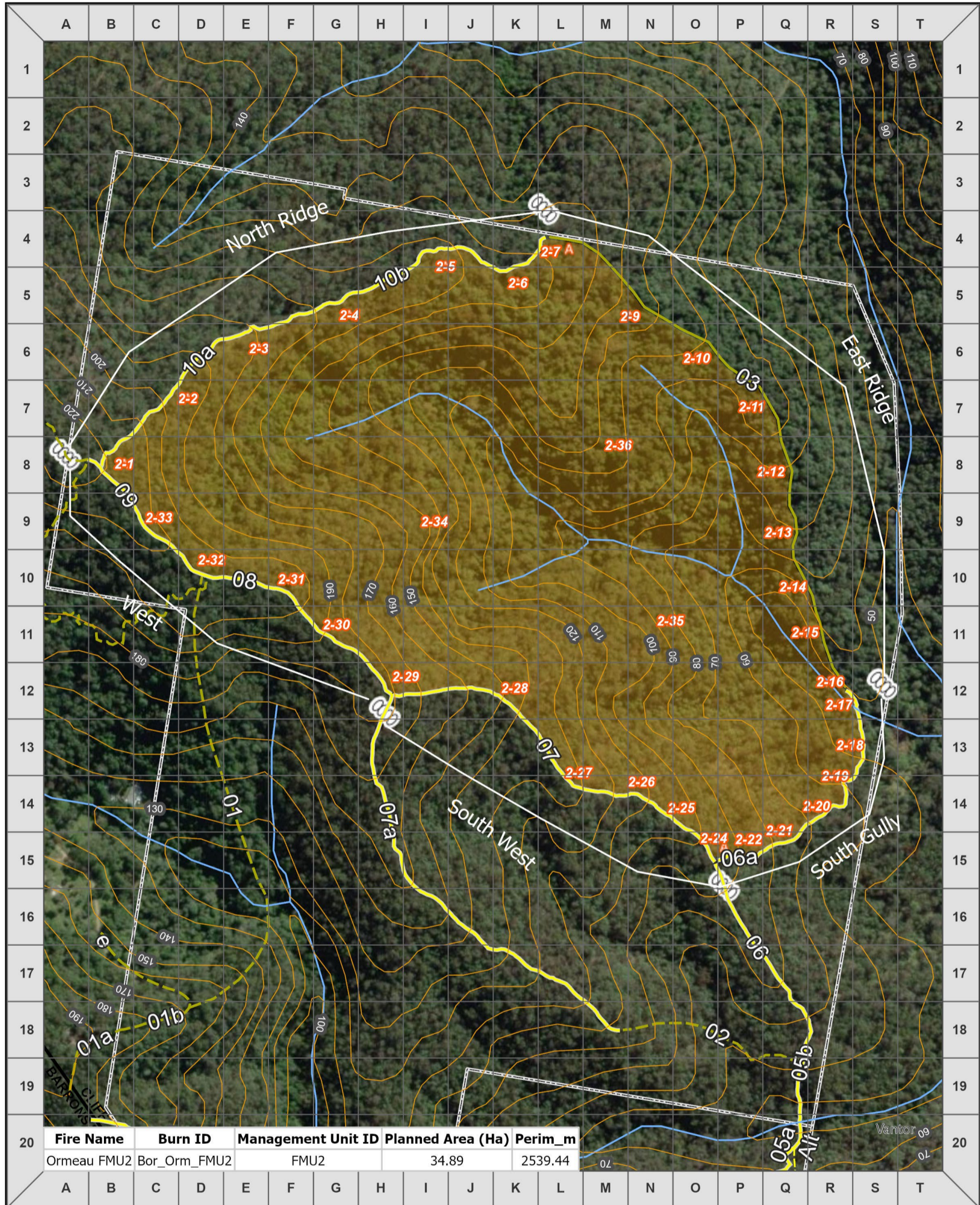
Table 3: Traffic Management						
Assessment (Describe what may be affected and the strategies to reduce the risk of adverse effects)						
This section to be used to assess values (in relation to traffic management) that may be threatened (adversely) from the planned fire event						
Value Type Select from pull-down list.	Name of the value	Location	Threat (from the activity)	Work type Select from pull-down list.	Mitigation – Task/Constraint Must be a task or constraint. Any tasks to be transferred to the Burn Prep Works Order section.	Timing Select from pull-down list.
<i>Built</i>	<i>Example: Gympie Rd</i>	<i>To North of burn</i>	<i>Smoke impacts - visibility</i>	<i>Scheduling</i>	<i>Constraint – only burn with a northerly wind.</i>	<i>Day of burn</i>
Person	Upper Ormeau Road	South of burn area	Reduced visibility Reduced traffic flow	Signage - roadside	Constraint - Suitable weather to minimise smoke impacts	Day before burn
Choose an item				Choose an item		Choose an item
Choose an item				Choose an item		Choose an item
Choose an item				Choose an item		Choose an item
Choose an item				Choose an item		Choose an item

Table 4: Personal Safety Management						
Assessment (Describe what threats are present that may cause adverse effects to staff, contractors or site users from the planned activity)						
This section to be used to assess specific threats that exist that could adversely affect individuals from the activity.						
Value Type Select from pull-down list.	Name of the value	Location	Threat (from the activity)	Work type Select from pull-down list.	Mitigation – Task/Constraint Must be a task or constraint. Any tasks to be transferred to the Burn Prep Works Order section.	Timing Select from pull-down list.
<i>Person</i>	<i>Example: Gympie Rd</i>	<i>Northern boundary of burn</i>	<i>Tree strike</i>	<i>Hazard tree prep</i>	<i>Identify and treat all hazard trees within 1.5 times tree height of road.</i>	<i>> 7 days before burn</i>
Person	Fire Control lines	All	Vehicle roll over/roll away	Consultation	Task – Brief crews, follow procedures.	Day of Burn
Person	Staff	All	Tree strike	Hazard tree prep	Task – undertake inspection and preparation of any hazard trees	> 7 days before burn
Choose an item				Choose an item		Choose an item
Choose an item				Choose an item		Choose an item
Choose an item				Choose an item		Choose an item

Table 5: Control line and Contingency control line prep tasks						
Assessment (Describe the current and desired fireline standards that are required to deliver the planned activity)						
Name of the control line	Location	Desired control line standard Select from pull-down list.	Current control line standard Select from pull-down list.	Work type Select from pull-down list.	Mitigation – Task/Constraint Must be a task or constraint. Any tasks to be transferred to the Burn Prep Works Order section.	Timing Select from pull-down list.
<i>Example: FT_NC_03</i>	<i>Pt A - D on Ops Map</i>	<i>Other</i>	<i>Other</i>	<i>Control line - slashing</i>	<i>Task – Slash to 4m width.</i>	<i>> 7 days before burn</i>
Containment line 03	East Ridge Sector	UTV	Walking track	Control line - mulching	Task – Much existing foot trail to enable use by ATV	> 7 days before burn
		Choose an item.	Choose an item.	Choose an item		Choose an item
		Choose an item.	Choose an item.	Choose an item		Choose an item
		Choose an item.	Choose an item.	Choose an item		Choose an item
		Choose an item.	Choose an item.	Choose an item		Choose an item

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OPERATIONAL MAP



Fire Name	Burn ID	Management Unit ID	Planned Area (Ha)	Perim_m
Ormeau FMU2	Bor_Orm_FMU2	FMU2	34.89	2539.44

Burn Plan Area



IMT Symbol Type

Location Reference

Sector

Current Fireline Category

- Secondary - meets criteria
- Management Access
- Does not meet classification criteria
- Other/closed/private

Baseline_roads_and_tracks



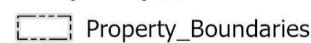
Contours 5m



Watercourse



Property_Boundaries



Boral Ormeau
FMU2 Burn Plan Map
v01

0 50 100 200
Coordinate System: GDA2020 MGA Zone 56
Map Units: Meter 1:5,500 Date: 10/11/2025



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Appendix J

Maintenance Report Year 5 - Fireland



FIRELINE MAINTENANCE REPORT

ACTIVITY NAME	Boral Ormeau Offset Fireline maintenance	Lot/Plan/s No. (all approvals obtained) <input checked="" type="checkbox"/> Yes	2/RP15912 1/RP174509 20/SP292283
Location	Cliff Barron Road.	Road Segment No.	NA
LGA	City of Gold Coast	Assessment Date	

Scope & Outcomes

Works intent	The Firelines within the Ormeau Offset have previously been inspected and found to be non-conforming with the Offset Bushfire Management Plan. Given the significant deterioration of the Firelines to a status of un-trafficable, these initial works are to undertake basic drainage to minimise runoff and to provide access to allow a comprehensive inspection to determine further works required to conform with the BMP.
Task undertaken	Clear debris from Firelines Restore carriageways to allow vehicle access. Reinstate and or add drainage features.
Outcomes	The Firelines listed are all traversable by light 4WD fire appliance and other light 4WD vehicles and broadly conform to the standards identified in the BMP. Some areas of built up debris have occurred along some sections of firelines resultant from treefall and paucity of regular maintenance. These to be treated on next maintenance pass.

Further works required

- Review Fireline "FT_BO_05a Alt" for suitability and required works to meet standard.
- Fireline vegetation management is required to improve carriageway and verge clearance and debris buildup along fireline edge.
- Implement scheduled maintenance at least once per year by an experienced Fireline contractor.
- Implement Fireline Audit at least once per year.

Schedule of Works

Works Required	Timing	Frequency	Comment
Review Fireline "FT_BO_05a Alt" for suitability and required works to meet standard.	Sep-25	Na	Review and implement works requirements with next scheduled maintenance pass.
Implement Fireline Audit at least once per year.	March	Yearly	Undertake inspection to identify works required and inform following years budget submission
Fireline vegetation management is required to improve carriageway access, verge clearance and debris buildup along fireline edge.		Na	Undertake these works in conjunction with next scheduled maintenance pass
Implement scheduled maintenance at least once per year by an experienced Fireline contractor.	March	Annual	Annual scheduled maintenance pass.

Track Name/ID	BMP Desired Standard	Current Condition meets standard (RFS-Fire-Trail-Standards-Nov 2023)								Compliance comment	Further works required/comment	Photo Reference
		Trail width	Trafficable surface	Clearance	Grade	Crossfall	Horizontal curves	Passing bays	Turning bays			
FT_BO_01b	NA									Not within Offset	Nil	Na
FT_BO_02	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Clearance maintenance	Enhance when undertaking scheduled maintenance	Na
FT_BO_02a	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NA	Closed	Na
FT_BO_03a	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nil	Enhance when undertaking scheduled maintenance	Na
FT_BO_03b	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nil	Enhance when undertaking scheduled maintenance	Na
FT_BO_04a	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nil	Enhance when undertaking scheduled maintenance	Na
FT_BO_04b	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nil	Enhance when undertaking scheduled maintenance	Na
FT_BO_05a (alternative)	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Requires suitability review	Realign carriageway, reduce curves and cross fall, add passing bays	1
FT_BO_05b	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Lacks turning and passing bays	Enhance turning and passing bays.	2
FT_BO_06	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Lacks turning and passing bays	Enhance turning and passing bays.	3
FT_BO_06a	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Steep with physical constraints	Enhance when undertaking scheduled maintenance	4
FT_BO_07	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Lacks turning and passing bays. Physical constraints.	Enhance when undertaking scheduled maintenance	5
FT_BO_07a	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Physical constraints.	Enhance when undertaking scheduled maintenance	6
FT_BO_08	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Physical constraints.	Enhance when undertaking scheduled maintenance	7
FT_BO_09	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Physical constraints.	Enhance when undertaking scheduled maintenance	8
FT_BO_10a	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Physical constraints.	Enhance when undertaking scheduled maintenance	9
FT_BO_10b	Cat 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Physical constraints.	Enhance when undertaking scheduled maintenance	10
WT_BO_01	As req									NA	Does not exist	Na
WT_BO_02	As req									NA	Pre planned burn maintenance required	Na
WT_BO_03	As req									NA	Pre planned burn maintenance required	Na
FT_P_01	NA									NA	Nil - Private	Na

Supporting Documentation

Post works imagery

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



