

# Compliance Report – Bruce Highway Upgrade – Caloundra Road to Sunshine Motorway, January 2023

EPBC Approval 2015/7464

Report 06

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# Document control options

## Departmental approvals

Refer to the appropriate Risk Assessment Tool for relevant reviewer and approver

Date	Name	Position	Action required (Review/endorse/approve)
10/02/2023	Anita Haynes	Principal Environmental Officer	Review
20/02/2023	Leah McKenzie	Deputy Regional Director (North Coast)	Approve

## Risk level

GACC major       GACC minor       High risk (but not GACC)       Medium risk

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<b>Title</b>	Environmental Officer
<b>District &amp; Region</b>	North Coast
<b>Branch &amp; Division</b>	PDO
<b>Project/program</b>	Bruce Highway Upgrade Program - Caloundra Road to Sunshine Motorway
<b>Project number</b>	280/10A/1
<b>Project location</b>	Glenview
<b>Status</b>	Revision 1
<b>DMS ref. no.</b>	450/01693

# Proponent and Approval Action

Detail	Applicable Details
EPBC Reference Number:	2015/7464
Project Name:	Bruce Highway Upgrade – Caloundra Road to Sunshine Motorway
Proponent:	Department of Transport and Main Roads
ABN:	390 407 690 291
Proposed Action:	To upgrade a 7km section of the Bruce Highway between Caloundra Road at Meridan Plains and the Sunshine Motorway at Sippy Downs, Queensland. The upgrade will allow for the construction of a six-lane highway, the upgrade of two interchanges and the addition of a two-way service road.
Location of Action:	Between Caloundra Road at Meridan Plains and the Sunshine Motorway at Sippy Downs, Queensland
Reporting Period:	December 2021 – December 2022
Date Prepared:	January 2023

## Declaration of Accuracy

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

**Signed**



**Full name**

Leah McKenzie

**Position**

Deputy Regional Director (North Coast)

**Organisation**

Department of Transport and Main Roads (ABN 39 407 690 291)

**Date**

20 February 2023

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Proponent and Approved Action

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# 1. Introduction

## 1.1 Purpose of this Report

The Department of Transport and Main Roads (TMR) has constructed a 7km upgrade of the Bruce Highway between Caloundra Road and Sunshine Motorway (hereafter referred to as “the Project” or “CR2SM”). The Project consisted of an upgrade to both the Sunshine Motorway and Caloundra Road interchanges, a six-lane upgrade of the Bruce Highway between the two interchanges, as well as a fully connected service road on the western side of the highway. TMR (as Administrator) awarded the Project to a Joint Venture of Fulton Hogan and Seymour Whyte (hereafter referred to as “the Contractor”) as a design and construct contract. All construction related works for the project were completed by August 2022.

The Project was referred to the Department of Agriculture, Water and Environment (DoAWE), now known as the Department of Climate Change, Energy, the Environment and Water (DoCCEEW) on 15 April 2015 for determination of whether the Project was likely to have a significant impact on *Matters of National Environmental Significance* (MNES). Projects likely to cause a significant impact on MNES require approval under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Project was deemed a controlled action on 18 May 2015 and was approved, subject to conditions, on 2 September 2016 (reference number: 2015/7464). The approval conditions are provided in **Appendix A** of this report.

Condition 6 of the EPBC Act approval requires that TMR prepare and publish an annual report on their website that addresses compliance with each of the conditions of the approval for each year of construction. This report is the sixth and final annual compliance report for the Project that meets this condition.

## 1.2 Matters of National Environmental Significance

Under the EPBC Act, a project must be referred to DoCCEEW for actions that are likely to have a significant impact on MNES protected by Part 3 of the EPBC Act. These are known as “controlling provisions”. This project triggered one controlling provision: “*potential impacts to listed threatened species and communities* (Section 18 and Section 18A)”. The proposed action is likely to have a significant impact on the following matters protected by the EPBC Act.

- Lowland Rainforest of Subtropical Australia – critically endangered.
  - The proposed actions will reduce the extent of the critically endangered Lowland Rainforest of Subtropical Australia (LRSA) Threatened Ecological Community.
- Koala (*Phascolarctos cinerus*) – vulnerable (at the time of approval)<sup>1</sup>.
  - The proposed action will reduce the extent of critical habitat for the Koala.

# 2. Description of Activity

## 2.1 Project Location

The upgrade to the Bruce Highway involved major construction activities between the area extending south of Caloundra Road at Meridan Plains and north towards the Sunshine Motorway at Sippy Downs,

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<sup>1</sup> In February 2022, the koala was up-listed to endangered under the EPBC Act. However, at the time of referral, the koala was listed as vulnerable as assessed accordingly.

Queensland. The Project also included areas on the Mooloolah River floodplain and areas north of Aussie World along Frizzo Connection Road.

The project was located within the Sunshine Coast Council (SCC) Local Government Area, approximately 15km west of Caloundra and 10km southwest of Mooloolaba. The project area encroached on a section of the former Beerwah State Forest, west of the Bruce Highway at Glenview.

Sections of the project area have been historically cleared along the Bruce Highway for residential and commercial purposes. The project area also included areas of remnant vegetation, within the former Beerwah State Forest, Palmview Regional Park, and along the Mooloolah River.

## 2.2 Description of the Project

The Project consisted of an upgrade to a 7km section of the Bruce Highway between Caloundra Road and the Sunshine Motorway from four to six lanes including major upgrades to the interchanges at Caloundra Road and the Sunshine Motorway. The major construction activities associated with the upgrade were completed in July 2021 and all construction works finalised by August 2022. The completed Project works includes the following key features:

- Upgrade of the historical Bruce Highway alignment from four to six lanes and to provide immunity for a 1 in 100-year flood event.
- A “diverging diamond” interchange at the intersection of the Bruce Highway and Caloundra Road to better facilitate right-turn movements that are critical to the effective functioning of the interchange.
- The western service road (Frizzo Connection Road) linking the Caloundra Road interchange with the Aussie World precinct and extending through to the Sunshine Motorway interchange.
- A grade-separated interchange at the intersection of the Bruce Highway, the Sunshine Motorway and the new western service road and to provide improved efficiency for all movements, reduce queuing and delays, and increase road safety by eliminating high speed at grade intersections.
- A southbound off-ramp at Pignata Road providing access to the Aussie World precinct and the local road network.
- Replacement and upgrades of existing drainage structures (bridges and culverts) on the Bruce Highway to maintain the existing surface water hydrological and hydraulic characteristics of the area.
- Fauna passage structures, including an underpass, fauna fencing, a rope ladder and fauna escape structures for animals trapped on the Bruce Highway.

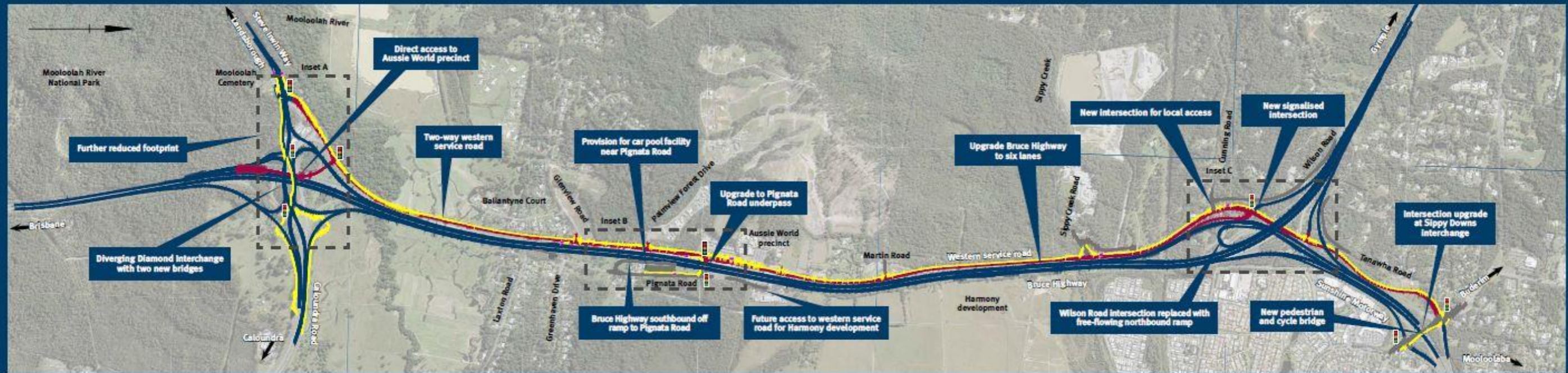
**Figure 1** provides the CR2SM final design layout as an overview of the completed project.



# Bruce Highway Upgrade — Caloundra Road to Sunshine Motorway

**design layout**

May 2017



**Inset A**  
Caloundra Road interchange



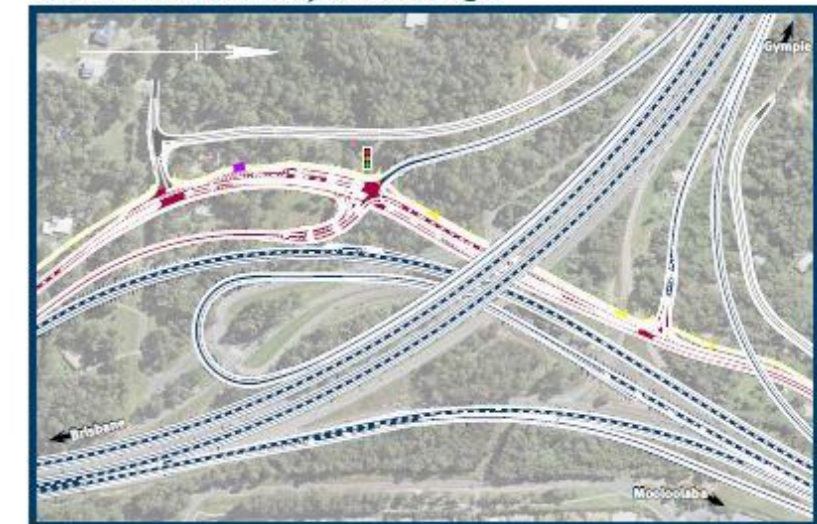
**Inset B**  
Southbound off ramp to Pignata Road



**Legend**

- █ Main roads
- █ Western service road
- █ Local road/connection
- █ New pedestrian and/or cycle route
- █ Bus stop
- █ Signalised intersection

**Inset C**  
Sunshine Motorway interchange



For a closer look at the Bruce Highway Upgrade design layout, visit [www.tmr.qld.gov.au/brucehwycaloundrazsunshinemwy](http://www.tmr.qld.gov.au/brucehwycaloundrazsunshinemwy)



Figure 1: Bruce Highway Upgrade—Caloundra Road to Sunshine Motorway, Final design layout

## 2.3 Project Progress

The Project achieved practical completion in July 2021, with the Project completing all Conditions related to construction activities during the 2021-2022 reporting period, these included:

- Completing the final components of the Sippy Creek fauna structure in August 2022.
- Completing post construction weed surveys.
- Commencing fauna monitoring of the five (5) dedicated underpasses to define Koala utilisation of the underpass structures.

As all construction related conditions are completed, this report provides finalised details of the Conditions.

The Project's environmental offset sites are continuing with rehabilitation and maintenance activities as required under the approved Environmental Management Plans. The results from each specific Biocondition survey undertaken at the offset sites reported continued improvement, noting that weather conditions (flooding) during the reporting period hindered some growth. One of the offset sites has completed the action to the Conditions of the offset management plan and is now finalised.

The respective offset sites have been purchased with voluntary declarations in place, and one property legally secured under a Conservation Agreement from the Commonwealth, with the Department of Natural Resources, Mines and Energy (NRME), TMR and Sunshine Coast Council (SCC) as parties to the agreement.

## 2.4 Approval History

The date of the EPBC Approval, the compliance reporting dates and status of the Annual Compliance Reports are provided in Tables 1 and 2.

**Table 1: Relevant Dates for EPBC Approval**

Approval Number	Date of Decision	Expiry Date
EPBC 2015/7464	2 September 2016	31 December 2026

**Table 2: Chronology of Compliance Reports**

Reporting Dates	Report No.	Status
December 2016 – December 2017	01	Completed
December 2017 – December 2018	02	Completed
December 2018 – December 2019	03	Completed
December 2019 – December 2020	04	Completed
December 2020 – December 2021	05	Completed
December 2021 – December 2022	06	Completed (this report)

### 3. EPBC Condition Compliance

**Table 3** provides an overview of the conditions and compliance status. Where additional information is required, reference has been made to relevant sections of this report for further evidence of compliance.

**Table 3: Summary of Compliance with EPBC Act Approval Conditions**

No.	Condition	Timeframe	Status	Evidence of Compliance
1	For the protection of the <i>EPBC Act</i> listed vulnerable Koala ( <i>Phascolarctos cinereus</i> ) and <i>Lowland rainforest of subtropical Australia</i> Threatened Ecological Community, the approval holder must implement the “Overarching Environmental Management Plan” while undertaking the proposed action.	Progressive - for the period of construction.	<b>Compliant and closed</b>	<p>An Environmental Management Plan (Planning) was prepared to communicate the EPBC compliance requirements applicable to the project during the development and implementation phases.</p> <p>The Contractor operated under an Environmental Management Plan for Construction (EMP-C) which underwent document revision process by TMR. The EMP-C reflected the mitigation measures outlined in the Overarching Environmental Management Plan (OEMP), as well as control strategies and commitments to account for any issues and requirements identified in the Project Scope of Works and Technical Criteria (SWTC), presented in a format that is suitable for use by on-ground personnel.</p> <p>During the undertaking of the controlled action, the Contractor provided monthly environmental reports demonstrating compliance with the EMP-C, which reflects the requirements of the OEMP and SWTC. Demonstration of compliance was achieved through monthly internal and third-party audits and reporting, which included the subset of compliance and reporting deliverables noted within the OEMP.</p> <p>The works have been completed and now closed.</p>

No.	Condition	Timeframe	Status	Evidence of Compliance
				Refer to Section 4.1 for additional information pertaining to Condition 1 compliance.
2	<p>For the protection of the EPBC Act listed critically endangered <i>Lowland Rainforest of Subtropical Australia</i> (LRSA) the approval holder must:</p> <p>(a) Not disturb more than 3.92ha of the LRSA Threatened Ecological Community (TEC) within and adjacent to the project site;</p> <p>(b) Legally secure and implement the offset of 16.64ha at the location shown and ensure that by the tenth anniversary of commencement of action, the offset meets the following condition thresholds:</p> <ol style="list-style-type: none"> <li>i. Canopy cover: at least 70% of canopy vegetation is native.</li> <li>ii. Species richness: contains 30 native woody species from the LRSA TEC listing advice.</li> <li>iii. Total vegetation: At least 70% of total vegetation cover is native.</li> </ol> <p>(c) Legally secure and implement the offset of 4.65ha at the location shown by the first 12-month anniversary of the commencement of the action.</p>	<p>(a) For the construction period.</p> <p>(b) By the tenth anniversary of commencement action</p> <p>(b)(i)</p> <p>(b)(ii)</p> <p>(b)(iii)</p> <p>(c) By the first 12-month anniversary of commencement.</p>	<p><b>(a) Compliant and Closed</b></p> <p><b>(b) Compliant</b></p> <p><b>(b)(i) Compliant</b></p> <p><b>(b)(ii) Compliant</b></p> <p><b>(b)(iii) In progress</b></p> <p><b>(c) Compliant</b></p>	<p>(a) A total of 13,231.13m<sup>2</sup> (1.32ha) of TEC was cleared as part of the project works (within the project site), detailing compliance with Condition 2(a).</p> <p>Progressive quantities for cleared areas were reviewed and provided in the Contractors monthly environmental progress reports.</p> <p>The project overall reduced the footprint area within the TEC vegetation zone, reducing the total impact area from the initial design area by over 66% (2.6ha of TEC retained).</p> <p>The action is compliant to the condition and now closed.</p> <p>Refer to <b>Appendix B</b> for a map of the project Threatened Ecological Community, and <b>Appendix C</b> for as-built diagrams of areas cleared and completed.</p> <p>(b) Lot 37 C3147, Lot 1 SP300404, and Lot 2 RP27760 have been legally secured. The implementation of offset actions relevant to Section (b) are currently works in progress. Local Government (Sunshine Coast Council) has been engaged to undertake management of the site to meet the condition thresholds.</p> <p>(b)(i) Data was collected from transects during the fourth quarter of 2022 for this Year 6 Report. Refer to Section 4.2 for detailed information.</p>

No.	Condition	Timeframe	Status	Evidence of Compliance
				<p>(b)(ii) Flora Assessment undertaken.</p> <p>Eco 9 Pty. Ltd. 2011. “Lower Mooloolah River Environmental Reserve, Claymore Road, Sippy Downs”. This report has identified 61 native woody species from the Lowland Rainforest of Subtropical Australia threatened ecological community listing advice.</p> <p>(b)(iii) Data was collected from transects during the fourth quarter of 2022 for this Year 6 Report. Refer to Section 4.2 for detailed information.</p> <p>Refer to <b>Appendix D</b> for map of Lower Mooloolah River Environmental Reserve.</p> <p>(c) Lot 2 SP268457 has been legally secured by TMR. The implementation of offset actions relevant to Section (c) are currently works in progress. The management actions relevant to these conditions are being undertaken by the engaged TMR contractor.</p> <p>Refer to <b>Appendix E</b> for map of Mooloolah Valley property.</p> <p>Refer to Section 4.2 for additional information pertaining to Condition 2.</p>
3	<p>For the protection of the EPBC Act listed vulnerable Koala (<i>Phascolarctos cinereus</i>) the approval holder must:</p> <p>(a) Not disturb more than 35.3ha of Koala habitat within the Project site.</p> <p>(b) Implement the five Koala movement structures (Koala friendly underpasses) within the Project site, namely:</p>	<p>(a) For the construction period.</p> <p>(b) Design and Implementation phase.</p>	<p><b>(a) Compliant and Closed</b></p> <p><b>(b) (i) - (v) Compliant and Closed</b></p>	<p>(a) The definition of Koala habitat in the approval refers only to “high” and “medium” Koala habitat. Accordingly, the total Koala habitat cleared for the project works was recorded as 18,7625m<sup>2</sup> (18.76ha), no further clearing is required and considered compliant with Condition 3(a).</p>

No.	Condition	Timeframe	Status	Evidence of Compliance
	<ul style="list-style-type: none"> <li>i. One new structure to facilitate Koala movement across Steve Irwin Way.</li> <li>ii. One new structure to facilitate Koala movement across the Bruce Highway south of the Mooloolah River.</li> <li>iii. One new structure to facilitate Koala movement across the Bruce Highway north of Sippy Creek.</li> <li>iv. Improve the existing structure at Sippy Creek to facilitate Koala movement across the Bruce Highway.</li> <li>v. Improve the existing structure at Mooloolah River to facilitate Koala movement across the Bruce Highway.</li> </ul> <p>(c) Legally secure and implement the offset of 50ha at the location shown by the first 12-month anniversary of the commencement of the action.</p>	<p>(c) By the first 12-month anniversary of commencement.</p>	<p><b>(c) Compliant</b></p>	<p>The total for Non-Juvenile Koala Habitat (NJKH) floral species cleared for the Project works was recorded as 3,256 individuals.</p> <p>(b) (i-v) Koala movement structures have been incorporated into the design drawings for the road furniture and landscaping.</p> <p>The final construction of fauna movement structures at the Sippy Creek was completed August 2022.</p> <p>All fauna koala movement structures (underpasses) for the condition has been installed, completing the condition. These are further discussed in Section 4.3.2.</p> <p>(c) The 50ha offset, Lot 2 RP51879 at Missing Link Road, Glenview has been legally secured by TMR.</p> <p>Refer to <b>Appendix F</b> or map of Glenview property.</p> <p>Refer to Section 4.3 for additional information pertaining to Condition 3.</p>
4	<p>Within 10 days of the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement of the action.</p>	<p>Within 10 days of commencement of construction.</p>	<p><b>Compliant and closed</b></p>	<p>A letter was submitted to the Department on 23 December 2016 to formally notify of the commencement of works.</p> <p>Refer to <b>Appendix G</b> for this notice.</p>
5	<p>The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval and make them available upon request to the Department.</p> <p>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</p>	<p>Progressive.</p>	<p><b>Ongoing</b></p>	<p>All records associated with this condition are maintained and updated on a regular basis.</p>

No.	Condition	Timeframe	Status	Evidence of Compliance
	on the Department's website. The results of audits must also be published on the approval holder's website within two weeks of the Department's approval of the final audit.			
6	Within three months of every 12-month anniversary of the commencement of the action, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval over the previous 12 months. 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.	For the period of construction.  The compliance report must be published within three months of every 12-month anniversary.	<p><b>Compliant</b></p> <p>Sixth compliance report complete (this report).</p> <p>Fifth compliance report complete</p> <p>Fourth compliance report completed.</p> <p>Third compliance report completed.</p> <p>Second compliance report completed.</p> <p><i>Minor Non-Compliance</i></p> <p>The first compliance report was published on TMR's project website October 2018, which was not within the reporting period. DoAWE was notified of this non-compliance.</p>	<p>This report provides the sixth compliance report. This report will be published on the TMR website concurrently with submission to the Department, satisfying this condition of approval.</p> <p>The relevant documentary evidence will be provided to DoCCEEW at the time of publication.</p>
7	Upon 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	Following direction from the Minister.	To date, there has been no direction from the Minister to	Not applicable.

No.	Condition	Timeframe	Status	Evidence of Compliance
	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.		complete an independent audit.	
8	Condition 6 ceases to apply once the approval holder has demonstrated to the satisfaction of the Minister that all conditions have been achieved.	Not currently applicable	Not currently applicable.	Not currently applicable.



## 4. OEMP Conditions Compliance

### 4.1 EPBC Condition 1

Condition 1 of the EPBC Act Approval states:

*For the protection of the EPBC Act listed vulnerable Koala (*Phascolarctos cinereus*) and Lowland rainforest of subtropical Australia Threatened Ecological Community, the approval holder must implement the Overarching Environmental Management Plan while undertaking the proposed action.*

The project reached 95% Practical Completion in the last annual reporting period. During the current reporting period, the works were finalised with the installation of fauna structures at Sippy Creek. All works have since been completed.

The Contractor developed and operated under an Environmental Management Plan for the construction phase of the project (EMP-C) which reflects the mitigation measures outlined in the Overarching Environmental Management Plan (OEMP).

No non-conformances against the EMP-C and OEMP were raised during the remainder of works in this reporting period. All previous non-conformances have been corrected and closed, refer to **Appendix H**.

The management measures implemented for the Project are considered to have met the intent of Condition 1.

### 4.2 Giant Barred Frog (*Mixophyes iteratus*)

With respect to the specific management of Giant Barred Frog (*Mixophyes iteratus*) (GBF), the following was undertaken during the Project:

- Construction within suitable habitat was avoided, where possible, following rain if water was still present onsite.
- Qualified ecologists conducted surveys of potentially suitable habitat during the nights prior to clearing.
- Fauna spotter-catchers captured and relocated individuals, tadpoles and egg masses to similar habitat if detected.
- Any frogs observed or relocated were recorded and reported to the Administrator.
- Monitoring of GBF and other frog species was also undertaken to gain an undertaking of the habitat locations within and surrounding the project site.

At the commencement of this project, a total of sixteen (16) distinct frog habitat areas were identified to provide known and potential habitat for several threatened frog species. Those confirmed species were the GBF, the wallum froglet (*Crinia tinnula*) and the tusked frog (*Adelotus brevis*). Species considered potential to occur were the wallum sedge frog (*Litoria olongburensis*) and the wallum rocket frog (*Litoria freycineti*).

The Project has undertaken five years of monitoring surveys. During these surveys, threatened frog species have been confirmed at eight (8) of the sixteen (16) habitat sites with a potential species, the wallum rocket frog, now being confirmed to occur within the Project at one site. Additional threatened species were also positively identified, these being the tusked frog and wallum froglet.

In addition to the monitoring surveys and project approval Conditions, detailed mitigation measures were implemented in relation to the management of clearing in areas of known or potential frog habitat.

These measures required pre-clear surveys at specified times prior to the commencement of vegetation and undertaking inspection of known and potential frog habitat immediately prior to, and during actual clearing.

One of the most sensitive areas of habitat within the project was at and surrounding the Mooloolah River. This monitoring site was confirmed habitat for the endangered GBF. In addition to the standard pre-clear surveys, hand clearing of vegetation was undertaken at the site prior to conventional clearing with machine. Hand clearing involved removing all leaf litter and other potential microhabitat that could be used as refuge by the GBF. Seasonal spring and summer surveys were conducted opportunistically when favourable weather conditions had been experienced on site.

## 4.3 Condition 2

### 4.3.1 Condition 2(a)

Condition 2(a) of the EPBC Act Approval states:

*Not disturb more than 3.92ha of the Lowland Rainforest of Subtropical Australia Threatened Ecological Community within and adjacent to the project site.*

As detailed within the fifth annual compliance report this condition was completed within the 2020-2021 reporting period. Condition 2(a) is considered compliant and closed.

### 4.3.2 Condition 2(b)

Condition 2(b) of the EPBC Act Approval states:

*Legally secure and implement the offset of 16.64ha at the location shown and ensure that by the tenth anniversary of commencement of action, the offset meets the following condition thresholds.*

- i. Canopy cover – at least 70% of canopy vegetation is native.*
- ii. Species richness – contains 30 native woody species from the LRSA TEC listing advice.*
- iii. Total vegetation – at least 70% of total vegetation cover is native.*

An Offset Management Plan (OMP) has been developed by TMR to demonstrate the objectives of the EPBC Act Environmental Offsets Policy in compensating for impacts on the Lowland Rainforest of Subtropical Australia (LRSA) Threatened Ecological Community (TEC). The impacts on this TEC will result from works associated with the Project.



The scope of the OMP is to align specific environmental revegetation, regeneration, rehabilitation and protection measures for vegetation that occurs in a portion of the LMRE Reserve at Laxton Road,

Palmview. These activities will deliver TMR's offset obligations under the EPBC Act, yielding an overall conservation outcome for the LRSA TEC.

An agreement between SCC and TMR to deliver and manage the Mooloolah River Rainforest Offset Project was signed on 1 June 2017. The agreement will comply with and meet the EPBC conditions of approval and is part of the agreement.

A summary of works undertaken for this reporting period is summarised below:

- Ongoing control of weed and exotic grass across entire 16.64ha offset area around naturally regenerating species as a key component to assisted natural regeneration. Ongoing maintenance of weeds along the edge of the remnant area (Lantana, Broadleaved pepper tree, Mile-a-minute, Singapore daisy in particular). Greater than 98% of weeds on the rainforest edges have been controlled. The ongoing maintenance will ensure close to 100% weed control along the remnant edge.

Weed density in the remnant rainforest has been reported as almost negligible. Weed density in the reconstruction zones has reported to have been reduced from approximately 80% down to less than 5%.

Weed control activities and reinforcement plantings have resulted in almost 100% of canopy vegetation being native, significantly more than 30 different native woody LSRA TEC species (52 species in total), and significantly greater than 70% total vegetation cover being native in these zones.

In total, 1618 replacement tube stock has been installed for the project to date, with 160 replacements within this reporting period to ensure original planting numbers are maintained.

- The biocondition monitoring was undertaken at the six established transects locations across the offset area. Transects 1 and 2 were established within high quality LRSA remnant and will provide a direct comparison across all attributes monitored with Transects 3 to 6, that were established within the reconstruction zones and transitional zone. Both Transect 1 and 2 are only 25m long compared to the 100m Transects for Biocondition Assessment, this in turn has provided results with slightly lower species diversity.

T1 vegetation is a very good representation of RE 12.3.1 and is in excellent condition. The canopy cover is 100% native.

T2 vegetation is a very good representation of RE 12.3.1 and is in excellent condition. The canopy cover is 100% native.

Transects T3, T4 and T5 are located within a reconstruction zone of the offset area and as such are representative of the areas where exotic pasture grasses previously dominated. Natural recruitment is responsible for 16%, 21% and 14% within T3, T4 and T5 respectively of the native stem count for the transects, with the balance attributed to successful native tube stock installation during Stage 1 and Stage 2 reconstruction plantings. The vegetation assemblage at these transects continues on a positive trajectory towards a representation of LRSA. The vegetation cover at the transects were reported as being T3 100% native canopy with 5% non-native ground cover recorded, T4 100% native canopy with 5% non-native ground cover recorded, and T5 100% native canopy with 4% non-native ground cover recorded.

T6 is located within a transitional zone of the offset area where elements of RE 12.3.5 and RE 12.3.1 occur. *Eucalypt*, *Allocasuarina* and *Melaleuca emergents* exist as well as lower and mid-storey rainforest species and native shade-tolerant grasses. Reinforcement planting occurred throughout this zone as part of Stage 1 and Stage 2 plantings. As expected, natural recruitment is significantly higher in this zone than in the reconstruction zones. Natural recruitment is responsible for 30% (24/80) of the native stem count for this transect with the balance directly attributed to successful native tube stock installation during the Stage 1 and Stage 2 reinforcement plantings. The vegetation assemblage at T6 is on a positive trajectory

towards a representation of LRSA. The vegetation cover was reported as being 100% native canopy with 2% non-native ground cover recorded.

- The SCC Pest Management Team have collected pest animal data and responded accordingly throughout the reporting period.

The following upcoming activities are scheduled to occur over the following twelve (12) months:

- Ongoing monitoring and weed control throughout the rainforest remnant.
- Ongoing monitoring and data collection.
- Ongoing general maintenance works as required by the OMP and the SCC technical specification.
- Removal of tree guards as necessary.

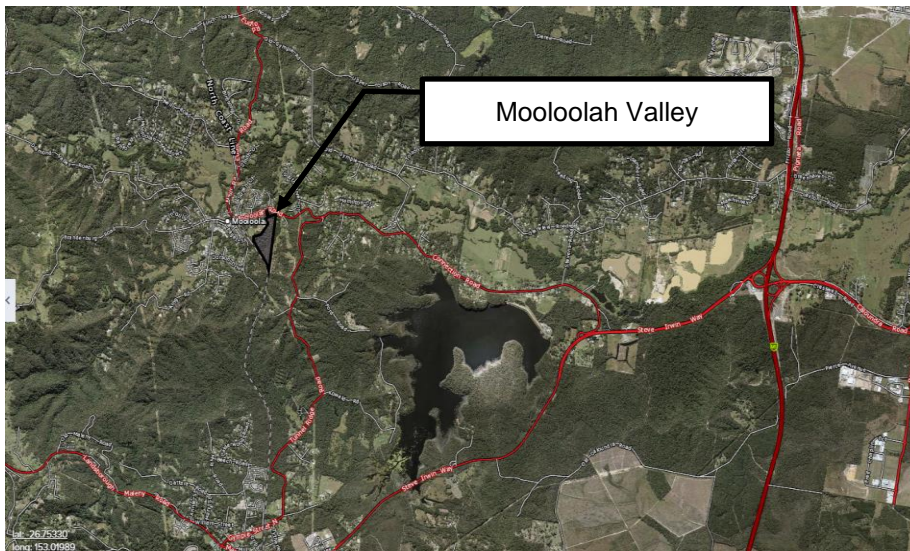
Refer to **Appendix D** for the location.

### 4.3.3 Condition 2(c)

Condition 2(c) of the EPBC Act Approval states:

*Legally secure and implement the offset of 4.65ha at the location shown by the first 12-month anniversary of the commencement of the action.*

TMR has purchased Lot 2 RP268457 (28 Mooloolah Road, Mooloolah Valley, Sunshine Coast) in Freehold in 2016 and a Voluntary Declaration is in place.



An OMP has been prepared and aims to protect and maintain in perpetuity 5.02ha of Lowland Rainforest of Subtropical Australia and manage to remnant status approximately 4.5ha of high value regrowth as a land-based offset for clearing works associated with the Project works.

The OMP details key risks and management actions and provides support for a Voluntary Declaration under the *Vegetation Management Act 1999*, and the requirements of the approval under the EPBC Act for the Project.

The primary management objective for the site is to conserve and improve the value of the area for the Lowland Rainforest of Subtropical Australia (LRSA). The overall management outcome will be to maintain current vegetation structure, composition and diversity, and improve the value of the area through management of high value regrowth. This will increase the total area of LRSA, and buffer core LRSA against weed invasion and fire.

TMR has engaged a separate Contractor to deliver the works required under the OMP and to meet the EPBC conditions of approval as part of the agreement. The purpose of the OMP and works is to protect and maintain in perpetuity 5.02ha of LRSA and manage to remnant status.

A summary of works undertaken for this reporting period is summarised below:

- Weed control activities continued during the reporting period. The works continued to focus on the control of exotic species beneath intact canopy as well as creating space along the edge of native vegetation to assist facilitating recruitment in these areas as well as access in and around the site. Due to the well-timed and systematic follow up in previous years, many of the zones have now achieved a level of relatively low maintenance and increased efforts were put towards primary weed control works. This involved the expansion of the current works front to conduct further primary weed control. Efforts largely involved control of Easter cassia (*Senna pendula* var. *glabrata*), broad leaf pepper tree (*Schinus terebinthifolius*), large leaf privet (*Ligustrum lucidum*), small leaf privet (*Ligustrum sinense*), Alexander palm (*Archontophoenix alexandrae*), wild tobacco (*Solanum mauritianum*), green cestrum (*Cestrum parqui*) lantana (*Lantana camara*), blue morning glory (*Ipomoea indica*), climbing nightshade (*Solanum seaforthianum*), corky passionfruit (*Passiflora suberosa*), glycine (*Neonotonia wightii*) and mile-a-minute (*Ipomoea cairica*).

In addition to progressing primary weed control works, systematic and timely follow up weed control and maintenance was performed through all previously worked areas. Follow up spraying was primarily used to control weeds such as Madeira vine (*Anredera cordifolia*), Easter cassia, blackberry nightshade (*Solanum nigrum*), blue billygoat weed (*Ageratum houstonianum*), cobbler's pegs (*Bidens pillosa*), signal grass (*Urochloa decumbens*), thick head (*Crassocephalum crepidioides*), urena burr (*Urena lobata*), giant devil's fig (*Solanum chrysotrichum*), lantana (*Lantana camara*), polka dot plant (*Hypoestes phyllostachya*), inch plant (*Callisia repens*), coral berry (*Ardisia crenata*), trad (*Tradescantia fluminensis*), mile a minute, blue morning glory, Mickey Mouse bush (*Ochna serrulata*), Alexander palm, broad leaf paspalum (*Paspalum mandiocanum*), purple top (*Verbena bonariensis*), ragweed (*Ambrosia artemisiifolia*) and arrowhead vine (*Syngonium podophyllum*).

- While no BioCondition monitoring was completed for year 4 of the project as per the OMP specifications, photo monitoring was updated (excerpts shown in Figure 1 below). The site continues to respond to assisted regeneration works as is detailed in the series of images below. Many native plants were observed germinating throughout the site, including *Acacia melanoxylon*, umbrella cheese tree (*Glochidion sumatranum*), cheese tree (*Glochidion ferdinandi*), pink doughwood (*Melicope elleryana*), three-veined laurel (*Cryptocarya triplinervis* var. *pubens*), cunjevoi (*Alocasia brisbanensis*), white bolly gum (*Neolitsea dealbata*), weeping lily pilly (*Waterhousea floribunda*), bleeding heart (*Homalanthus populifolius*), rough leaved elm (*Aphananthe philippinensis*), native holly (*Alchornea ilicifolia*), marblewood (*Acacia bakeri*), Indian weed (*Sigesbeckia orientalis*) and native peach (*Trema tomentosa*).

The following upcoming activities are scheduled to occur over the next 12 months:

- Ongoing maintenance and weed control of site.
- A biocondition survey.
- Further planting.

Refer to **Appendix E** for location.



PP1ai November 2018



PP1ai December 2020



PP1ai January 2023



**Figure 1: Photo monitoring at Bio-Condition plots**

#### **4.4 Condition 3**

##### **4.4.1 Condition 3(a)**

Condition 3(a) of the EPBC Act Approval states:

*Not disturb more than 35.3ha of Koala habitat within the project site.*

As detailed within the fifth annual compliance report this condition was completed within the 2020-2021 reporting period. Condition 3(a) is considered compliant and closed.

##### **4.4.2 Condition 3(b)**

Condition 3(b) of the EPBC Act Approval states:

*Implement five koala movement structures (koala friendly underpasses) within the project area.*

Five Koala movement structures have been incorporated into the project design drawings for road fauna furniture. Condition 3(b) is considered compliant and closed.

The update and status of the fauna structures are as follows:

- i. Steve Irwin Way fauna passage (CU-04-01) is **complete** with plants and fencing installed (refer to **Figure 2** in **Appendix I**).
- ii. Southern fauna passage (CU-02-02) is **complete** including the forked refuge poles (refer to **Figure 3** and **4** in **Appendix I**).
- iii. Northern fauna passage (CU-17-03) is **complete** with plants and fencing installed (refer to **Figure 5** in **Appendix I**).
- iv. Sippy creek fauna crossing improvement (movement) works are **complete**, including the fauna furniture beneath the bridges, forked refuge poles and landscaping (refer to **Figures 6,7** and **8** in **Appendix I**).

- v. Mooloolah River fauna crossing improvement works are **complete**. The fauna furniture is fully installed throughout the Mooloolah River bridges including the fauna furniture beneath the bridges forked refuge poles and landscaping completed (refer to **Figure 9** and **10** in **Appendix I**).

Additional fauna structures that have been installed for the project include:

- Steve Irwin Way Rope ladder has been installed (refer to **Figure 11** in **Appendix I**).
- Koala refuge poles have been installed along western service road and Wilson Road section.
- Koala resting forks have been installed across the site at Mooloolah River and overflow channels
- Large vegetation root balls were salvaged and used for fauna habitat.

Photos of the fauna structures are shown in **Appendix I**.

#### **4.4.3 Monitoring Fauna Infrastructure**

As part of the Project's requirements to mitigate its impacts on the Koala, five (5) Koala movement structures (fauna underpasses) were required to be incorporated into design. In addition, the project installed a new fauna rope ladder along Steve Irwin Way and 45 Koala escape poles located along 13km of Koala exclusion fencing.

These were successfully installed in July 2021 and a separate contractor has been engaged to monitor for fauna movement. A total of 88 passive infrared cameras traps were installed in April 2022 across the fauna infrastructure to monitor their use by fauna. In total, 131 fauna crossings were recorded with 24 confirmed crossings. The following data was compiled and analysed for this reporting period:

First monitoring review:

- There were 31 crossing events, including 6 confirmed crossings, 15 probable crossings.
- Nine (9) instances where fauna entered the bridge, culvert or rope ladder but turned around (did not cross).
- One (1) probable escape pole use (short-eared brushtail possum).

Second monitoring review:

- There were 100 crossing events, including 18 confirmed crossings and 79 probable crossings.
- Three (3) instances where fauna entered the bridge, culvert or rope ladder but turned around (did not cross).

Fauna species recorded on the monitoring cameras:

- Arboreal fauna other than Koalas recorded on and around the fauna infrastructure included Common Brushtail Possum (*Trichosurus vulpecula*), Ringtail Possum (*Pseudocheirus peregrinus*), Short-eared Brushtail Possum (*Trichosurus caninus*), and Squirrel Glider (*Petaurus norfolcensis*).
- Terrestrial fauna species recorded on and around the fauna infrastructure, that are likely to use the fauna infrastructure based on their ecology, included Antechinus (*Antechinus sp.*), Brush Turkey (*Alectura lathamii*), Eastern Grey Kangaroo (*Macropus giganteus*), Eastern Water Dragon (*Intelligama lesueuri*), Northern Brown Bandicoot (*Isodon macrourus*), Short-beached Echidna (*Tachyglossus aculeatus*), and Swamp Wallaby (*Wallabia bicolor*).
- Other individual macropods were recorded but could not be identified, as these individuals were often captured moving past the camera at speed and at night resulting in a lack of detail for any distinguishing features.
- No Koalas were recorded either using the fauna infrastructure or recorded on camera's facing the bushland.

During the 2022 monitoring period, two species listed under state and Commonwealth legislation were recorded around the fauna infrastructure:

- Rufous fantail (*Rhipidura rufifrons*) – listed as Migratory under the EPBC Act and Special Least Concern under the Nature Conservation Act 1992 (NC Act).
- Short-beaked Echidna (*Tachyglossus aculeatus*) – listed as Special Least Concern under the NC Act — recorded ten times, at several locations, namely Southern underpass east and west, Steve Irwin Way underpass south and north, and Mooloolah Bridge underpass west).

Monitoring will continue for a two-year monitoring period and trends will be assessed for fauna activity and usage of the infrastructure.

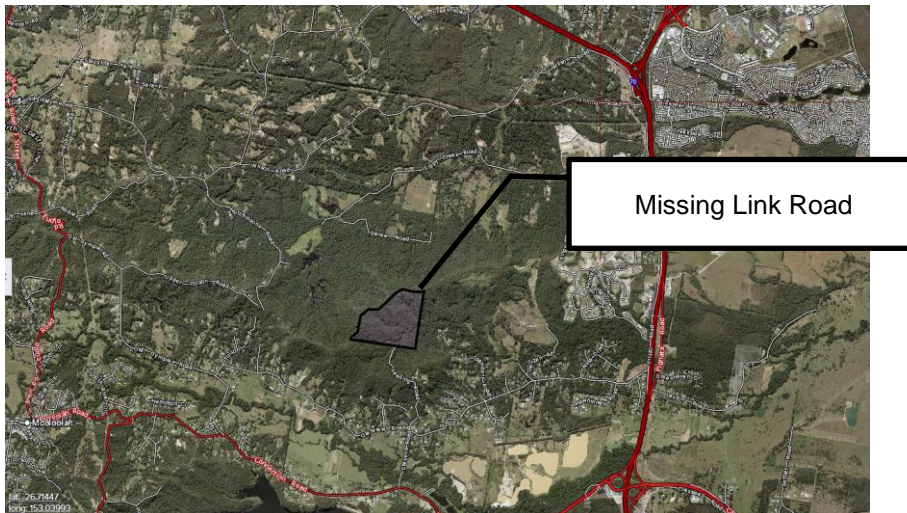
Images taken throughout this monitoring period can be found in **Appendix J**.

#### 4.4.4 Condition 3(c)

Condition 3(c) of the EPBC Act Approval states:

*Legally secure and implement the offset of 50ha by the first 12-month anniversary of the commencement of action.*

TMR purchased Lot 2 RP51879 (Missing Link Road, Glenview) in Freehold in 2016 from a private landowner and a Voluntary Declaration is now in place.



An OMP has been prepared for the property to protect and maintain in perpetuity 50.07ha of Koala habitat as a land-based offset for clearing works associated with the Project. The OMP details key risks management actions, provides support for a Voluntary Declaration under the *Vegetation Management Act 1999* and outlines the requirements for management of Koala habitat offsets.

This 50.07ha offset will provide a net conservation gain over the impacts on Koala habitat of the Project, largely through protection in perpetuity of existing remnant vegetation and improvements to habitat condition through weed and fire management.

TMR engaged a separate contractor to deliver the requirements of the OMP and offset conditions to enhance Koala habitat characteristics. As of the 2020-2021 reporting period the final programmed weed management works were almost finalised, with three days of weed management to be completed in 2022. Weed management under the OMP was completed in April 2022.

Completed activities relevant to the offset site include:

- Koala habitat monitoring – a baseline Koala Survey conducted using Koala Detection Dogs and the Spot Assessment Technique (SAT) and Annual BioCondition plot monitoring.
- Fire management – the preparation of a detailed Fire Management Plan (FMP) and onsite fire management including application of controlled burns.
- Weed control – implementation of systematic and regular weed control.



- Reporting – annual reports, biannual in the first year.
- Weed management, primarily of lantana (*Lantana Camara*), white passionflower (*Passiflora subpeltata*), stinking passionflower (*Passiflora foetida*), camphor laurel (*Cinnamomum camphora*) and fishbone fern (*Nephrolepis cordifolia*).

A summary of works undertaken over the course of the last five years of the OMP is below:

- On-ground weed management continued at the property with the successful reduction of weed density at the site. Final survey results were reported in November 2021 with one weed treatment event conducted after this date in April 2022. Survey results show that the sites' weed presence is very low with approximately 95% of the site in excellent condition. Results from annual BioCondition surveys reflect this, with results showing that weed species make up  $\leq$  1% of cover at Bio sites in 2021, a reduction from the 4% weed cover in 2017.
- Annual biocondition surveys were undertaken with the final assessment completed in 2021. Five of the six sites surveyed continue to fall within the range for BioCondition 1, indicating vegetation in good condition. One site continues to record a score as BioCondition 2. The main factor reducing the score at this site is the total number of large trees which are less than benchmark condition. The site has a cohort of slender canopy trees or “poles” present, and in time the site will also attain BioCondition 1 status. Several years will be required for the smaller girth trees to start to reach the benchmark diameter. Following four years of survey, no underlying factors which may result in altering the BioCondition scores at sites are apparent. The presence of weeds mainly *Lantana camara* was not extensive enough to lower scores initially. Weeds accounted for up to 4% of total plant cover at sites in the first survey in 2017, however weed cover is now  $\leq$  1% at sites due to targeted weed control measures.
- Annual Koala surveys were undertaken in accordance with the Spot Assessment Technique (SAT) with the integration of the University of Sunshine Coast's Detection Dogs for Conservation. Koala activity levels showed an overall decrease from 2017 to 2021, from 14.7% to 10.5% but have increased from 2020 to 2021 (5.7% to 10.5%).

The works per the requirements of the Conditional OMP for the site has been completed. The works were considered to have met the intent of the objectives and measures detailed in the OMP.

Refer to **Appendix F** offset site locality map.

## 4.5 Condition 5

Condition 5 of the EPBC Act Approval states:

*The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval and make them available upon request to the Department.*

TMR acknowledges this condition. All records pertaining to activities associated with or relevant to the EPBC Act conditions of approval are maintained and updated on a regular basis.

### 4.5.1 Principal Contractor EMP

The Principal Contractor was required to maintain accurate records of all activities relevant to the conditions of approval in accordance with their EMP and associated sub-plans. The Contractors EMP and sub-plans have undergone the process of review and acceptance by the Administrator (TMR). The implementation of the Contractor's EMP and sub-plans, including compliance with required record-keeping, was subject to internal monthly and external quarterly audits. The construction EMP and sub-plans were revised on a six-monthly basis.

### 4.5.2 Environmental Site Inductions

An environmental site induction was delivered to all project site personnel, contractors and sub-contractors prior to commencing work on site. The Principal Contractor was required to maintain an accurate record of all persons inducted on the Project.

### 4.5.3 Contractor Reporting

In accordance with the conditions of the contract, the Principal Contractor has kept records of the following:

- Environment and cultural heritage induction register.
- Monitoring results including air, noise, vibration, water, flora (veg clearing reports, KHT counts), fauna (amphibian monitoring, fauna reports), contamination, weeds and pests.
- Inspection reports, checklists and diary entries.
- Incident and non-conformance reports, complaints register and associated corrective actions taken.
- Compliance testing results.
- Environmental audit reports and subsequent corrective actions taken.
- Biosecurity matter certificates, permits, and management documentation.
- Complete registers kept under the Species Management Program of animal breeding place(s) tampered with and injury/death to native fauna.

The Contractor has undertaken and documented weekly and monthly environmental site inspections for verifying compliance with the EMP, licences, permits and approvals and other environmental performance requirements specified within the Contract.

The Contractor has provided the Administrator monthly progress reports on environmental matters. The monthly reports included records of the total area and individual numbers of TEC and Koala habitat cleared each month.

#### **4.5.4 Environmental Checks**

To ensure compliance with the EPBC Act conditions of approval, including measures taken to implement the management plans, the following environmental audits and reviews were undertaken:

- Prior to works commencing on site, the environmental documentation (including the EMP) was revised and accepted by the Administrator prior to use.
- The Contractor's updates and revisions to environmental documentation (EMP, sub-plans and Erosion and Sediment Control Plans) were also revised and accepted by the Administrator prior to use.
- Independent quarterly audits on the implementation of the Contractor's EMP(C) and compliance of approval conditions were also undertaken.
- Internal monthly audits on the implementation of the Contractor's EMP(C) as well as compliance to approval conditions and client specifications were undertaken.

#### **4.5.5 Environmental Incident Reporting**

As per the conditions of the contract, the Contractor has notified the Administrator immediately of any incidents where actual or potential environmental harm has taken place. Incident investigations and notifications have been provided to the Administrator and regulatory body where required. The results and findings of the incidents were also submitted as part of the Contractor's environmental monthly progress reports.

#### **4.6 Conclusion**

The Project has completed Condition 6 of the EPBC Act approval for CR2SM that requires TMR to prepare and publish an annual report on their website that addresses compliance with each of the conditions of the approval for each year of construction. This report is the sixth and final annual compliance report for the Project that meets this condition and outlines completion of all remaining works.

This has been confirmed through closure of remaining project approvals and completion of the post construction monitoring activities upon the project.

All other construction related activities have been completed with notable achievements in revision of overarching design to remove significant impacts to both existing TEC and NJKH vegetation communities.

The Contractor has been compliant with their related components of the EPBC approval during the 2021-2022 reporting period. This has been managed through ongoing monitoring of site works, review of documentation and records carried out through ongoing ad-hoc environmental inspections and formal audits. These ongoing management actions have ensured that any issues identified are addressed promptly in order to maintain compliance with the EPBC conditions. All project non-conformances have been addressed and closed.

The proposed Action "to upgrade a 7km section of the Bruce Highway between Caloundra Road to Sunshine Motorway, Queensland" is considered to be completed. The works have now entered into a maintenance period.

Approval Conditions 1, 2(a), 3(a),3(b),3(c) and 4 as of this reporting period are completed and complied with the intent of the approval and management plans, and are considered closed.

## 4.7 References

Department of Transport and Main Roads (2016), *Offset Management Plan – Lowland Rainforest of Subtropical Australia: Lower Mooloolah River Environmental Reserve*.

Ecosure Pty Ltd (2021), *BioCondition Assessment, Mooloolah River, CR2SM*, prepared for Fulton Hogan Seymour Whyte Joint Venture.

Ecosure Pty Ltd (2022), *Mooloolah Valley Offset Year 4 Report: January 2022 to July 2022*

Ecosure Pty Ltd (2022), *Mooloolah Valley Offset Year 4 Report: July 2022 to December 2022*

Environtech Solutions, *CR2SM Construction Environmental IA Program Closeout*

Future-Plus Environmental (2018), *Fire Management Plan*, prepared for Department of Transport and Main Roads.

Future-Plus Environmental (2021), *Glenview Koala Offset Project – Fire and Weed Management Works Report No. 5*, report prepared for Department of Transport and Main Roads.

RPS Australia East Pty Ltd (2016), *Bruce Highway Upgrade – Caloundra Road to Sunshine Motorway Project: Threatened Ecological Community Impact Assessment (Lowland Rainforest of Subtropical Australia) EPBC 2015/7464*, report prepared for Department of Transport and Main Roads.

Sunshine Coast Council (2022), *Annual Report – Year 6 (2021-2022) Lowland Rainforest of Subtropical Australia Threatened Ecological Community offset; Lower Mooloolah River Environmental Reserve*, report prepared for Department of Transport and Main Roads.

# Appendix A –EPBC Approval Decision Notice

## APPROVAL

**BRUCE HIGHWAY UPGRADE, CALOUNDRA ROAD TO SUNSHINE MOTORWAY,  
QUEENSLAND (EPBC 2015/4764)**

### Proposed action

<b>person to whom the approval is granted</b>	Department of Transport and Main Roads
<b>proponent's ABN</b>	39 407 690 291
<b>proposed action</b>	To upgrade a 7km section of the Bruce Highway between Caloundra Road to Sunshine Motorway, Queensland (see EPBC referral 2015/7464)

### Approval decision

<b>Controlling Provision</b>	<b>Decision</b>
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 31 December 2026

### Decision maker

**Name and position** James Barker  
Assistant Secretary  
Assessments (Qld, Tas, Vic) and Sea Dumping Branch

### Signature

### Date of Decision

## Conditions attached to the approval

### General

1. For protection of the **EPBC Act** listed koala (*Phascolarctos cinereus*) and **Lowland rainforest of subtropical Australia threatened ecological community** the **approval holder** must implement the **Overarching Environmental Management Plan** while undertaking the proposed action.

### *Lowland rainforest of subtropical Australia threatened ecological community management*

2. For the protection of the **EPBC Act** listed critically **endangered rainforest of subtropical Australia** the **approval holder** must:
  - a. Not disturb more than 3.92ha of the **Lowland rainforest of subtropical Australia** threatened ecological community within and adjacent to the **project site**, as shown in Attachment A;
  - b. Enter into a **Conservation Agreement** over the offset of 16.64 ha at the location shown in Attachment B, and ensure that by the tenth anniversary of **commencement of the action**, the offset meets the following condition thresholds:
    - i. Canopy Cover: at least 70 per cent of canopy vegetation is native;
    - ii. Species Richness: contains 30 woody species from the **Lowland rainforest of subtropical Australia threatened ecological community listing advice**; and
    - iii. Total vegetation: At least 70 per cent of total vegetation cover is native.
  - c. **Legally secure** and implement the offset of 4.65 ha at the location shown in Attachment C by the first 12 month anniversary of the **commencement of the action**.

### *Koala management*

3. For the protection of the **EPBC Act** listed vulnerable Koala (*Phascolarctos cinereus*) the **approval holder** must:
  - a. Not disturb more than 35.3 ha of **Koala habitat** within the **project site** (Attachment D);
  - b. Implement five koala movement structures (koala friendly underpasses) within the project area, namely:
    - i. One new structure to facilitate movement across Steve Irwin Way;
    - ii. One new structure to facilitate koala movement across the Bruce Highway south of Mooloolah River;
    - iii. One new structure to facilitate koala movement across the Bruce Highway north of Sippy Creek;
    - iv. Improve the existing structure at Sippy Creek (at the location identified in Attachment E) to facilitate koala movement across the Bruce Highway

- c. **Legally secure** and implement the offset of 50ha at the location shown in Attachment F by the first 12 month anniversary of the **commencement of action**.

#### **Administrative conditions**

4. Within 10 days of the **commencement of action**, the **approval holder** must advise the **Department** in writing of the actual date of **commencement of action**.
5. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of 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 the compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of the audits must also be published on the **approval holder's** website within two weeks of the **Department's** approval of the final audit.
6. Within three months of every 12 month anniversary of the **commencement of the action**, the **approval holder** must publish a report on their website addressing compliance with each of the conditions of this approval over the previous 12 months. 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.
7. 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**.

#### **Definitions**

**Approval holder** means the person to whom the approval is granted, or any person acting on their behalf, or to whom the approval is transferred under section 145B of the EPBC Act.

**Commencement of the action** means the disturbance of any vegetation identified as **Lowland rainforest of subtropical Australia** or **Koala habitat**, as defined in this approval notice. Commencement of the action includes physical disturbance of this vegetation for any purpose including clearing of vegetation, earthworks, establishment of site offices and fencing, and new road works.

**Conservation Agreement** means an agreement established under s.305 of the *Environment Protection and Biodiversity Conservation Act 1999*.

**Department** means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

**EPBC Act** means the *Environment Protection and Biodiversity Conservation Act 1999*.

**Koala habitat** means the areas identified as 'high koala habitat values' and 'medium koala habitat values' in Attachment D.

**Legally secure** means placing on the land title a voluntary declaration under the *Vegetation Management Act 1999* (Qld).

**Lowland rainforest of subtropical Australia** means the areas identified as 'ground-truthed TEC within the project area' and '50m buffer' in Attachment A.

**Lowland rainforest of subtropical Australia threatened ecological community listing advice** means Appendix A of the TSSC (2011a) Commonwealth Listing Advice on Lowland Rainforest of Subtropical Australia  
<http://www.environment.gov.au/biodiversity/threatened/communities/pubs/101-listing-advice.pdf>

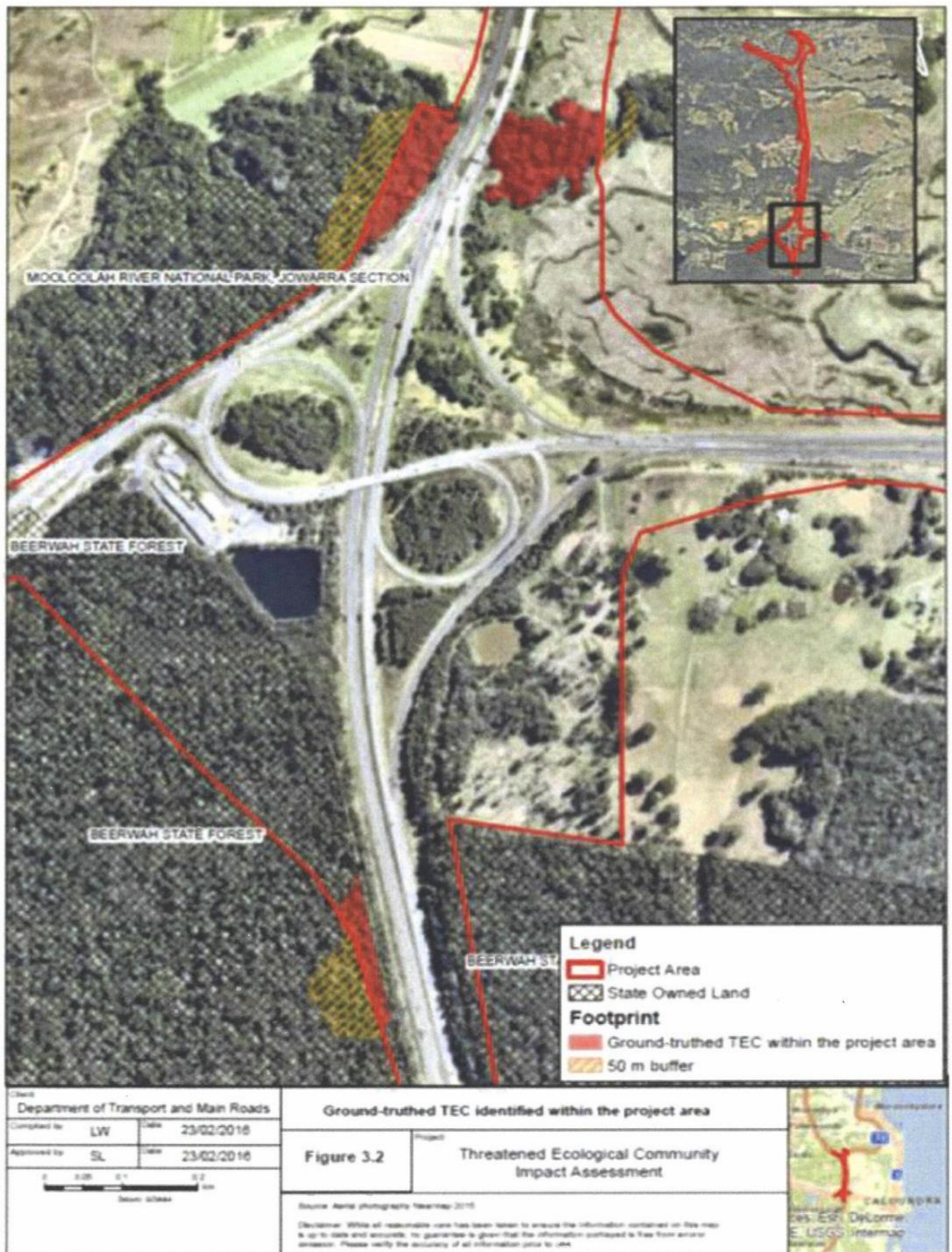
**Minister** means the Commonwealth **Minister** administering the **EPBC Act** and includes a delegate of the **Minister**.

**Overarching Environmental Management Plan** means the documents *Bruce Highway Upgrade – Caloundra Road to Sunshine Motorway Project: Overarching Environmental Management Plan*, version 2, Final/March 2016.

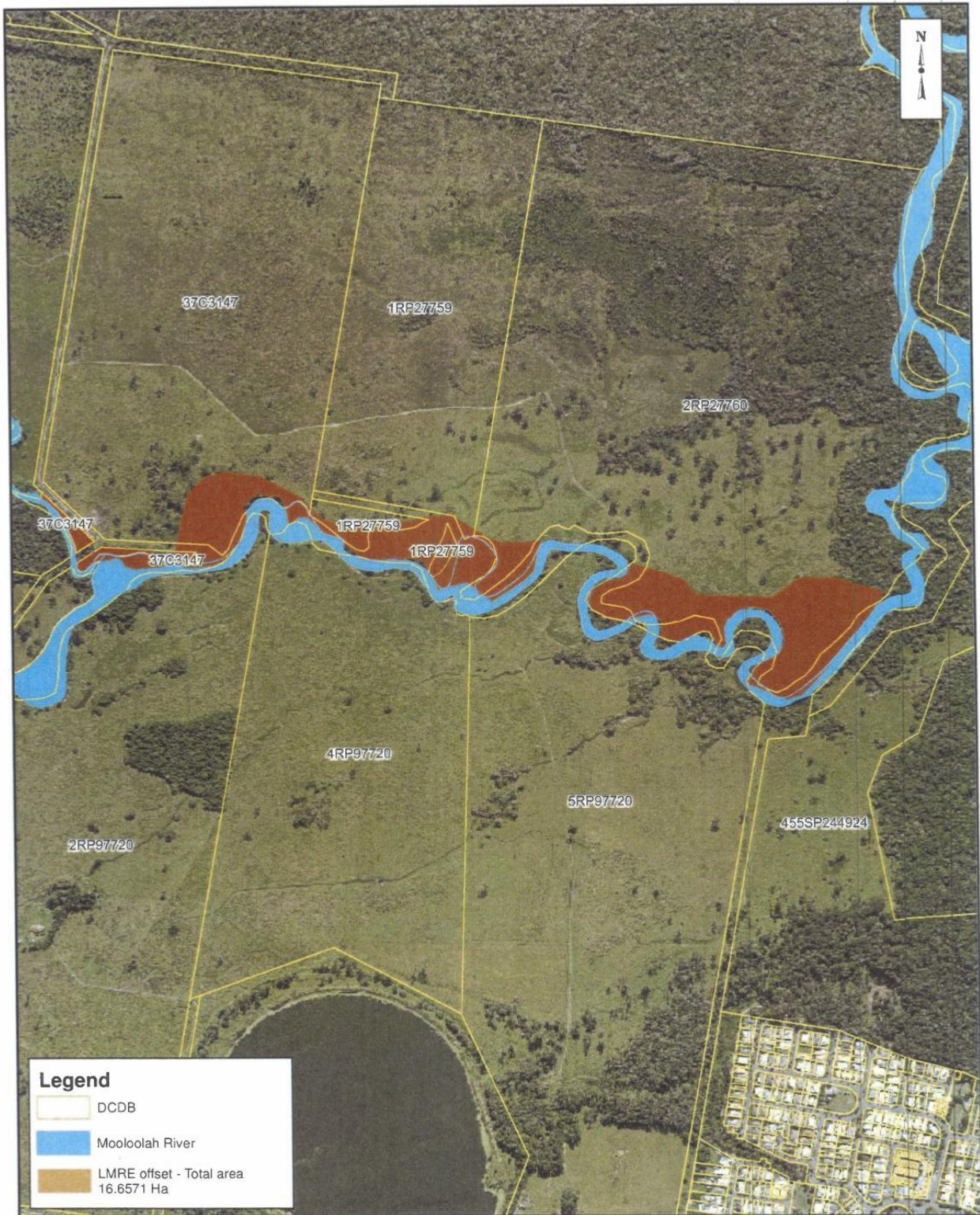
**Project site** means the 'updated referral area (March 2016)' as identified in Attachment G.



Attachment A



Attachment B.



**Legend**

- DCDB
- Mooloolah River
- LMRE offset - Total area  
16.6571 Ha

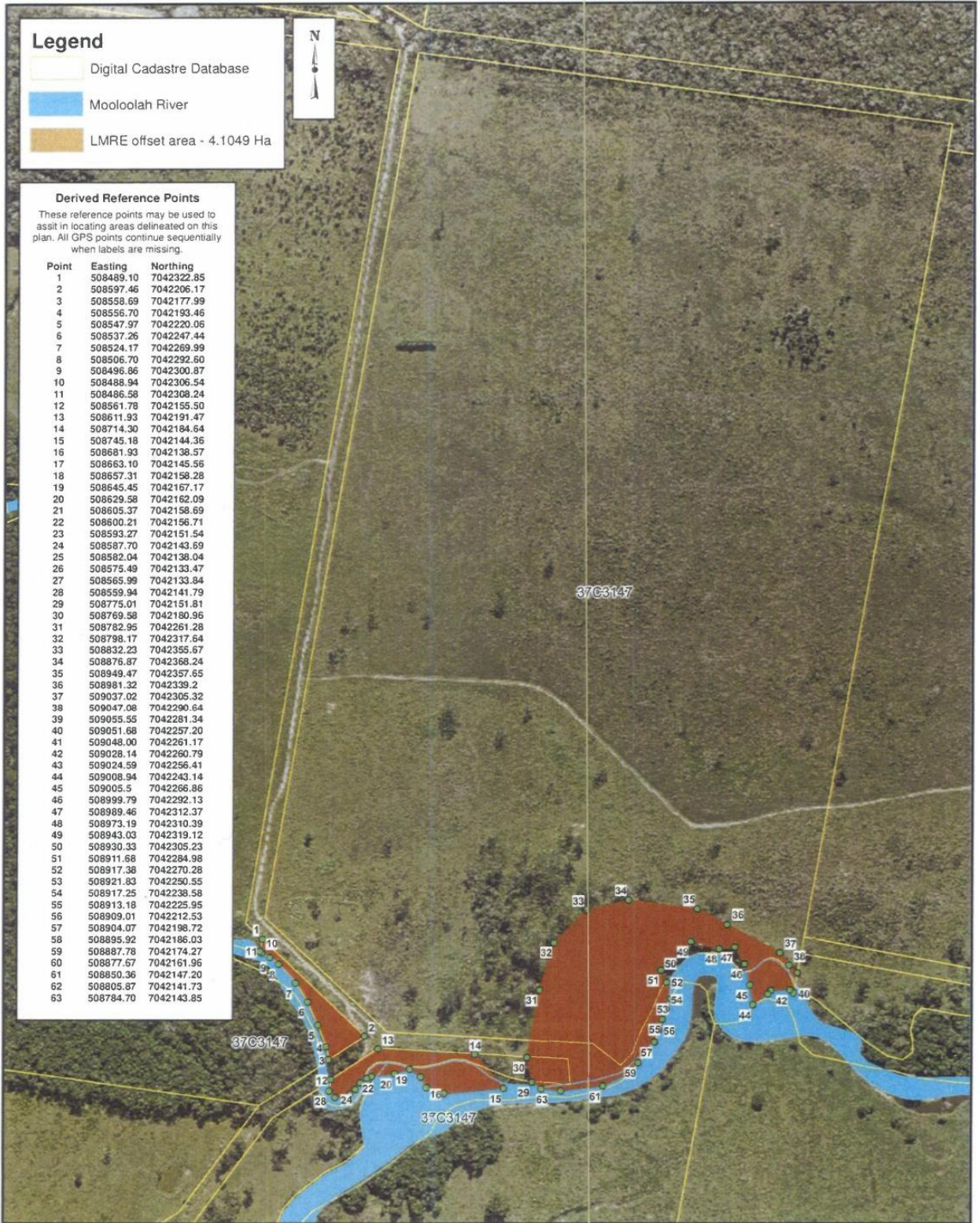
Projection/ Datum : Map Grid of Australia (MGA) Zone 56, Geocentric Datum of Australia (GDA) 1994

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Disclaimer: While every care is taken to ensure the accuracy of this data, Pinney Bowes Software Pty Ltd and/or the State of Queensland no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason.

**Mooloolah River  
Lower Mooloolah River Environment  
Reserve (LMRE Reserve)**

Plan No/ Job No:	<b>Map1</b>
Issue:	<b>A</b>
Date:	13/03/2017
Drawn by:	R Friend
Checked by:	S Scott





**Legend**


- Digital Cadastre Database
- Mooloolah River
- LMRE offset area - 4.1049 Ha

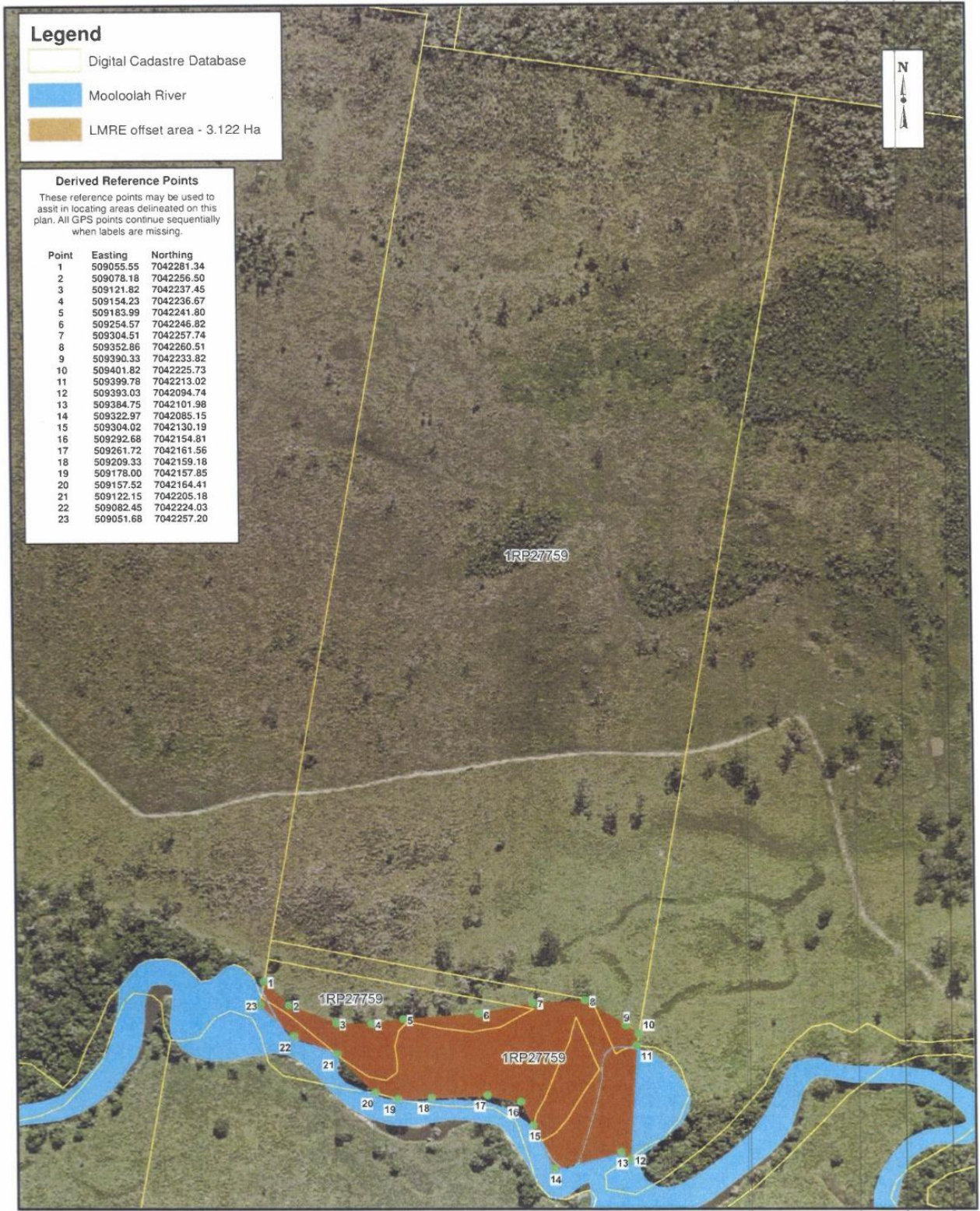


**Derived Reference Points**

These reference points may be used to assist in locating areas delineated on this plan. All GPS points continue sequentially when labels are missing.

Point	Easting	Northing
1	508489.10	7042322.85
2	508597.46	7042206.17
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7	508524.17	7042269.99
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13	508611.93	7042191.47
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15	508745.18	7042144.36
16	508681.93	7042138.57
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19	508645.45	7042167.17
20	508629.58	7042162.09
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22	508600.21	7042156.71
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43	509024.59	7042256.41
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46	508999.79	7042292.13
47	508989.46	7042312.37
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49	508943.03	7042319.12
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54	508917.25	7042238.58
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60	508877.67	7042161.96
61	508850.36	7042147.20
62	508805.67	7042141.73
63	508784.70	7042143.85

<p>Projection/ Datum : Map Grid of Australia (MGA) Zone 56, Geocentric Datum of Australia (GDA) 1994</p> <p>© The State of Queensland, 2017 © Plinney Bows Software Pty Ltd, 2017</p> <p><small>Disclaimer: While every care is taken to ensure the accuracy of this data, Plinney Bows Software Pty Ltd and/or the State of Queensland no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the data being inaccurate or incomplete in any way and for any reason.</small></p>	<p><b>Mooloolah River Lower Mooloolah River Environment Reserve (LMRE Reserve)</b></p>	<p>Plan No/ Job No: <b>Map3</b></p> <p>Issue: <b>A</b> Date: 13/03/2017</p> <p>Drawn by: R Friend</p> <p>Checked by: S Scott</p>	 <p><b>Queensland Government</b></p>
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**Legend**

- Digital Cadastre Database
- Moolooloolah River
- LMRE offset area - 3.122 Ha

**Derived Reference Points**

These reference points may be used to assist in locating areas delineated on this plan. All GPS points continue sequentially when labels are missing.

Point	Easting	Northing
1	509055.55	7042281.34
2	509078.18	7042256.50
3	509121.82	7042237.45
4	509154.23	7042236.57
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9	509390.33	7042233.82
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11	509399.78	7042213.02
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15	509304.02	7042130.19
16	509292.68	7042154.81
17	509261.72	7042161.56
18	509209.33	7042159.18
19	509178.00	7042157.85
20	509157.52	7042164.41
21	509122.15	7042205.18
22	509082.45	7042224.03
23	509051.68	7042257.20

Projection/ Datum : Map Grid of Australia (MGA) Zone 56, Geocentric Datum of Australia (GDA) 1994

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**Moolooloolah River  
Lower Moolooloolah River Environment  
Reserve (LMRE Reserve)**

Plan No/ Job No: **Map3**

Issue: **A** Date: **13/03/2017**

Drawn by: **R Friend**

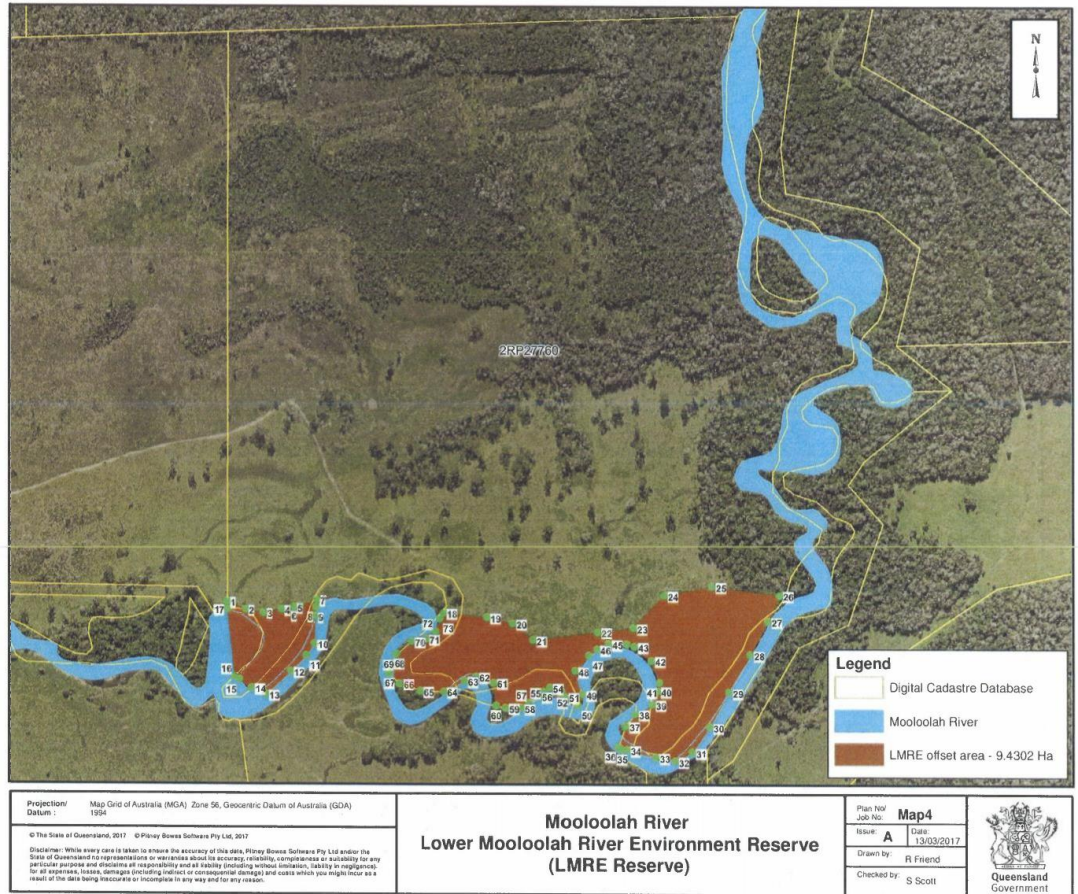
Checked by: **S Scott**



**Derived Reference Points**

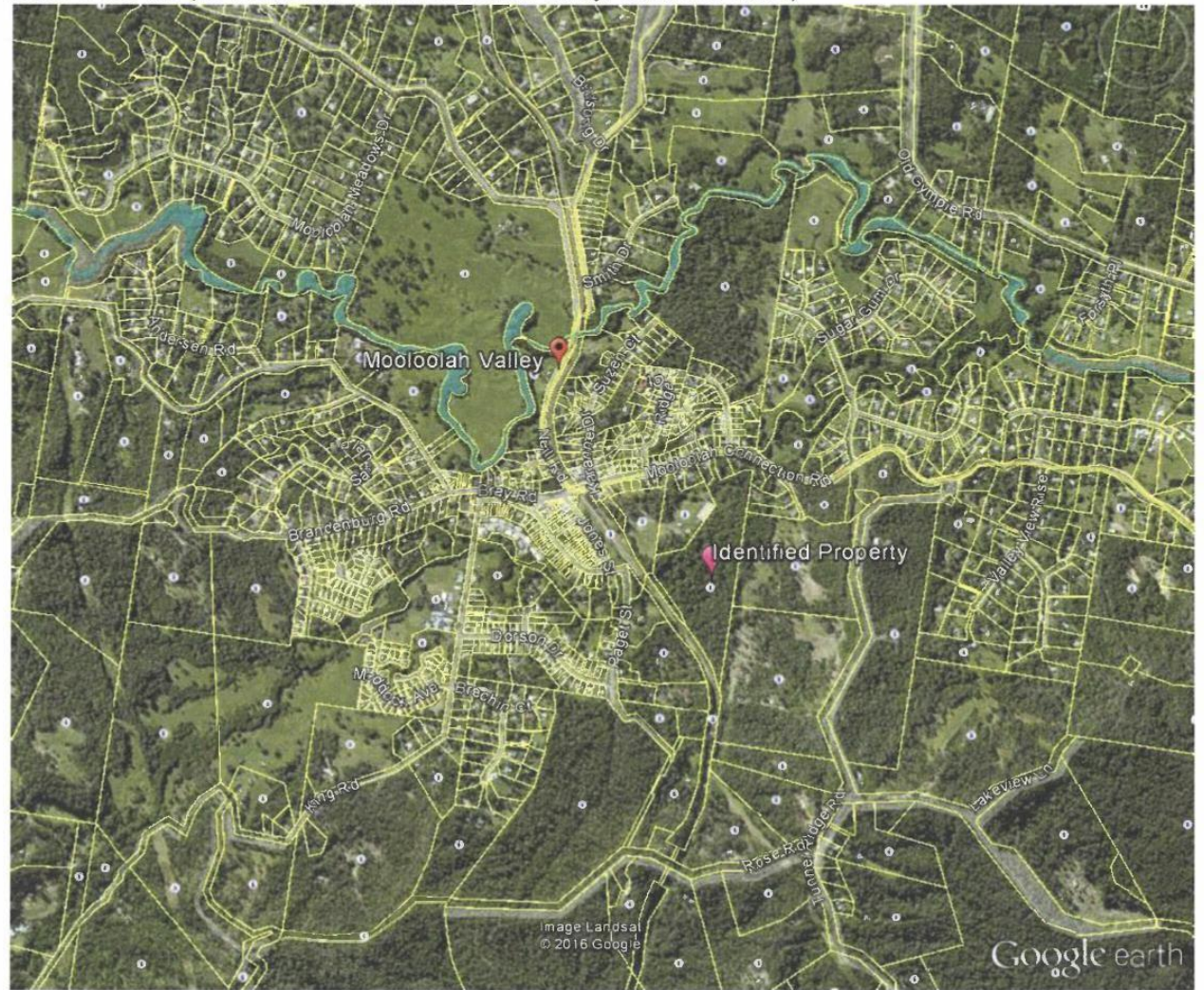
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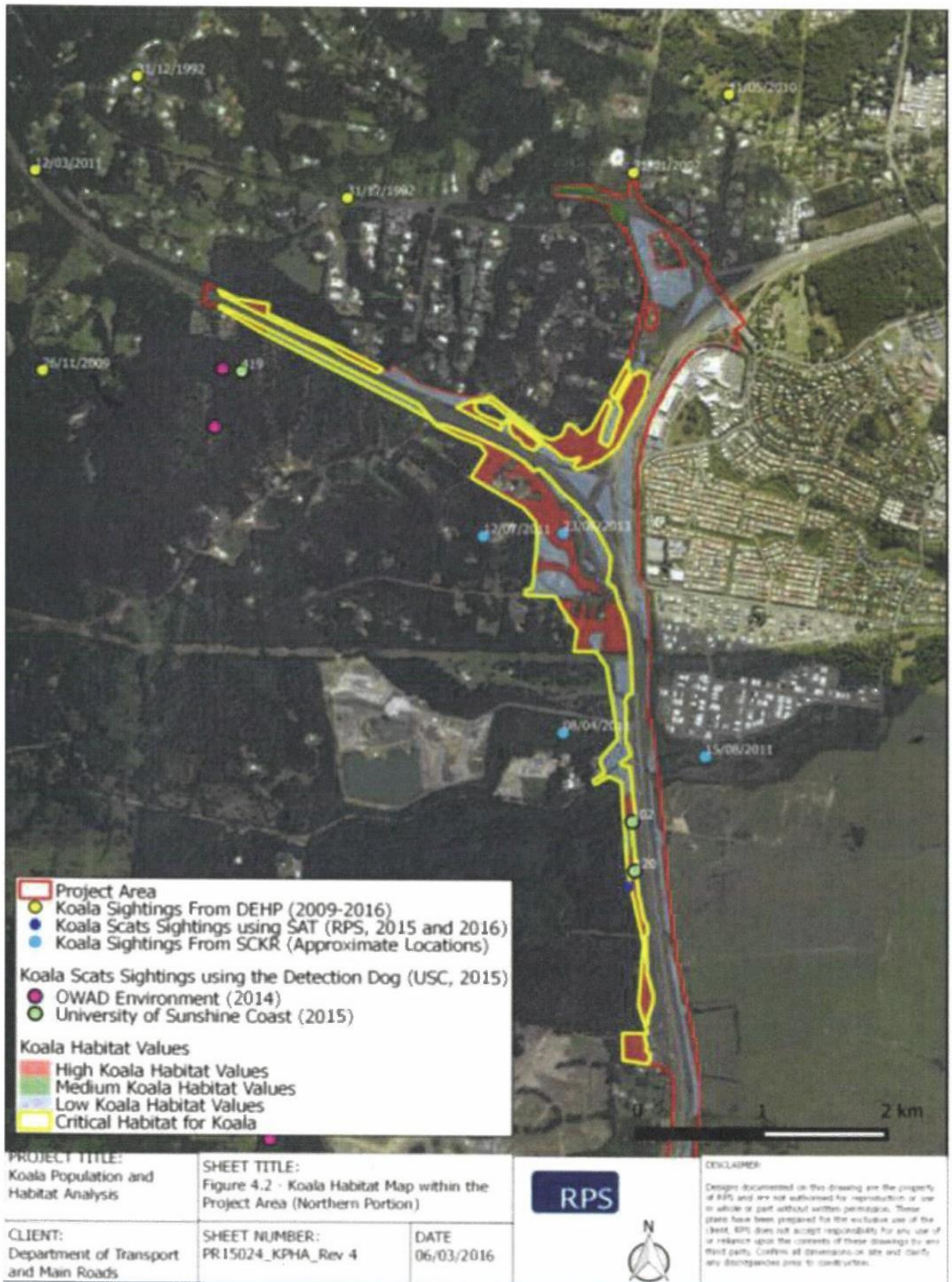
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29	510158.89	7041918
30	510120.17	7041864.79
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32	510056.27	7041816.76
33	510026.41	7041829.3
34	509983.98	7041851.06
35	509974.7	7041854.07
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37	509987.99	7041862.03
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73	509727.85	7042132.15



Attachment C

Lot 2 RP268457 (28 Mooloolah Road, Mooloolah Valley, Sunshine Coast)





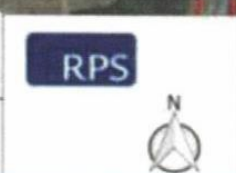
**PROJECT TITLE:**  
Koala Population and Habitat Analysis

**CLIENT:**  
Department of Transport and Main Roads

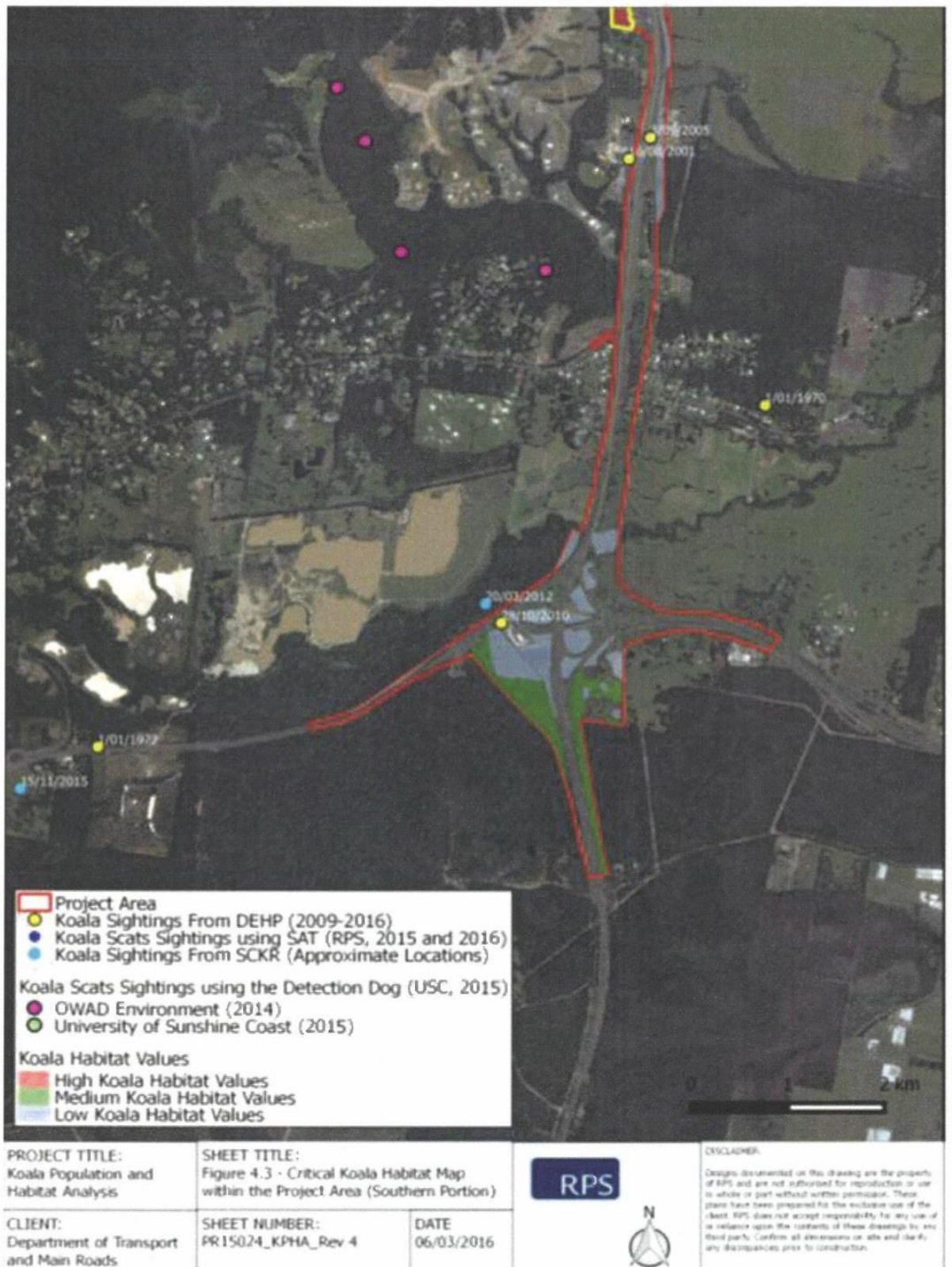
**SHEET TITLE:**  
Figure 4.2 - Koala Habitat Map within the Project Area (Northern Portion)

**SHEET NUMBER:**  
PR15024\_KPHA\_Rev 4

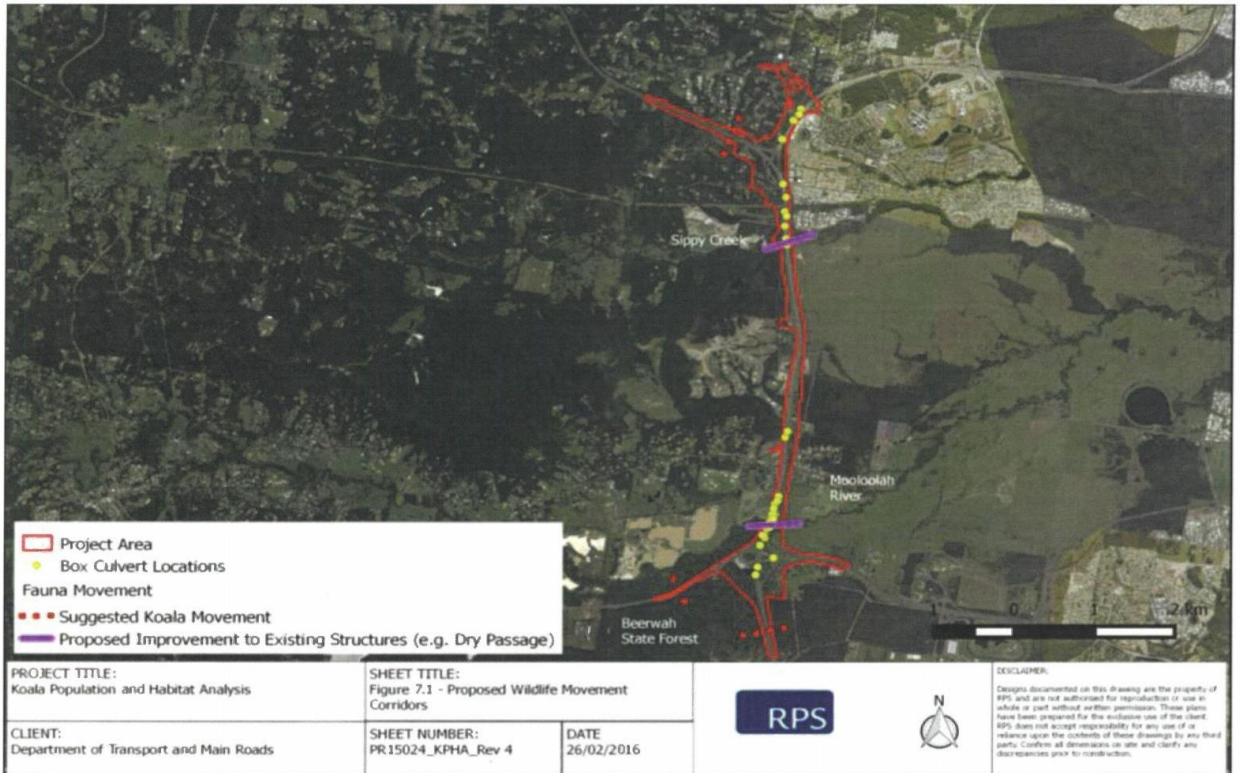
**DATE:**  
06/03/2016



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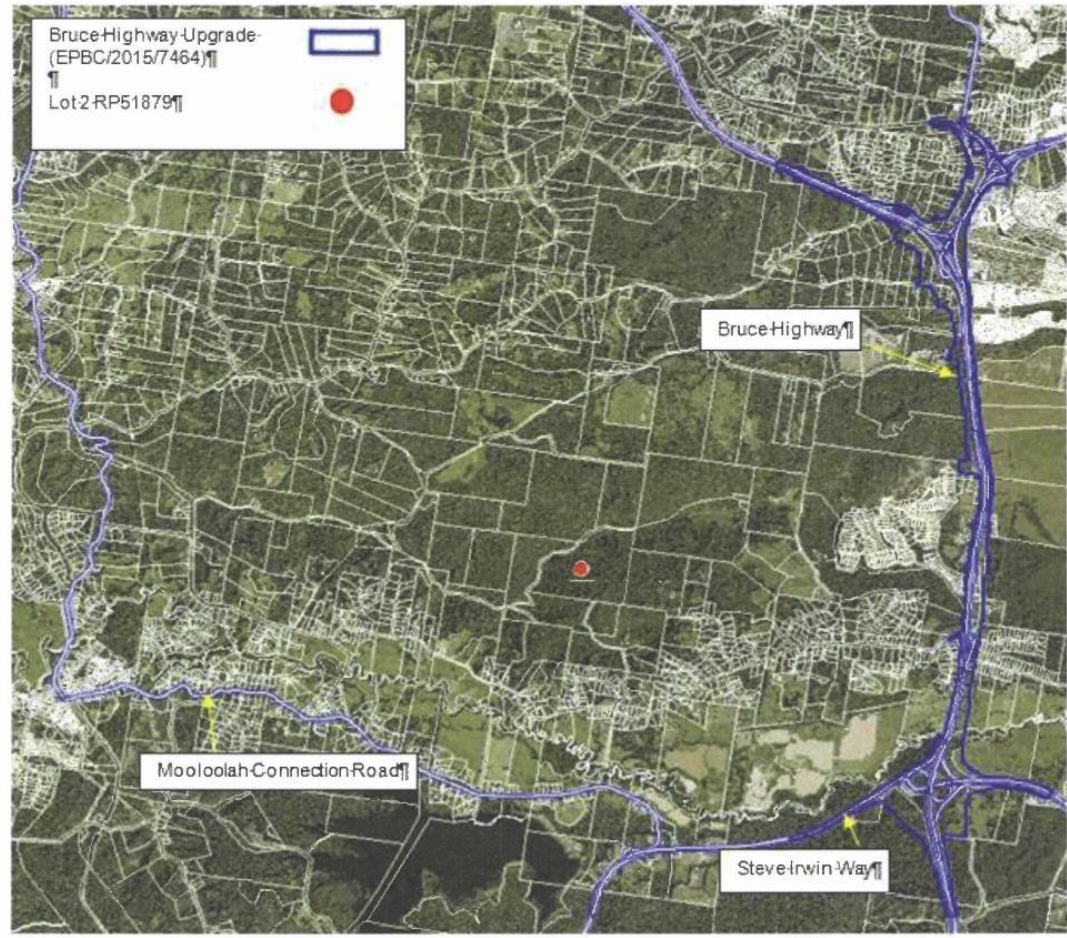




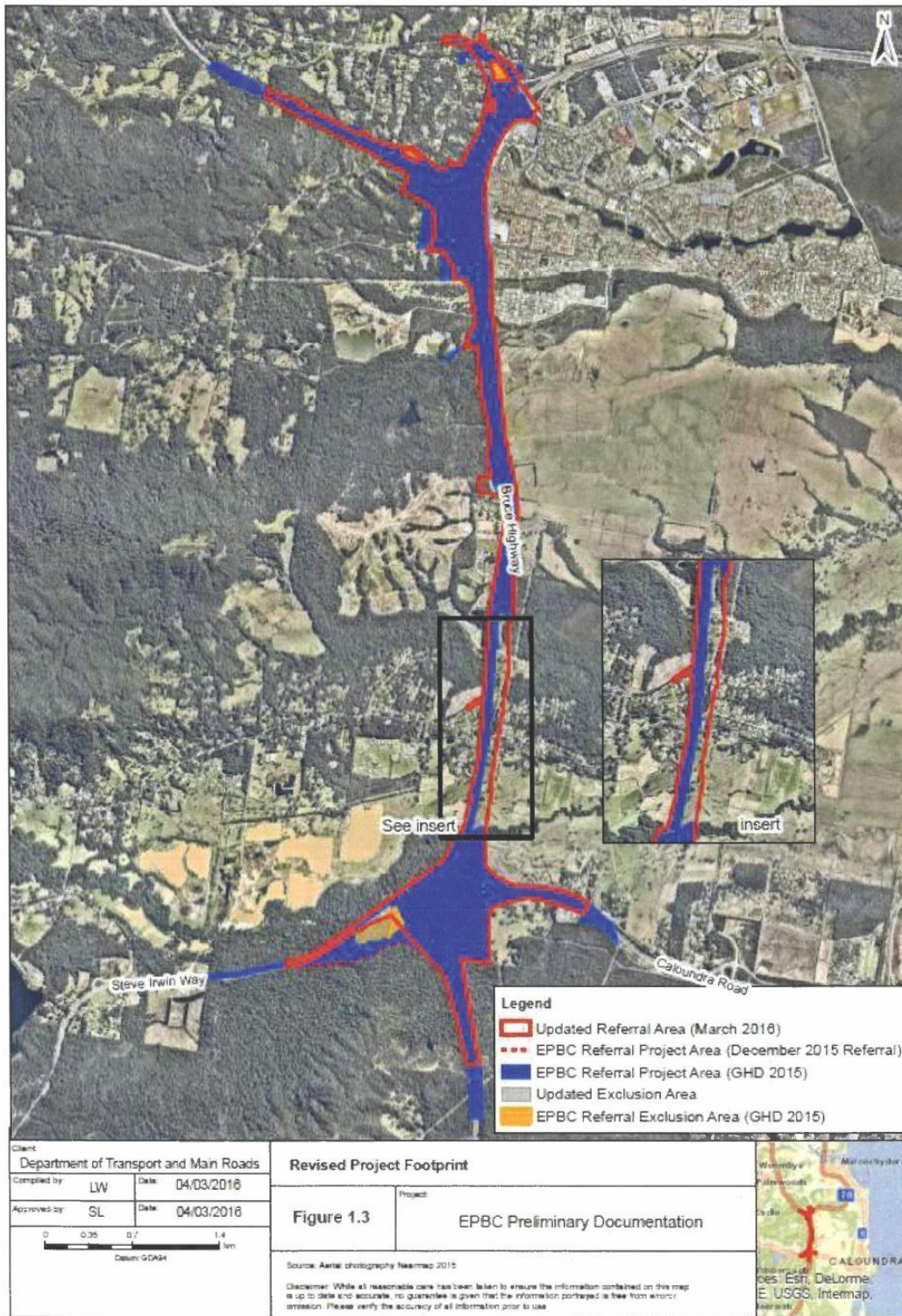


Attachment F

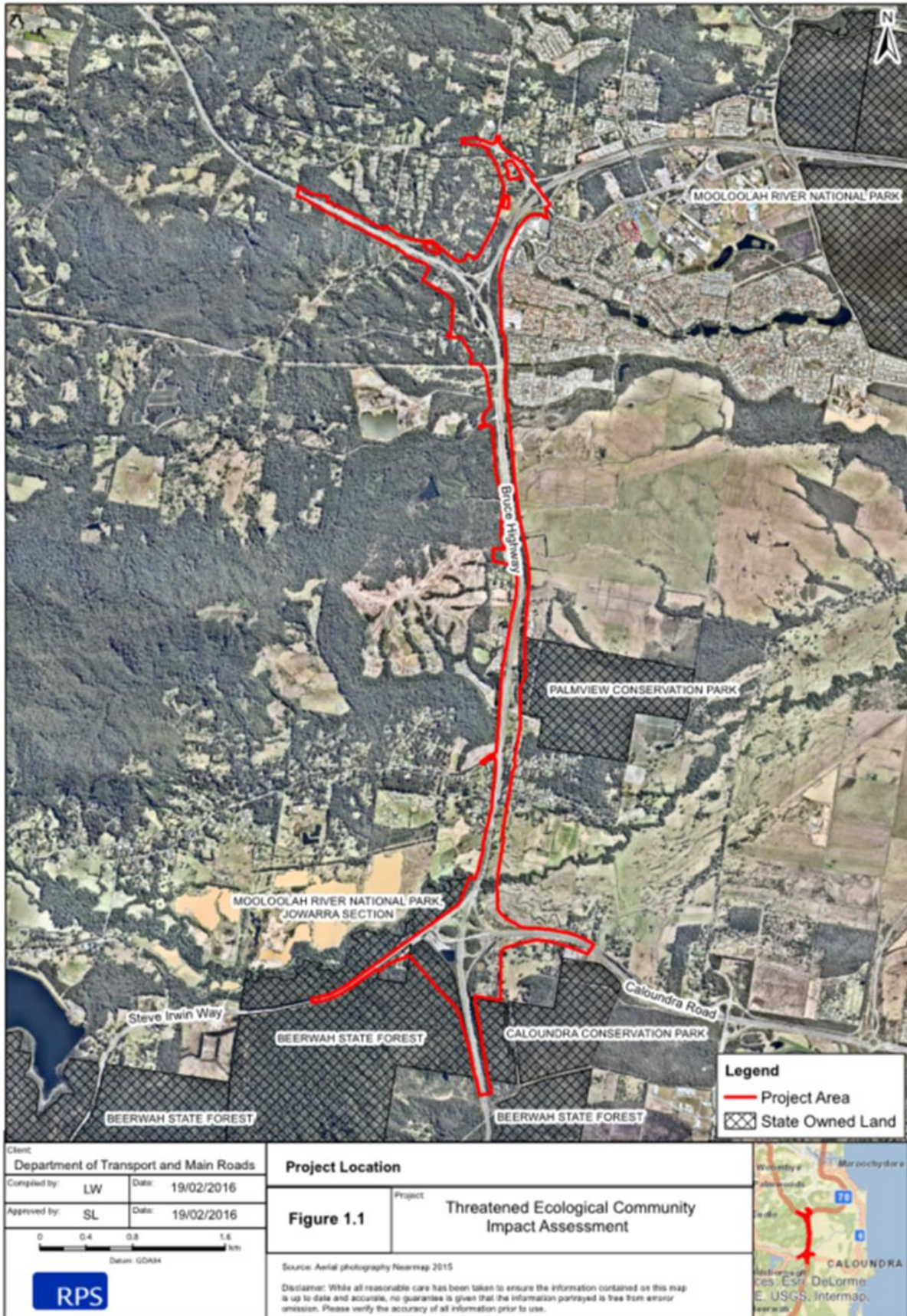
Lot 2 RP51879 (Missing Link Road, Glenview)



Attachment G



# Appendix B – CR2SM Project Site Threatened Ecological Community



# Appendix C – As-Built Clearing Diagrams

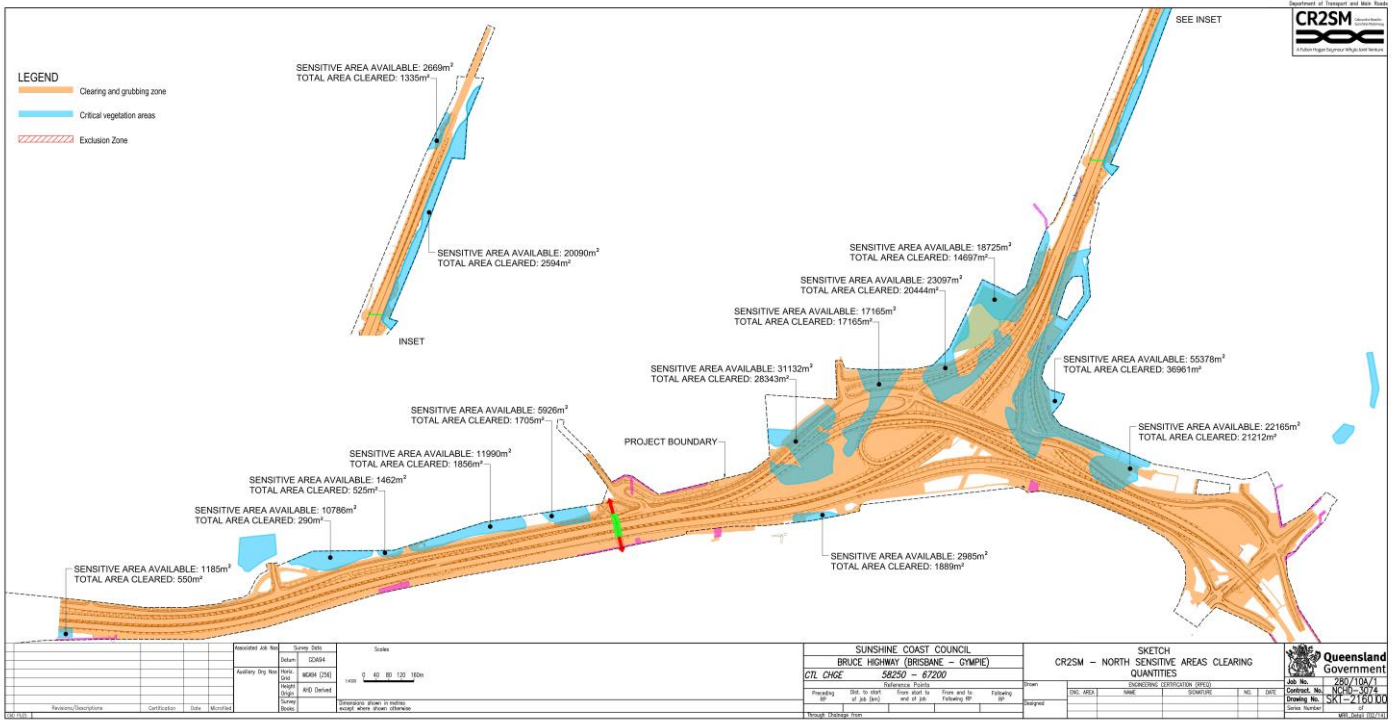


Figure 1: Medium and high value koala habitat cleared to date - North

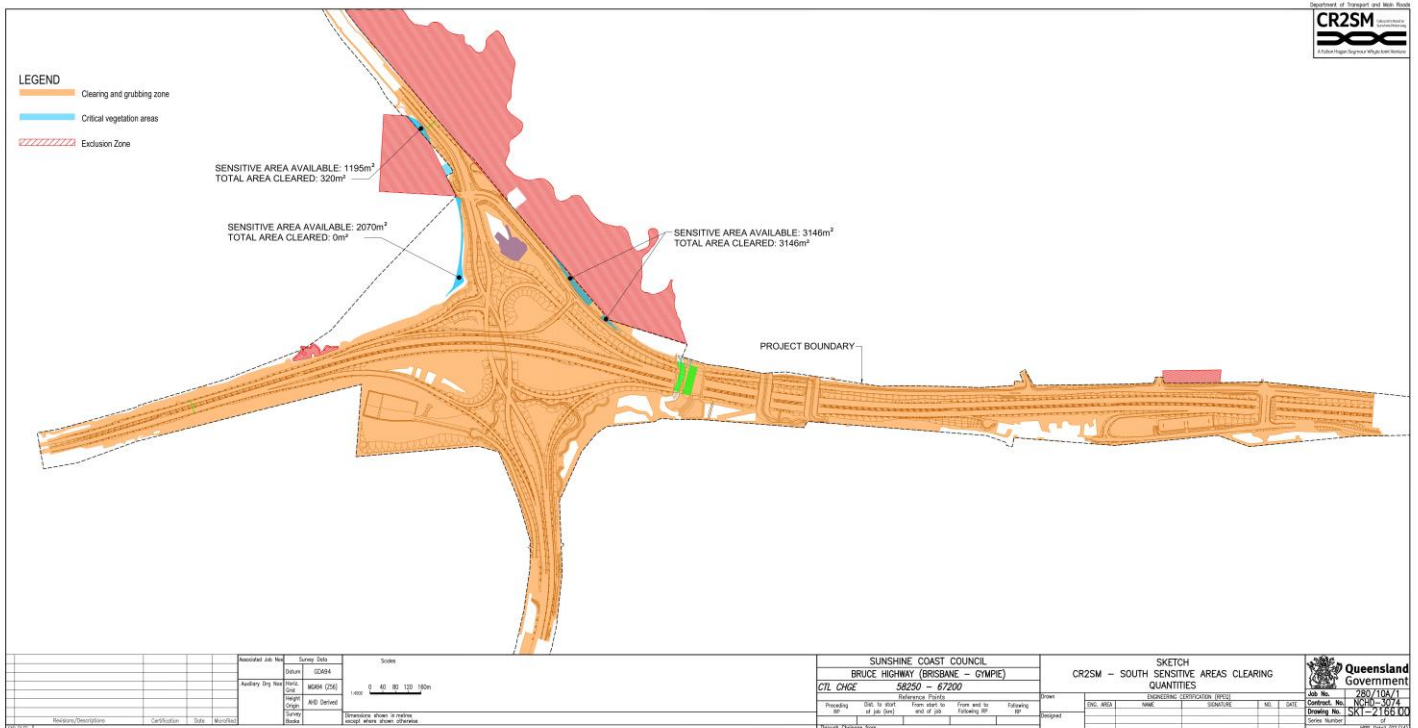
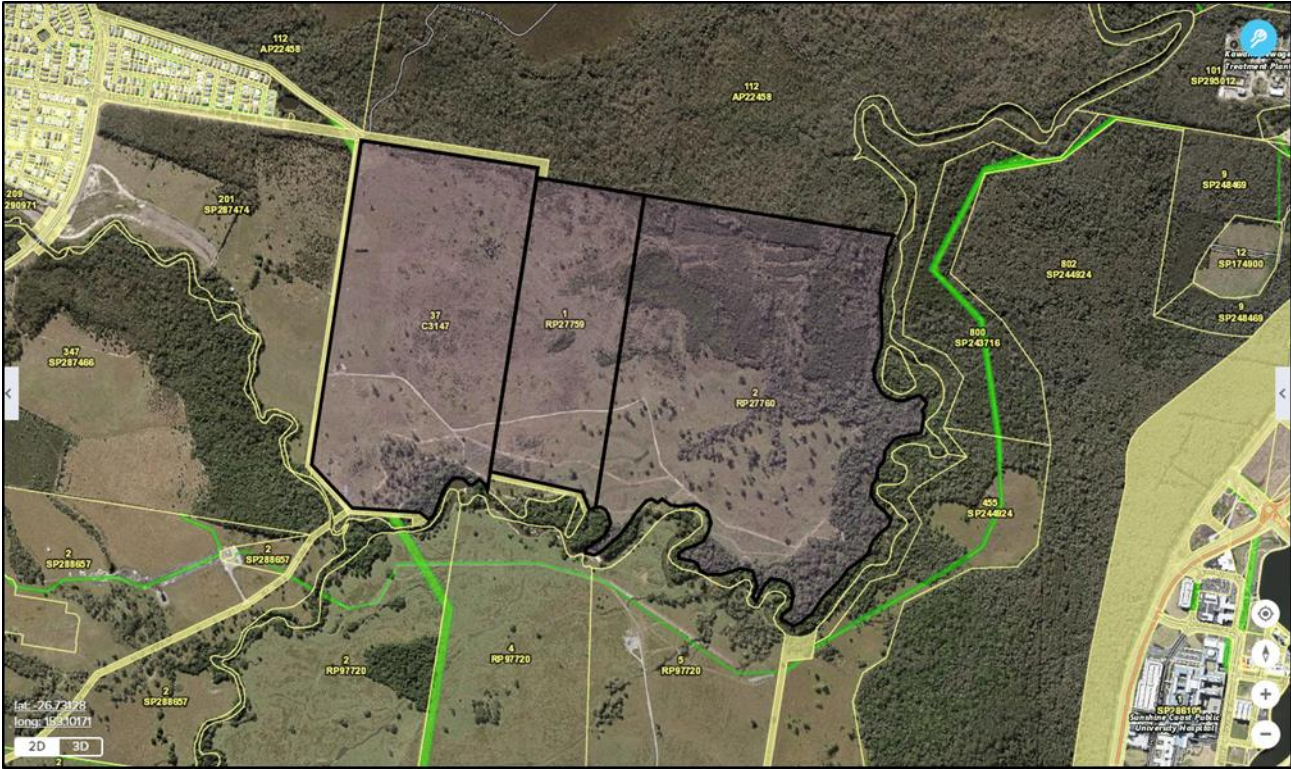


Figure 2: Medium and high value koala habitat cleared to date - South

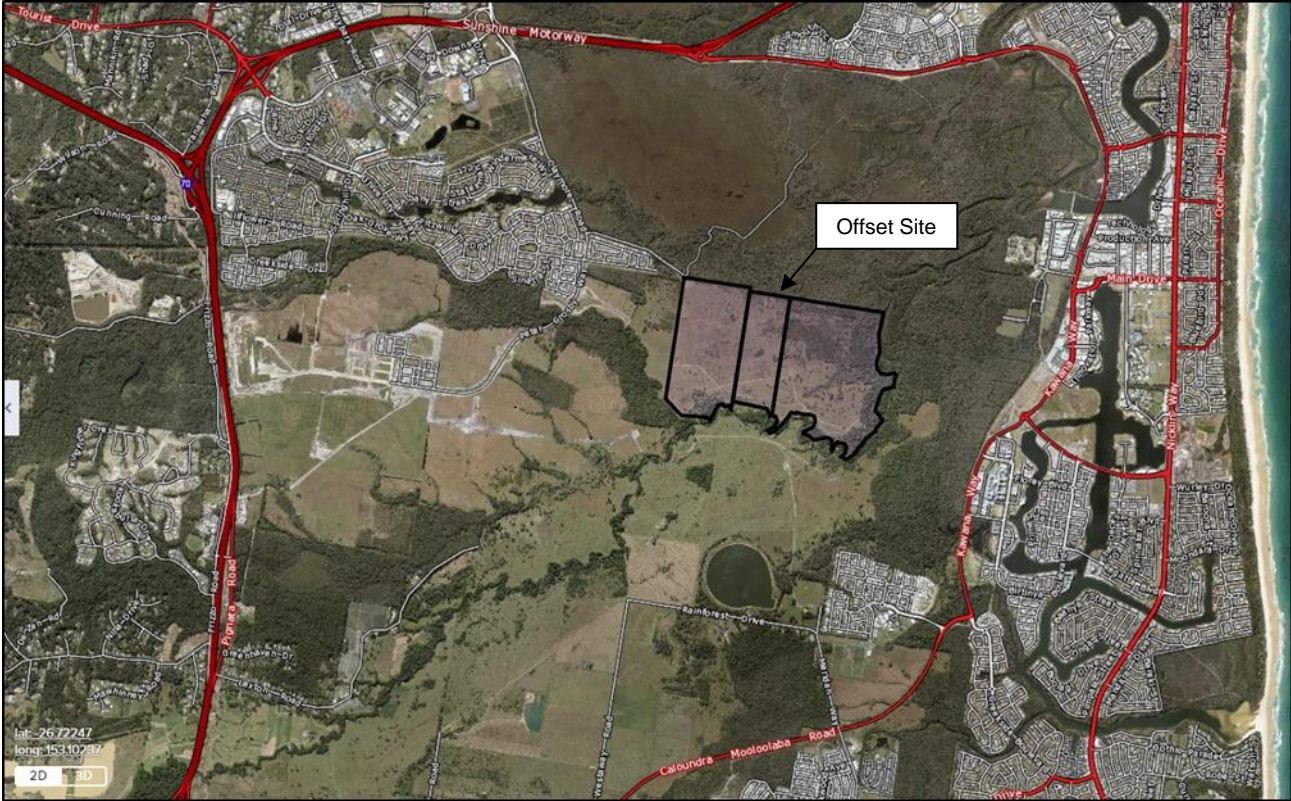


Figure 3: Total TEC cleared

# Appendix D – Lower Mooloolah River Environmental Reserve Offset Site (16.64ha)

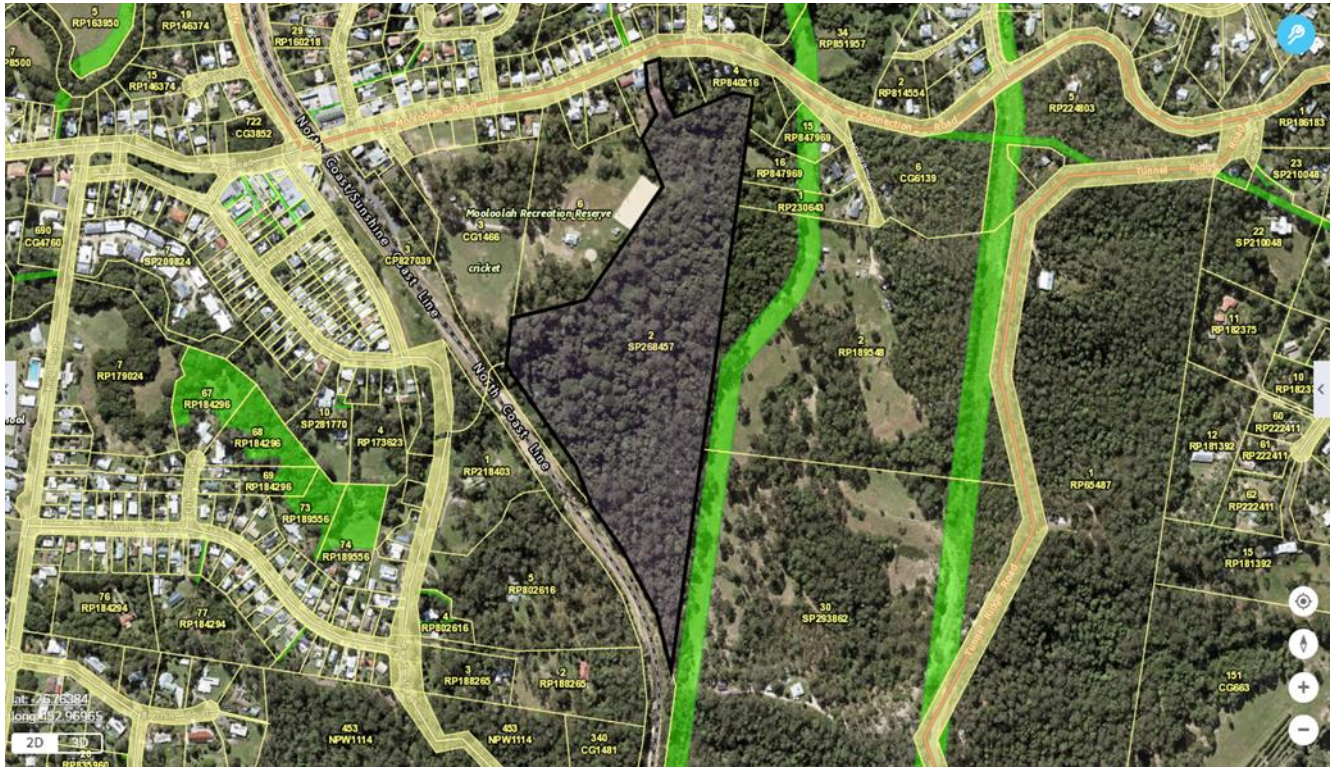


Lower Mooloolah River Environmental Reserve Offset Site.



Lower Mooloolah River Environmental Reserve Offset Site general locale.

# Appendix E – 28 Mooloolah Road, Mooloolah Valley Offset Site (4.65ha)



28 Mooloolah Road, Mooloolah Valley Offset Site.



28 Mooloolah Road, Mooloolah Valley Offset Site general locale.



# Appendix F – Missing Link Road, Glenview Offset Site (50ha)



Missing Link Road, Glenview Offset Site.



Missing Link Road, Glenview Offset Site general locale.

# Appendix G – Notification of Commencement of the Action

Our ref 450/01352  
Your ref EPBC 2015/7464  
Enquiries Ms Amy Kirkpatrick



Department of  
**Transport and Main Roads**

23 December 2016

Compliance and Enforcement Branch  
Environment Standards Division  
Department of Environment and Energy  
GPO Box 787  
CANBERRA ACT 2601

Sent by email: [postapprovals@environment.gov.au](mailto:postapprovals@environment.gov.au)

Attn: Imogen Moore

Dear Ms Moore

With reference to condition 4 of EPBC Approval 2015/7464, this letter is to formally notify your Department of the commencement of works for The Bruce Highway Upgrade Project – Caloundra Road to Sunshine Motorway (CR2SM).

Access to the site was granted to the Contractor on 2 December 2016 for preliminary works including geotechnical investigations, building demolitions and site compound establishment.

Ancillary to the geotechnical investigations and site compound establishment, minor vegetation clearing commenced in locations applicable to this approval on 8 December 2016.

If you have any questions, or require further information in relation to the above works, please contact Mr Mark Asang on 0418 795 871 or Ms Amy Kirkpatrick on 0428 103 578. Information and on the project including project updates are also available on our website at: <http://www.tmr.qld.gov.au/Projects/Name/B/Bruce-Highway-Caloundra-Road-to-Sunshine-Motorway-upgrade>.

Yours sincerely

A handwritten signature in blue ink that reads "M. Asang".

Mark Asang  
Project Manager

for Gavin Soward  
Project Director

Program Delivery and Operations Branch  
North Coast Region  
PO Box 1600  
Maroochydore Queensland 4558

Telephone 1800 749 022  
Website [www.tmr.qld.gov.au](http://www.tmr.qld.gov.au)  
Email [brucehwycr2sm@tmr.qld.gov.au](mailto:brucehwycr2sm@tmr.qld.gov.au)  
ABN 39 407 690 291

# Appendix H – Non-Conformance List

**Table: Project Identified Non-Conformances and Corrective Actions**

Non Compliance Detail	Detected By	Date of Non-Compliance	Agencies Notified				How the Non-conformance will be corrected	Who is responsible for correcting the NC	Date Corrective Action	What measures have/will be taking to avoid recurrence	Status 2020-2021
			Agency	Date notification	Via	By					
<b>2019-2020 Reported Non Compliance</b>											
The OEMP revision 3 - Table 4.2 Fauna Management Pre-clear requires the establishment of temporary fauna (koala and giant barred frog) exclusion fencing surrounding construction sites to prevent fauna access. Temporary fencing has been removed in anticipation of installation of permanent fencing in several locations, however design changes and pending design change requests have resulted in a time lag between temporary and permanent. In cases where permanent fencing has not progressed, re-installation or maintenance of temporary frog fencing has been undertaken. Project logistics, switches, disciplines, significant weather, flooding and programming has provided challenging circumstances across the project in regard to the conditions.	Internal Audit	Sep-20	DoAWE	15-Feb-21	email	Dallas Frazier (FHSW)	Project Non-Conformances have been raised. Contractor progressively installing permanent fencing at an earlier construction stage and where construction allows. Temporary barriers were implemented.	Dallas Frazier (FHSW)	Feb-21	Maintenance of temporary fencing and expedited permanent fencing construction has been programmed and currently being completed. Areas where design clarifications were occurring, temporary fences were installed to manage intermediate staging until final design approval or clarification. All works now completed and permanent fauna fencing installed across the project	<b>Non conformance closed.</b> Installation of all permanent fauna fencing has been completed
<b>2018-2019 Reported Non Compliance</b>											
The OEMP Revision 3, 4 - Table 4.1 (Weed management) requires implementation of the weed hygiene protocols, which include the following: Footwear must be thoroughly cleaned and disinfected at the commencement of fieldwork. Audit shows this may not have been undertaken at all times.	Third party Auditor	Sep-19	DoAWE	13-Dec-19	email	Aline Rolim (FHSW)	A project Non Conformance has been raised. Weed control and maintenance is occurring at the site. Vehicle washdown is being undertaken. Weed audits have been undertaken prior to construction and successful weed removal is undertaken at least 2 weeks prior to clearing.	Dallas Frazier (FHSW)	Ongoing	Ongoing management of weeds to ensure no new infestations on site and therefore, no risk of weed spread.	<b>Non conformance closed</b> Site is continuing with weed management practices on site as per EMP-O and until completion of maintenance period (August 2023)

**Table Cont'd: Project Identified Non-Conformances and Corrective Actions**

Non Compliance Detail	Detected By	Date of Non-Compliance	Agencies Notified				How the Non-conformance will be corrected	Who is responsible for correcting the NC	Date Corrective Action	What measures have/will be taking to avoid recurrence	Status 2019-2020
			Agency	Date notification	Via	By					
<b>2018-2019 Reported Non Compliance Con'td</b>											
The OEMP revision 3 - Table 4.2 <i>Fauna Management Pre-clear requires the establishment of temporary fauna (koala and giant barred frog) exclusion fencing surrounding construction sites to prevent fauna access.</i> Partial compliance. All temporary giant barred frog barrier has been installed at required locations. Temporary fauna barriers have been partially installed across construction works.	TMR	June 2018  Ongoing	DoAWE	13-Dec-19	email	Aline Rolim (FHSW)	Project Non Conformances have been raised. The Contractor is progressively installing permanent fencing at an earlier construction stage and where construction allows. Temporary barriers will also be implemented.	Dallas Frazier (FHSW)	Jun-20	Expedited permanent fencing construction underway.	<b>Non conformance closed.</b> Installation of all permanent fauna fencing has been completed

# Appendix I – Fauna Furniture Locations



**Figure 1. Permanent fauna fence with frog exclusion fencing and Koala escape pole adjacent to Bruce Highway**



**Figure 2. Completed Steve Irwin Way Fauna passage**



**Figure 3 and 4. Completed Southern Fauna passage**





**Figure 5. Completed Northern Fauna passage**



**Figure 6, 7 and 8. Fauna structures installed at Sippy Creek**



**Figure 9 and 10. Fauna structures installed at Mooloolah River**



**Figure 11. Rope Bridge across Steve Irwin Way**

# Appendix J – Fauna Infrastructure Monitoring Photos



Figure 1: Infrared camera capture of two crossing events Steve Irwin Way underpass, a wallaby in the left image and a Common Brushtail Possum in the right image.



Figure 2: Infrared camera captures of a Short-Eared Brushtail Possum entering the Mooloolah River Underpass (left hand side image) and exiting the underpass (right hand side image), confirming a complete crossing



Figure 3: Infrared camera capture of a Short-Eared Brushtail Possum using a fauna escape pole

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