

8 February 2021

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Form 2

**NOTICE OF AN APPLICATION FOR PLANNING PERMIT**

<p>The land affected by the application is located at:</p>	<p><b>Great Alpine Road Double Bridges Crown Allotments 32 and 2001 Parish of Yonduk</b></p>
<p>The application is for a permit to:</p>	<p><b>Removal of native vegetation</b></p>
<p>The applicant for the permit is:</p>	<p><b>Regional Roads Victoria</b></p>
<p>The application reference number is:</p>	<p><b>25/2021/P</b></p>
<p>You may look at the application and any documents that support the application on the website of the responsible authority.</p>	<p><b>(Intentionally blank)</b></p>

This can be done anytime by visiting the following website:

[www.eastgippsland.vic.gov.au/PlanningApps](http://www.eastgippsland.vic.gov.au/PlanningApps)

Any person who may be affected by the granting of the permit may object or make other submissions to the responsible authority.

- An objection must
- ◆ be sent to the Responsible Authority in writing,
  - ◆ include the reasons for the objection, and
  - ◆ state how the objector would be affected.

<p>The Responsible Authority will not decide on the application before:</p>	<p><b>Subject to applicant carrying out notice</b></p>
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**If you object, the Responsible Authority will tell you its decision.**

Please note submissions received will be made available for inspection and may be made available to other parties in accordance with the Planning & Environment Act 1987. If you have concerns about this, please contact the East Gippsland Shire Council's Planning Office.

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CROWN FOLIO STATEMENT

VOLUME 11788 FOLIO 280  
No CoFT exists

Security no : 124079788781S  
Produced 17/10/2019 09:41 AM

CROWN FOLIO

LAND DESCRIPTION

Crown Allotment 32 Parish of Yonduk.  
Created by instrument MI239982Q 06/08/2016

CROWN LAND ADMINISTRATOR

SECRETARY TO THE DEPARTMENT OF ENVIRONMENT, LAND, WATER AND PLANNING of 8  
NICHOLSON STREET EAST MELBOURNE VIC 3002  
MI239982Q 06/08/2016

STATUS, ENCUMBRANCES AND NOTICES

RESERVATION MI239984L 06/08/2016  
TEMPORARY  
FOREST [ACT NO.6254/1958]

INDIGENOUS LAND USE AGREEMENT MI239985J 06/08/2016  
NATIVE TITLE DETERMINATION VID6007/1998

DIAGRAM LOCATION

SEE CD092344F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF CROWN FOLIO STATEMENT-----

Additional information: (not part of the Crown Folio Statement)

Street Address: GREAT ALPINE ROAD DOUBLE BRIDGES VIC 3893

DOCUMENT END

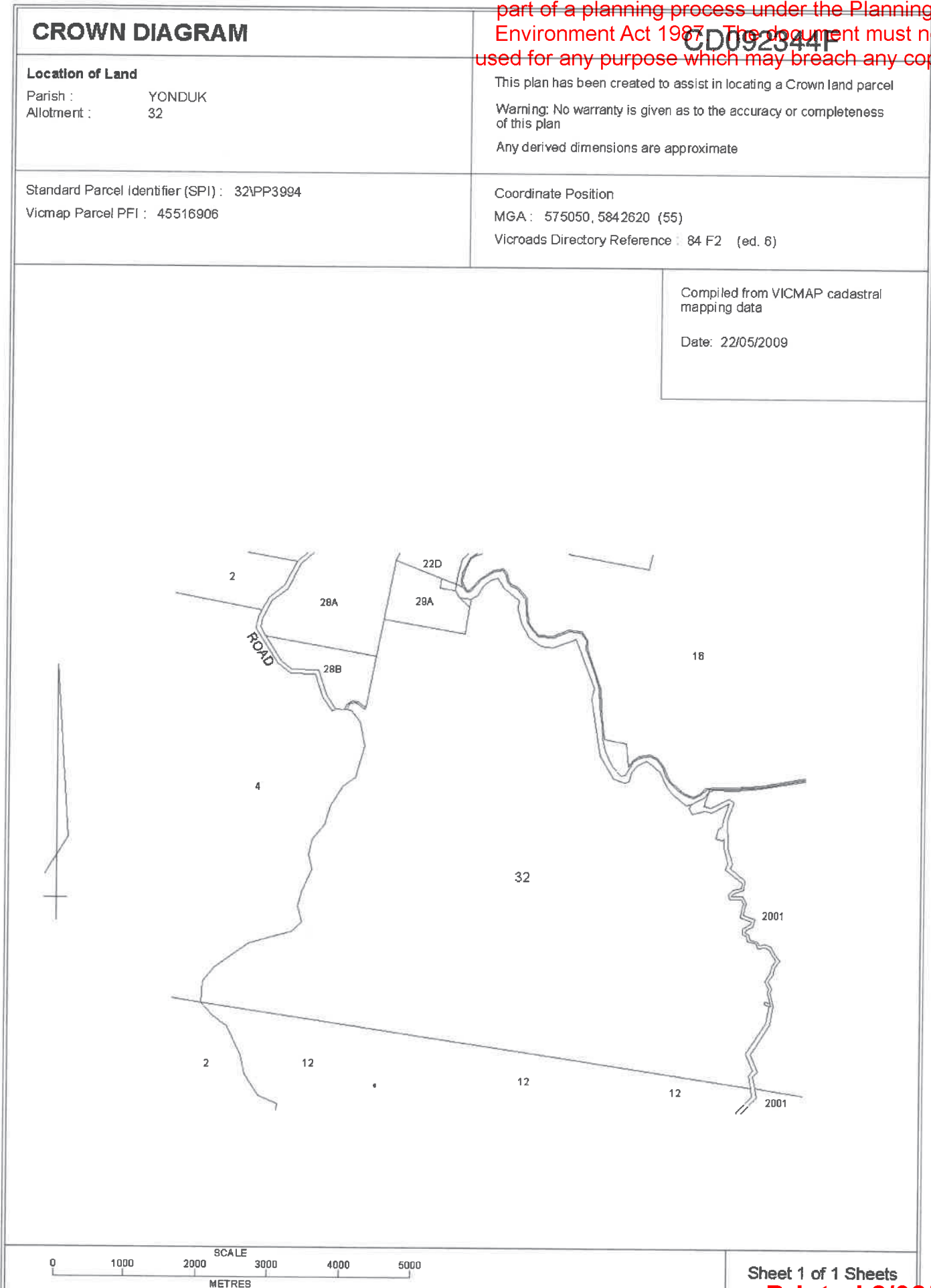
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CROWN FOLIO STATEMENT

VOLUME 11788 FOLIO 290  
No CofT exists

Security no : 124079788783Q  
Produced 17/10/2019 09:41 AM

CROWN FOLIO

LAND DESCRIPTION

Crown Allotment 2001 Parish of Yonduk.  
PARENT TITLE Volume 11788 Folio 281  
Created by instrument MI240010Y 06/08/2016

CROWN LAND ADMINISTRATOR

PARKS VICTORIA of LEVEL 10 535 BOURKE STREET MELBOURNE VIC 3000  
AS497932T 03/09/2019

STATUS, ENCUMBRANCES AND NOTICES

RESERVATION MI240012U 06/08/2016  
PERMANENT  
PUBLIC PURPOSES (NATURE CONSERVATION)  
LEGL04-037

INDIGENOUS LAND USE AGREEMENT MI240013S 06/08/2016  
NATIVE TITLE DETERMINATION VID6007/1998

DIAGRAM LOCATION

SEE CD092354C FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AS497932T	CROWN CHANGE LAND ADMIN	Registered	14/10/2019

-----END OF CROWN FOLIO STATEMENT-----

Additional information: (not part of the Crown Folio Statement)

Street Address: SOUTHERN TRACK DOUBLE BRIDGES VIC 3893

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CD0920540

### CROWN DIAGRAM

**Location of Land**

Parish : YONDUK  
Allotment : 2001

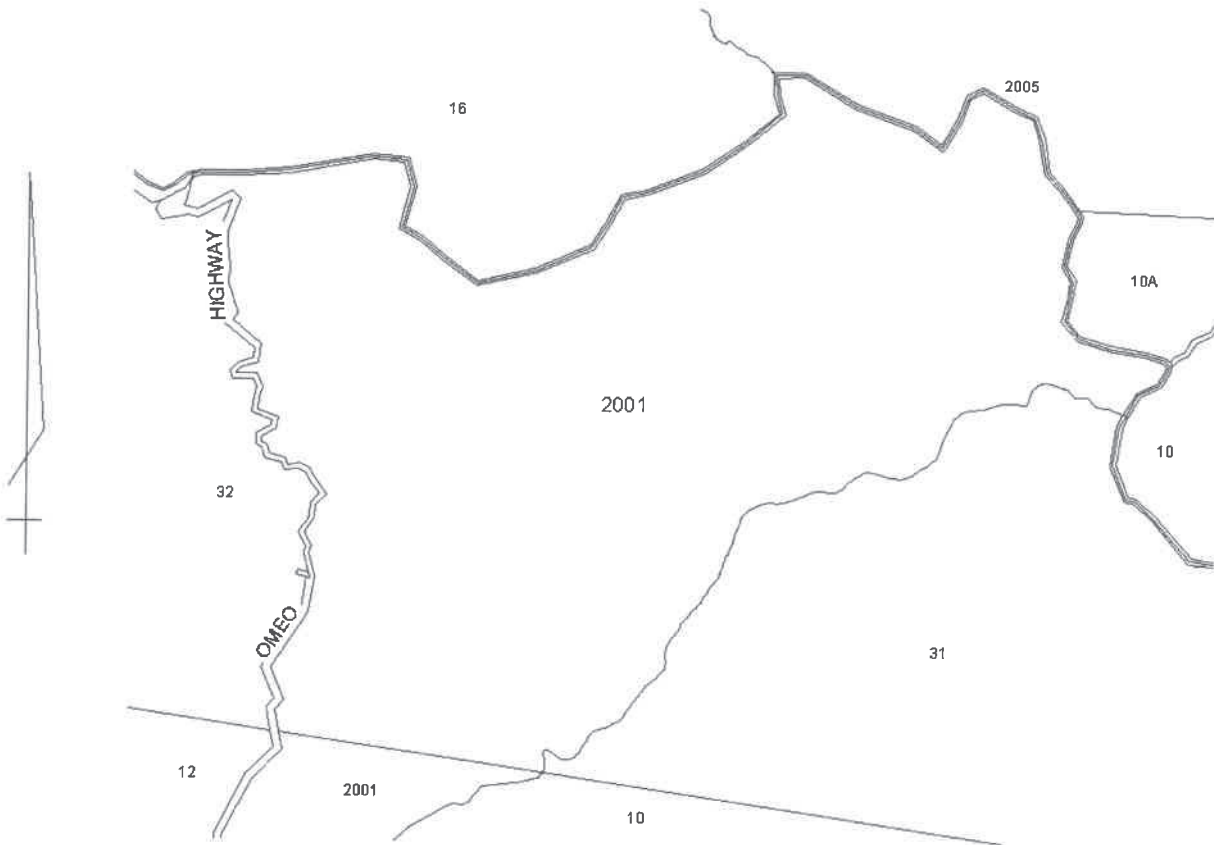
This plan has been created to assist in locating a Crown land parcel  
Warning: No warranty is given as to the accuracy or completeness of this plan  
Any derived dimensions are approximate

Standard Parcel Identifier (SPI) : 2001\PP3994  
Vicmap Parcel PFI : 124598592

Coordinate Position  
MGA : 581740, 5841480 (55)  
Vicroads Directory Reference : 84 G3 (ed. 6)

Compiled from VICMAP cadastral mapping data

Date: 22/05/2009



Sheet 1 of 1 Sheets

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120 Kay Street  
Traralgon, Victoria, 3844  
regionalroads.vic.gov.au

18/12/2020

Contact: Sajini Sirisena  
Telephone: 5172 2663

Planning Enquiries  
Development Co-ordinator  
East Gippsland Shire Council  
34 Pyke St  
BAIRNSDALE VIC 3875

Dear Sir/Madam

**PROPOSED CURVE IMPROVEMENT WORKS BETWEEN WALSH'S CUTTING AND MULLOCKY CREEK, GREAT ALPINE ROAD –PLANNING PERMIT APPLICATION**

Please find attached an East Gippsland Shire Council Planning Permit Application for works associated with the proposed curve improvement works between Walsh's Cutting and Mullocky Creek on the Great Alpine Road.

The Planning Permit Application is for:

- Native Vegetation removal under S52:16 and S52:17,
- Works associated with road widening works within the Public Conservation and Resources Zone (PCRZ)

**1. BACKGROUND**

The Great Alpine Road is identified as an important north-south freight and tourist route in several strategic documents. Gippsland Motorcycle Safety Action Plan 2016-2020 of Regional Roads Victoria- Eastern Region, Network Development Strategy, Victoria - The Freight State, Victoria's 2020 Tourism Strategy and Victoria's Road Safety Strategy 2013 – 2022 are some of the strategic documents which supports proposed road widening works at Great Alpine road.

These tight corners of road have been identified as priority sites due to the limited carriageway width and limited site distance which creates problems, particularly for heavy vehicle traffic which is common on the route.

Community consultation has been undertaken by Regional Roads Victoria (RRV) during April and May 2017 for Great Alpine Road Improvement works. Common feedback received from road users from both local community and heavy vehicle operators were the narrow lane width along this section. This section characterized by intervening cut batters and fill batters with steep slopes with numerous hairpin bends. At the site, the road has approximately 6.0m formation width. This creates a dangerous situation with cars, trailers, heavy vehicles passing each other on a very narrow section and having to avoid roadside hazards such as cut batters, vegetation and drop offs.

Road widening works at these locations will increase traffic lane and shoulder widths and improve the sight distance and road safety.

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## 2. PROJECT DESCRIPTION

The Road widening works will consist of the following elements:

- Site Clearing and Grubbing
- Widening of the road by cutting into rock batters or by construction of additional pavement by widening the fill batters on east side at various high-risk locations; and
- Table drain formation at several locations, and filling works and extension of culverts

## 3. LAND STATUS

The site is within the road reserve.

An enquiry has been made from Department of Environment, Land, Water & Planning regarding the native title requirements and as per DELWP advise, Native Title is extinguished for this site.

The letter received from DELWP regarding Native Title requirements is provided as Attachment 5.

## 4. NATIVE VEGETATION REMOVAL

SMEC was engaged by RRV to prepare a detailed Flora and Fauna Assessment (Attachment 3.) which include the Habitat Hectare Assessment and Offset Requirement. The road widening works will require the removal of remnant patch native vegetation, including indirect loss.

This investigation had the following key findings:

- i. Curve Improvement works will require the removal of remnant patch native vegetation, including indirect loss, comprising of;
  - 0.439 hectares
  - 0.516 Species units for Eastern Horseshoe Bat

Note: EnSym Scenario testing results triggered the species offset for Eastern Horseshoe Bat. Based on the results of the Songmeter Acoustic Recorders, Eastern Horseshoe Bat have not been detected during the targeted bat surveys undertaken at the same time as the detailed assessment, in conjunction with the study site not containing habitat consistent with the species requirements (i.e. caves, mineshafts or large hollows for breeding or roosting). Therefore, SMEC will enter discussions with DELWP in early January 2021 on behalf of RRV to seek removal of the requirement for Eastern Horseshoe Bat species offsets. DELWP recommendation to be forwarded to East Gippsland Shire planning team once received.

Extent of past removal due to Double Bridges widening works (Planning permit application number 391/2019/P) is 1.473 ha and therefore extent of total removal equals to 1.912 ha.

- ii. A Planning Permit will be required from East Gippsland Shire Council for the removal of native vegetation between Walsh's Cutting and Mullocky Creek, and the application will need to fulfil the requirements of the detailed assessment pathway.
- iii. RRV Offset Strategy to meet its offset requirement will comprise one of, or a combination of the following:

- Existing Credits from RRV Genoa offset property for required general offset and/
- Purchasing existing Third Party Credits through an Accredited Offset Broker for species units for Eastern Horseshoe Bat. (attachment 7)

Note: The attached Eastern Horseshoe Bat species offsets will only be purchased should the discussions with DELWP to remove the species offset requirements are unsuccessful. If discussions with DELWP are successful, RRV will obtain the required general habitat units from the above mentioned RRV Genoa offset site.

The DELWP Biodiversity impact and offset requirements report prepared by SMEC is in Attachment 3.

## 5. ECOLOGICAL VALUES

An assessment on the likely impacts to species protected under the Environment Protection and Biodiversity Conservation (EPBC) Act and the Victoria Flora and Fauna Guarantee (FFG) Act have been undertaken. The assessments are contained within the Habitat Hectare Assessment & Offset Requirement attached.

As some protected flora will be required to be removed by the project a FFG Act Permit to take Protected Flora will be required from DELWP.

## 6. MINIMISATION OF BIODIVERSITY IMPACTS

RRV has taken extensive measures to minimise the impacts on biodiversity from the removal of native vegetation.

### i. PROJECT DESIGN AND ALIGNMENT

Following adjustments were made to reduce the ecological impacts of the project including;

- Increase the batter slope from 2 (horizontal): 1(vertical) to 1(horizontal):1(vertical) which has reduced the footprint considerably.
- Reduce the shoulder width to 1m.
- Locating the majority of the proposed works on the west side of the road has substantially reduced the indirect impacts on native vegetation.

### ii. DURING CONSTRUCTION

The following measures to minimise the impact on vegetation will be undertaken during construction:

- No-Go Zone fencing is to be utilised along the entire length of the Construction Area Boundary.
- Inspections with the Contractor to take place prior to any clearing commencing.
- Inspections during construction to make sure works are carried out in accordance with all permit approval conditions and approved Construction Environmental Management Plan (CEMP).

## 7. CULTURAL HERITAGE

Cultural Heritage due diligence report is prepared and provided as attachment 4.



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**8. LIST OF ATTACHMENTS**

Attachment 1	East Gippsland Shire Council Planning Permit Application
Attachment 2	Design drawings with cross sections
Attachment 3	Detailed Flora and fauna Assessment
Attachment 4	Cultural Heritage due diligence report
Attachment 5	Letter from DELWP regarding Native Title requirement.
Attachment 6	Title plans
Attachment 7	Evidence of availability of Eastern Horseshoe Bat species offset units

Should you have any queries or require further information regarding this application please contact myself on telephone number 0409 211 027.

Yours sincerely



**SAJINI SIRISENA**  
**SENIOR PROJECT ENGINEER**

**DATE: 18 / 12 / 2020**

**EAST GIPPLAND SHIRE COUNCIL  
LOCATION OF DOUBLE BRIDGES**





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BAIRNSDALE ▶

◀ OMEO

**GREAT ALPINE ROAD**

**LEGEND:**


-  LARGE TREES
-  VEGETATION REMOVAL
-  NO GO FENCE
-  EXTENT OF WORKS



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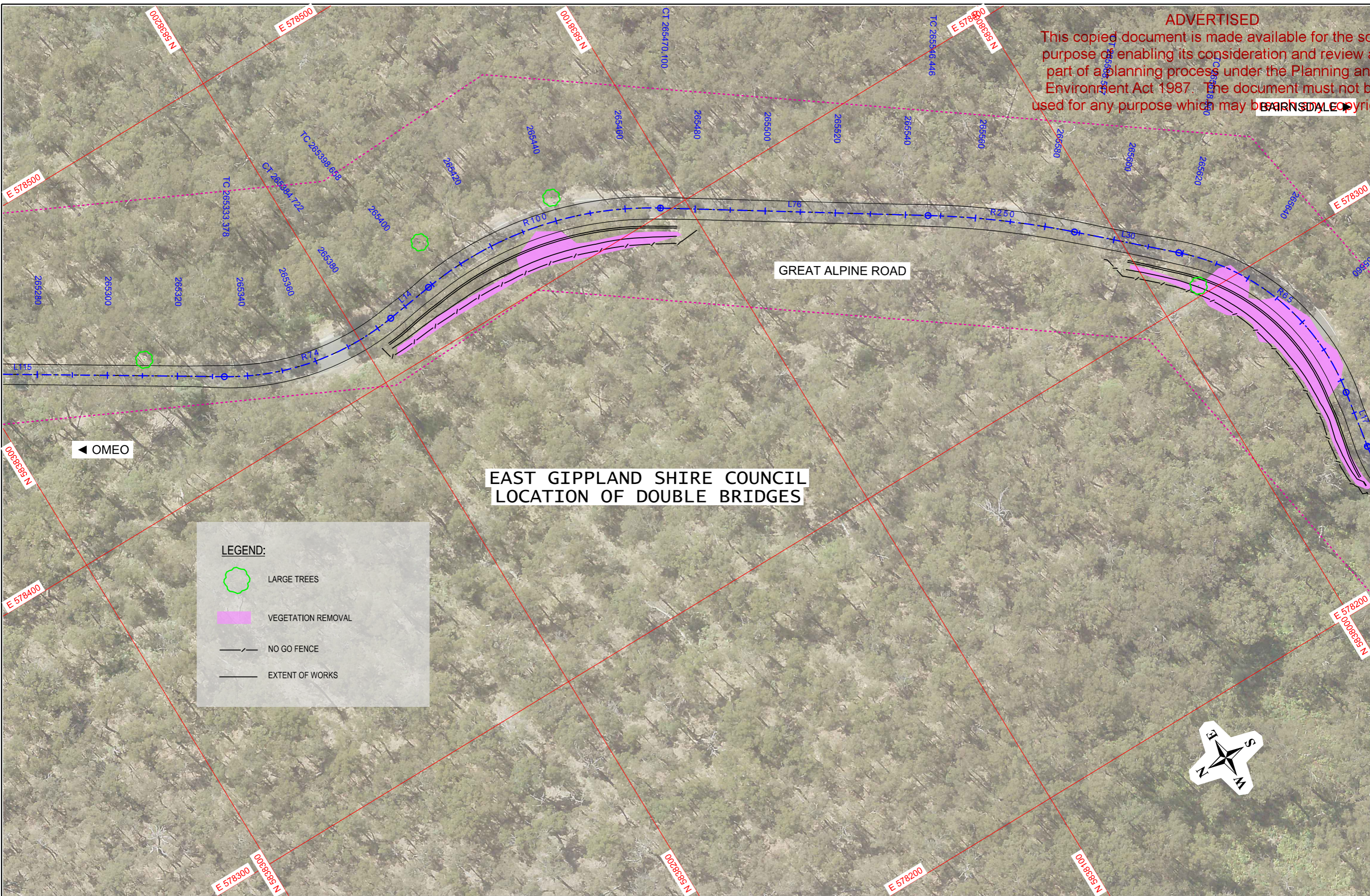
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 STATUS NOTES:  
 1. NOT FOR CONSTRUCTION  
 2. SUBJECT TO FURTHER AMENDMENT  
 3. FUNDING NOT APPROVED

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

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 266 KMS  
 ALIGNMENT PLAN  
 CONTRACT NO:

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**EAST GIPLAND SHIRE COUNCIL  
 LOCATION OF DOUBLE BRIDGES**

**LEGEND:**

-  LARGE TREES
-  VEGETATION REMOVAL
-  NO GO FENCE
-  EXTENT OF WORKS

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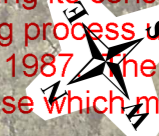
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


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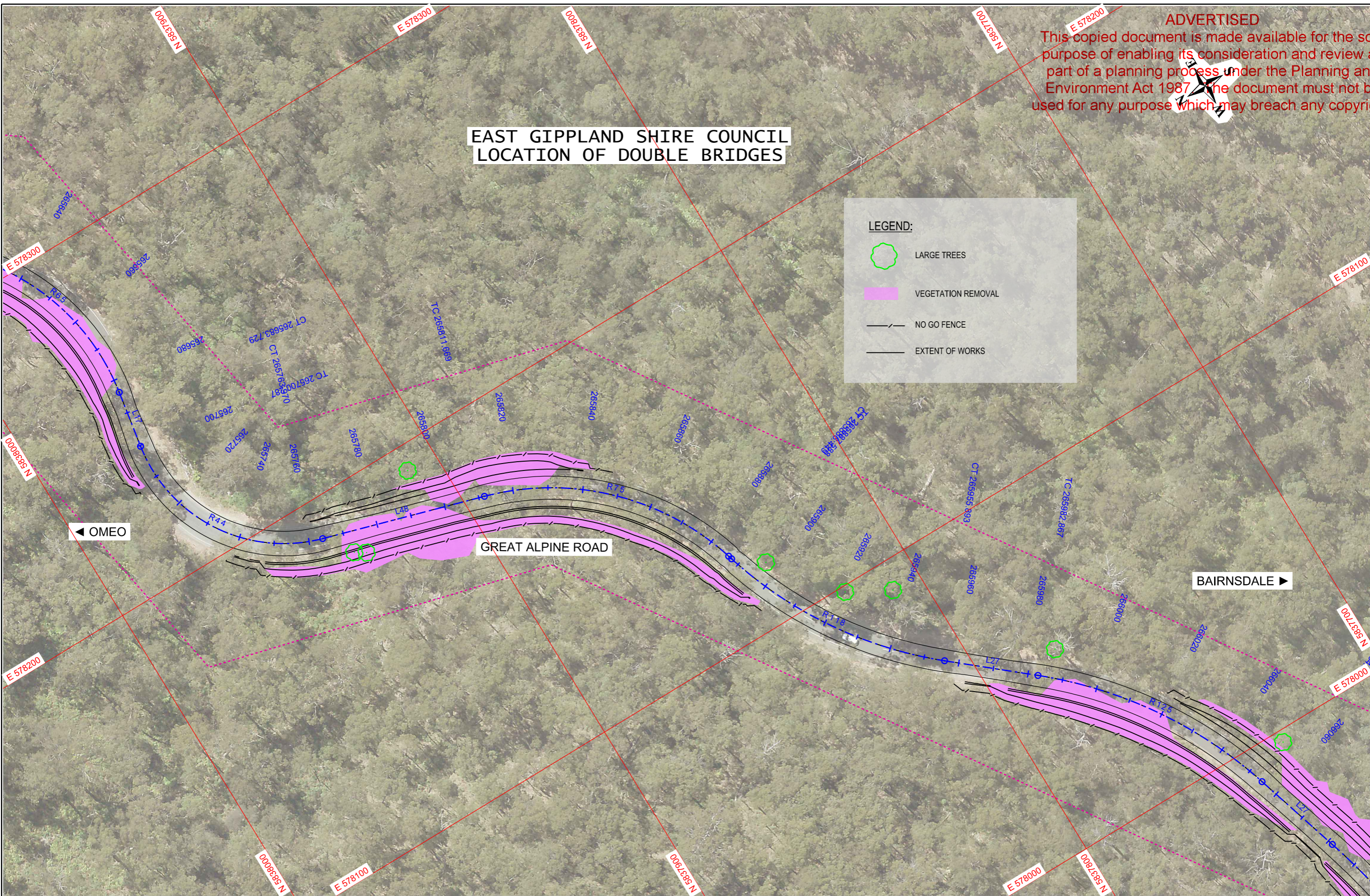
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**EAST GIPPLAND SHIRE COUNCIL  
LOCATION OF DOUBLE BRIDGES**

**LEGEND:**

-  LARGE TREES
-  VEGETATION REMOVAL
-  NO GO FENCE
-  EXTENT OF WORKS



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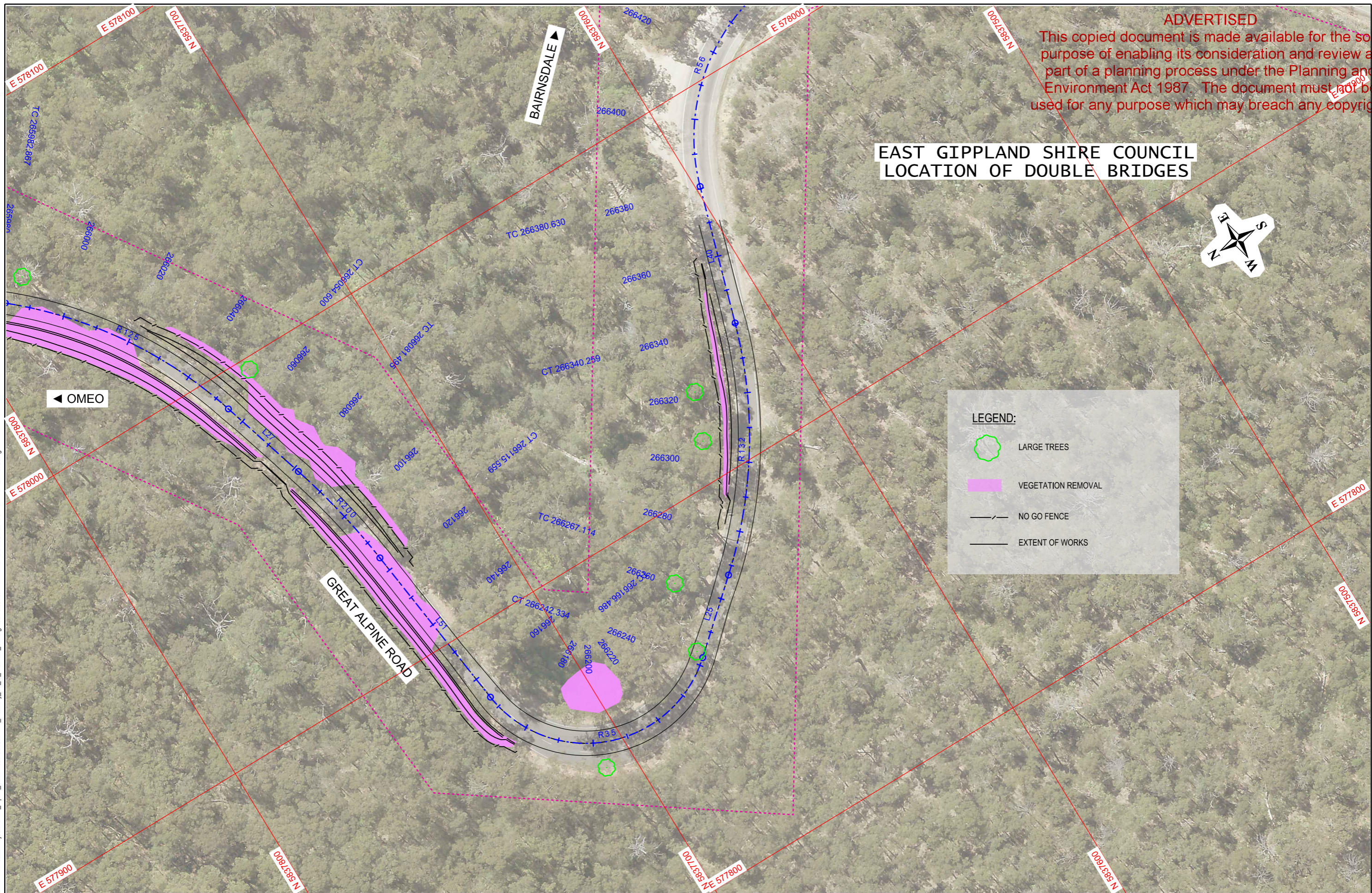
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**EAST GIPPLAND SHIRE COUNCIL  
 LOCATION OF DOUBLE BRIDGES**



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- VEGETATION REMOVAL
- NO GO FENCE
- EXTENT OF WORKS



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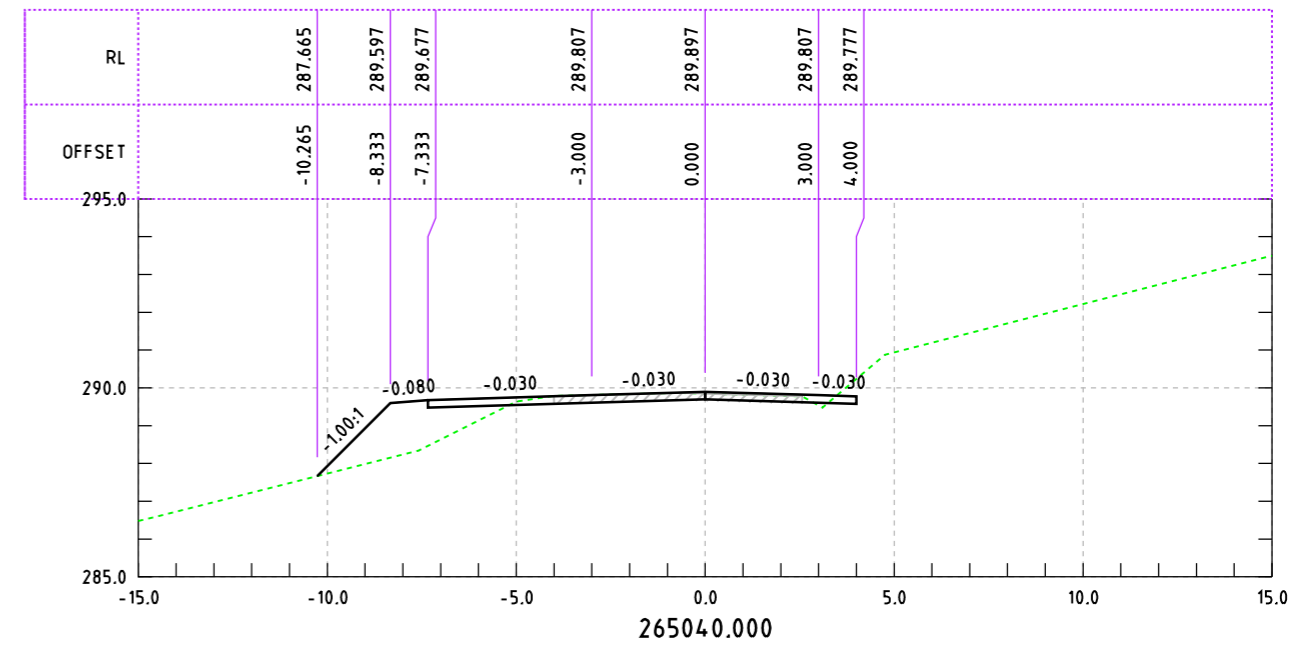
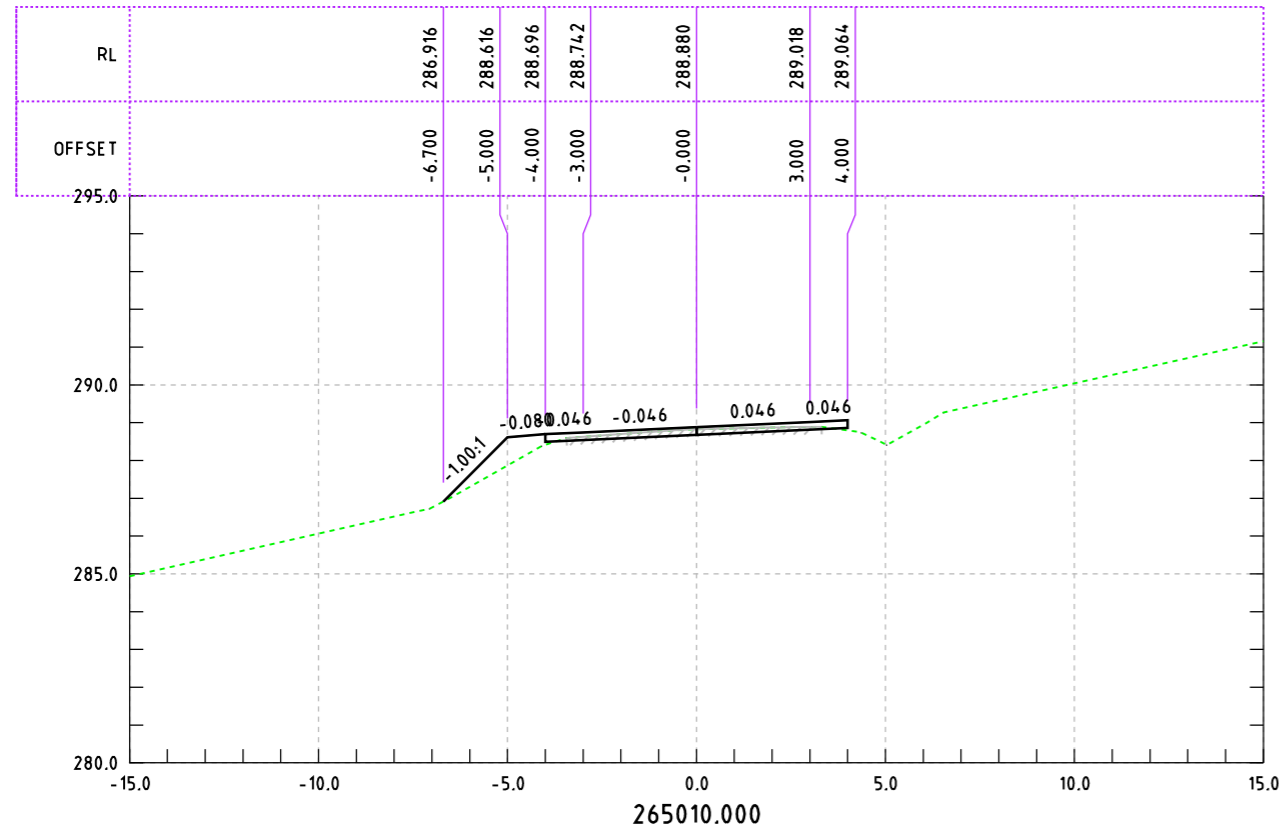
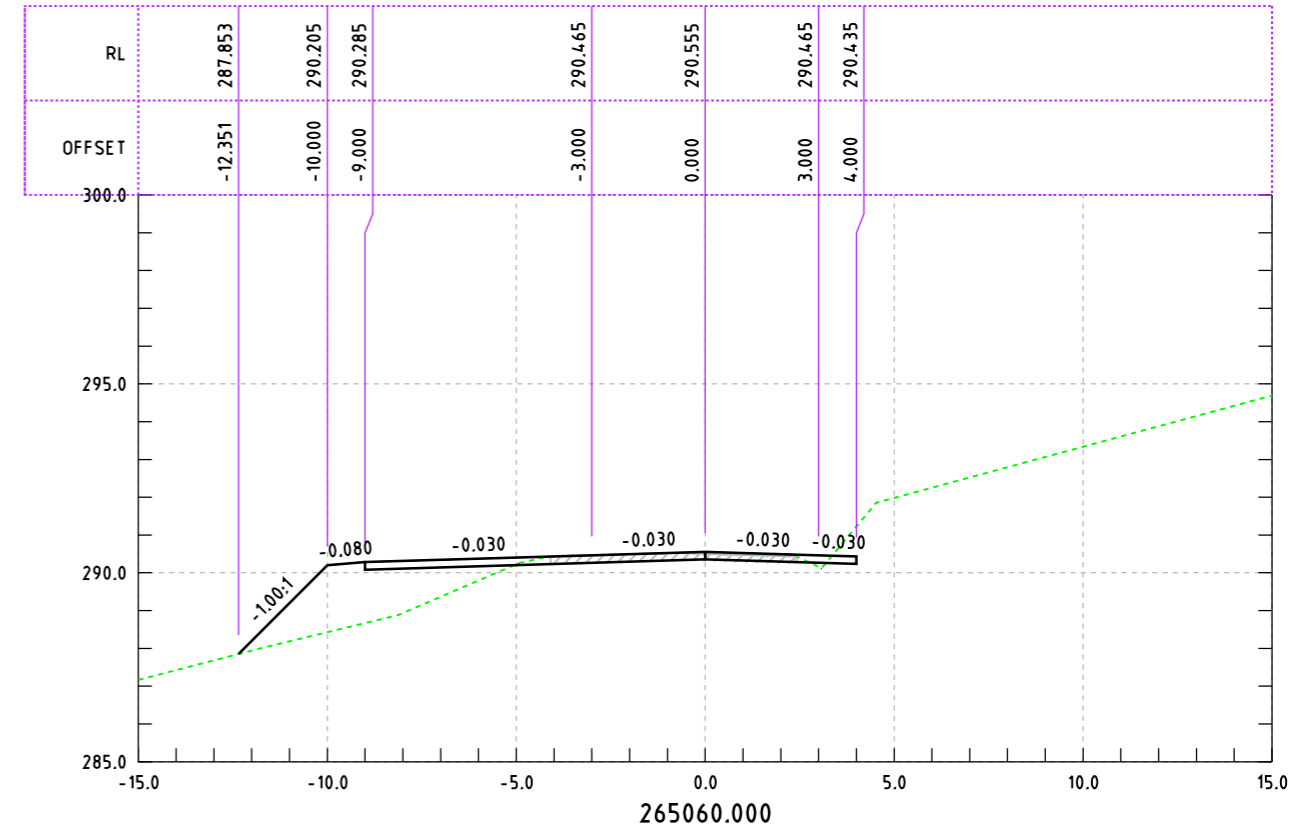
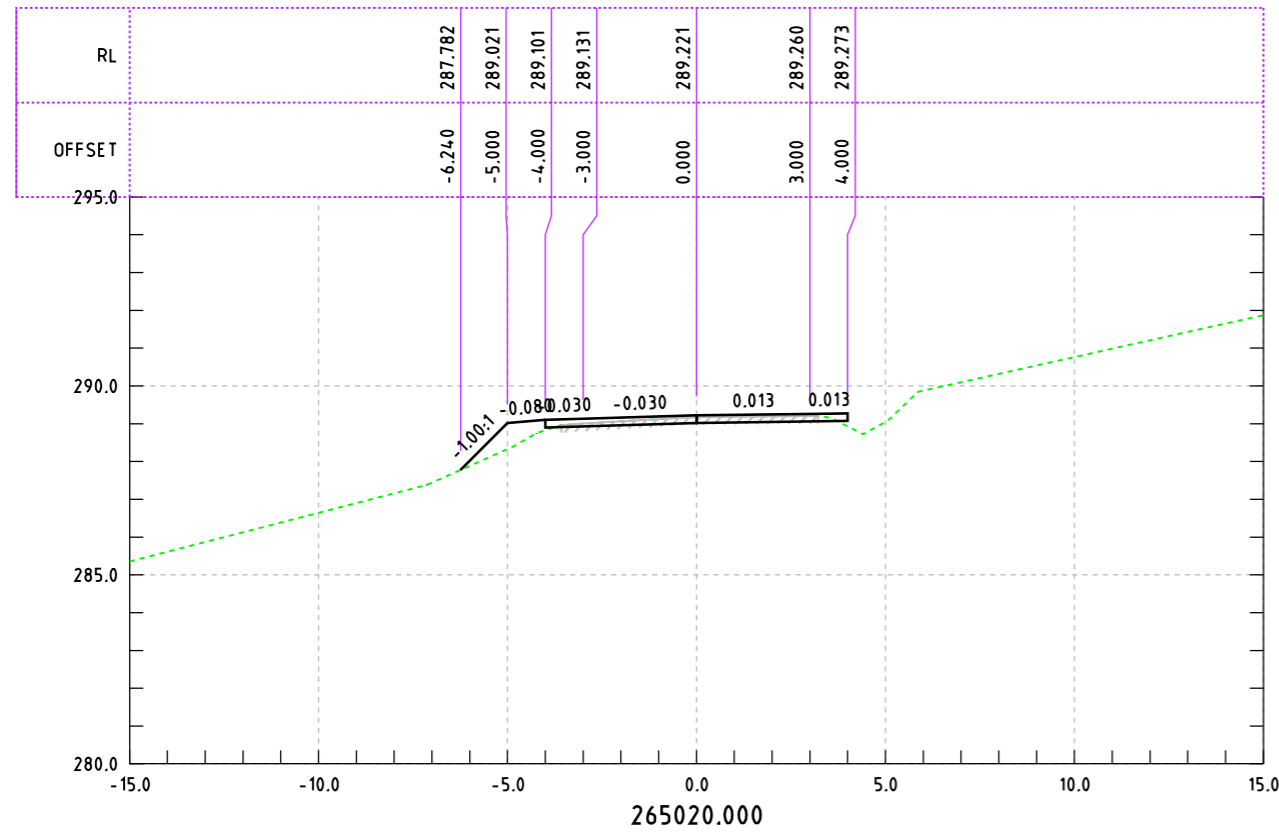
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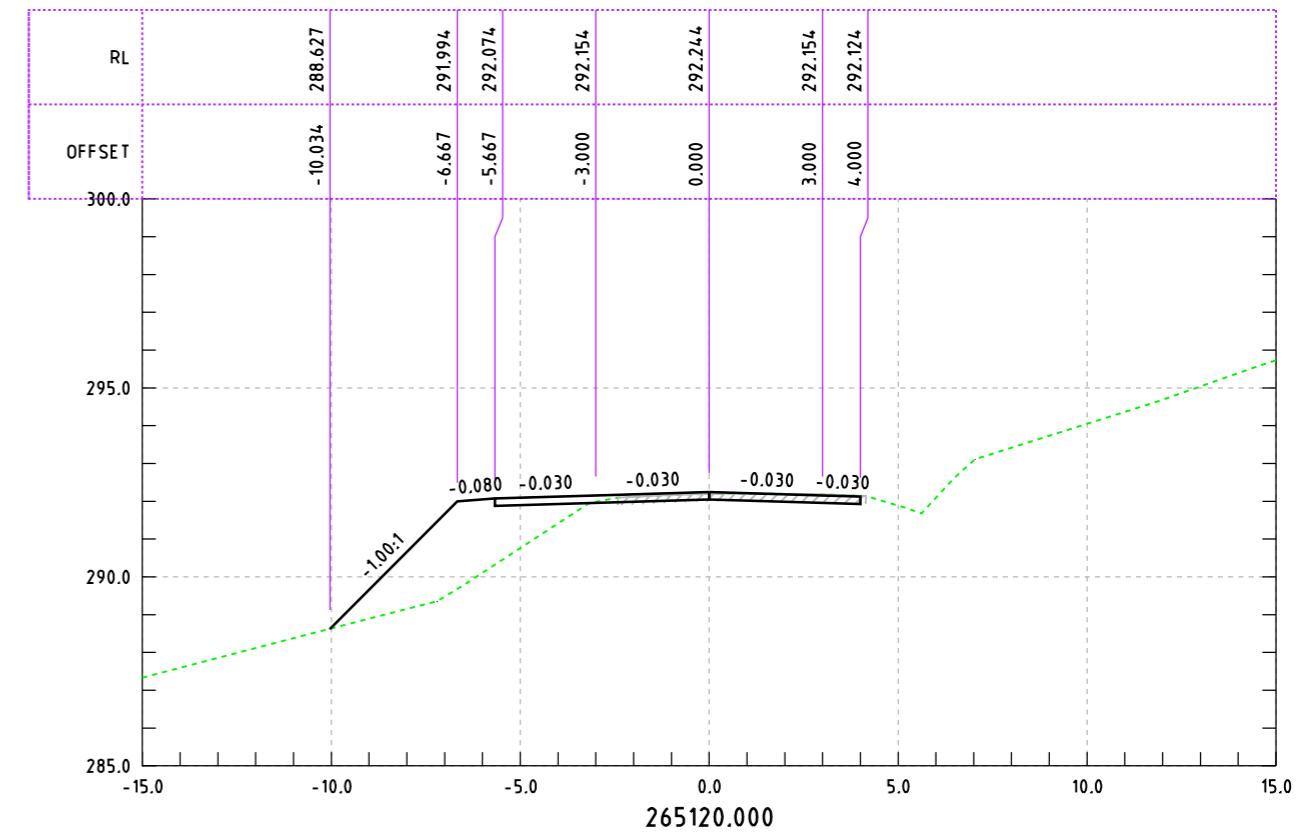
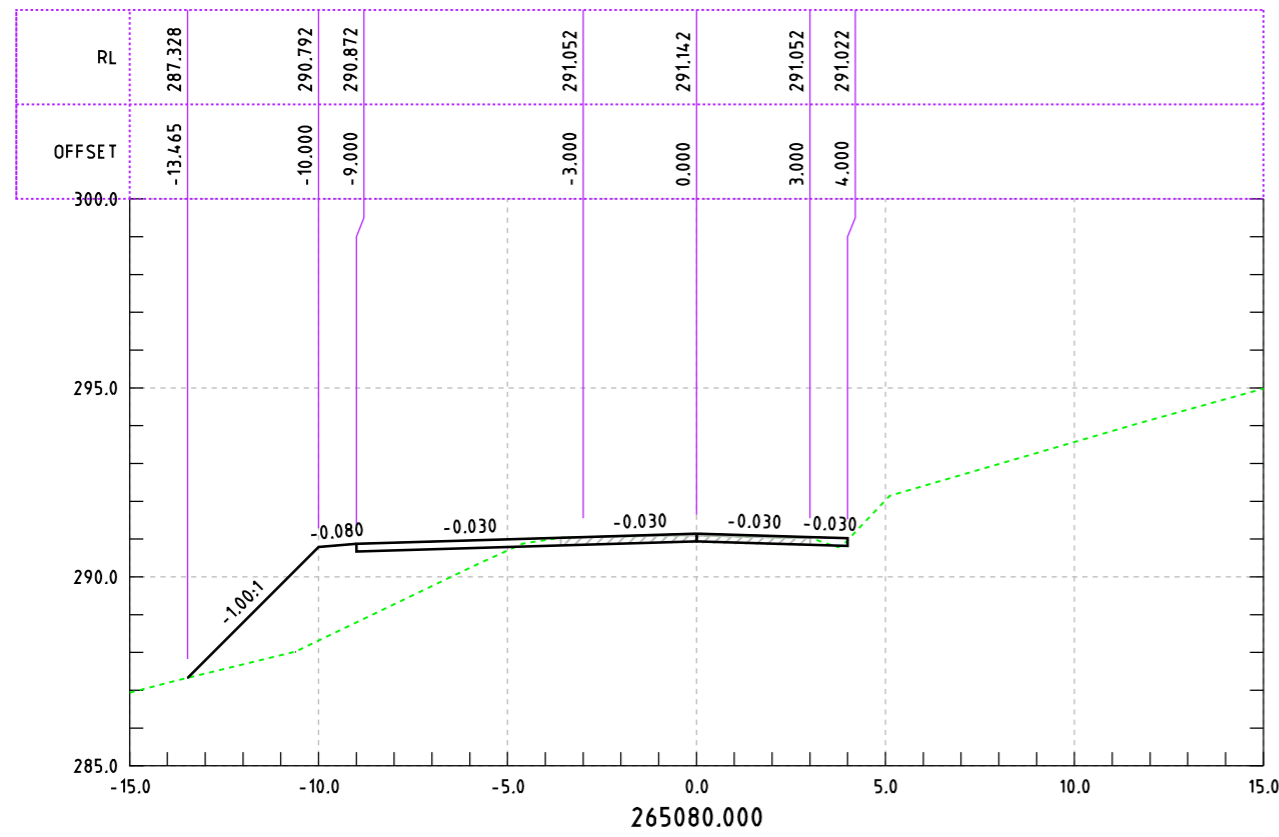
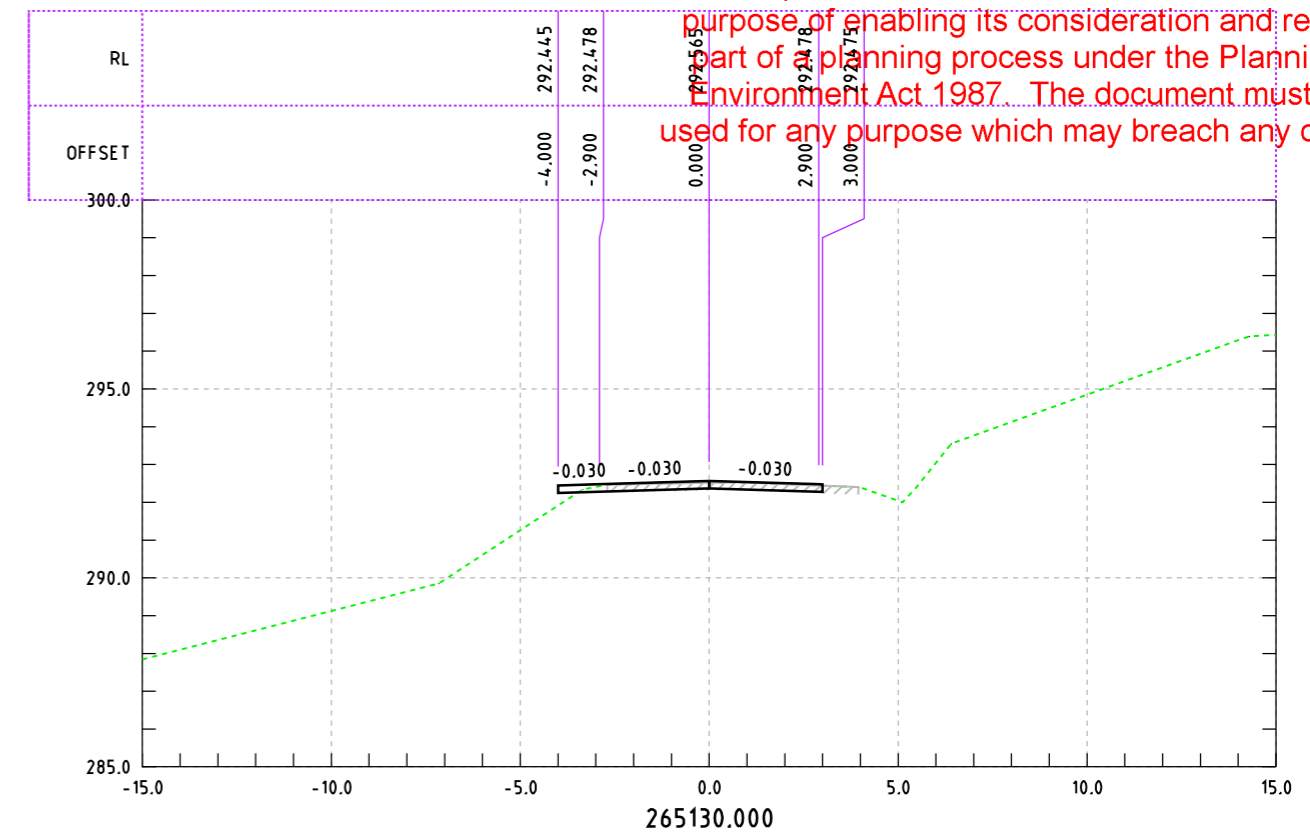
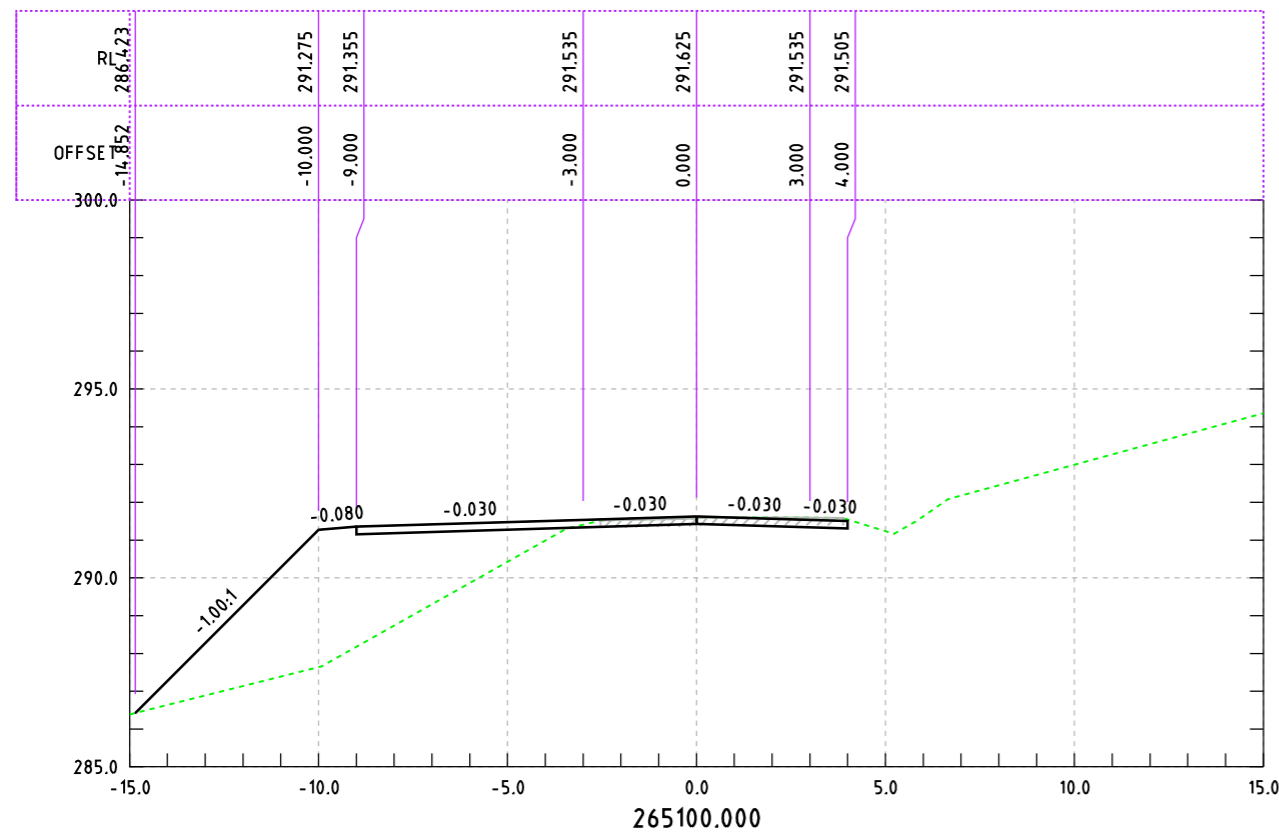
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GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS  
 CONTRACT NO:  
 PROJECT NO: 4005-266000-RW-P01-CIV-0800

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

CONSULTANT:

RRV:

SCALE:  
 HOR 0 2 4 (m)  
 VER 0 2 4 (m)

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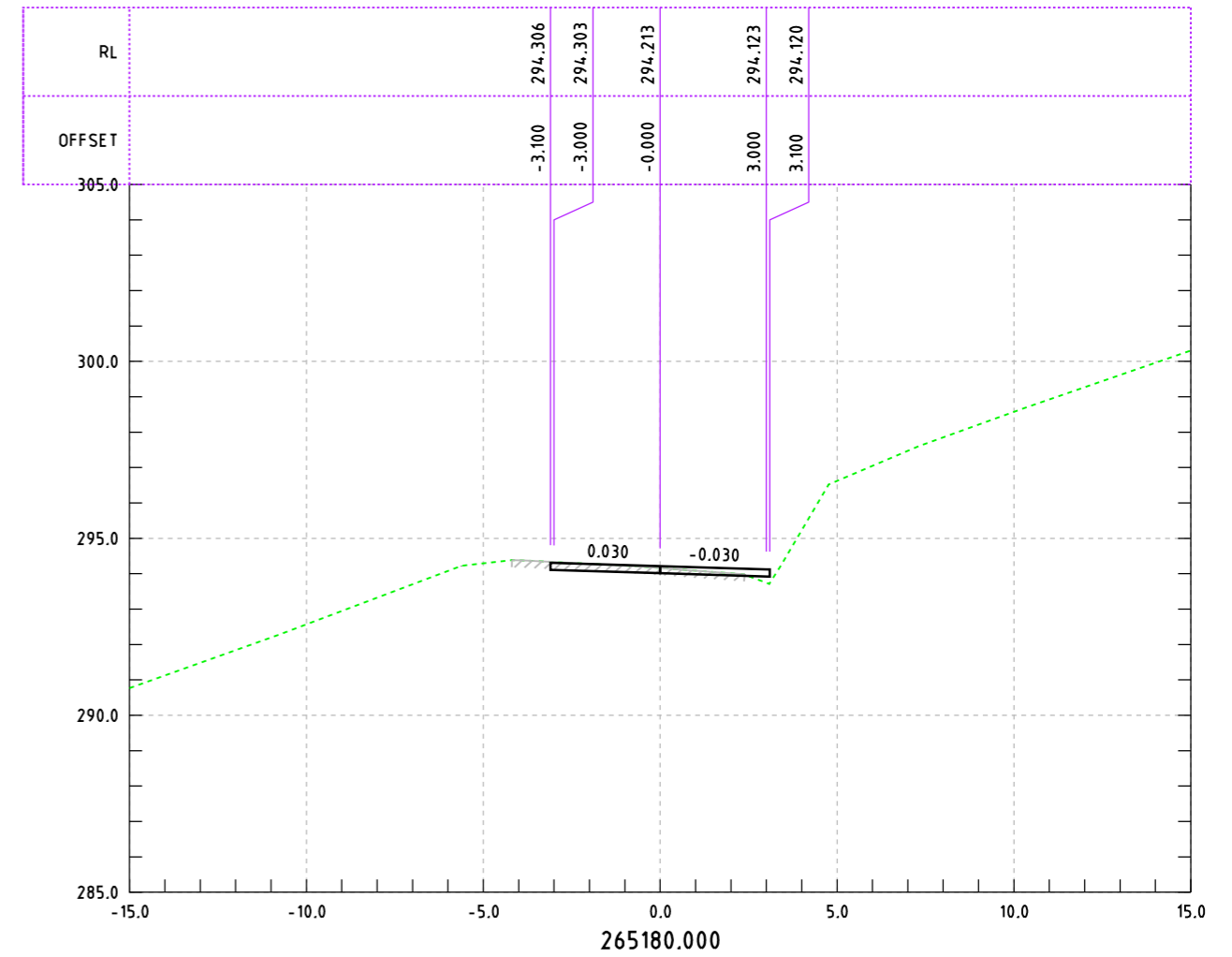
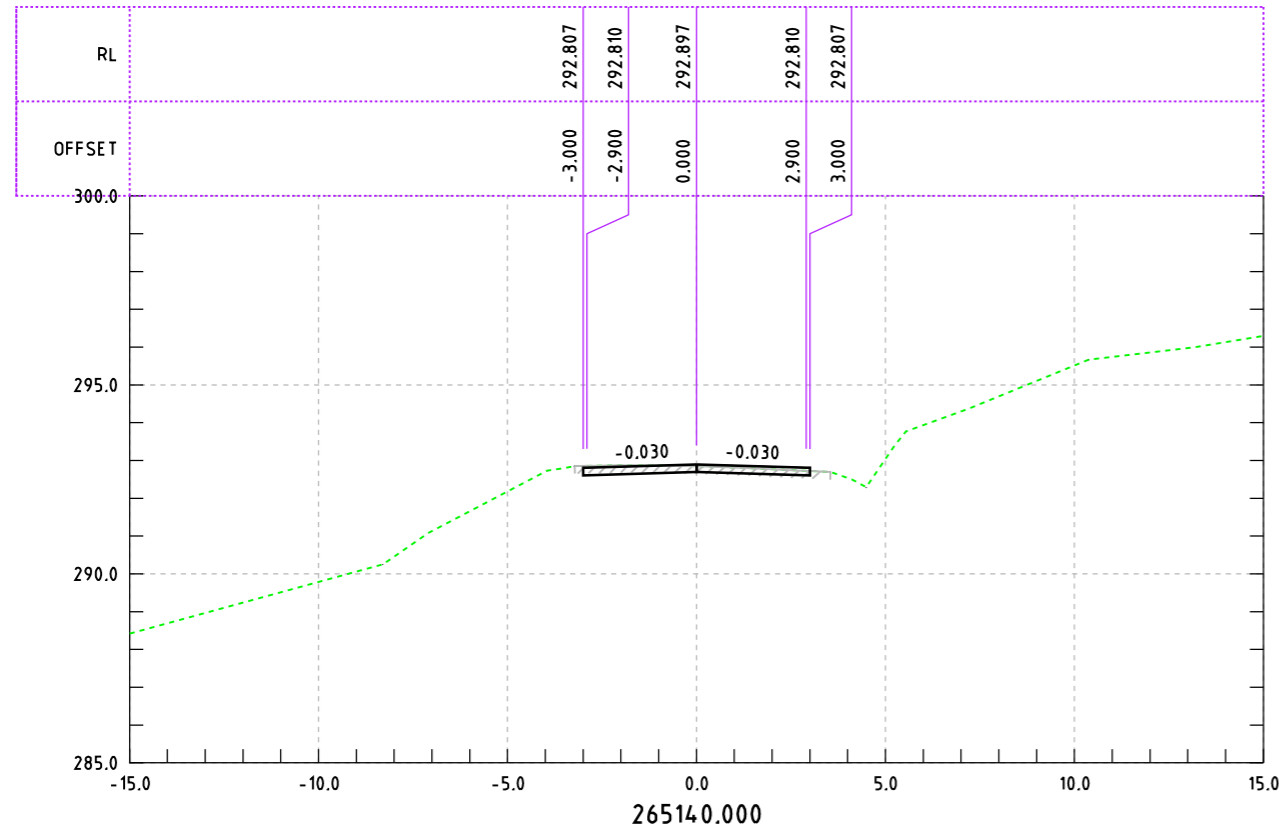
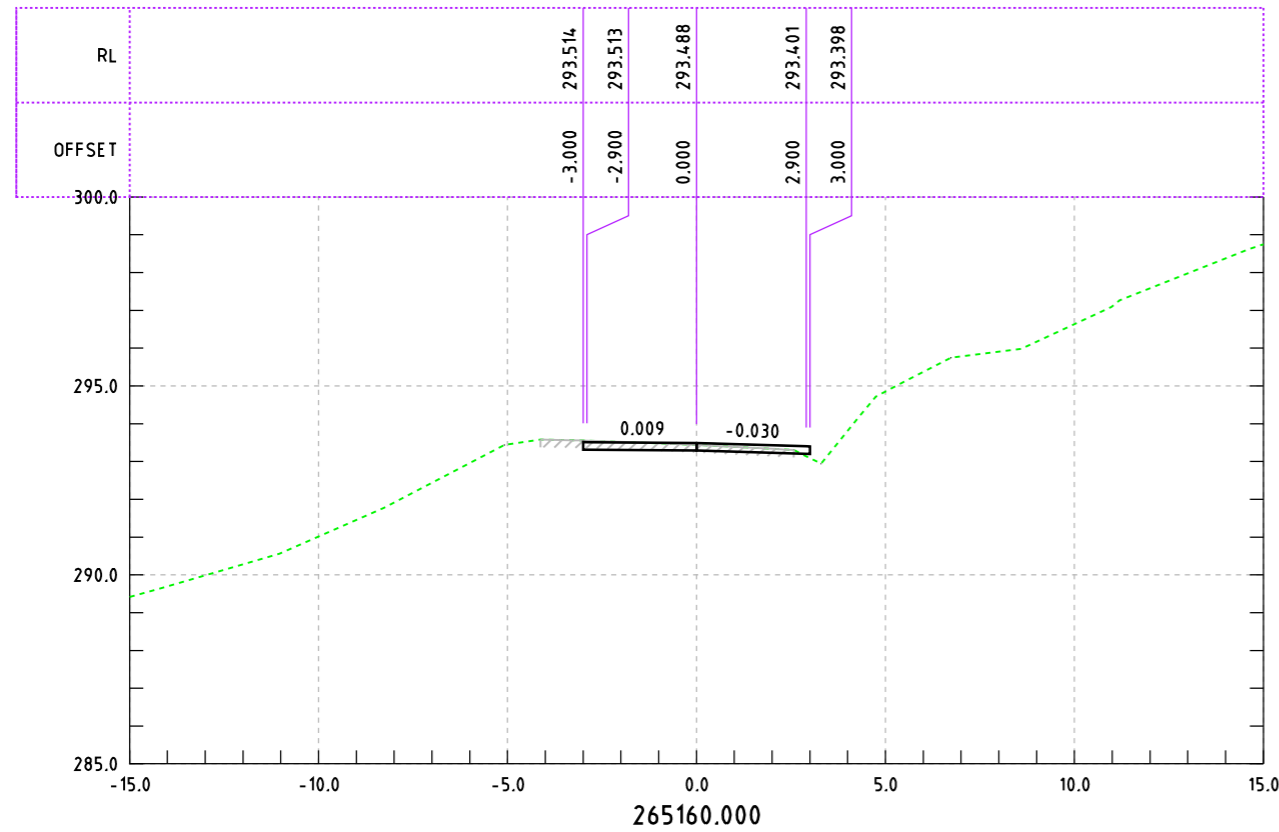
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 STATUS NOTES:  
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DESIGNED: EASTERN REGION  
 DATE: Jun-20  
 APPROVED:  
 EASTERN REGION DRAWING FILE:  
 4005-266000-RW-P01-CIV-0801

GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS  
 CONTRACT NO:  
 DATE: 18/12/2020  
 ISSUE: 1

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

CONSULTANT:

RRV:

SCALE:  
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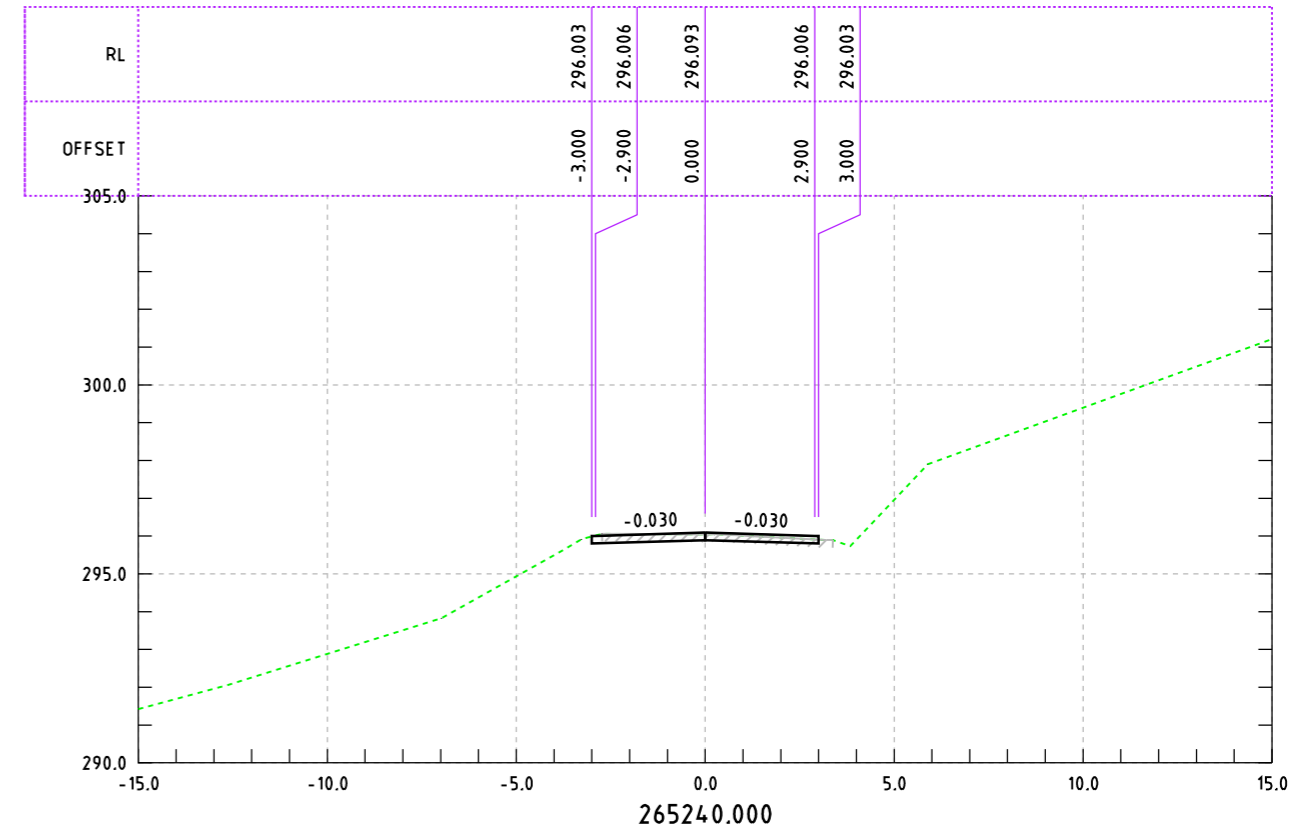
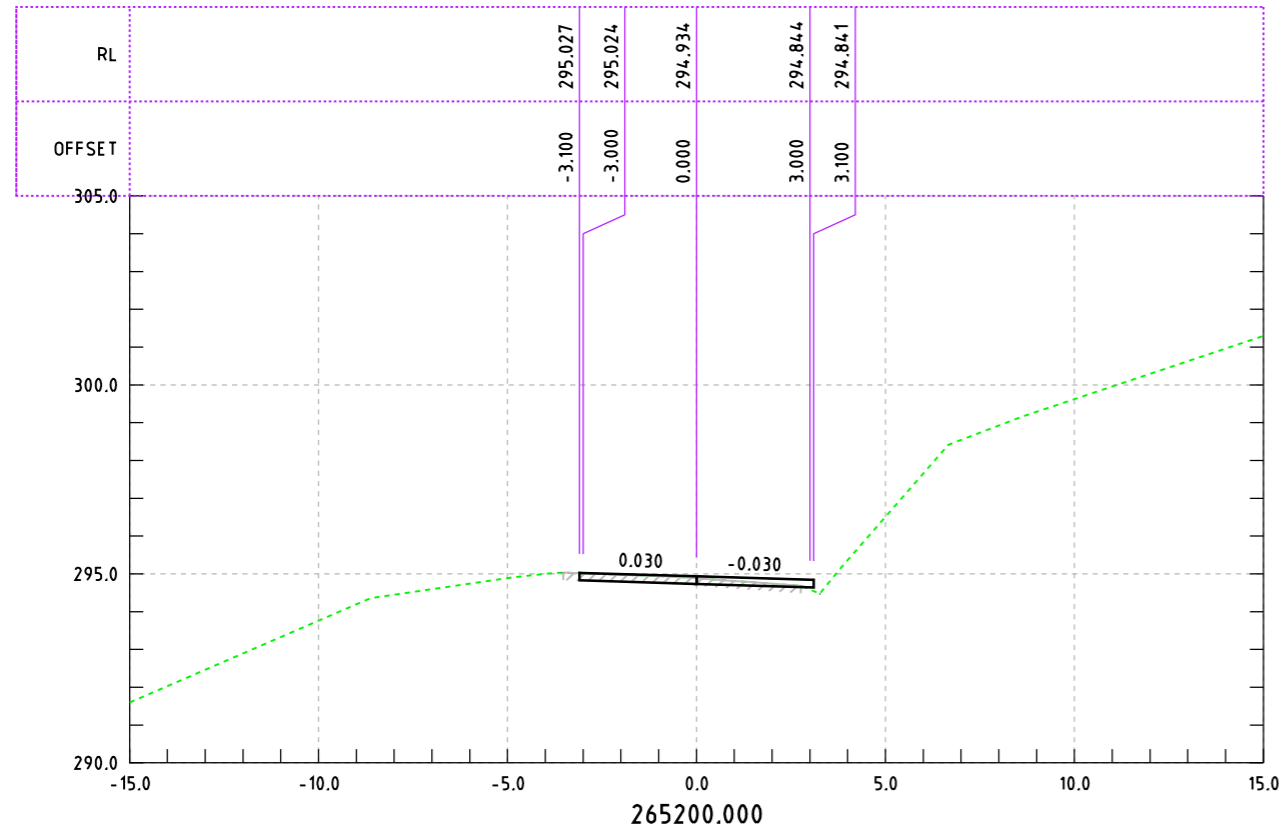
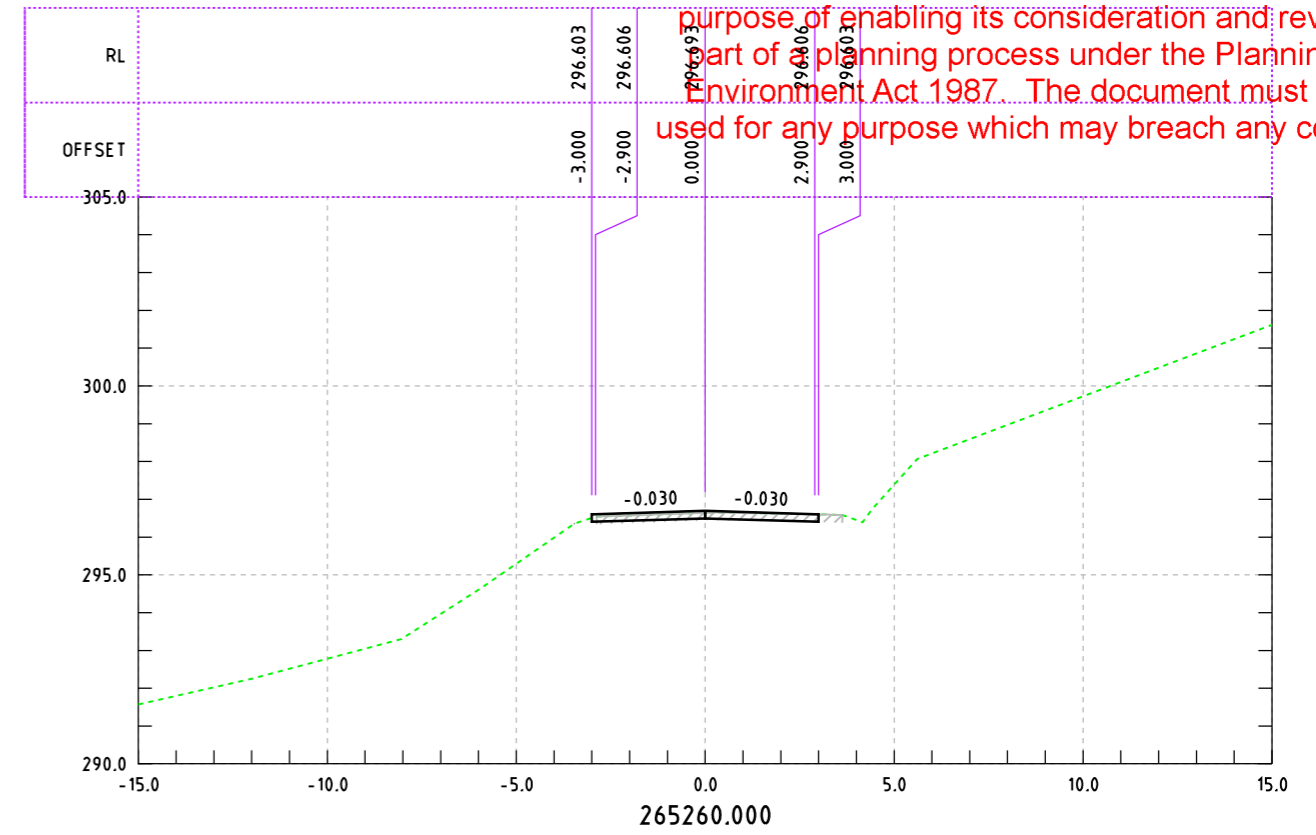
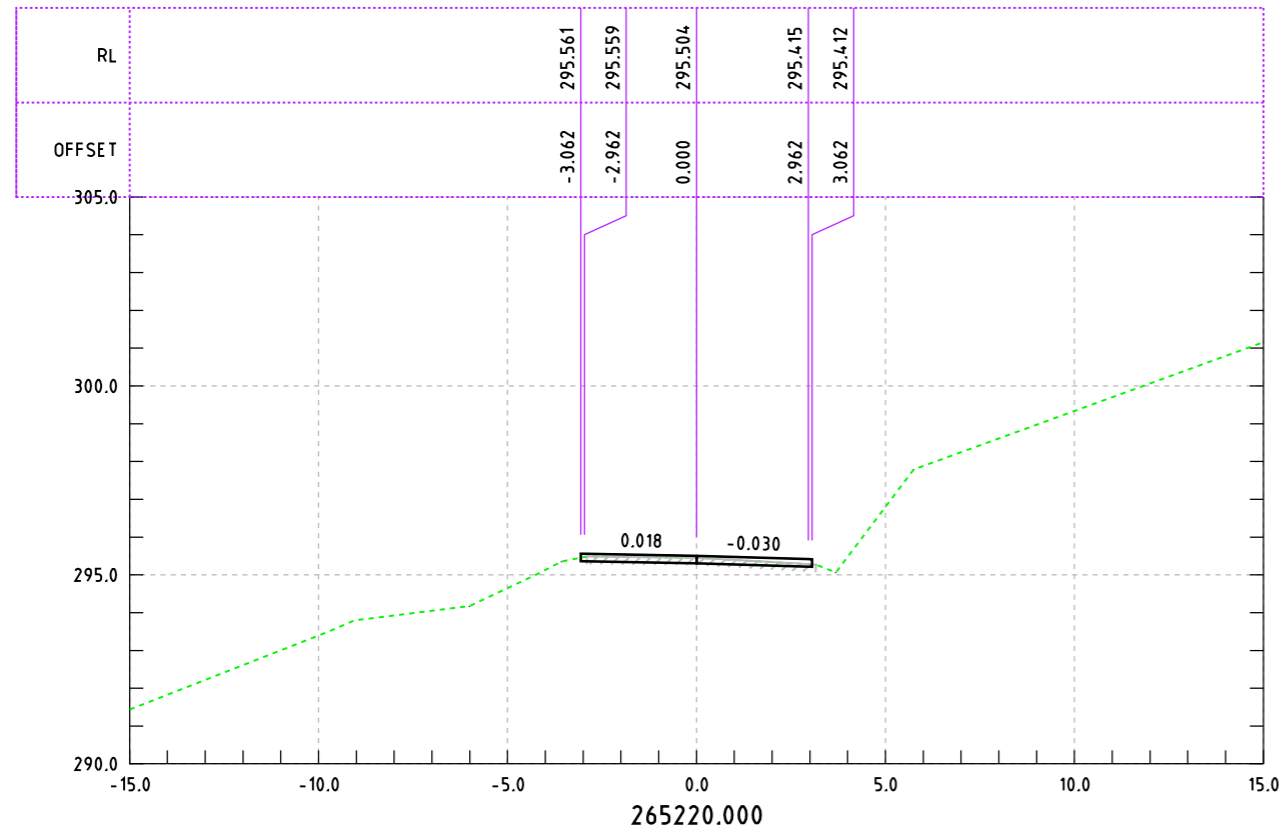
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GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS  
 CONTRACT NO:  
 DATE: 18/12/2020  
 ISSUE: 1



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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

CONSULTANT:

RRV: regional roads victoria

SCALE: HOR 0 2 4 (m)  
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STATUS NOTES:  
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DESIGNED: EASTERN REGION  
 DATE: Jun-20

APPROVED:

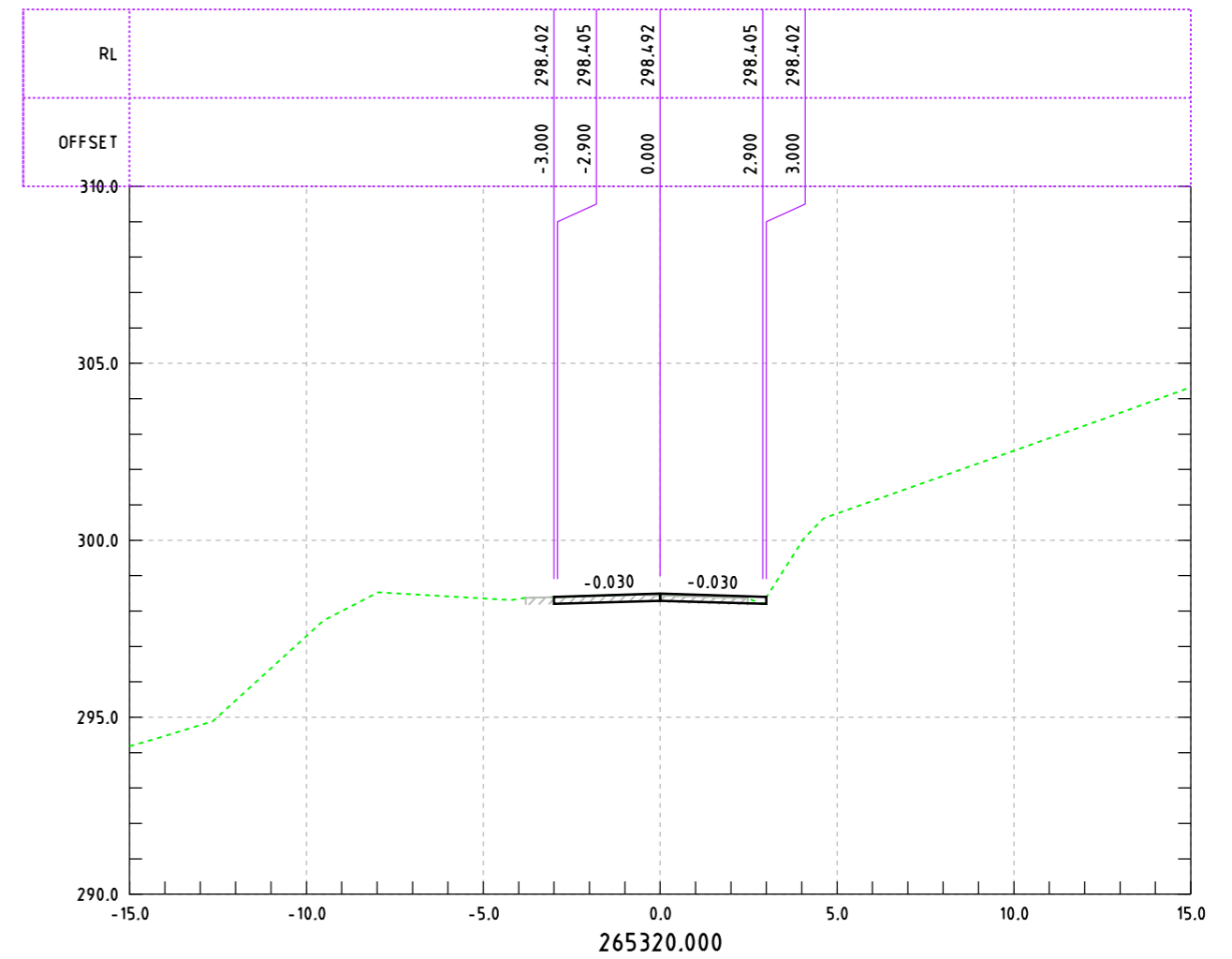
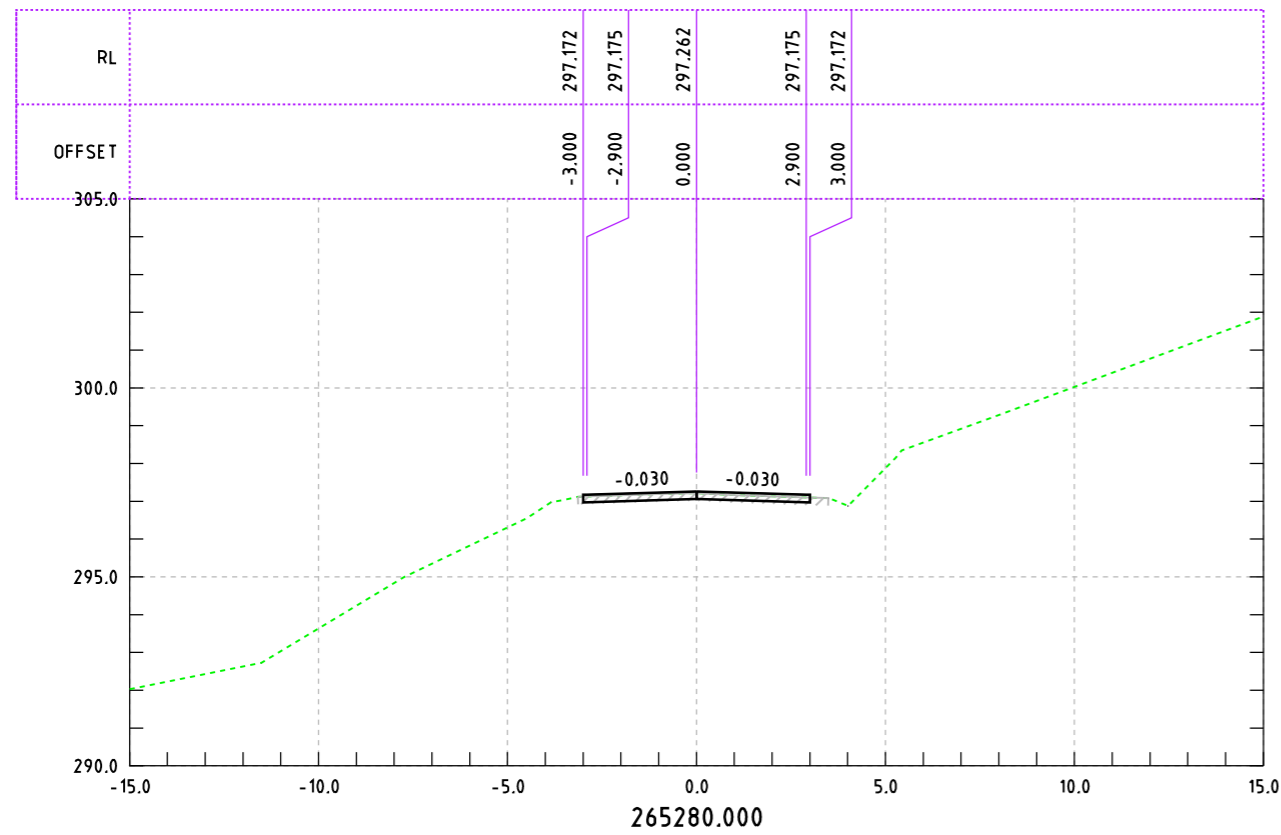
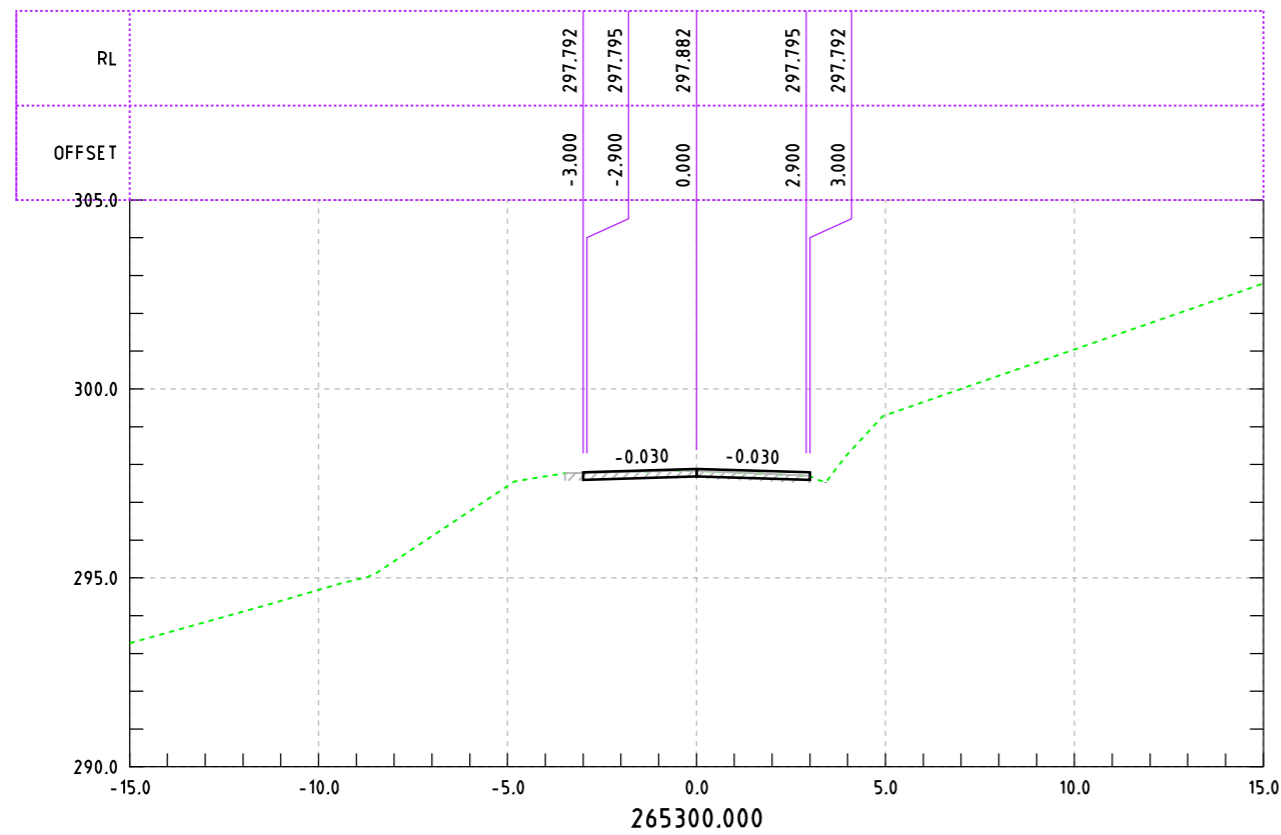
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GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

CONSULTANT:

RRV:

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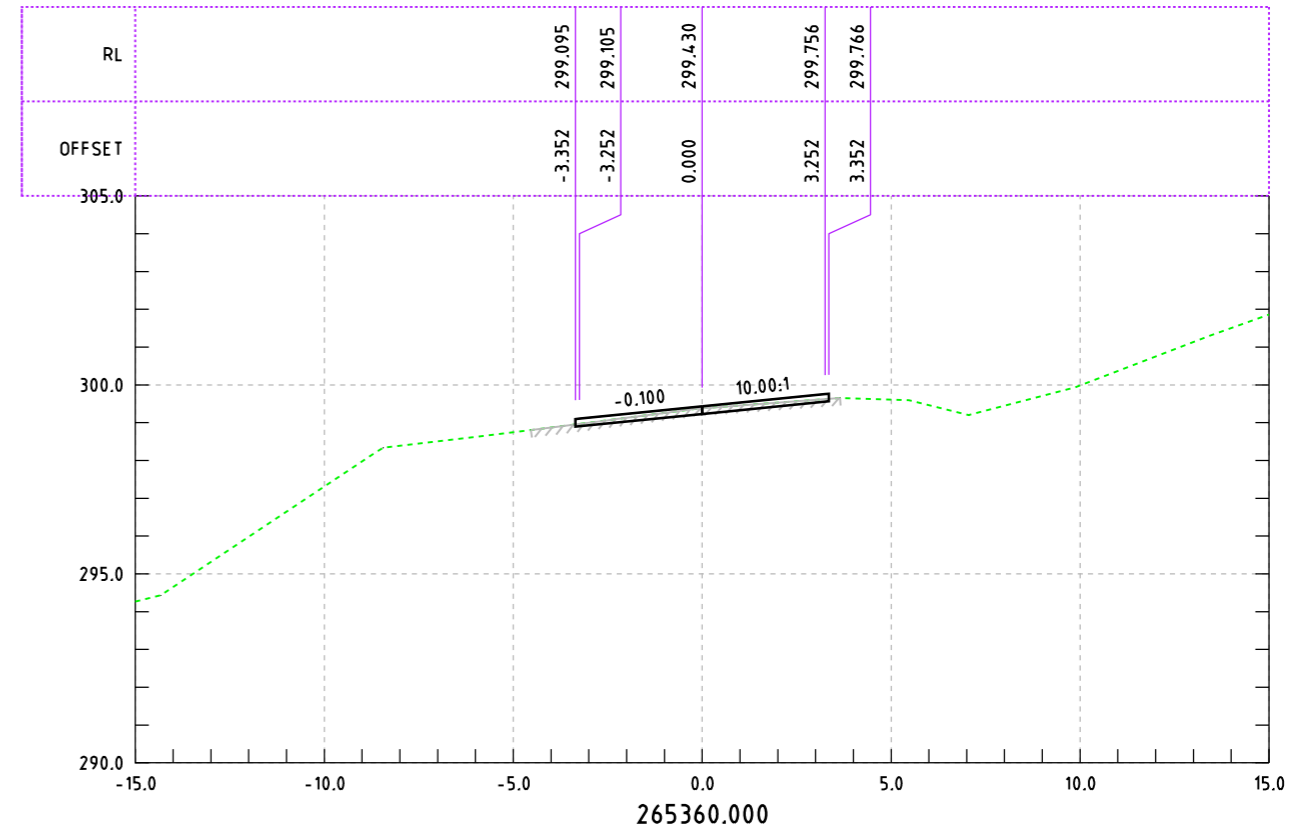
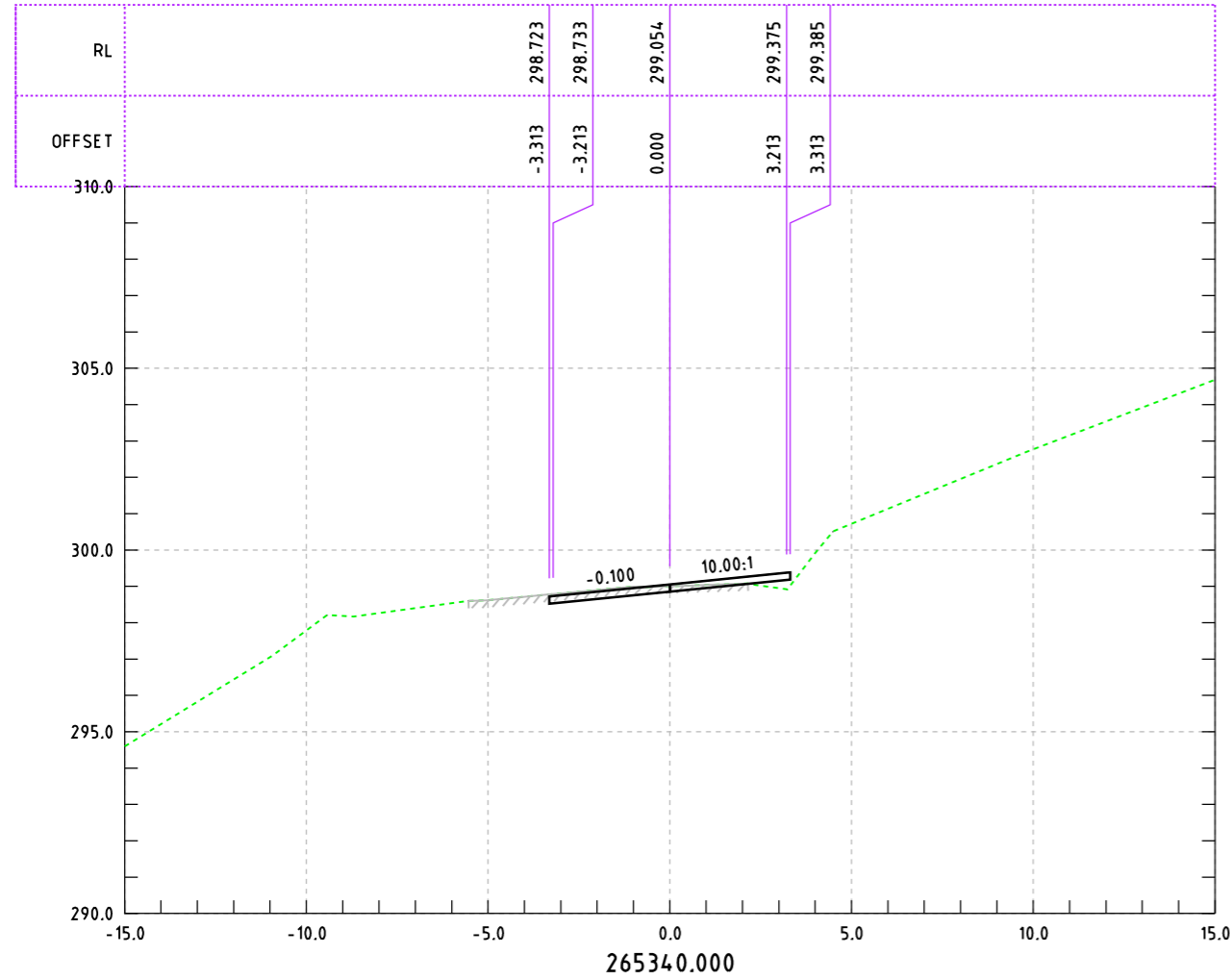
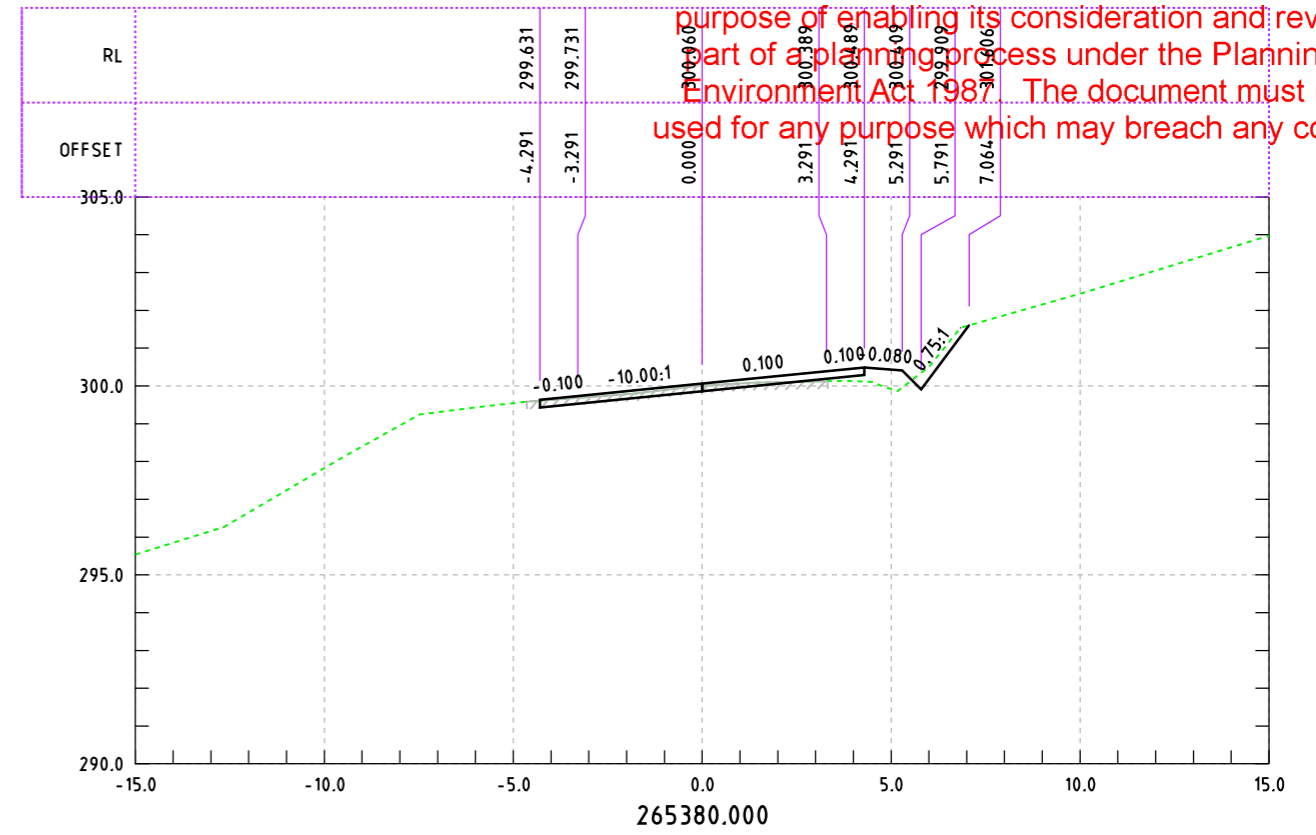
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 STATUS NOTES:  
 1. APPROVED FOR CONSTRUCTION

DESIGNED: EASTERN REGION  
 DATE: Jun-20  
 APPROVED:  
 EASTERN REGION DRAWING FILE:  
 4005-266000-RW-P01-CIV-0804

GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS  
 CONTRACT NO: 4005-266000-RW-P01-CIV-0804

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

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DESIGNED: EASTERN REGION  
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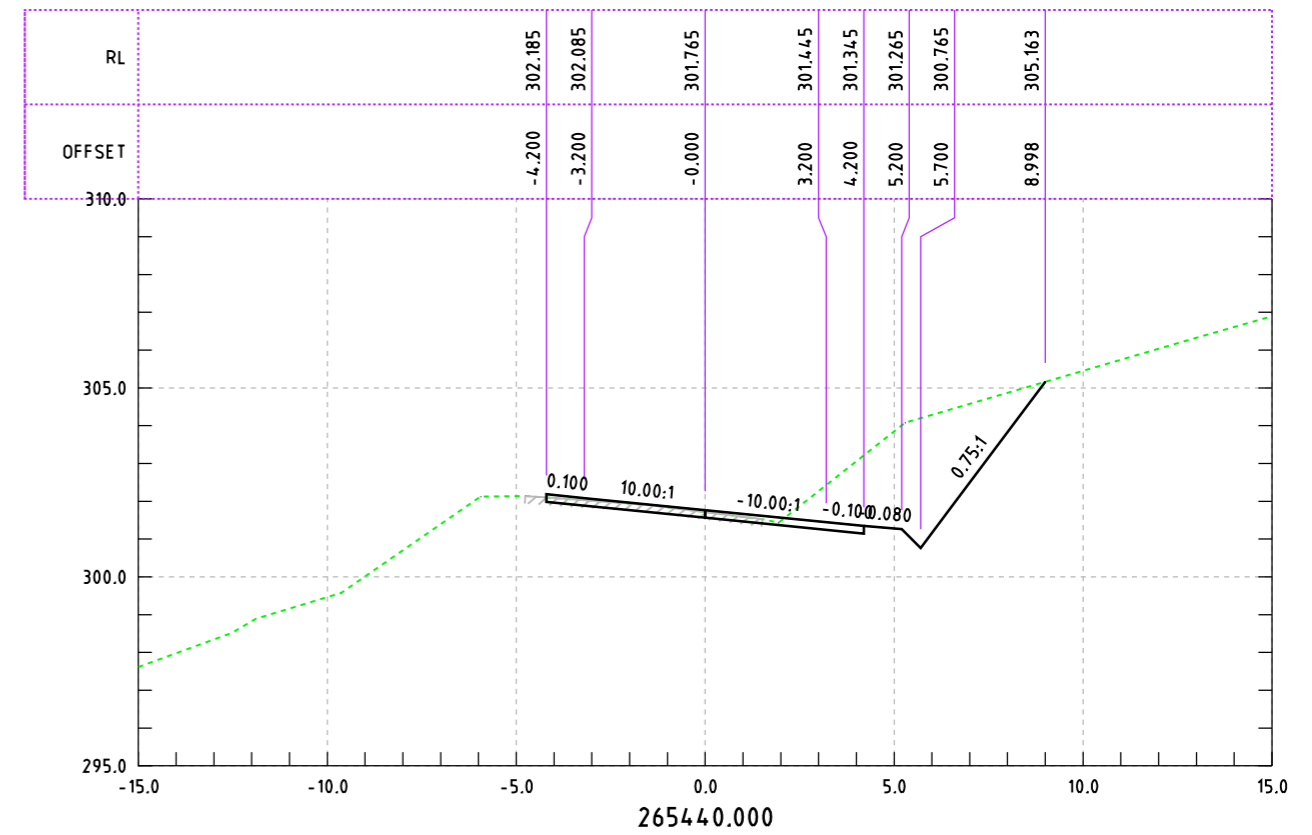
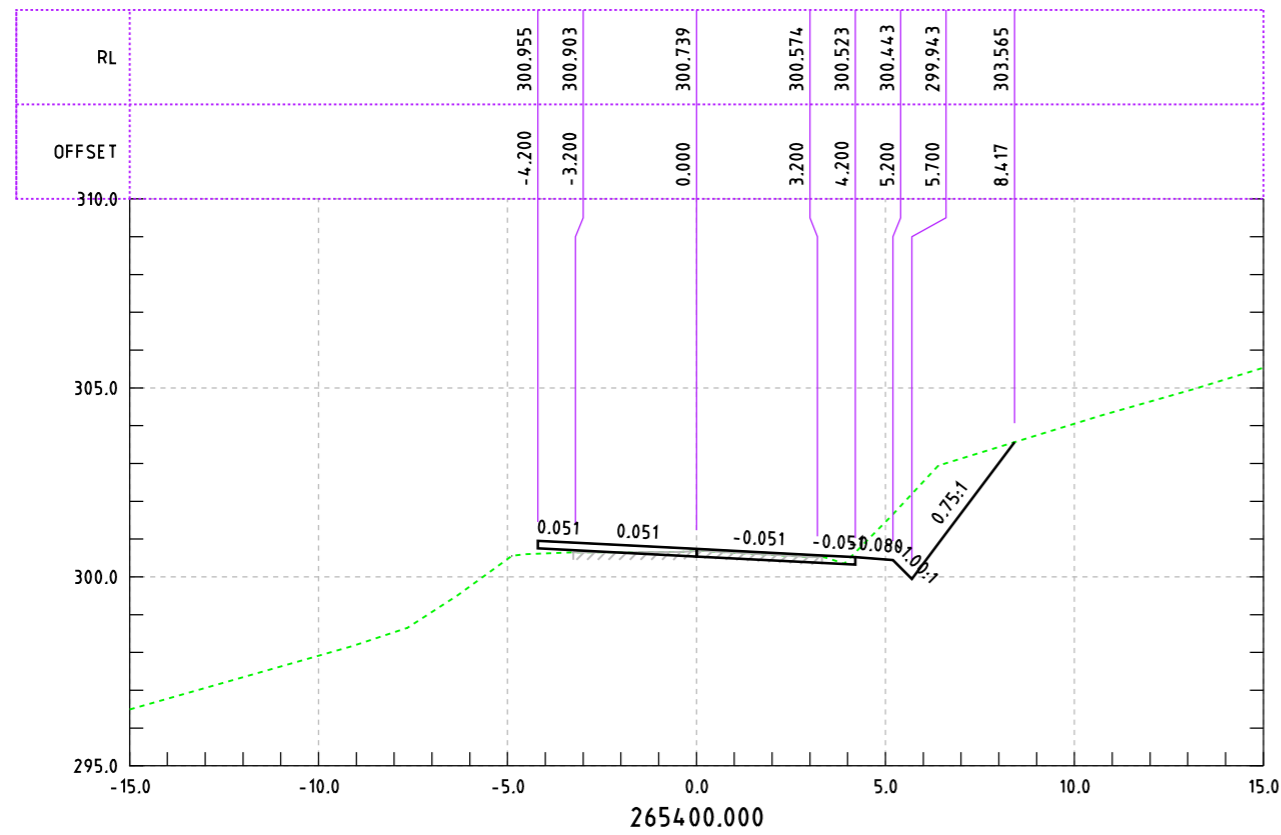
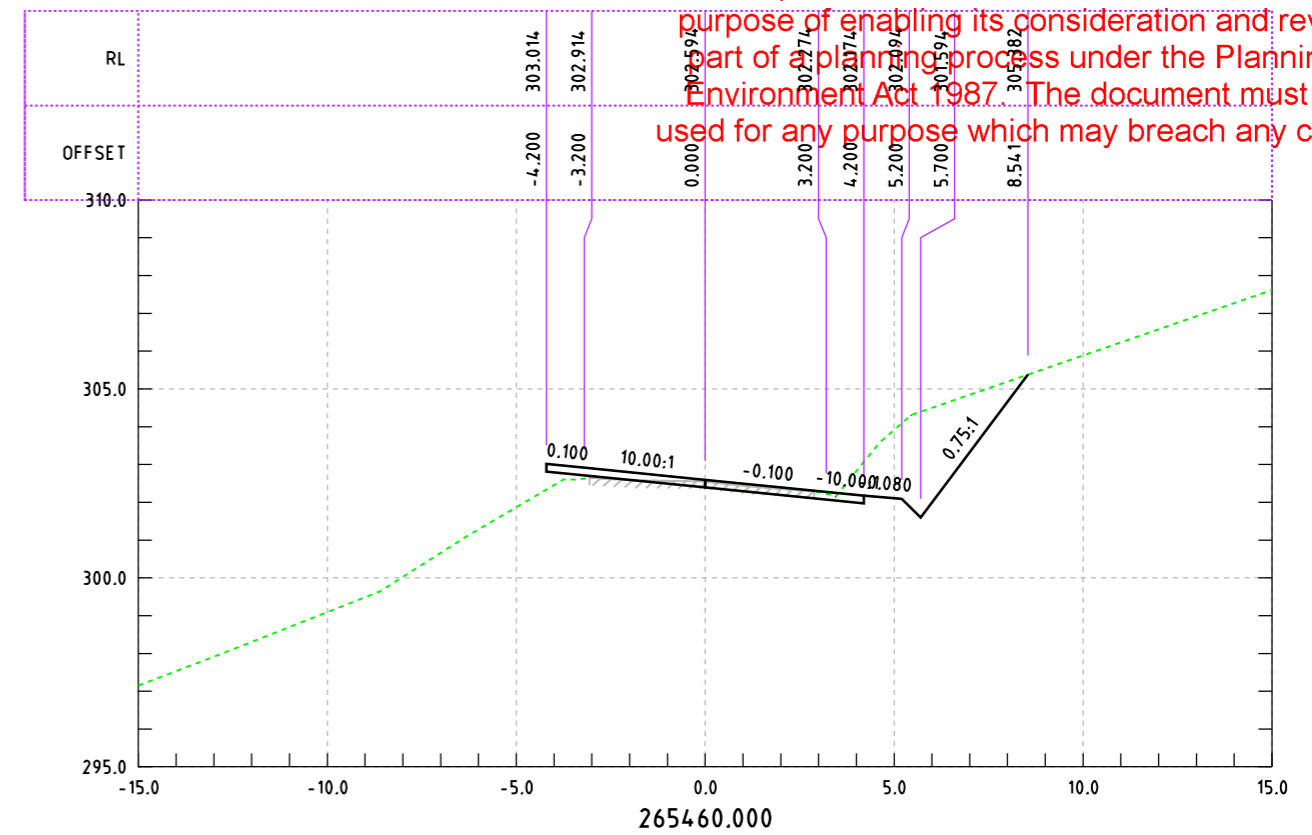
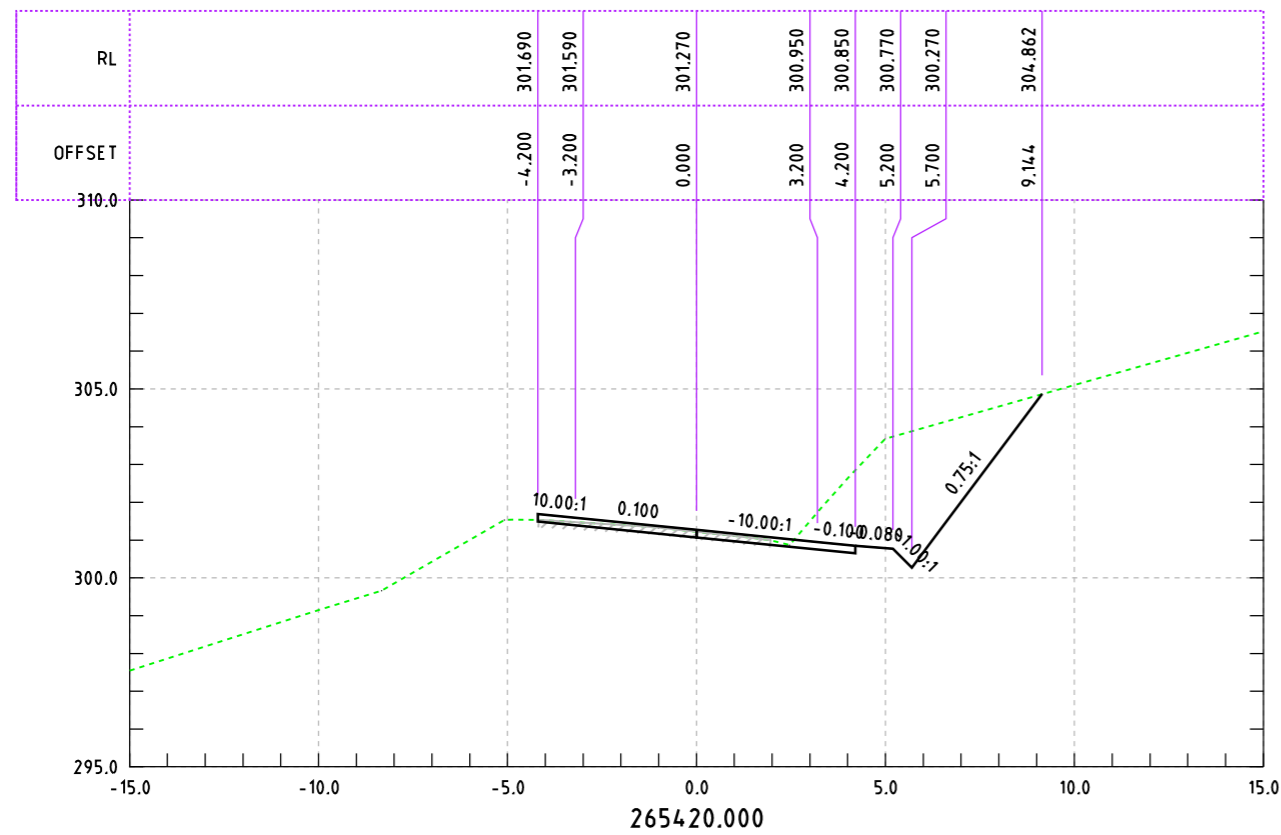
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GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

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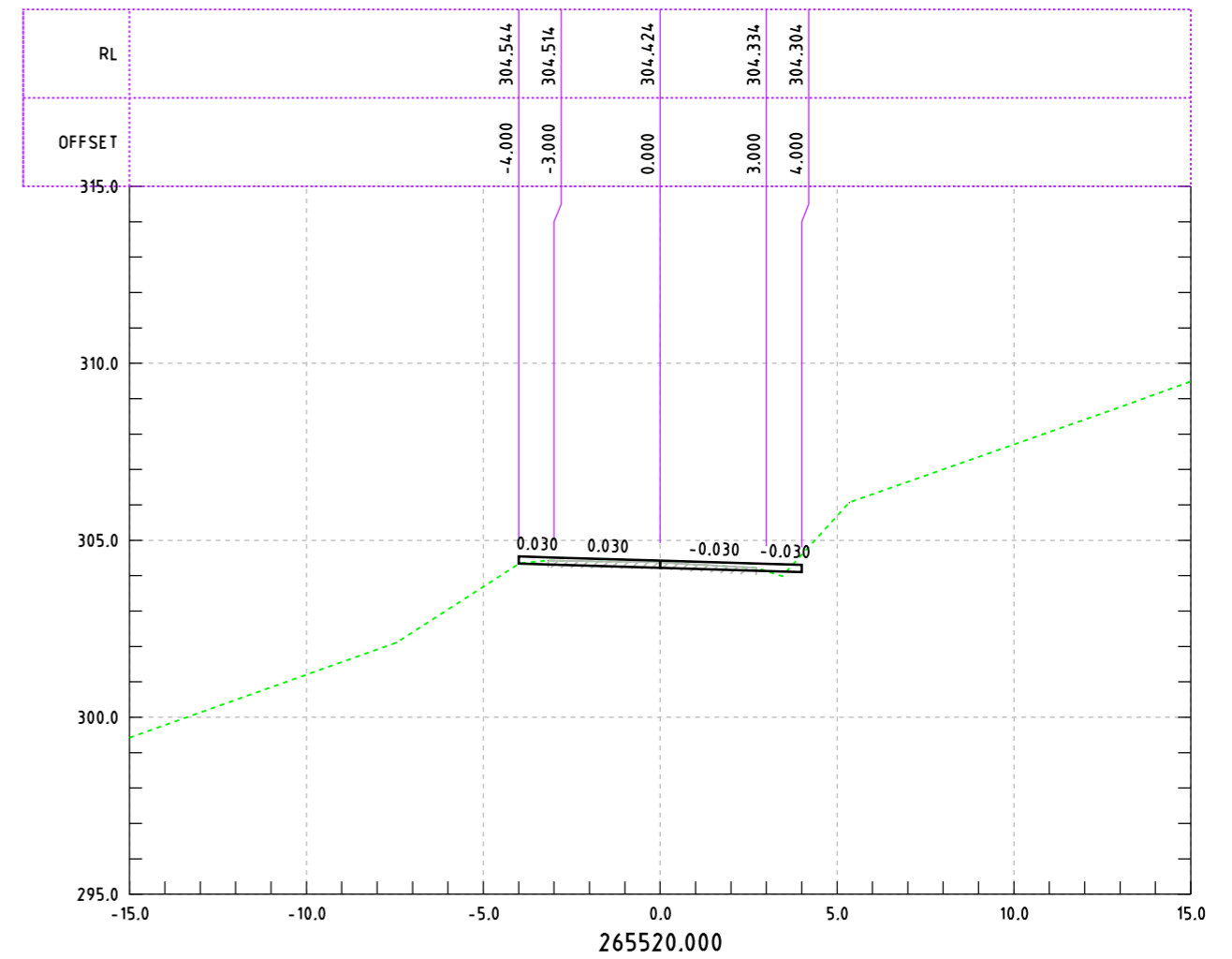
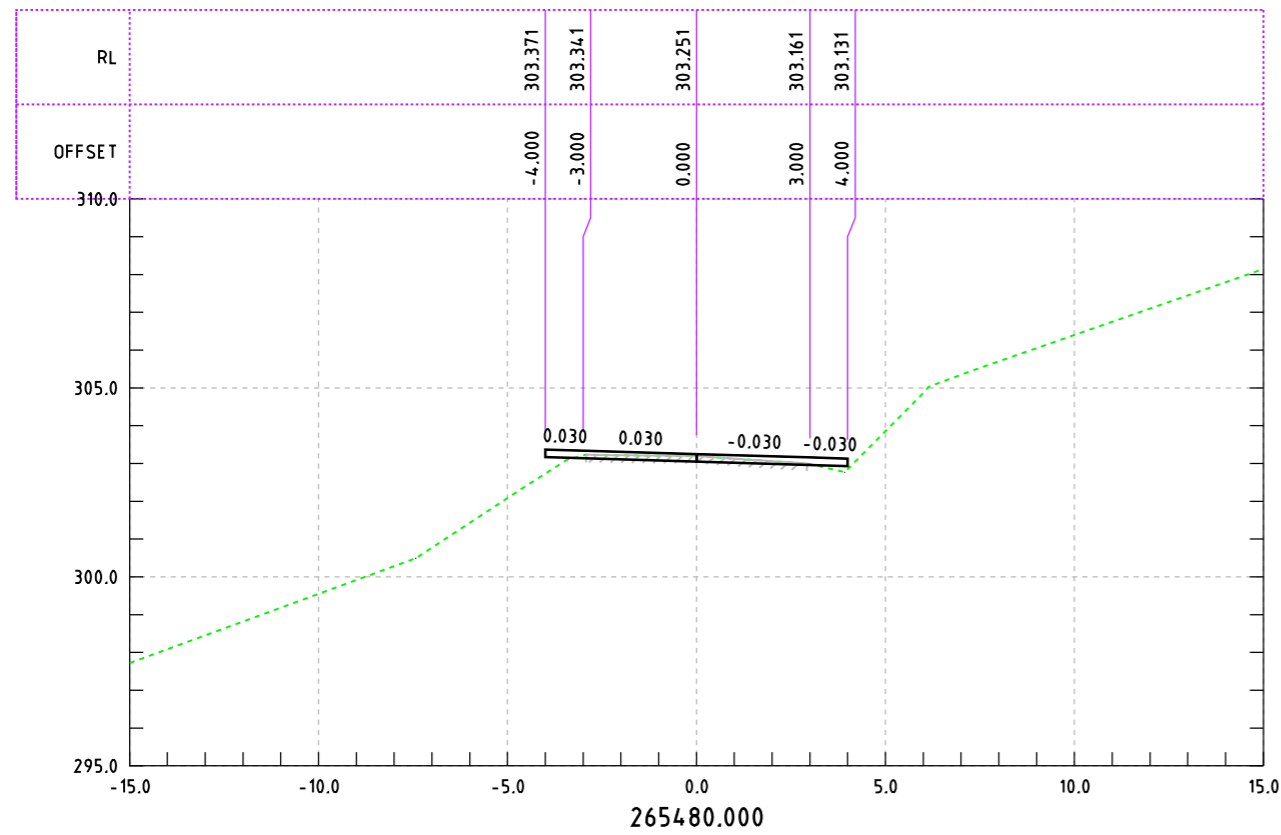
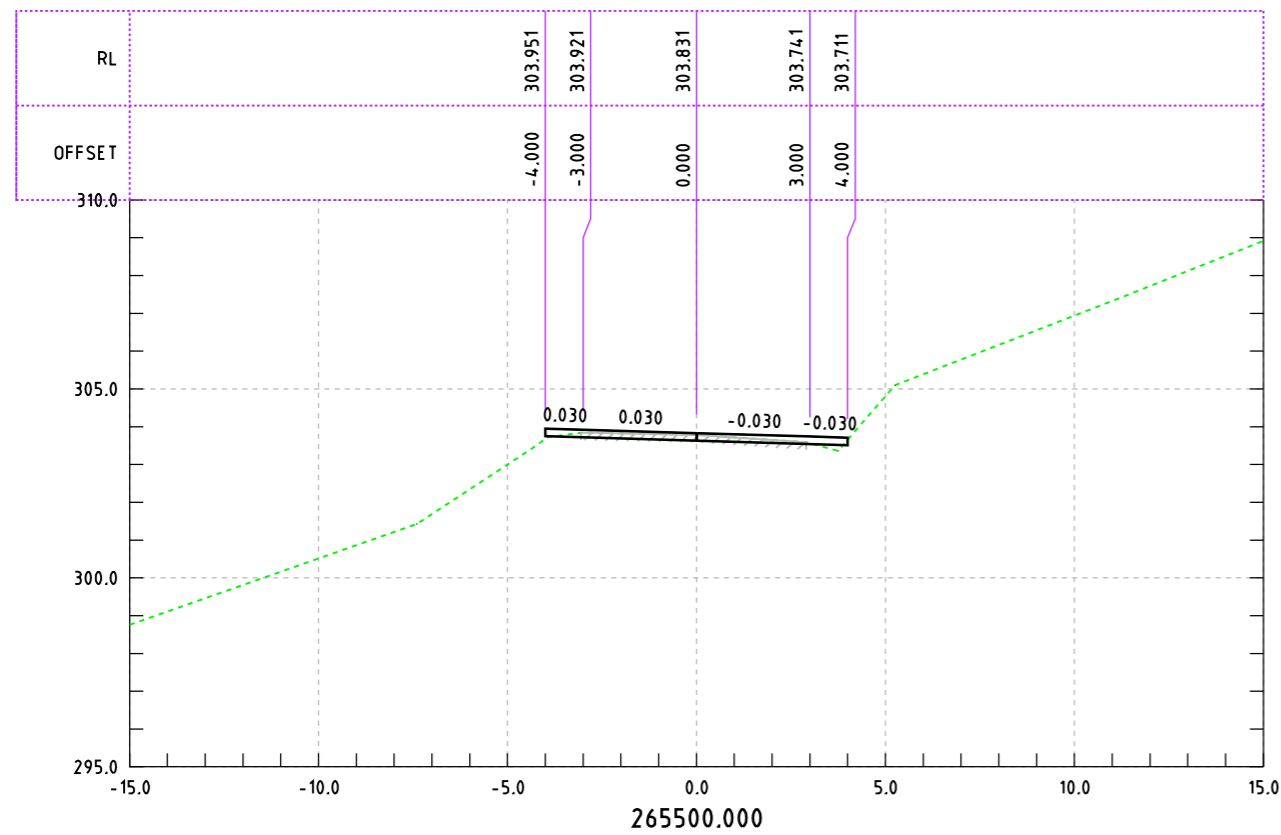
EASTERN REGION DRAWING FILE:  
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GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
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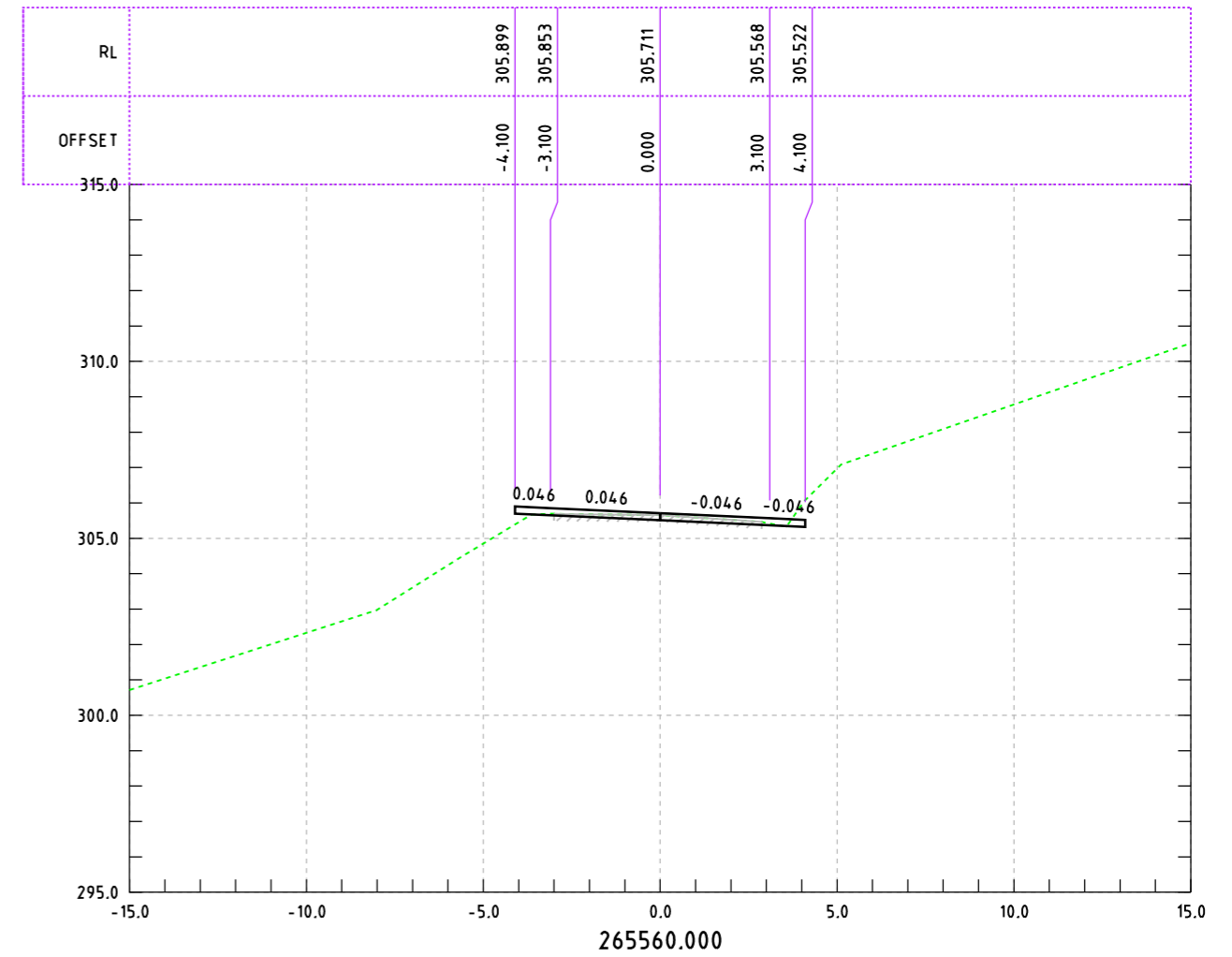
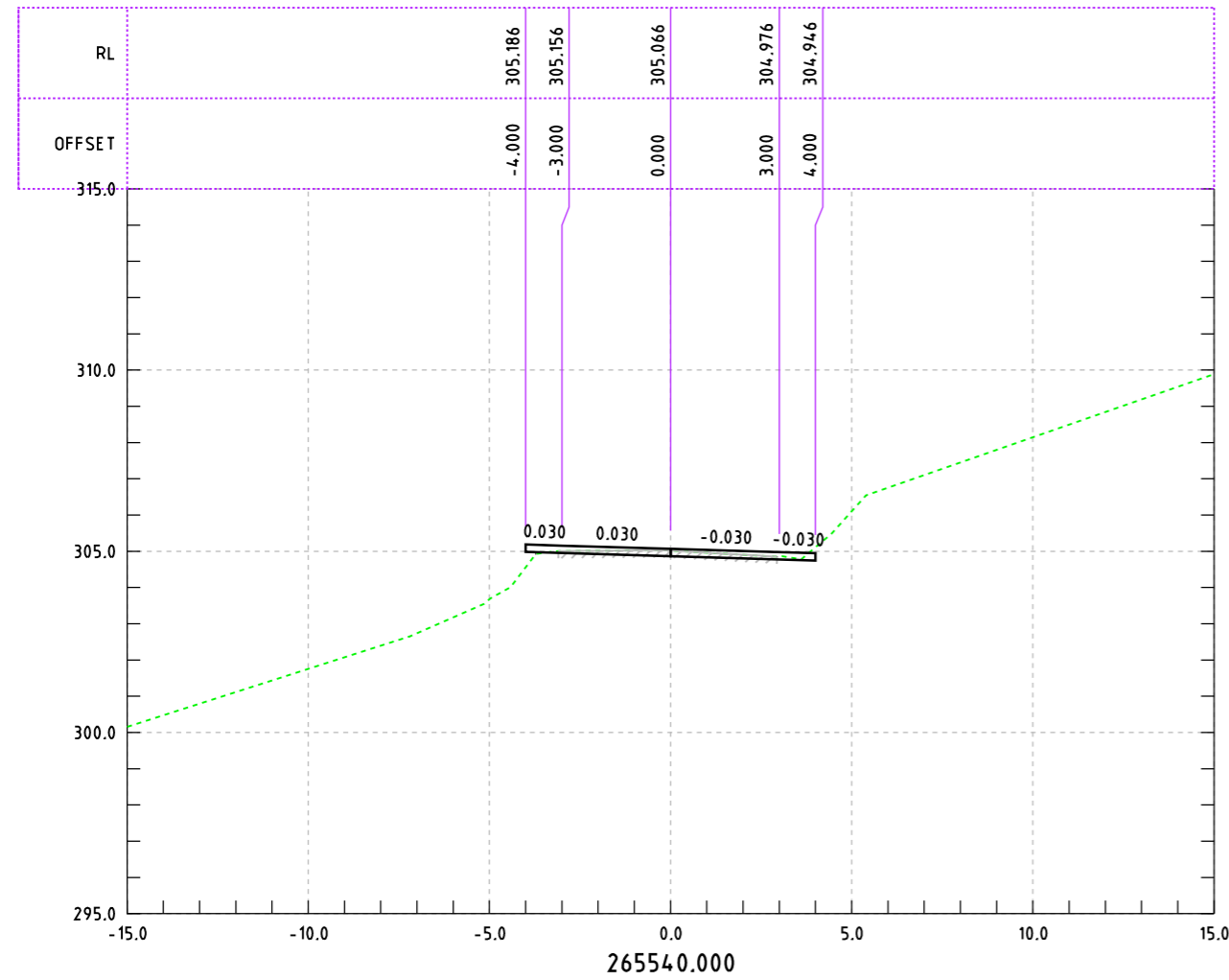
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DESIGNED: EASTERN REGION  
 DATE: Jun-20  
 APPROVED:  
 EASTERN REGION DRAWING FILE: 4005-266000-RW-P01-CIV-0807

GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS  
 CONTRACT NO: 4005-266000-RW-P01-CIV-0807

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

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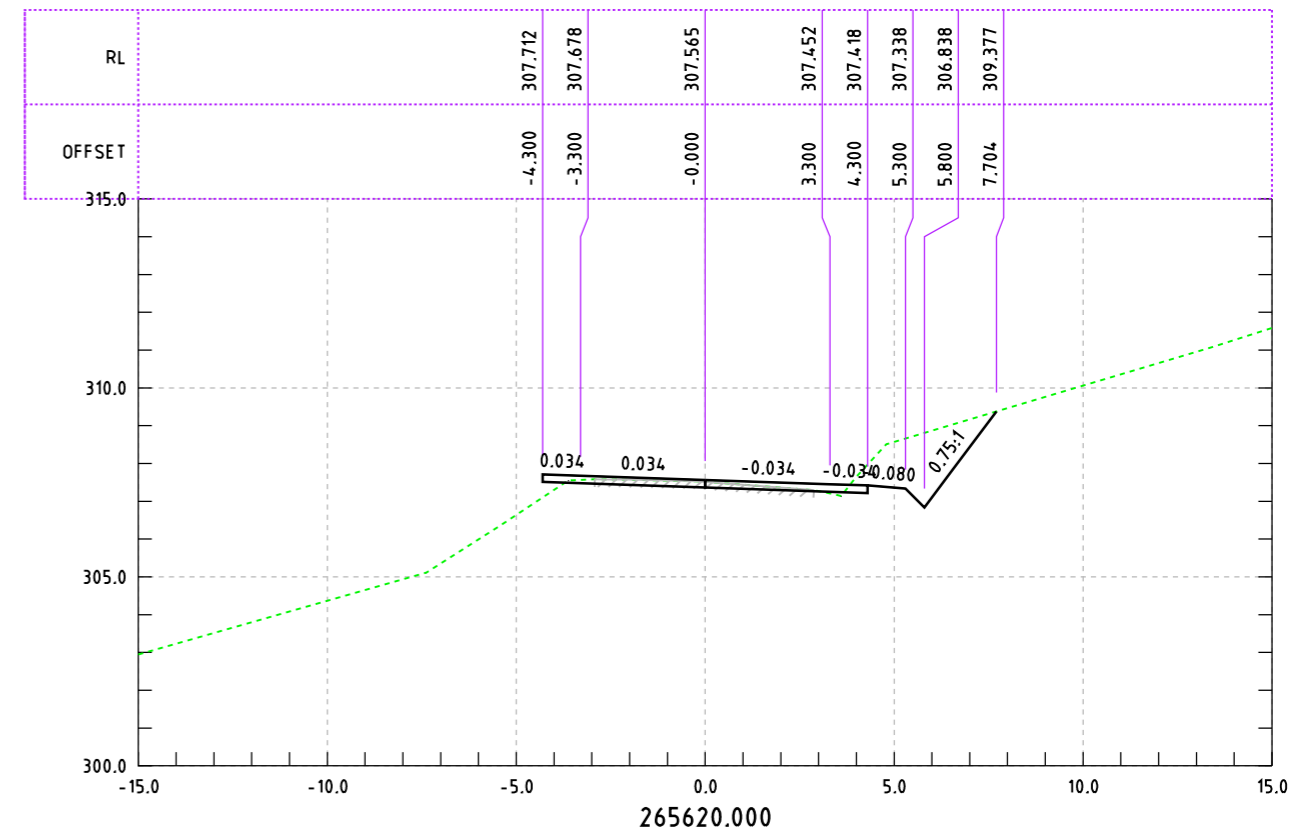
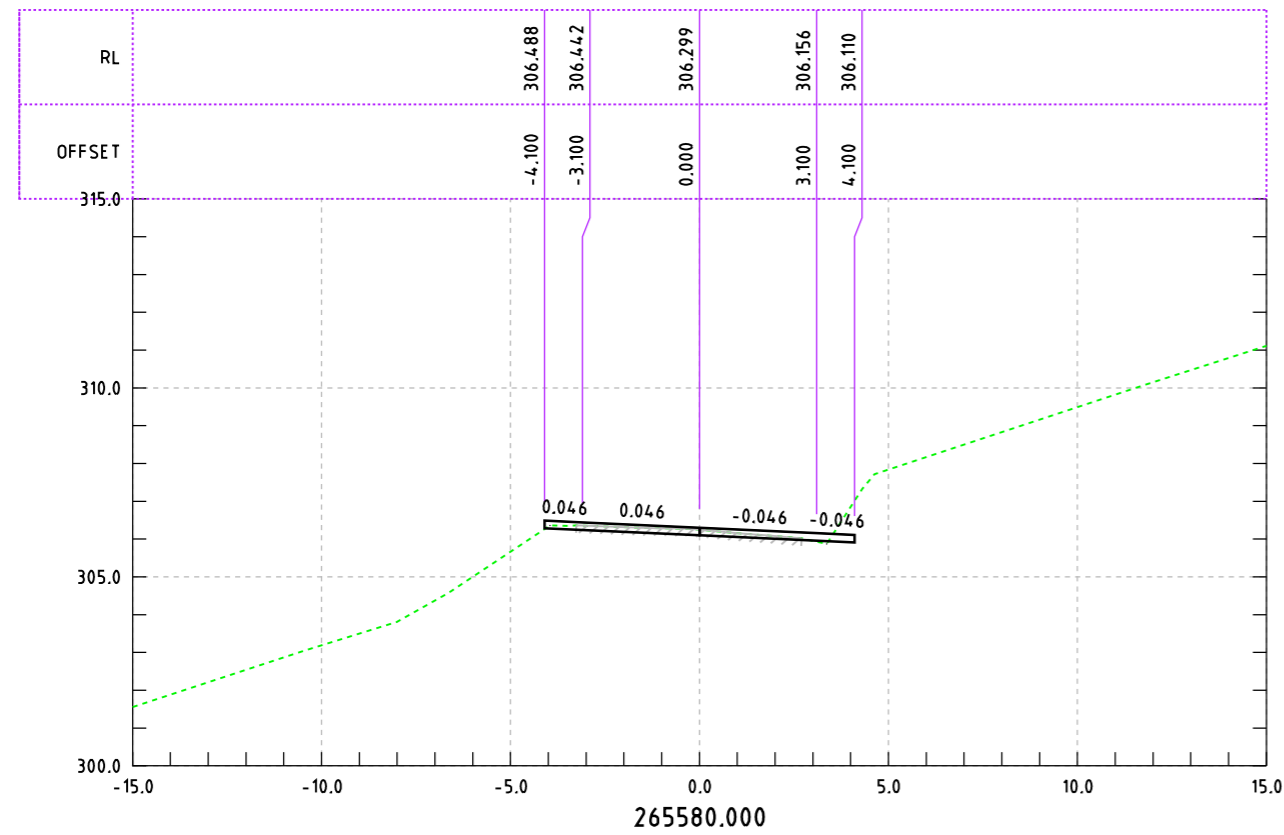
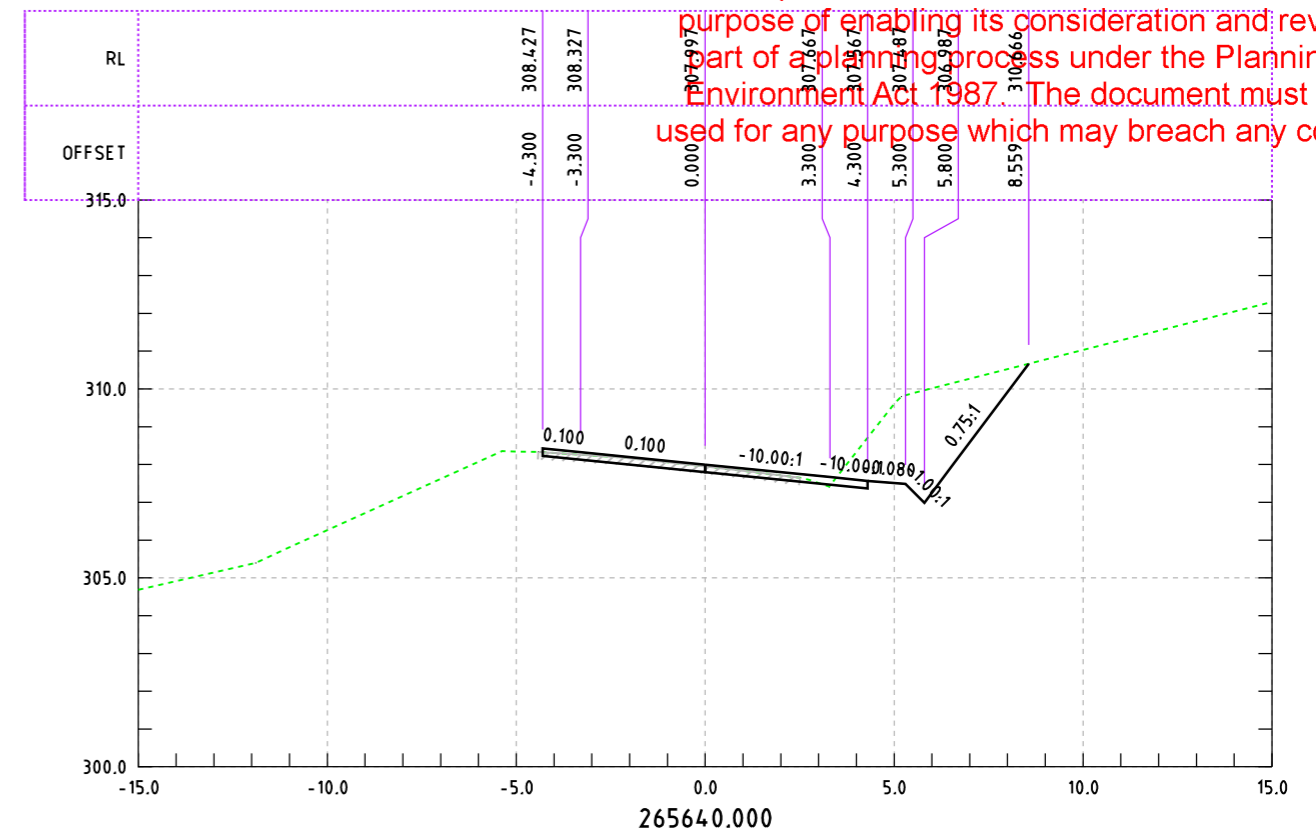
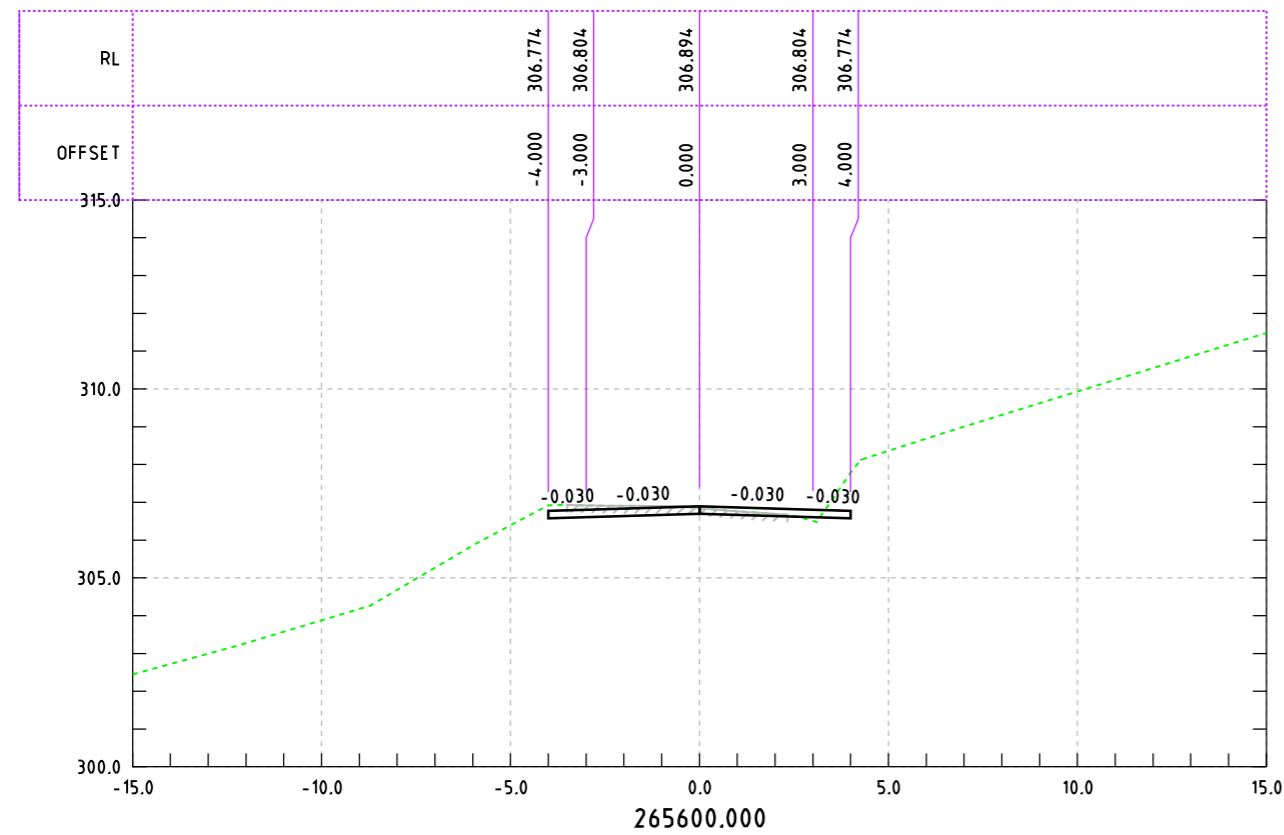
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DESIGNED: EASTERN REGION  
 DATE: Jun-20  
 APPROVED:  
 EASTERN REGION DRAWING FILE:  
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GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS  
 CONTRACT NO: 4005-266000-RW-P01-CIV-0808

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

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 DATE: Jun-20

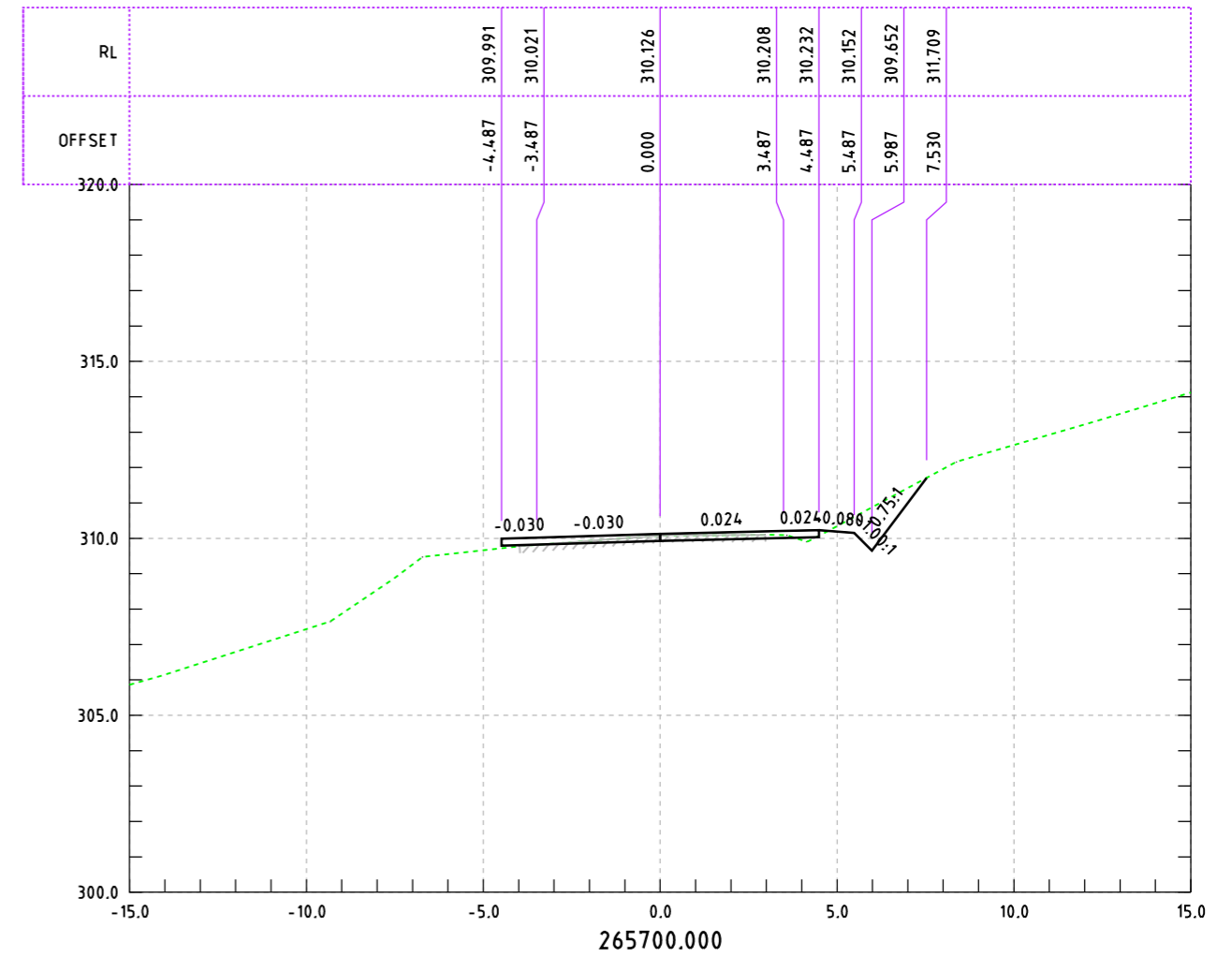
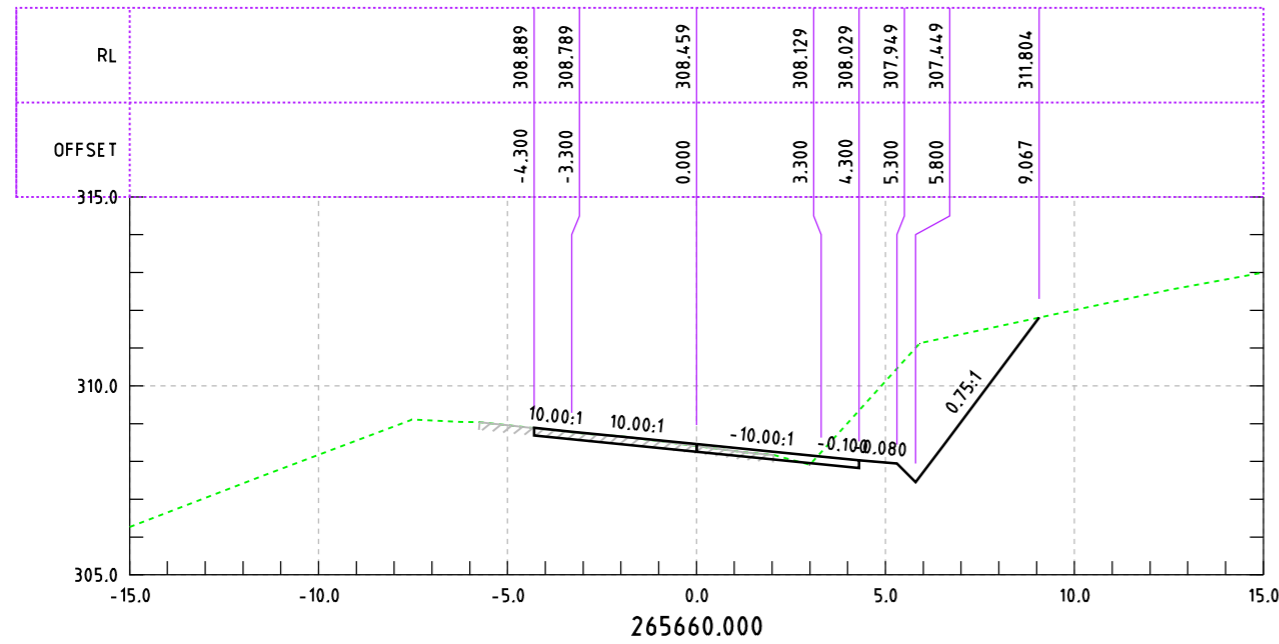
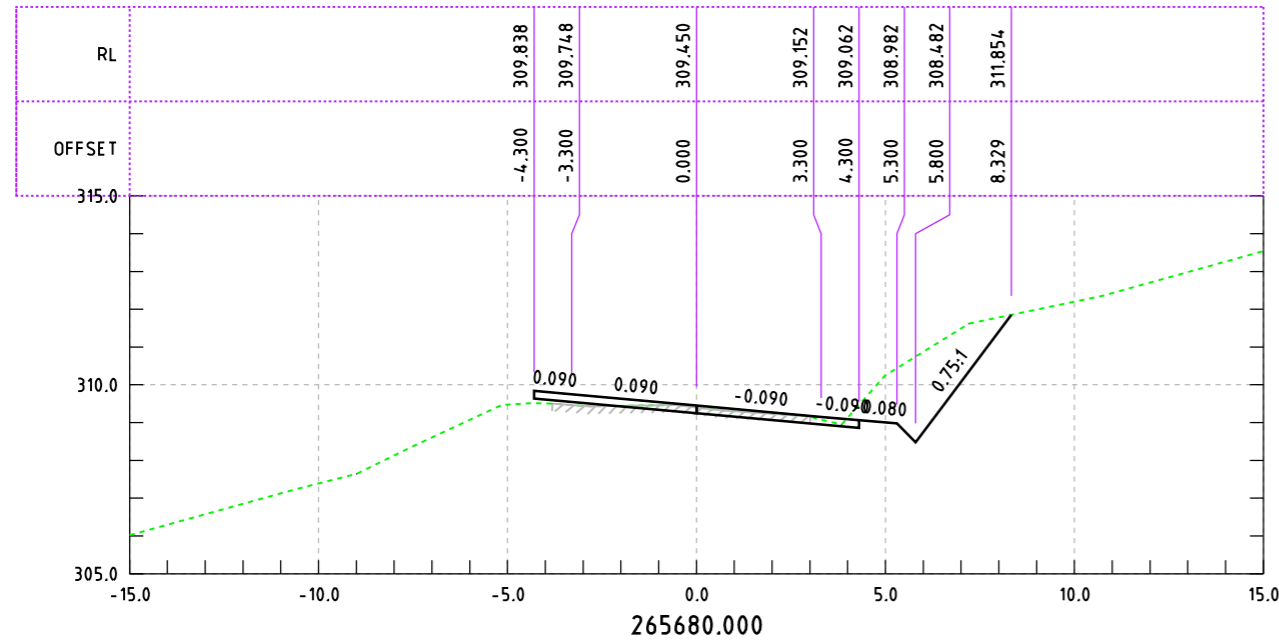
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EASTERN REGION DRAWING FILE:  
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GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

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RRV:

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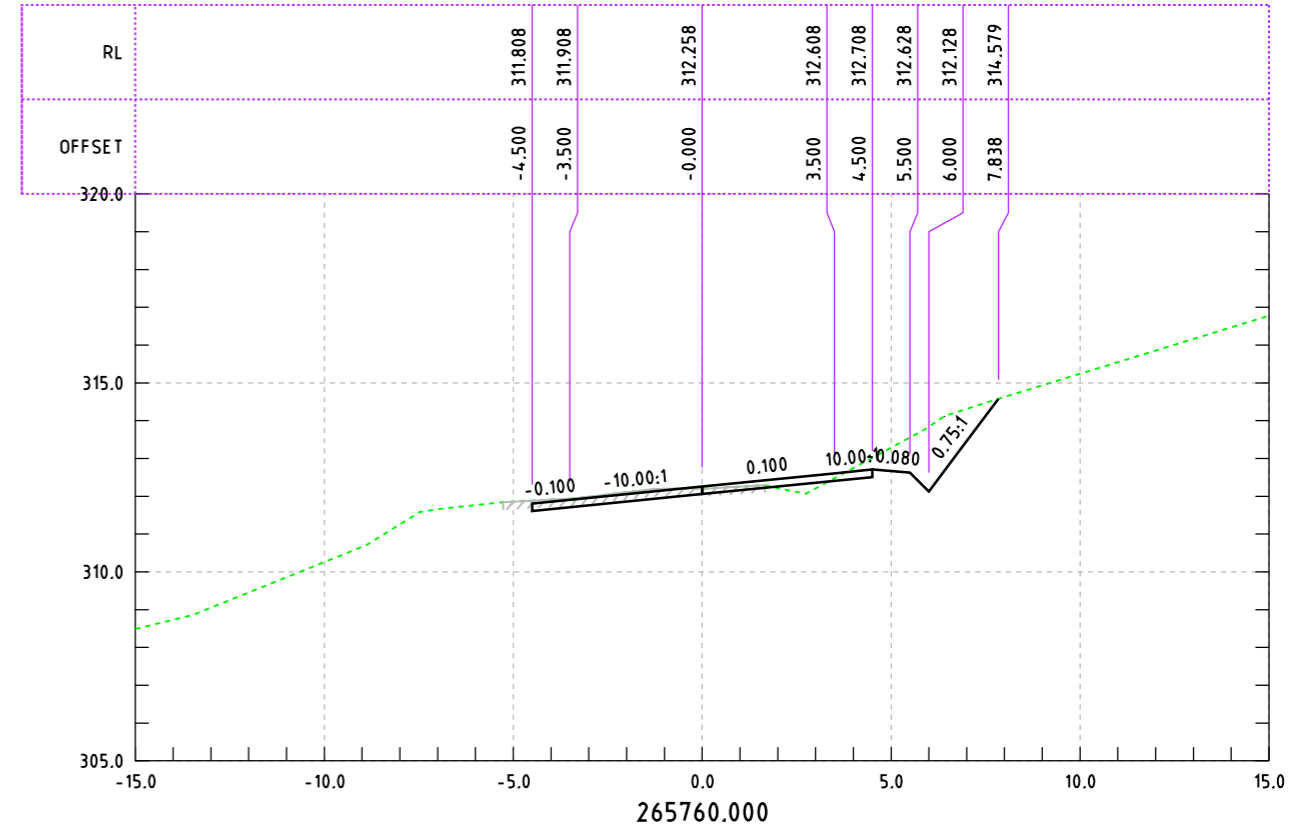
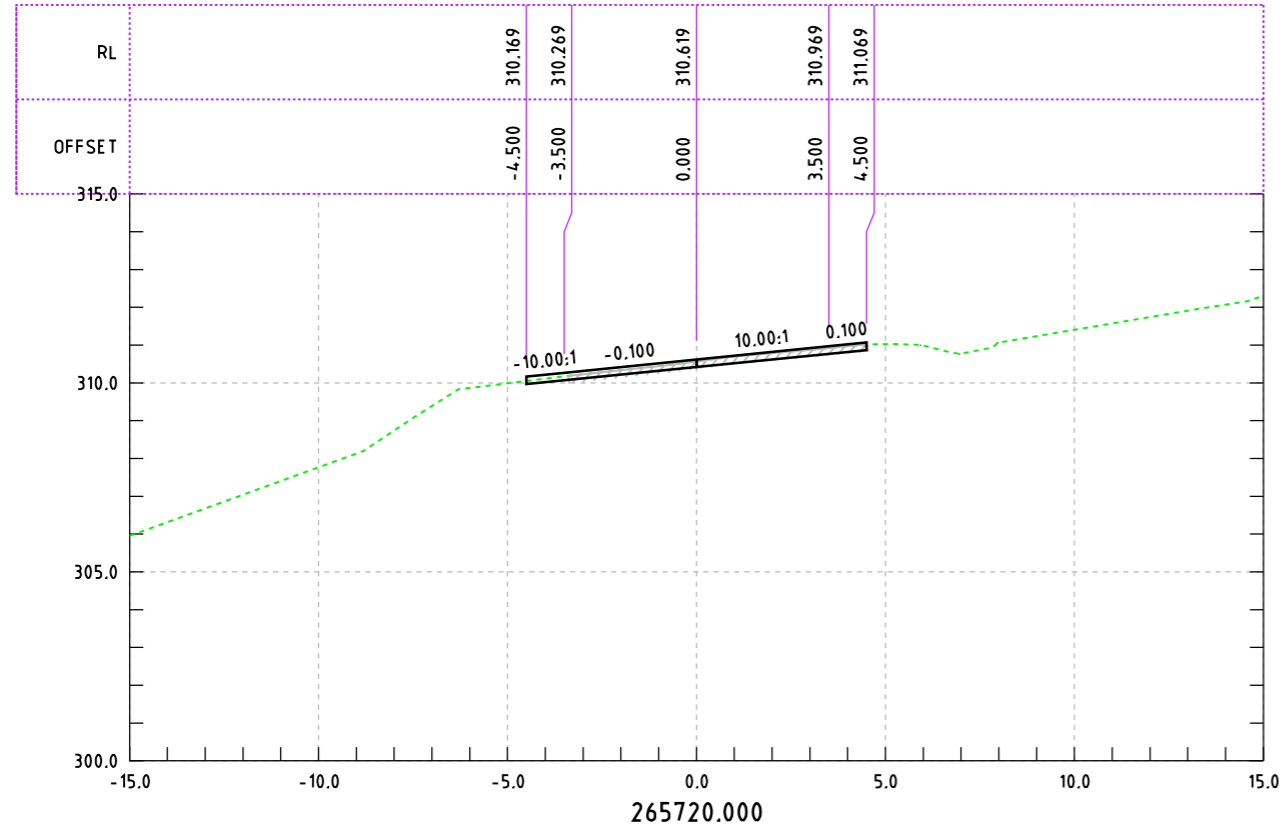
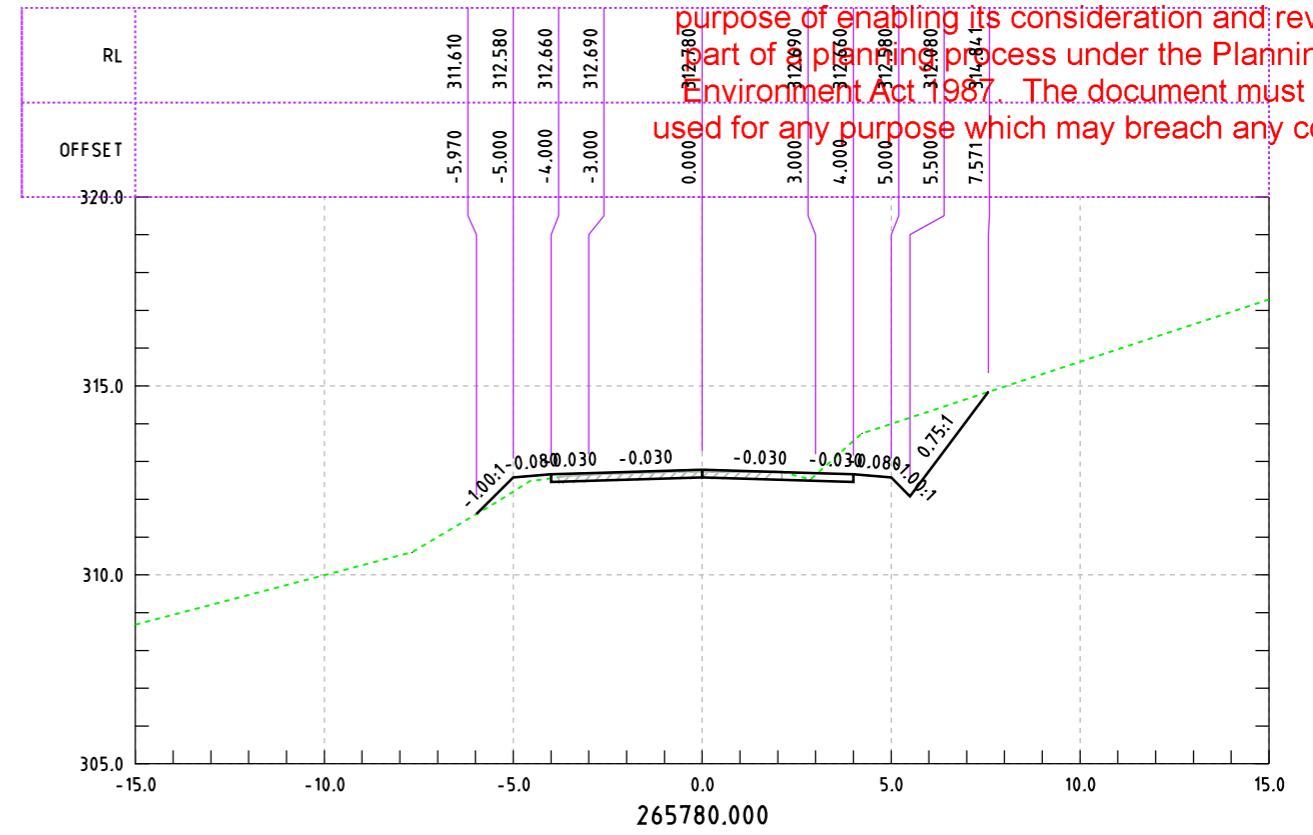
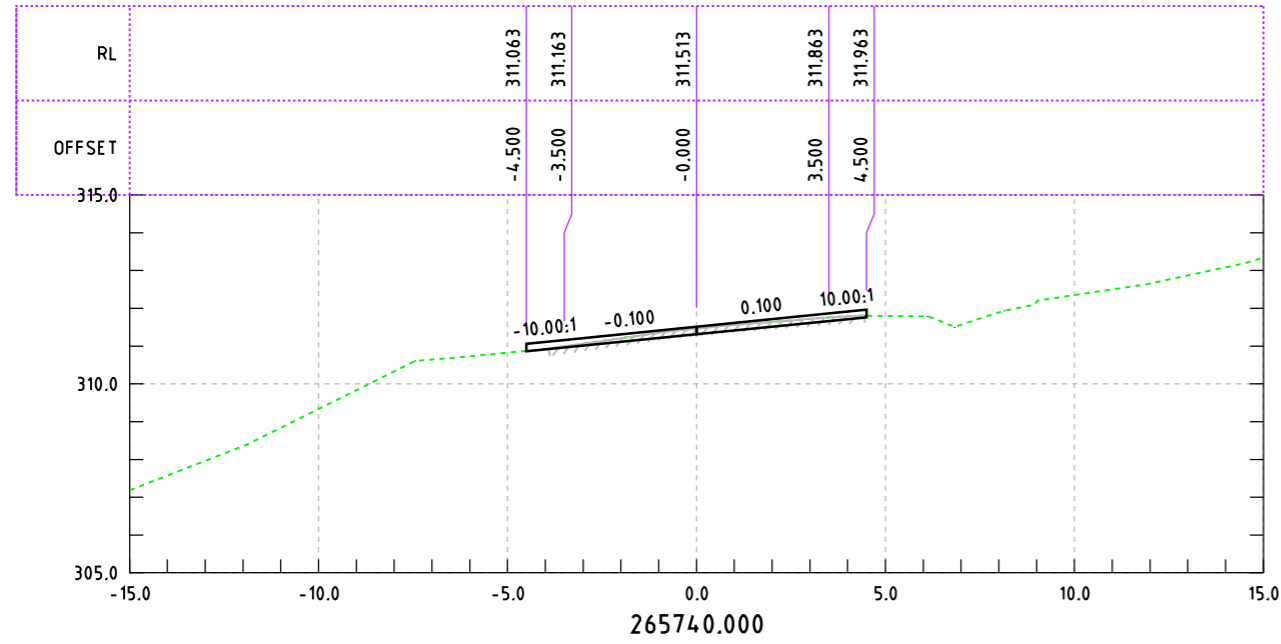
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APPROVED:  
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GREAT ALPINE ROAD  
OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
266 KMS  
CROSS SECTIONS  
CONTRACT NO:



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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

CONSULTANT:

RRV:  
 regional roads victoria  
 SCALE: HOR 0 2 4 (m)  
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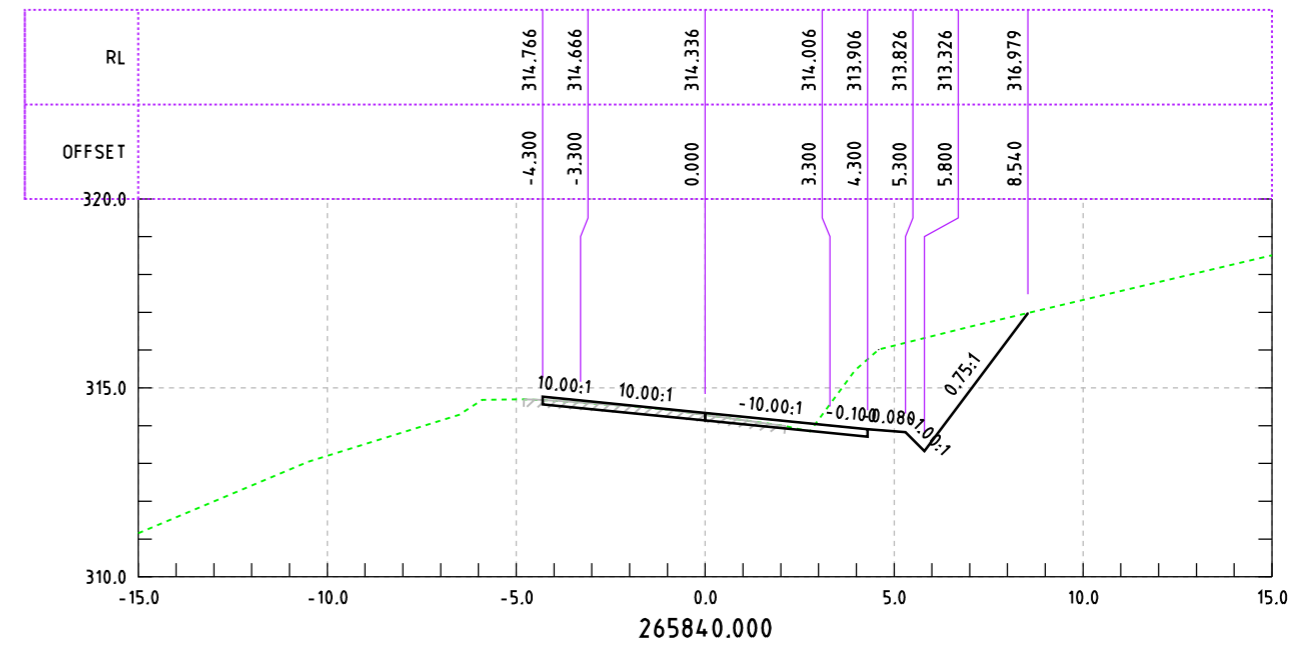
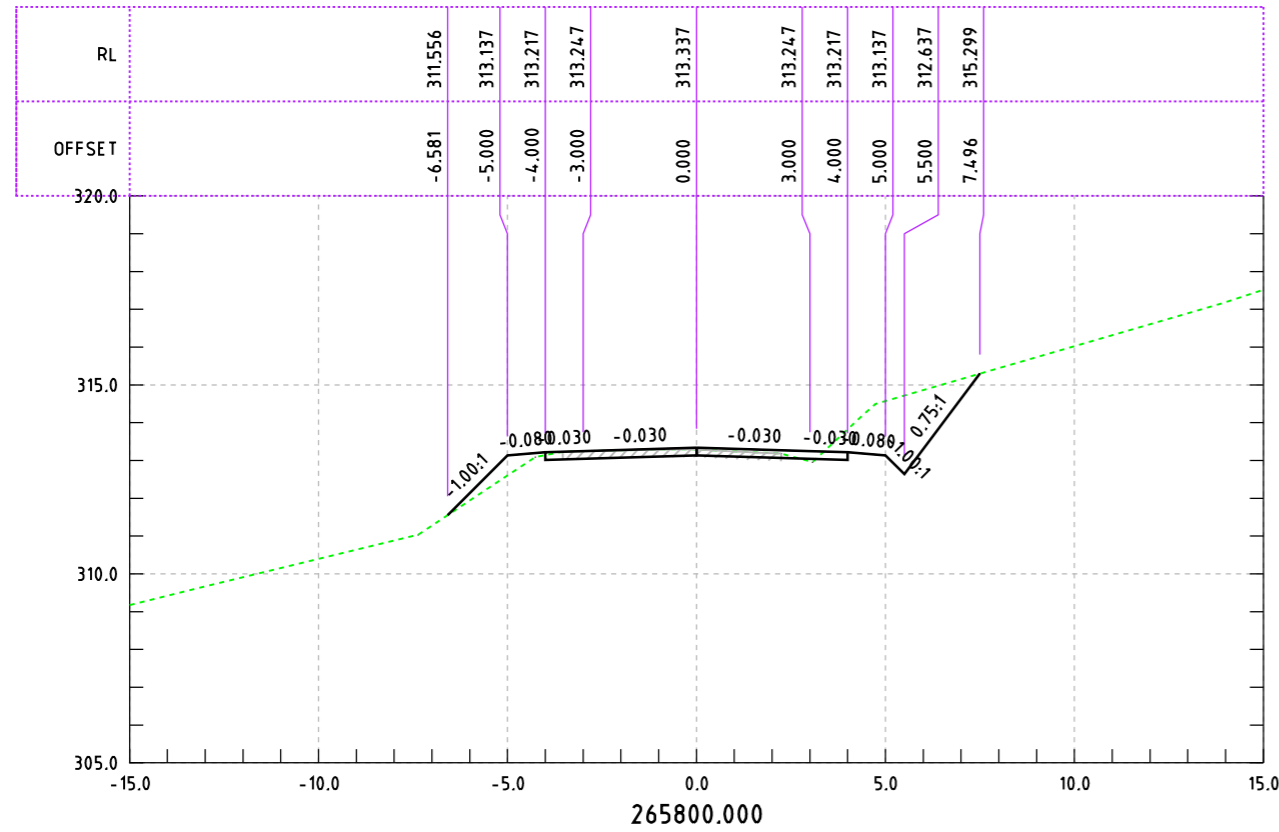
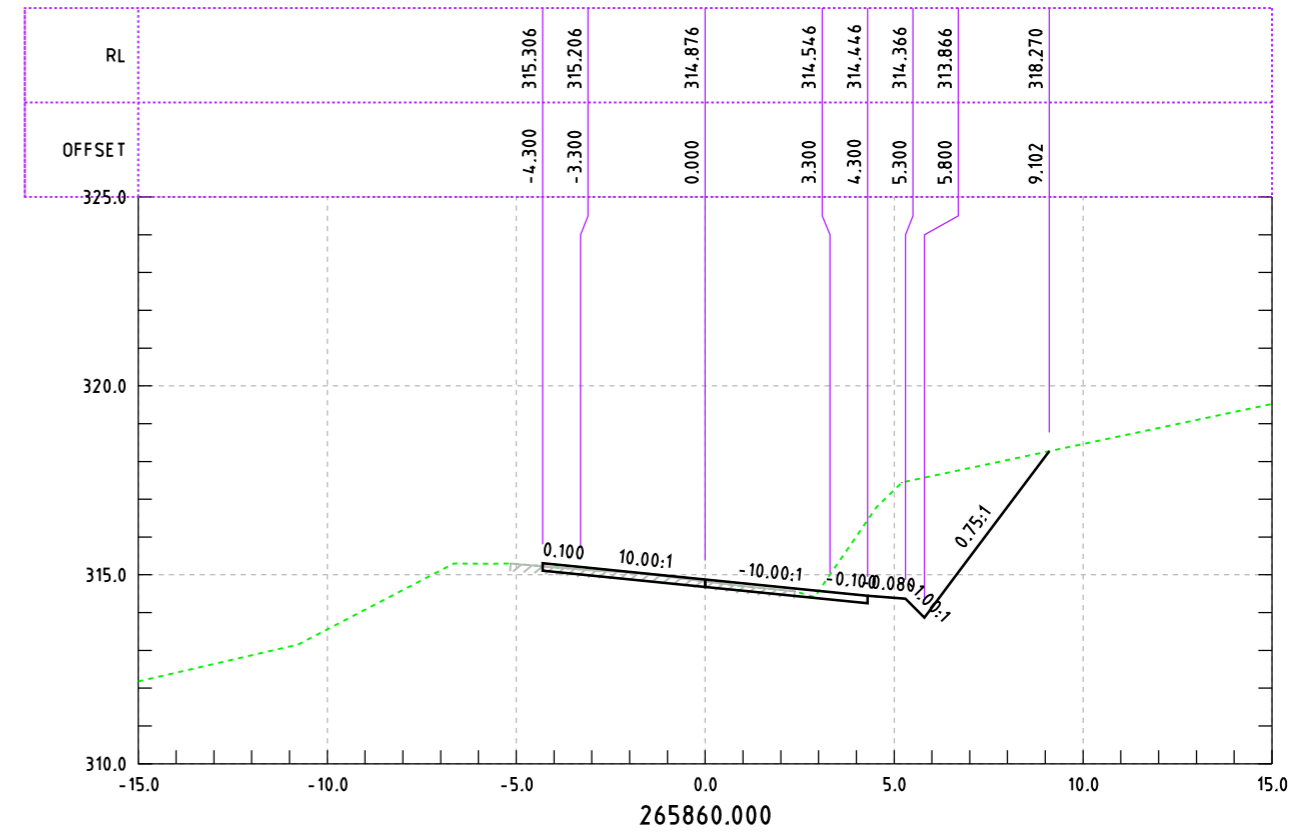
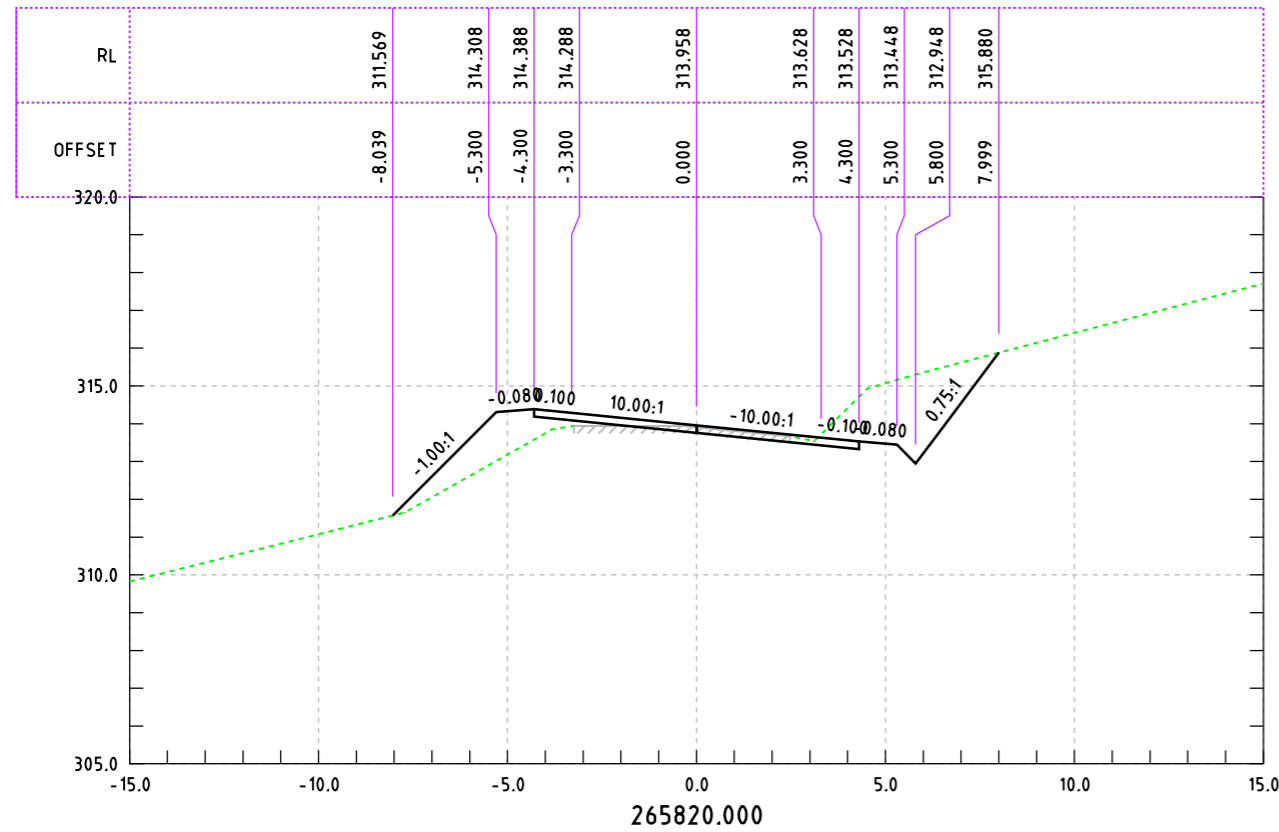
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DESIGNED: EASTERN REGION  
 DATE: Jun-20  
 APPROVED:  
 EASTERN REGION DRAWING FILE: 4005-266000-RW-P01-CIV-0811

GREAT ALPINE ROAD  
 OPTION P01 - MULLOCKY CREEK TO WATTLE CIRCLE  
 266 KMS  
 CROSS SECTIONS  
 CONTRACT NO: 4005-266000-RW-P01-CIV-0811

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ISSUE	APP'D	DATE	AMENDMENT DESCRIPTION

CONSULTANT:

RRV:  
 regional roads victoria  
 SCALE: HOR 0 2 4 (m)  
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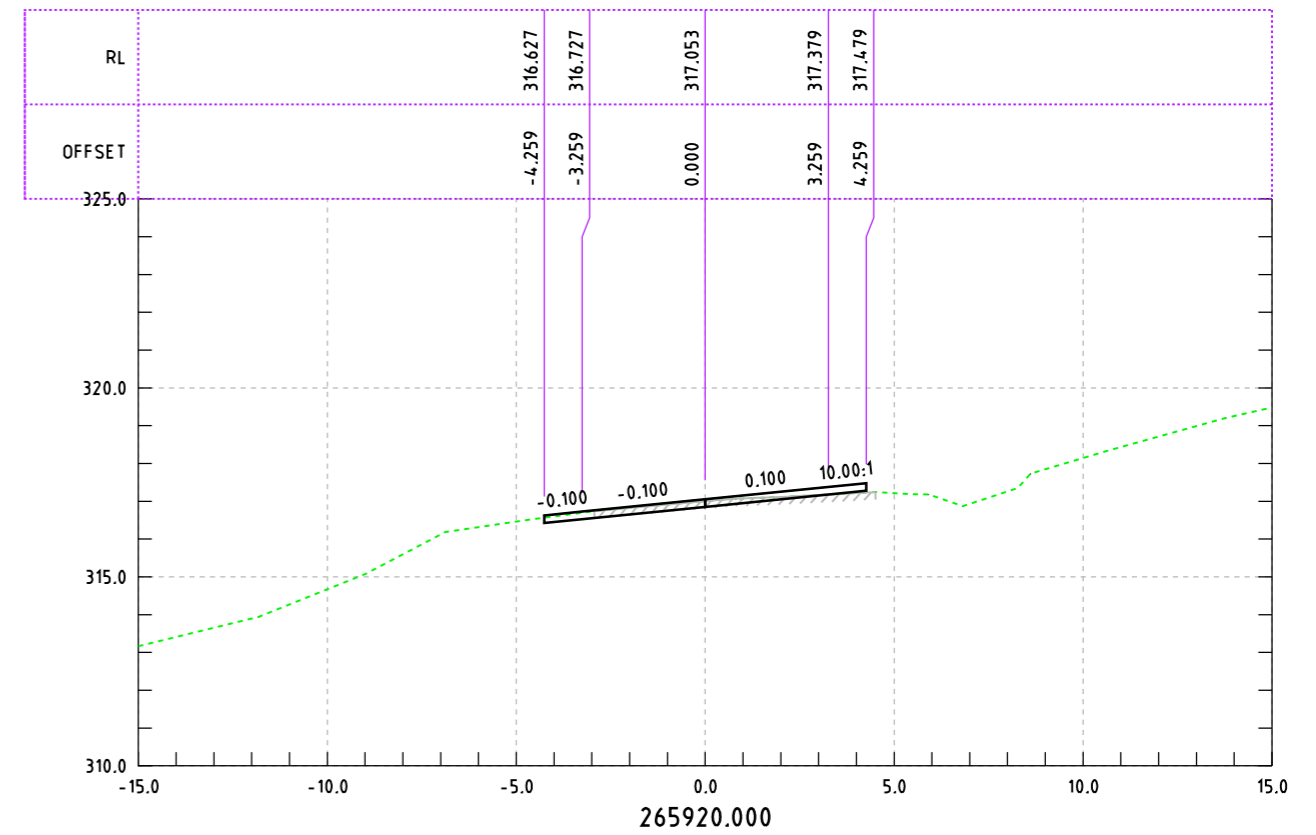
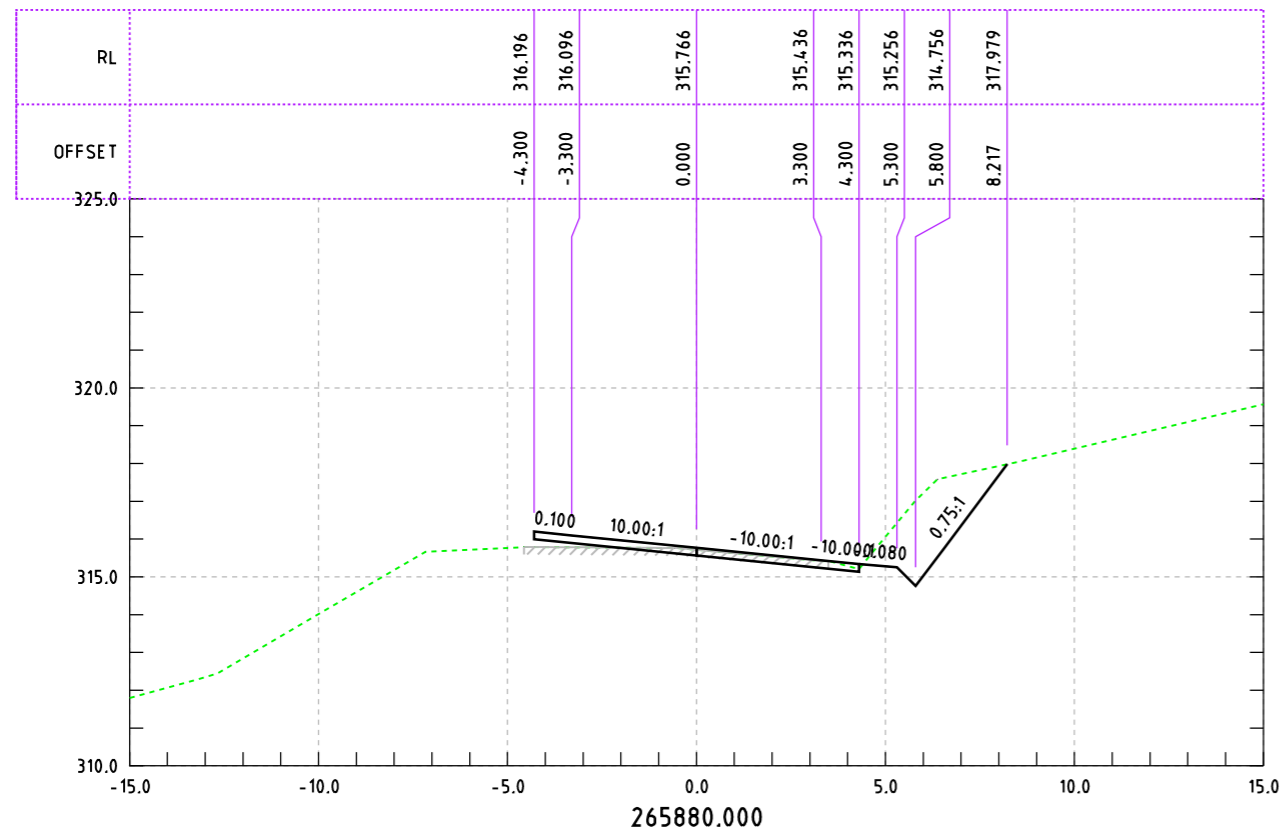
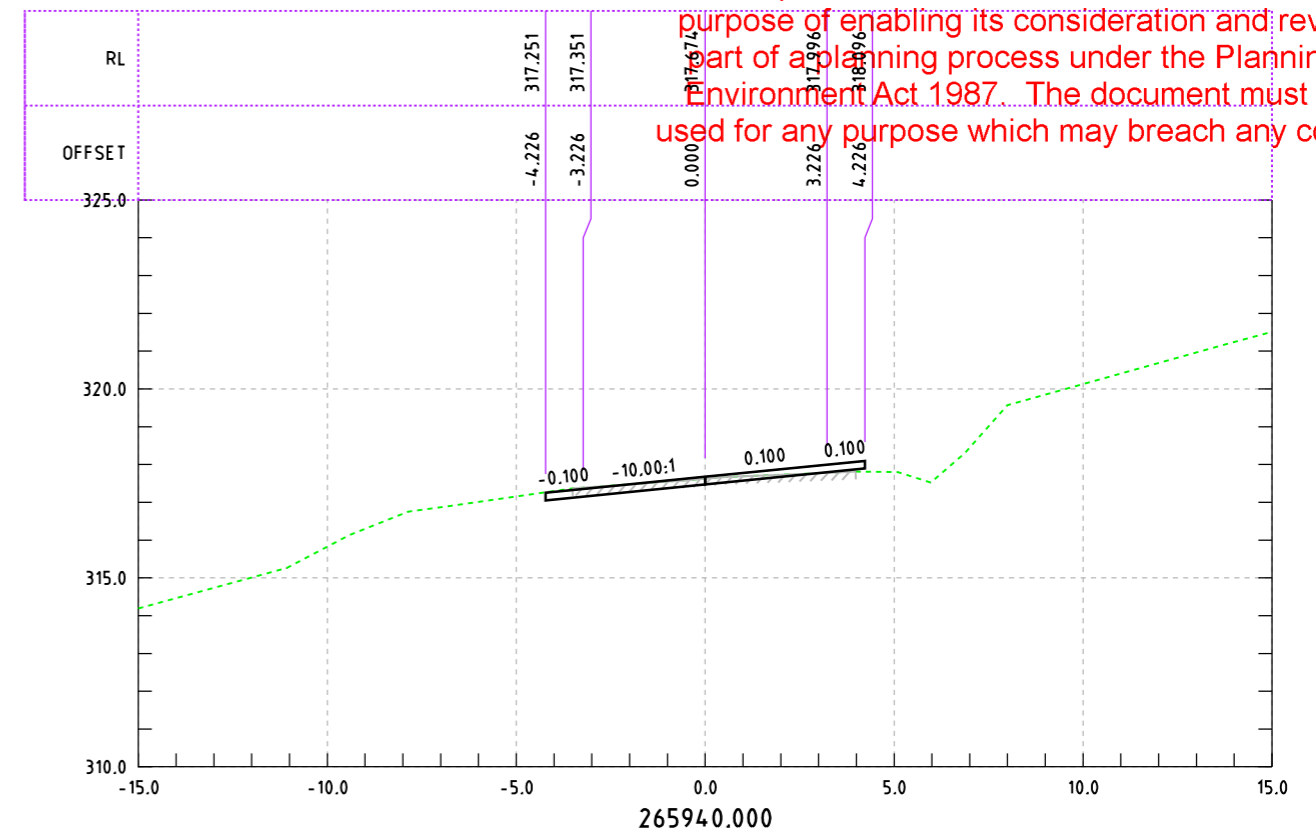
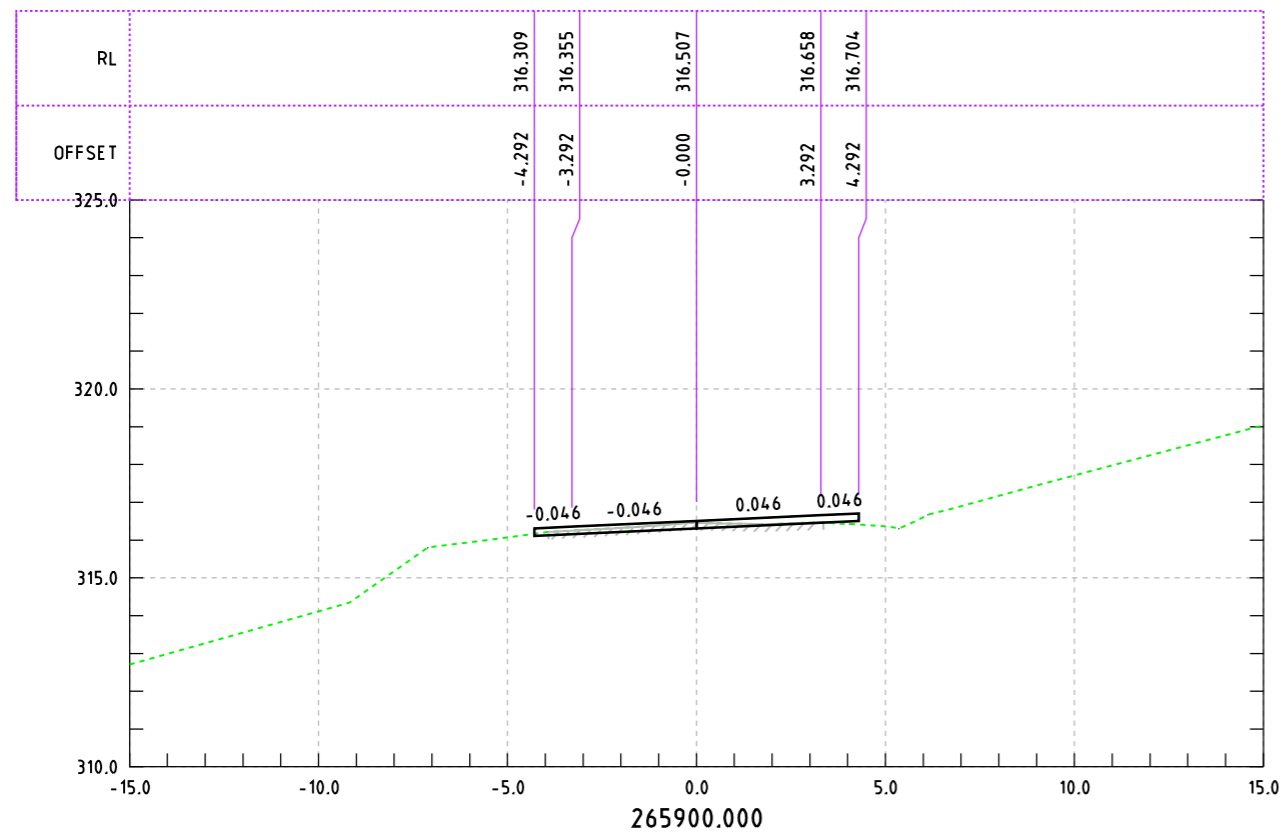
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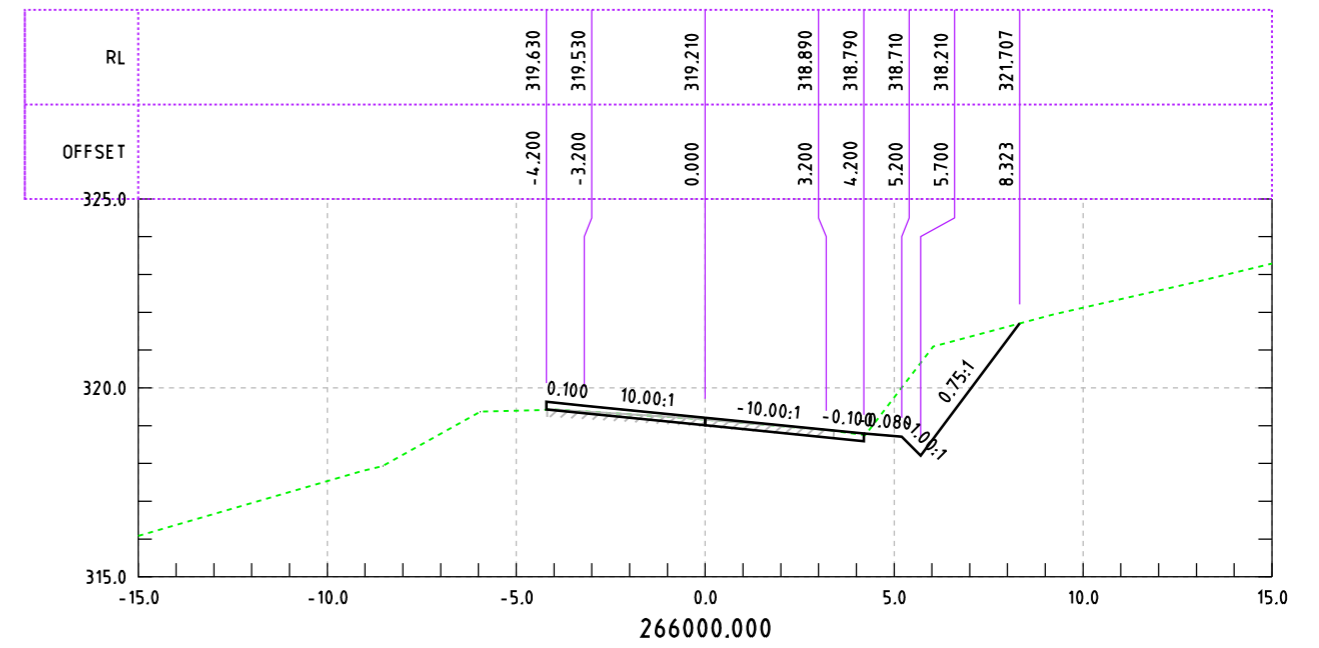
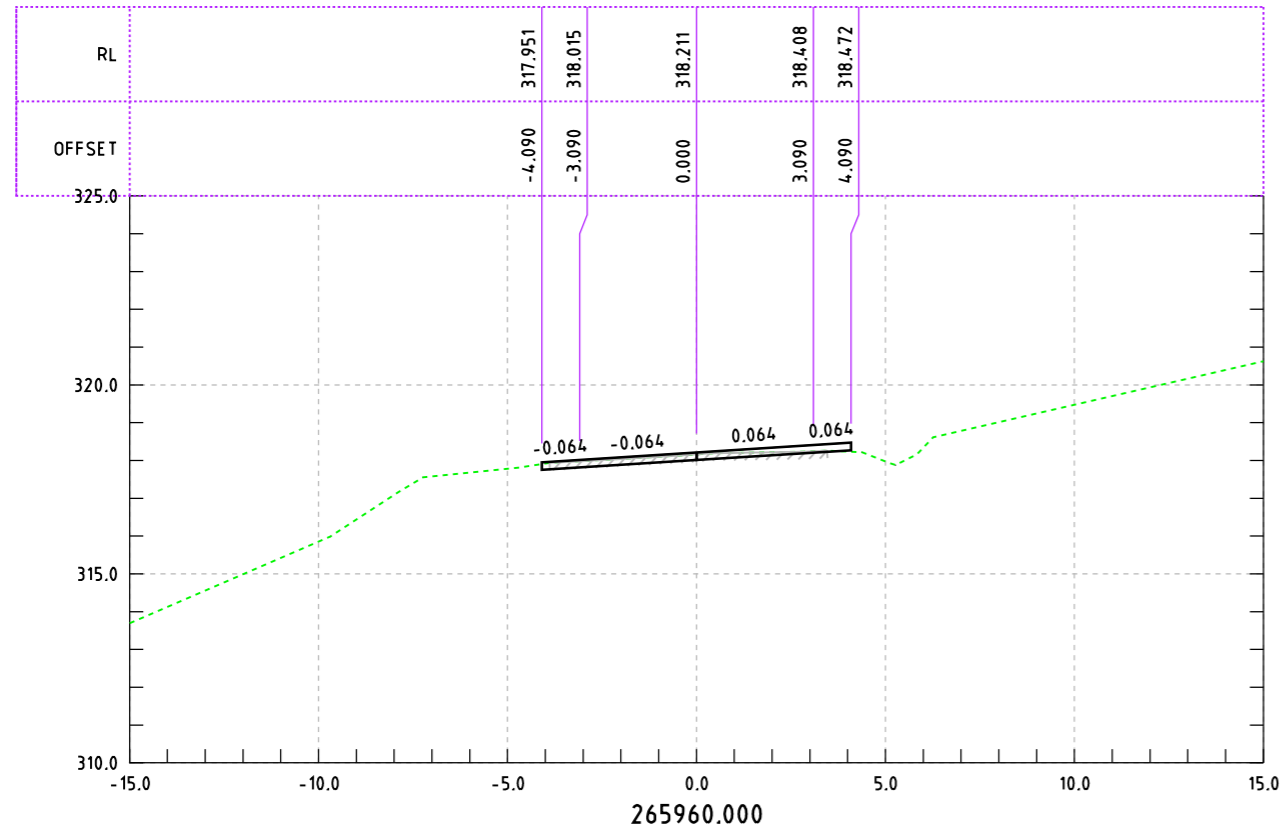
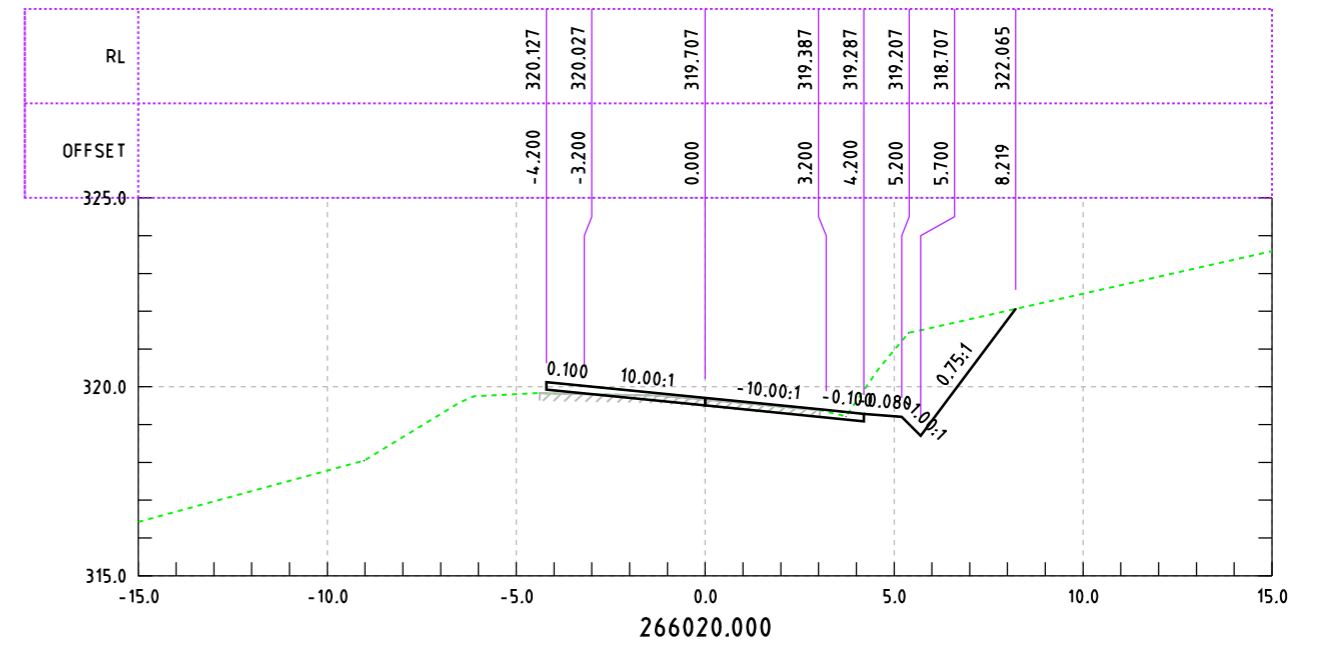
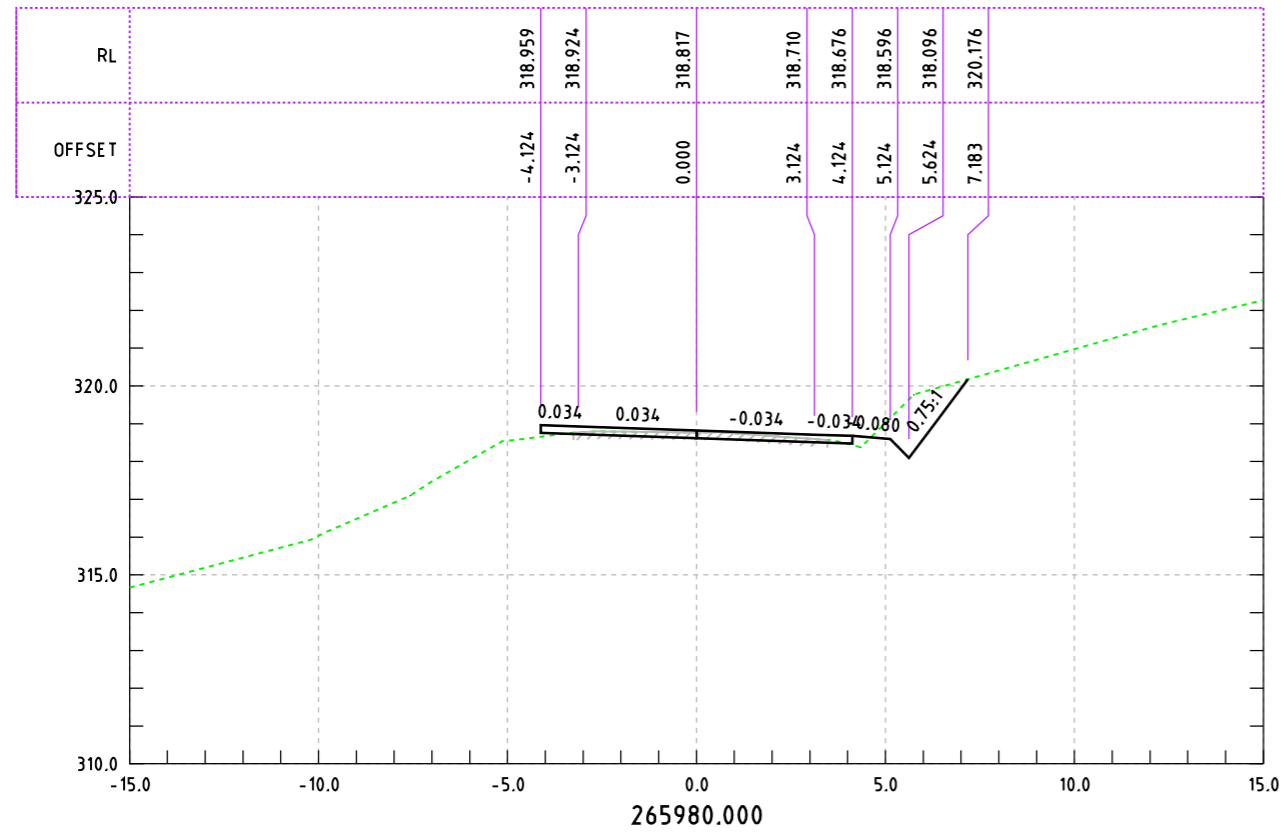
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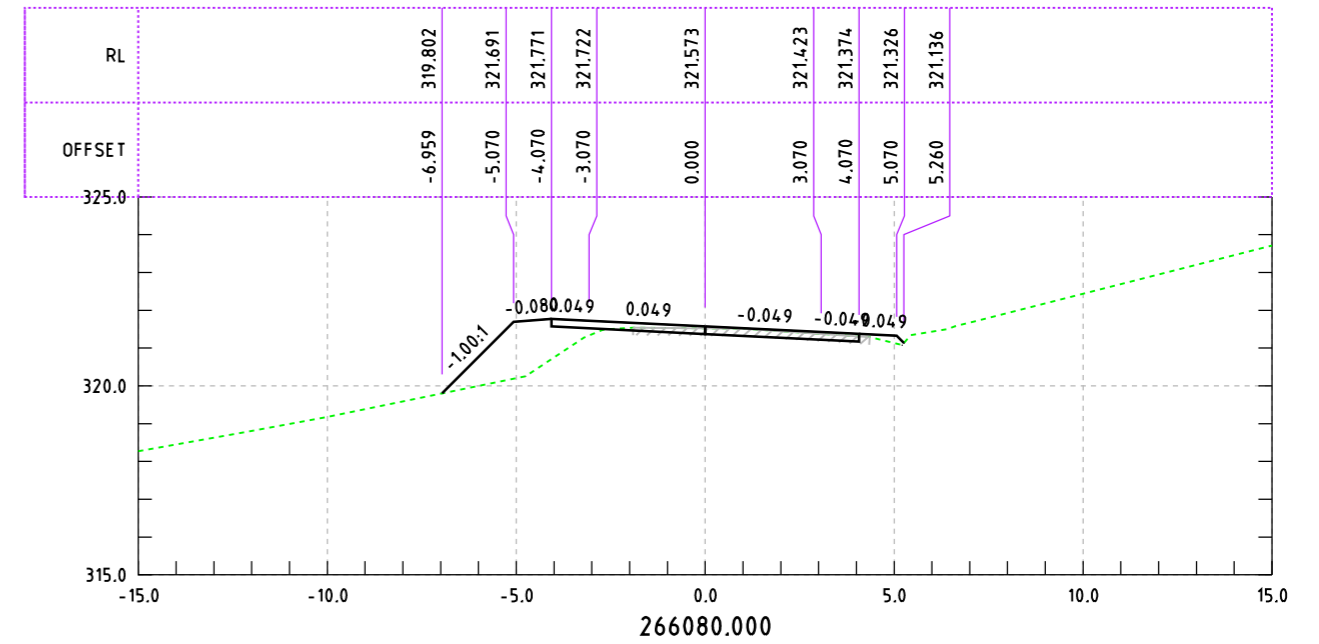
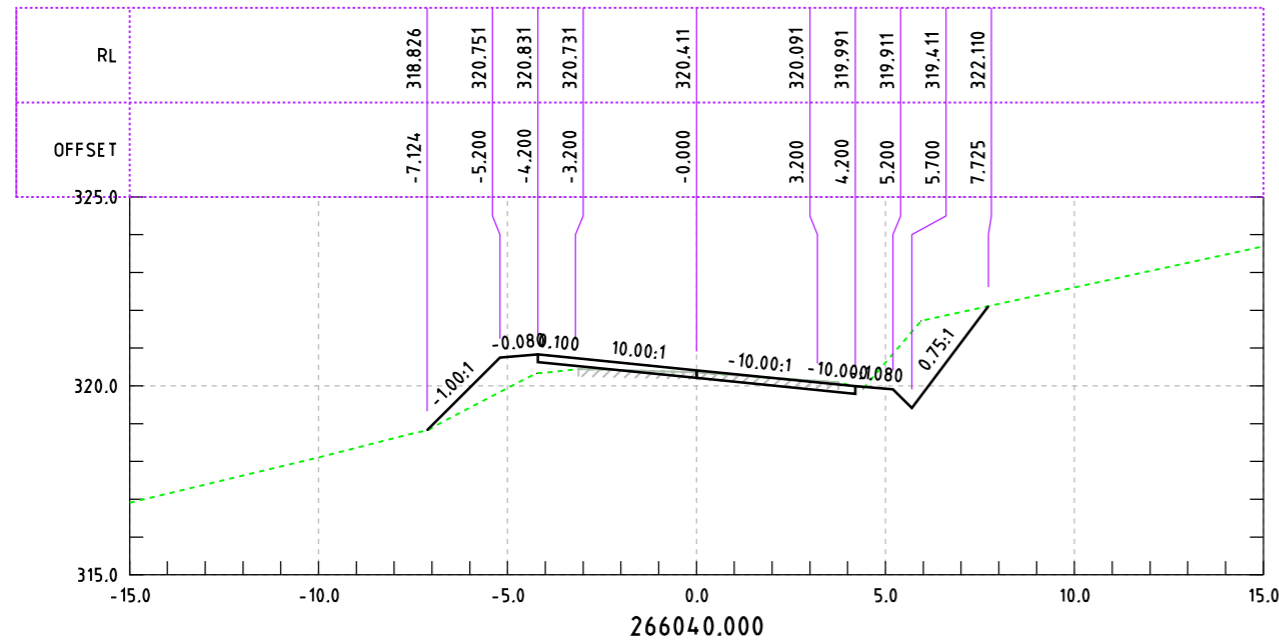
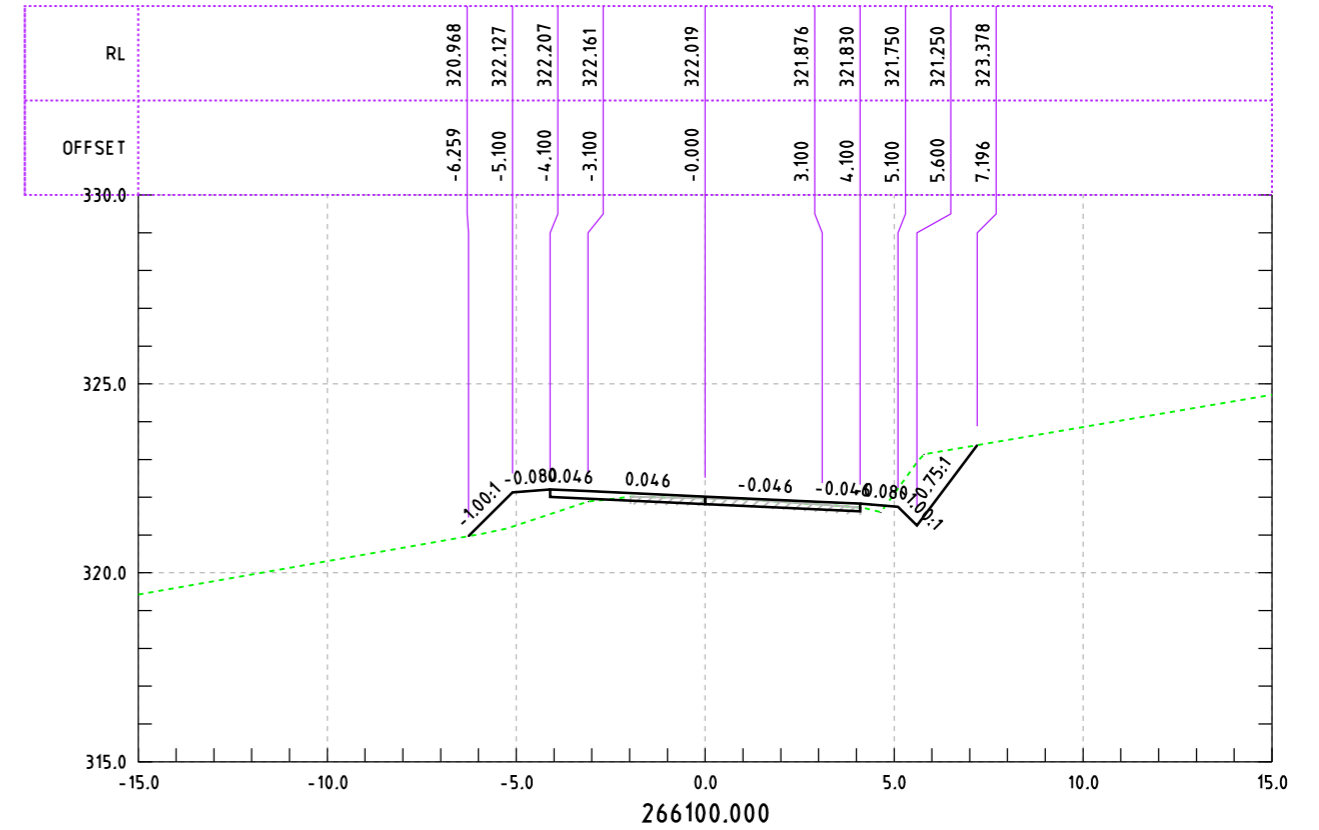
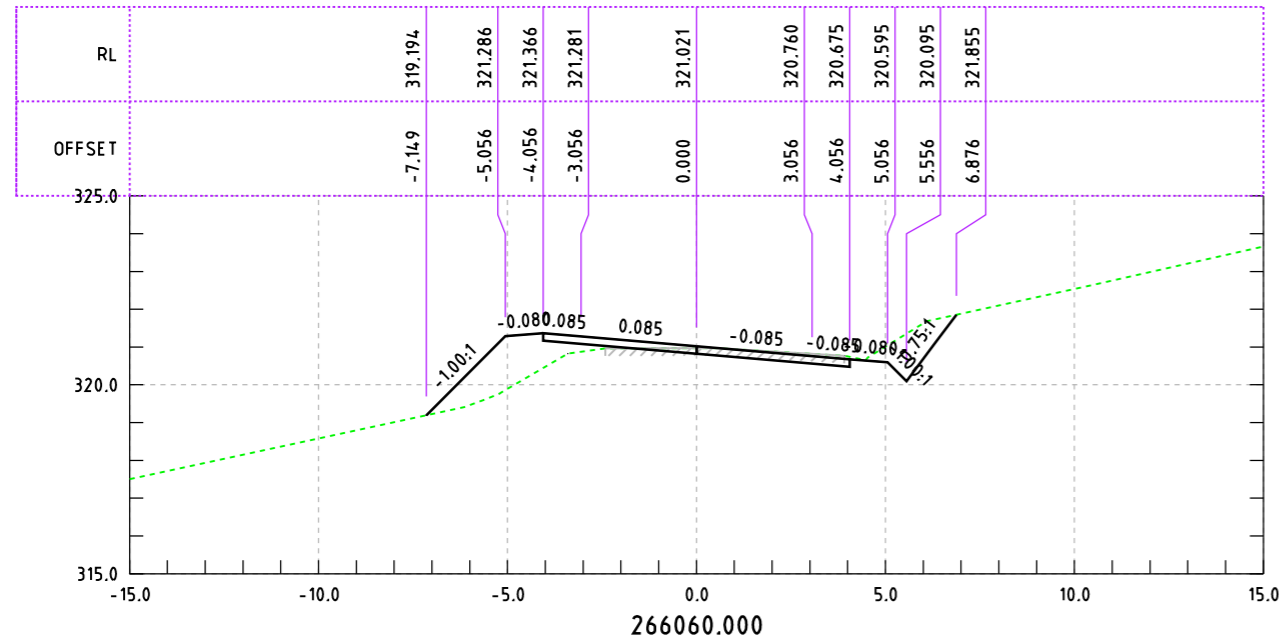
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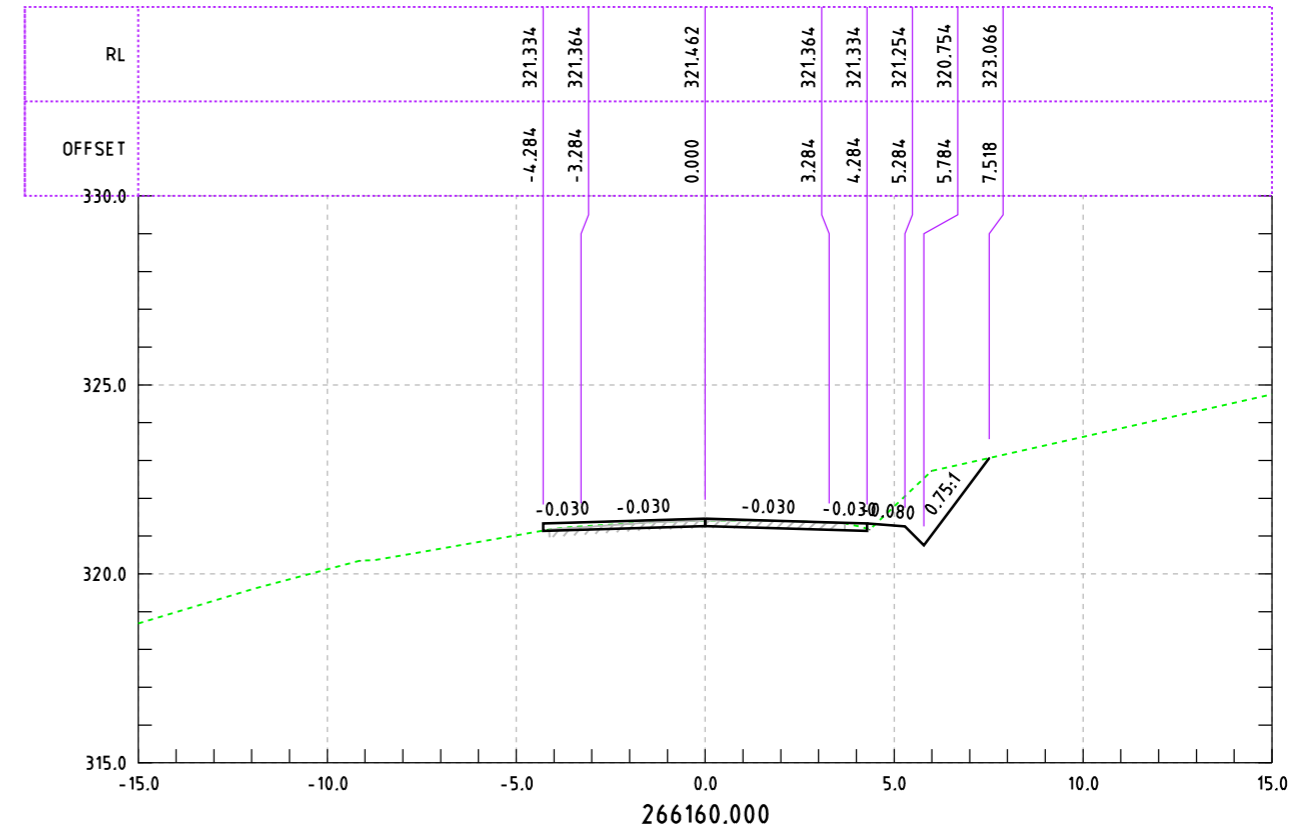
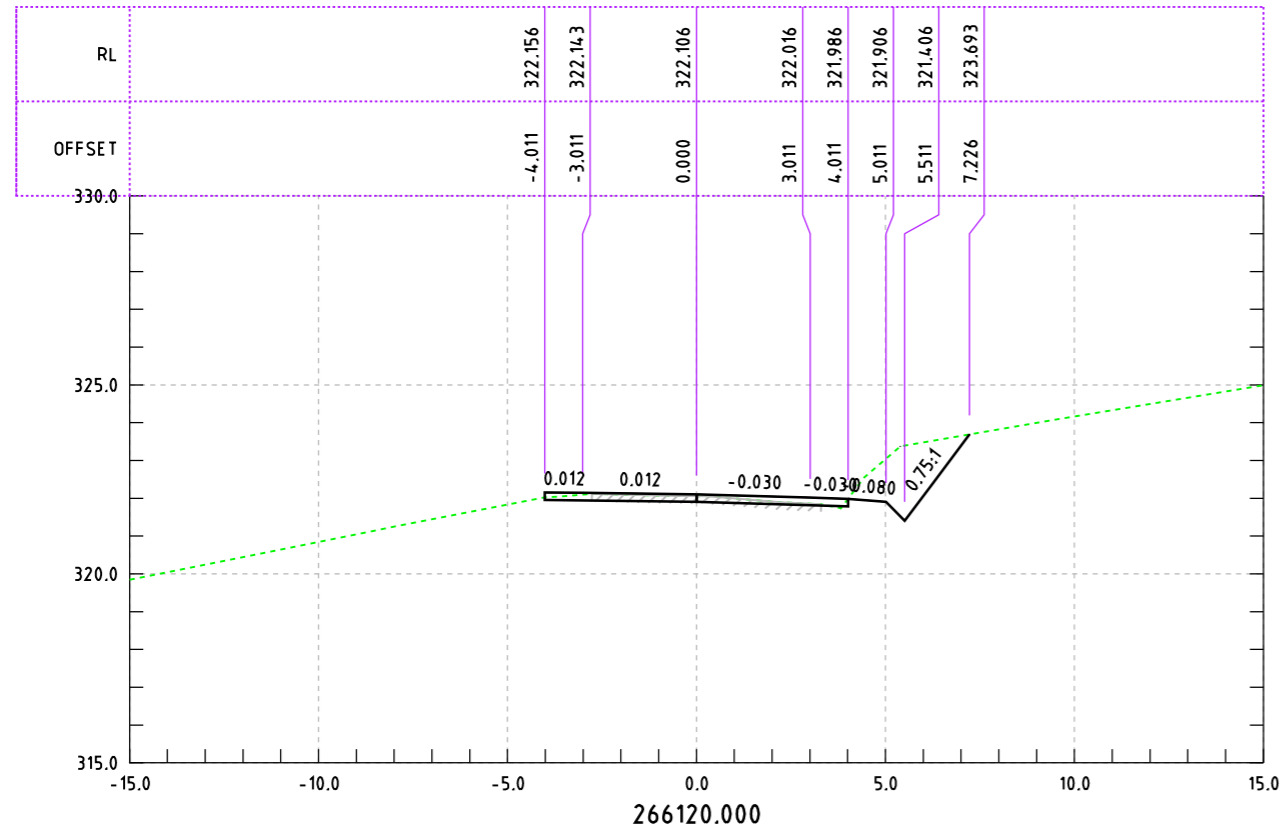
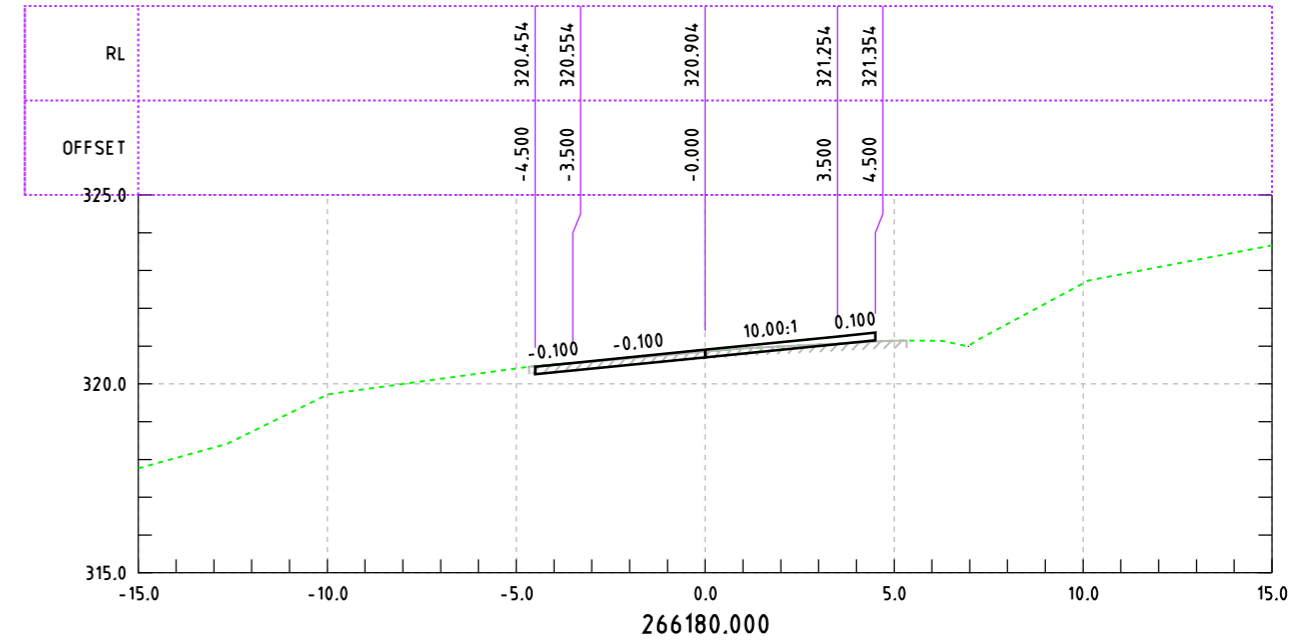
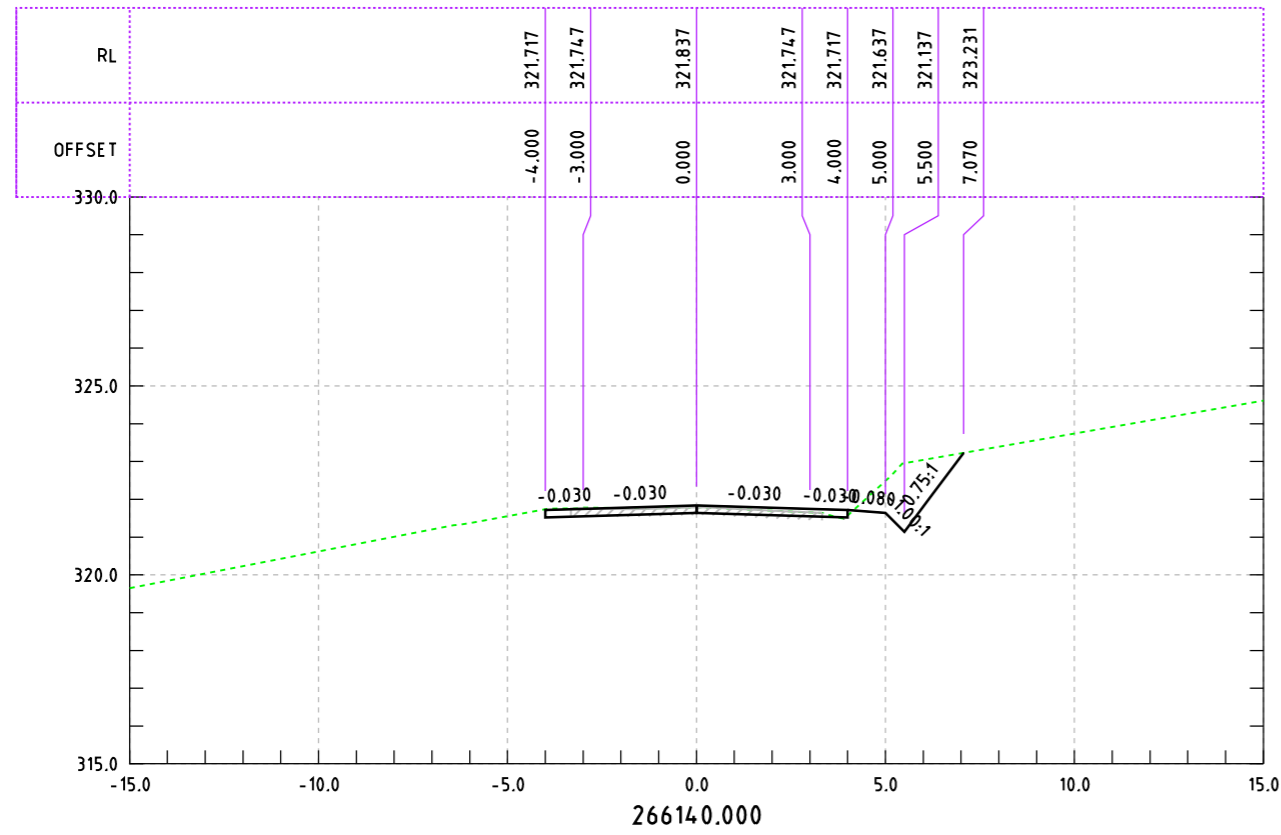
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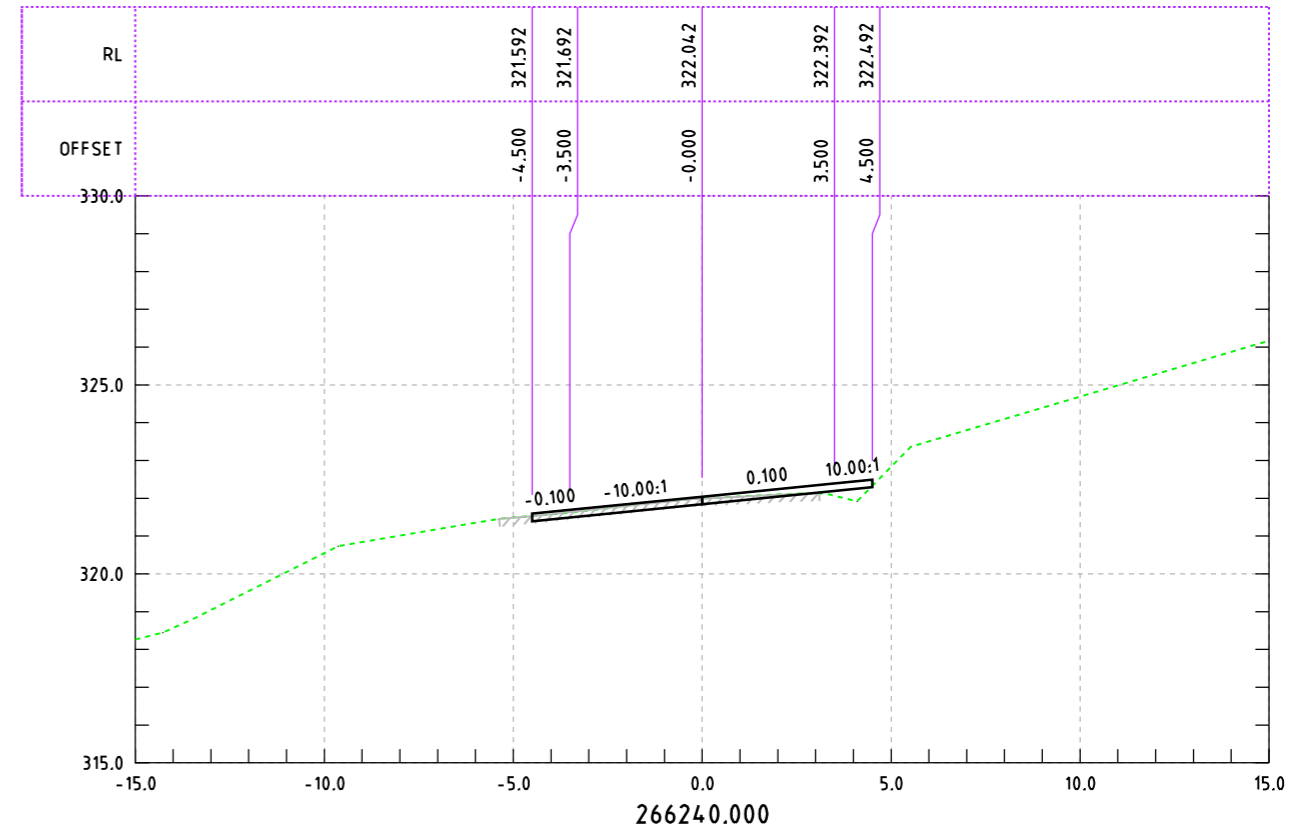
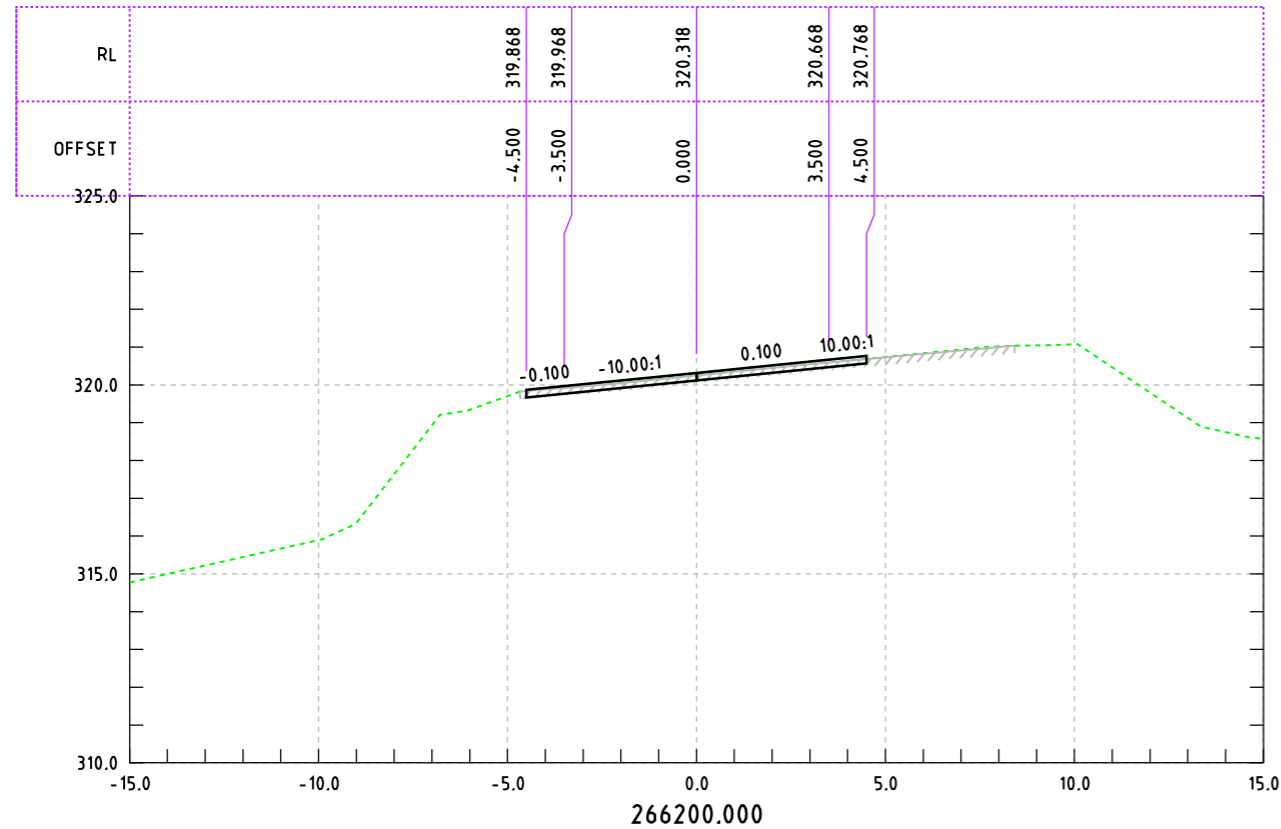
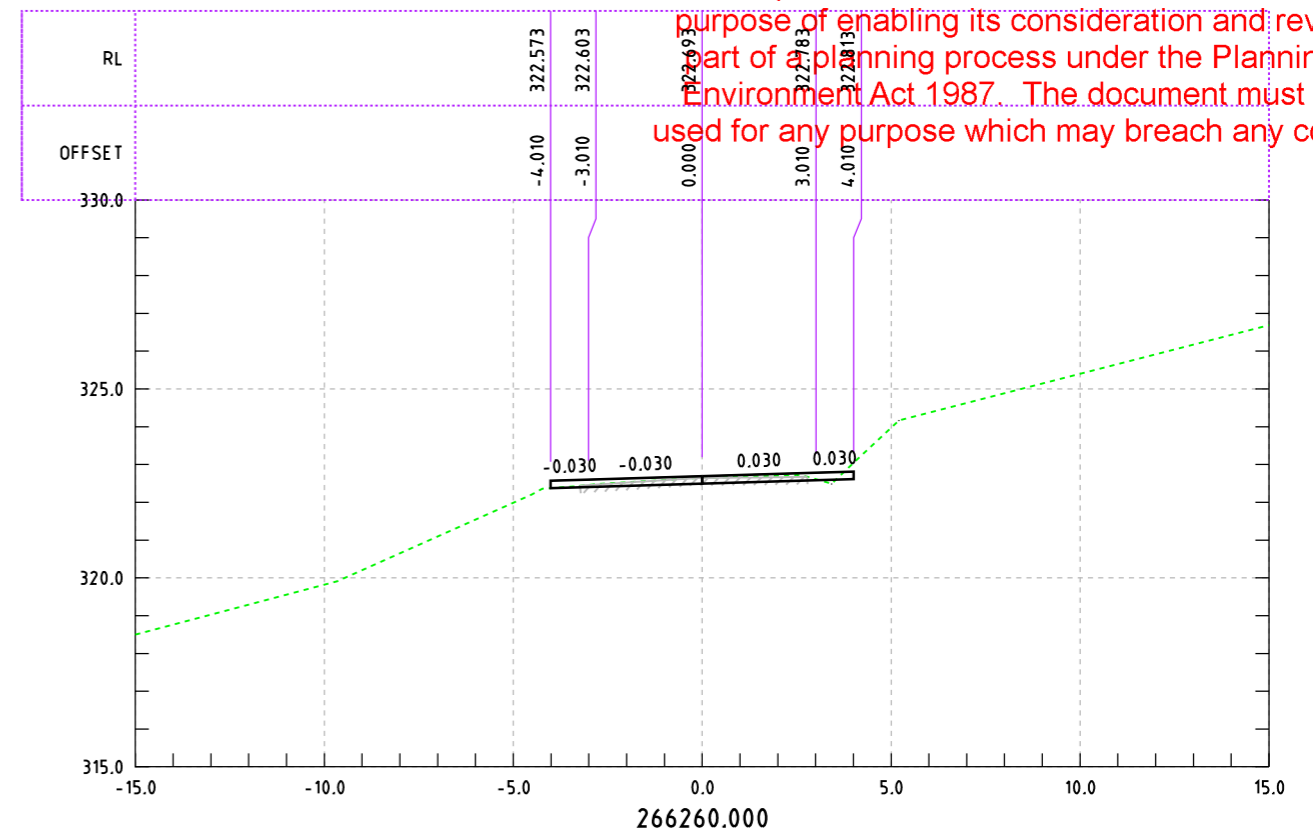
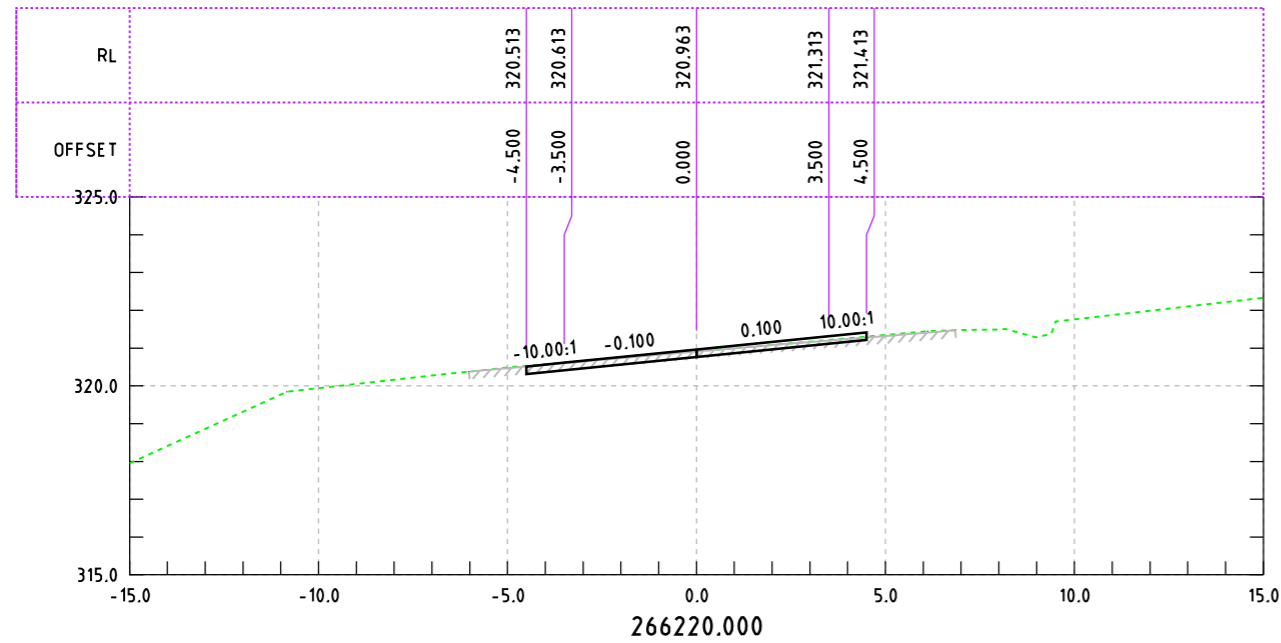
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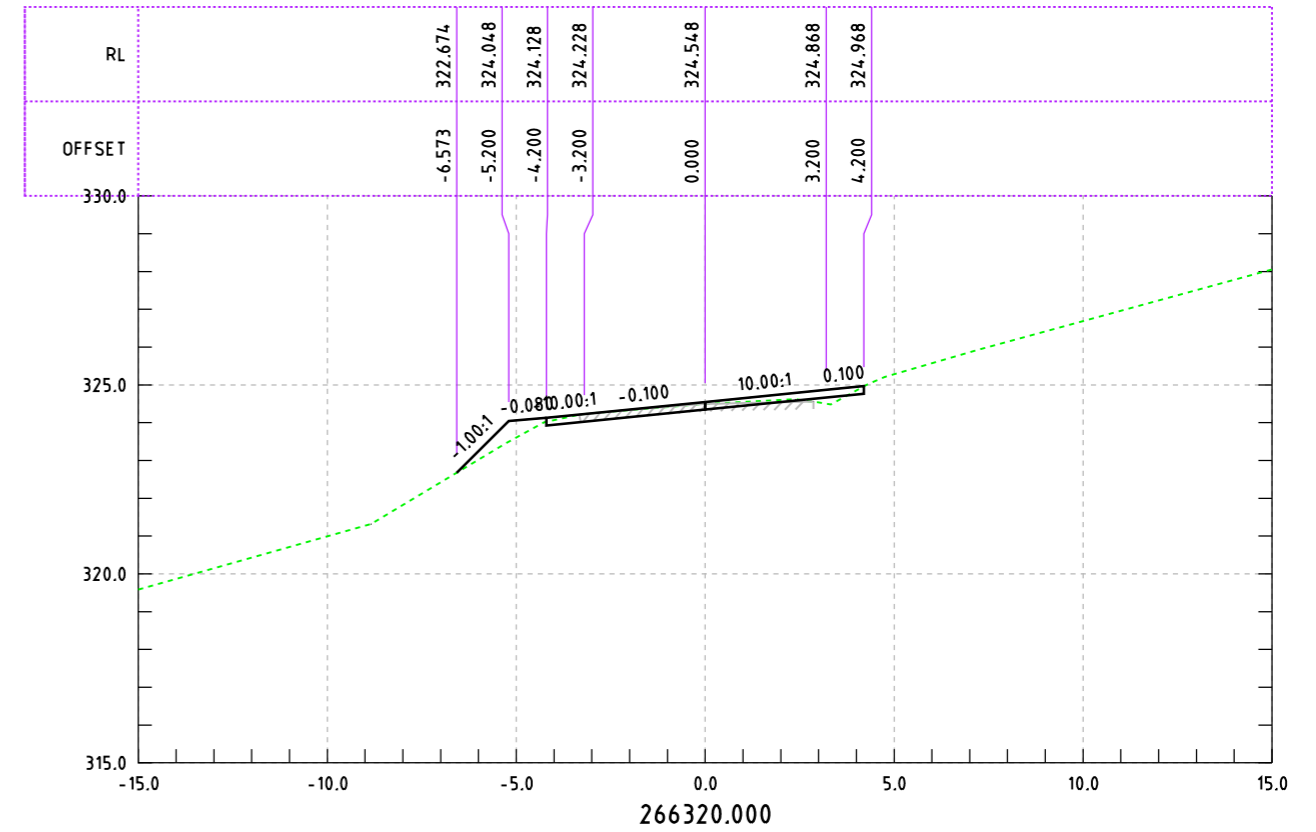
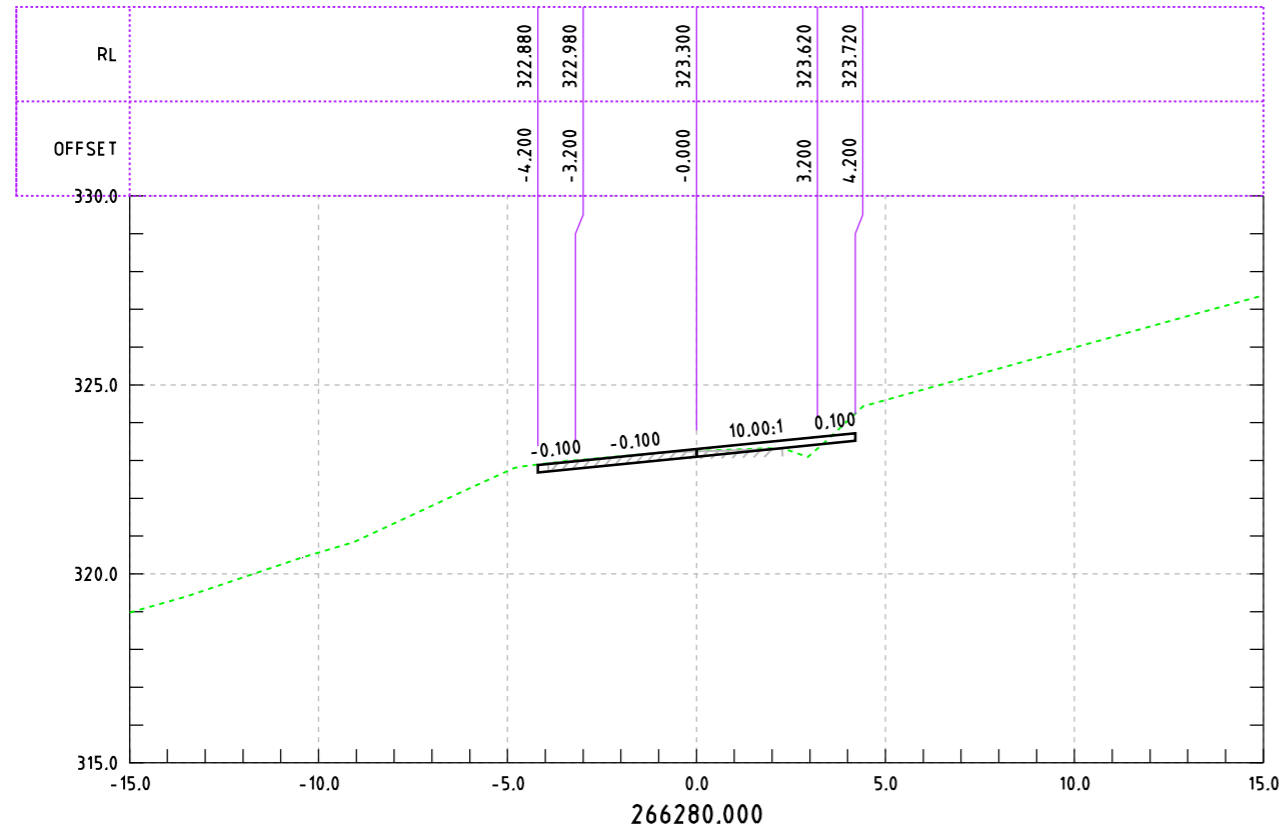
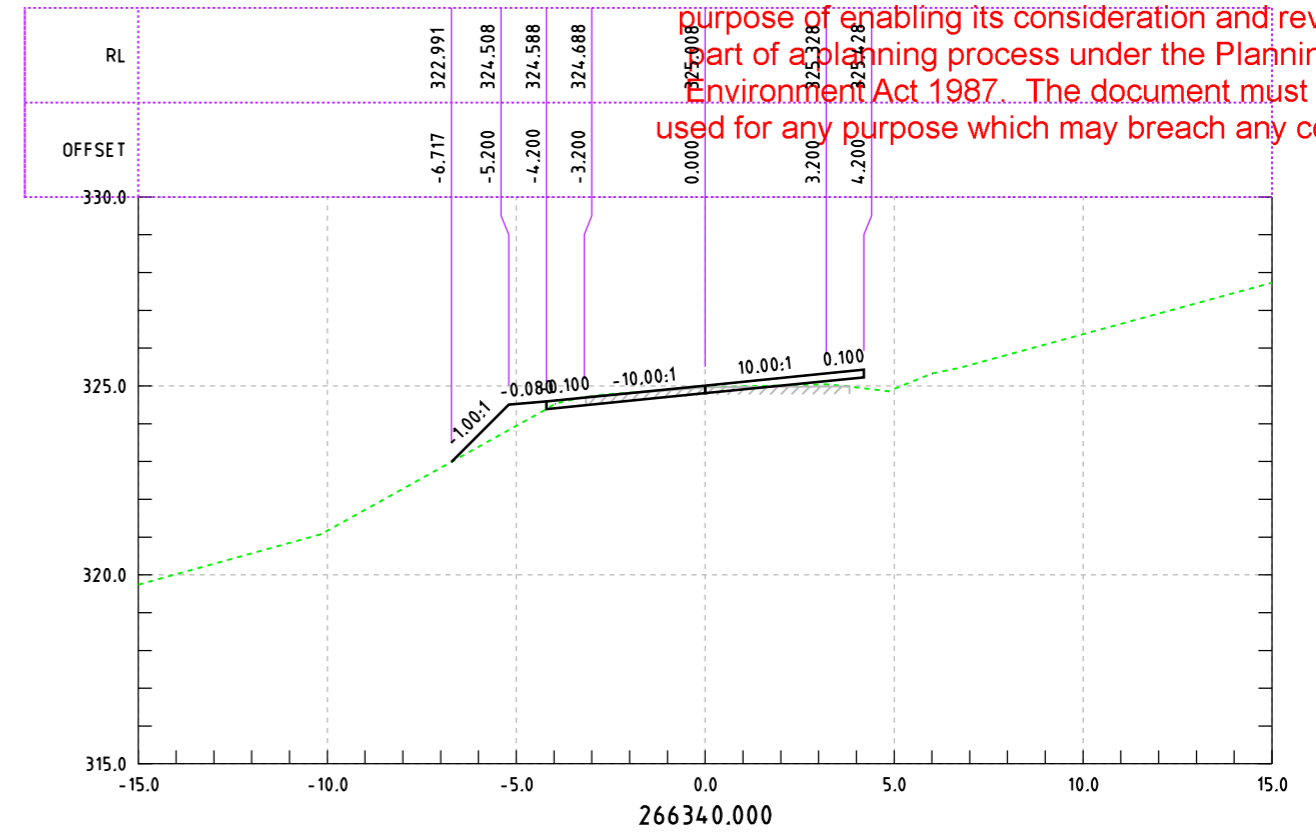
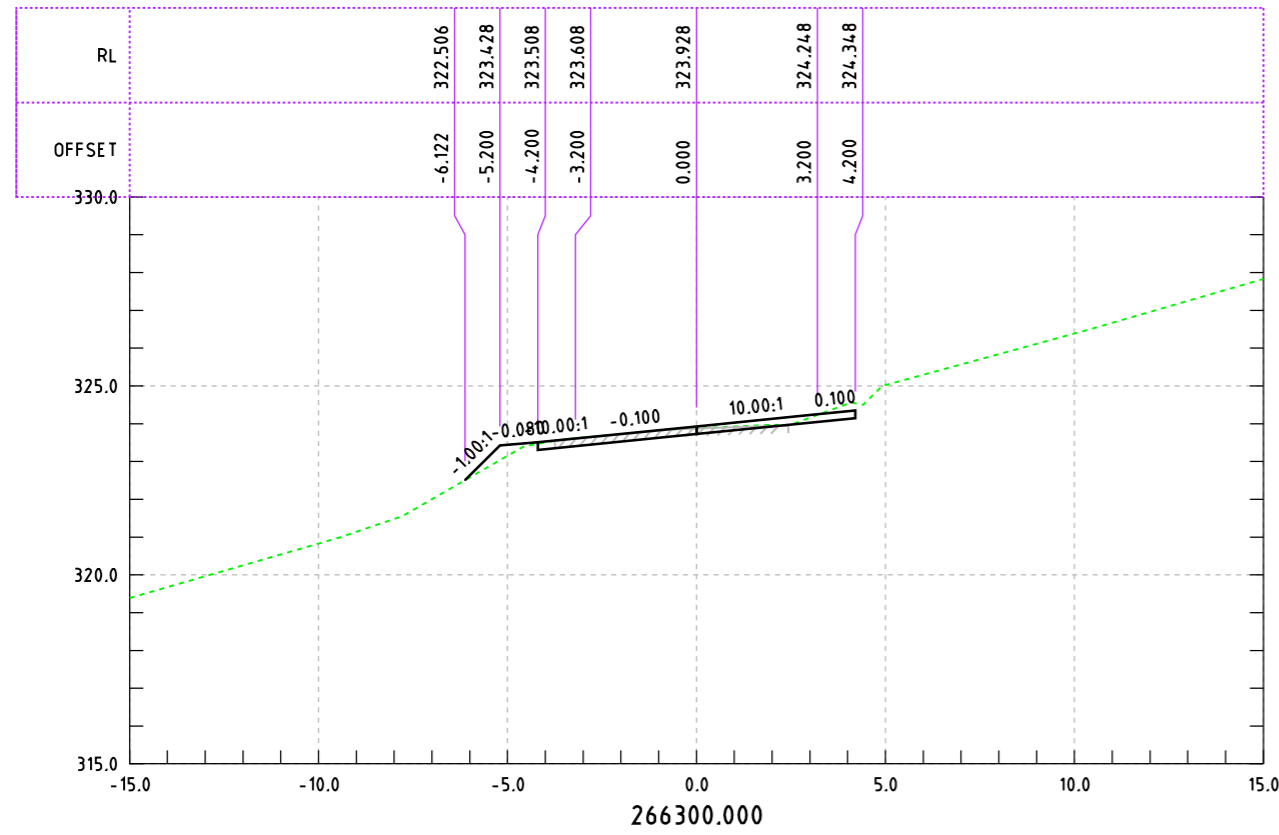
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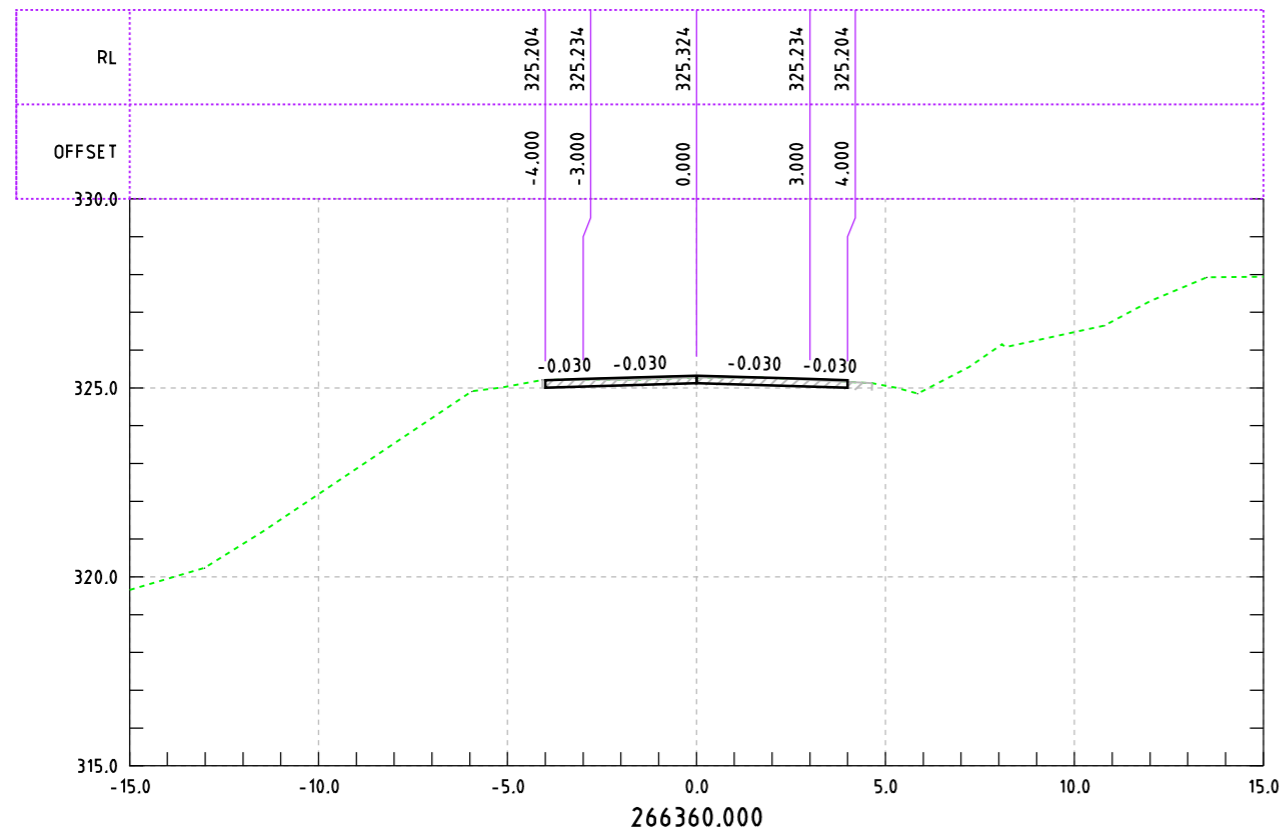
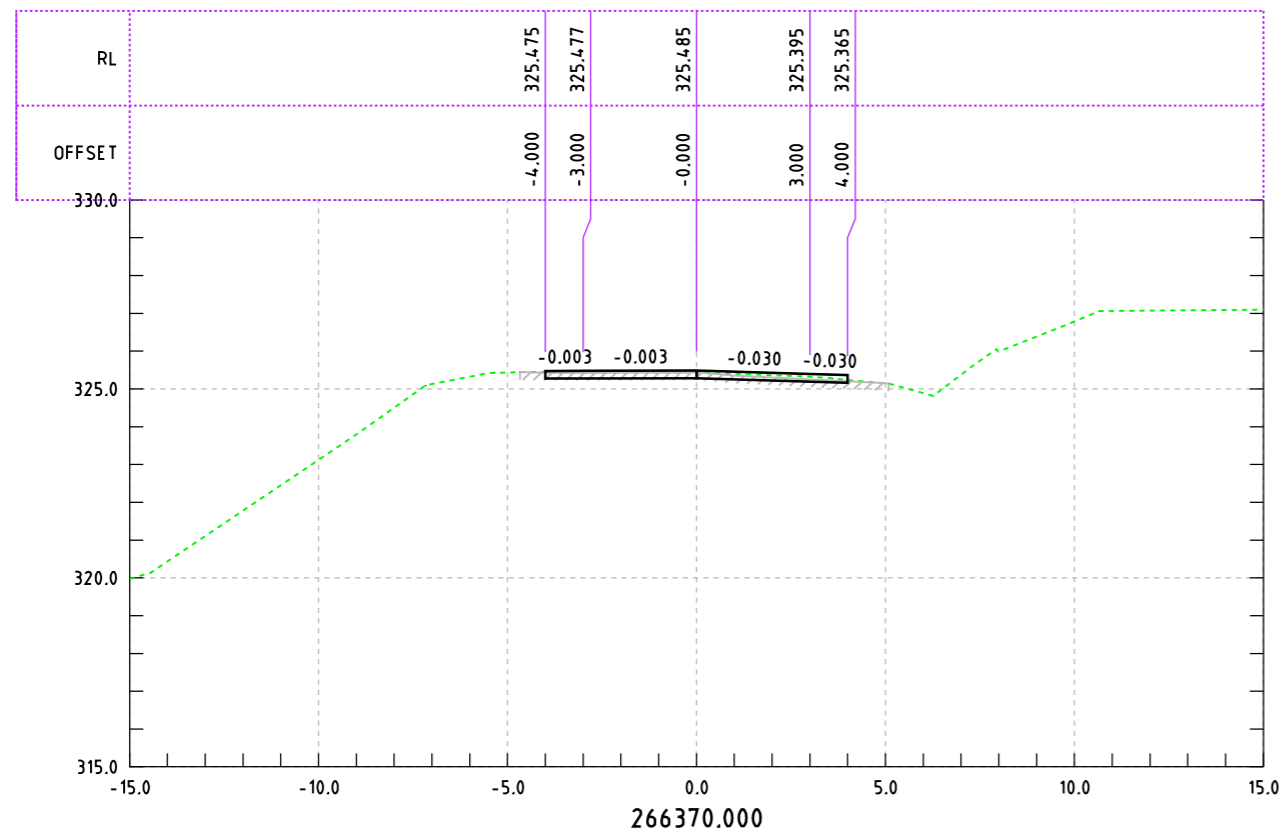
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SMEC INTERNAL REF. 30042306

Detailed Flora and Fauna Assessment

# Walsh's Cutting to Mullocky Creek, Great Alpine Road

Reference No. 30042306

Prepared for Regional Roads Victoria

17 December 2020

Printed 8/02/2021  
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Project Number:	30042306
Revision Number	2

## Revision History

Revision No.	Date	Prepared By	Reviewed By	Approved for Issue By
1	13 November 2020	Nicholas Carter Jacinta Harrison	Dan Weller Andrew Taylor	Jenna Forbes
2	17 December 2020	Nicholas Carter Jacinta Harrison	Dan Weller	Jenna Forbes

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## TIME OF YEAR

The biodiversity assessment of the study site was undertaken in October. This is considered an optimal time of year for conducting flora and fauna surveys as many ephemeral flora species are flowering and visible, and many fauna species are beginning to become active. To counteract the limitation of the survey being undertaken on one day of the year this assessment was supplemented by information from ecological database searches.

## ECOLOGICAL LIMITATIONS

This ecological assessment targets species of vascular plants (ferns, conifers and flowering plants). Non-vascular flora (e.g. mosses, liverworts, lichens) and fungi have not been considered as part of this assessment, except where listed threatened species are known or suspected to occur. Fish and aquatic invertebrates were only considered at desktop level. It was beyond the scope of this assessment to undertake detailed fauna survey methods such as fauna trapping.

Maps presented in this report displaying site information should not be relied on for the detailed design during the construction process.

## USE OF DATABASES

The Victorian Biodiversity Atlas (VBA) database can be used to search a defined geographical area to produce species lists of flora and fauna that have been recorded within the search area. The database lists are only as accurate as the quality and quantity of data that have been recorded and documented from the area. The use of the database in a desktop assessment has the following limitations:

- Location details for many records (typically older records) have a relatively low degree of accuracy ( $\leq 1$  km). Thus, the database search may not pick up some records of species that were made within the site historically.
- These datasets are not exhaustive given many locations locally and across Victoria have low or in some instances no documented survey effort for one or more groups of flora and fauna. During site assessments, it is not uncommon to find species at locations for which there are few or no previous nearby database records.

Professional experience and judgement are used to assess the potential for previously unrecorded threatened flora and fauna to be present within and adjoining the study site.

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## Acronyms

Acronyms	Description
BCS	Bioregional Conservation Status
CaLP Act	Catchment and Land Protection Act 1994
CEMP	Construction Environmental Management Plan
CMA	Catchment Management Authority
DAWE	Commonwealth Department of Agriculture, Water and the Environment
DBH	Diameter at Breast Height (taken 1.3 m from the ground)
DELWP	Department of Environment, Land, Water and Planning
DEPI	Department of Environment and Primary Industries (now DELWP)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EVC	Ecological Vegetation Class
FFG Act	Flora and Fauna Guarantee Act 1988
GIS	Geographic Information System
Guidelines	Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017)
ha	Hectares
HIM	Habitat Importance Maps (DELWP 2017)
km	Kilometres
LGA	Local Government Authority
m	Metres
MNES	Matters of National Environmental Significance
NVIM	Native Vegetation Information Management tool
PMST	Protected Matters Search Tool (DAWE)
sp.	Species (one species)
SPFL	Scientific Procedures Fieldwork Licence
spp.	Species (more than one species)
subsp.	Subspecies
VBA	Victorian Biodiversity Atlas (DELWP)
VROTS	Species listed on DELWP's Advisory List of Rare or Threatened Plants in Victoria
WONS	Weed of National Significance



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## Executive Summary

SMEC Australia Pty Ltd (SMEC) was commissioned by Regional Roads Victoria to undertake a detailed flora and fauna assessment of eight locations/corners within an approximately 1.4 km section of Great Alpine Road between Walsh's Cutting and Mullocky Creek, Victoria. In addition to the detailed assessment, a targeted survey was also undertaken for Eastern Horseshoe Bat (*Rhinolophus megaphyllus*) to confirm presence or absence of the species occurring within the study site. The purpose of the detailed and targeted assessment was to determine the ecological values present within the study site, identify potential project constraints and determine the legislative permits, approvals and/or referrals that may be required to undertake the works associated with the project. This report outlines the findings of the desktop and preliminary field assessment relating to ecological values within the study site, and provides information regarding permits, referrals and additional site visits required for the removal of native vegetation and fauna habitat.

Table E1 below provides a brief summary of the on-site findings within the study site in relation to the relevant environmental legislation and policy.

Table E1: Summary of project findings.

Project Summary		
Site address	Great Alpine Road, Mullocky Creek	
Date and area surveyed	29-30 October 2020, approximately 1.4 km of road reserved surveyed, from Walsh's Cutting to 1.1 km north-east.	
Local Government Authority	East Gippsland Shire	
Bioregion	East Gippsland Uplands	
Catchment Management Authority	East Gippsland	
EVCs recorded	Lowland Forest (EVC 16) Shrubby Dry Forest (EVC 21) Lowland Herb-rich Forest (EVC 877)	
Legislative Summary		
Legislation	Assessment Result	Permit Requirement
Environment Protection and Biodiversity Conservation Act 1999	No threatened flora, fauna or communities were recorded during the site assessment. Threatened fauna may occur within the study site, however, are considered unlikely to be significantly impacted by the proposed works.	No EPBC Act referral required.
Flora and Fauna Guarantee Amendment Act 2019	No threatened flora, fauna or communities were recorded within the study site. A total of 19 protected flora recorded on site during site assessment. Results collected from targeted surveys for Eastern Horseshoe Bat are pending. Suitable foraging habitat identified for this species.	A FFG Act permit is required for the removal of protected flora species.
Environmental Effects Act 1978	Approximately 0.439 ha of native vegetation is proposed for removal for the current upgrade.	No further requirements as criteria for referral have not been triggered.
Catchment and Land Protection Act 1994	One declared noxious weed was recorded during the site assessment: Forest Blackberry.	RRV must develop a CEMP which outlines measures to prevent the spread of declared noxious weeds and pest animals during construction.
Wildlife Act 1975	Suitable habitat is available for fauna within the study site. Ecologist recommended to supervise any vegetation removal works to capture and relocate any displaced fauna.	It is recommended an ecologist is present during vegetation removal to undertake nocturnal pre-clearance survey and relocation if necessary. An arborist with relevant hollow-bearing and nocturnal fauna experience is preferred.
Water Act 1989	One waterway intersects the study site; Double Bridges Creek.	If the waterway is proposed to be impacted, a works on waterway permit will be required from East Gippsland CMA.

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Legislative Summary		
Legislation	Assessment Result	Permit Requirement
Planning and Environment Act 1987	Approximately 0.439 ha of native vegetation is proposed for removal for the current upgrade. The local DELWP office has advised that cumulative impacts must be considered from recent upgrades on the Great Alpine Road at Double Bridges (SMEC 2019). A total of 1.912 ha of native vegetation removal is required for both projects.	As the road safety exemption does not apply to projects where vegetation removal is >0.5 ha, a planning permit is required to remove, destroy or lop native vegetation.

### Recommendations

- Obtain a planning permit for the removal of native vegetation;
- Eastern Horseshoe Bat have not been detected during the targeted bat surveys, in conjunction with the study site not containing habitat consistent with the species requirements (i.e. caves, mineshafts or large hollows for breeding or roosting purposes). SMEC can consult with DELWP on behalf of RRV to review the requirement for Eastern Horseshoe Bat species offsets;
- Secure offsets via a registered offset broker or RRV's existing registered offsets prior to the removal of native vegetation;
- Avoid and minimise impacts to native vegetation throughout the entirety of the project (e.g. zo-go zones, reconsidering construction boundaries);
- Develop a CEMP for the project to address protection of native vegetation to be retained on site during construction, appropriate risk management measures for weeds and pest animals (to comply with CaLP Act) and implement control measures for erosion and sedimentation runoff into waterway tributaries;
- Engage a suitably qualified and licenced ecologist (arborist preferred with relevant experience working at heights and with hollow-bearing fauna) to capture and relocate fauna from vegetation if necessary, during the vegetation removal phase of the project;
- As a precautionary approach, it is recommended one-two days prior to vegetation removal that a pre-clearance nocturnal survey (i.e. spotlighting) is undertaken to confirm if fauna, in particular Southern Greater Glider, are occupying any hollow-bearing trees within the study site proposed for removal;
- Liaison with local DELWP offices is recommended to determine if further assessment for Southern Greater Glider within the study site is warranted; and
- Improve the overall quality and extent of retained native vegetation post-construction through on-site rehabilitation or revegetation works.

# 1 Introduction

## 1.1 Background

SMEC Australia Pty Ltd (SMEC) was commissioned by Regional Roads Victoria (RRV) to undertake a detailed flora and fauna assessment for the proposed upgrade to Great Alpine Road between Walsh's Cutting and Mullocky Creek, Boonderoot, Victoria. The scope of works also included targeted surveys for Eastern Horseshoe Bat (*Rhinolophus megaphyllus*) pending suitable habitat for this species being identified during the site visit. The proposed road upgrades involve widening the road to improve the safety of a series of corners which require the removal of native vegetation and fauna habitat adjacent the road.

The Road widening works consists of the following:

- Site clearing and grubbing;
- Widening of the road by cutting into rock batters or by construction of additional pavement by widening the fill batters on east side at various high-risk locations (as per the design drawings attached to the initial project brief); and
- Other works including table drain formation at several locations, and filling works and extension of culverts as shown in the design cross sections.

The detailed flora and fauna assessment and targeted surveys were undertaken to identify ecological values which may be impacted by the proposed upgrades. This report provides results of the flora and fauna assessments to date, makes recommendations regarding considerations for design, and discusses the likely environmental approval requirements associated with potential impacts to flora and fauna values.

Department of Environment, Land, Water, and Planning (DELWP) has advised that cumulative native vegetation impacts must be considered as native vegetation has recently been removed at an additional site on the Great Alpine Road at Double Bridges (SMEC 2019).

## 1.2 Scope of works

The scope of works and objectives for the detailed flora and fauna assessment and targeted surveys are to:

- Undertake a desktop review of known or predicted ecological values within the study area;
- Conduct a site assessment to verify the results of the desktop review and assess the ecological values of the study site, including:
  - Mapping of ecological values such as native vegetation
  - Identifying the presence and extent of any threatened ecological communities
  - Identifying flora and fauna species occurring throughout the site
  - Undertaking targeted species surveys for Eastern Horseshoe Bat if suitable habitat was identified on site
  - Assessing the likelihood of occurrence for rare or threatened flora and fauna species;
- Prepare a report outlining the results of the preliminary flora and fauna assessment, including:
  - A description of the vegetation, flora and fauna and habitats of the study site
  - Identification of listed threatened ecological values within the study site
  - An outline of potential impacts of the project on ecological values;
- Identify permit requirements and the assessment pathway under environmental legislation; and
- Provide recommendations on the requirement (if any) for further ecological surveys, such as targeted surveys for threatened species.

## 1.3 Study site and study area

This report refers to two definitions describing the area assessed for the project; **study site** and **study area**.

The **study site** refers to the area surveyed on-ground by SMEC ecologists, as shown on Figure 1. The study site is a 1.4 km section of existing road alignments of Great Alpine Road extending north to south between Walsh's Cutting and Mullocky Creek, Boonderoot, Victoria. The study site occurs within the East Gippsland Uplands Bioregion, East Gippsland Shire municipality and East Gippsland Catchment Management Authority (CMA) area. The study site is located approximately 33 km north-east of the regional town Bairnsdale, Victoria.

The southern section of the study site intersects Double Bridges Creek, which is a tributary of the larger Tambo River. The study site extends across steep, undulating terrain and was extensively burnt in the 2019-2020 summer bushfires. The study site occurs within the road reserve and Crown land dedicated as Mount Elizabeth Nature Conservation Reserve.

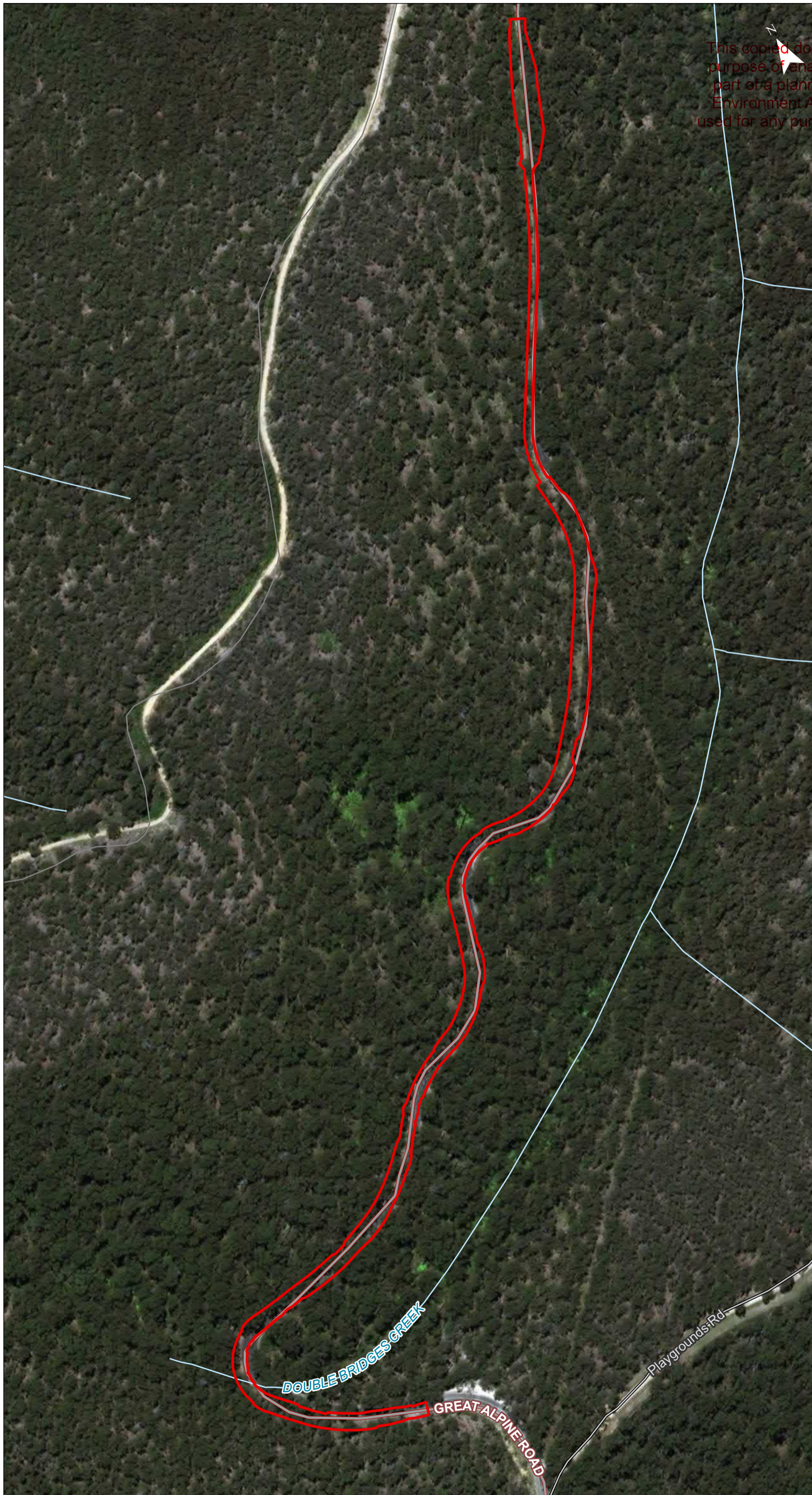
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The **study area** refers to a 10 km buffer area of the study site and was assessed by desktop only. The study area provides ecological context when discussing findings within the study site. The study area is dominated by naturally occurring forests including:

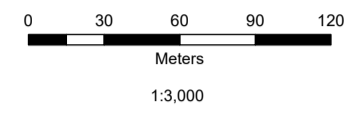
- Bruthen State Forest;
- Fainting Range State Forest;
- Haunted Stream State Forest;
- Kenny State Forest;
- Mount Elizabeth Nature Conservation Reserve; and,
- Yowen-burrun State Forest.

Anthropogenic modification within the study area is minimal and largely consists of agricultural properties in the south towards Bruthen, Victoria and the north of the study area in the vicinity of Tambo Crossing. Large river systems flow through the study area such as the Nicholson and Tambo Rivers.

**FIGURE 1: Location of study site**



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**Legend**

- Site Boundary
- Watercourse

**Road Class**

- Major Road
- Road
- Minor Road

**PROJECT NO:** 30042306  
**CREATED BY:** AR15136  
**DATE:** 12/11/2020  
**VERSION:** DRAFT 1  
**PAGE SIZE:** A3



**SOURCES:**  
 1. Roads and Waterways © DELWP 2020  
 2. World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS  
 World Imagery: Maxar

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## 2 Methods

### 2.1 Desktop assessment

The following resources were investigated as part of the desktop assessment:

- The Protected Matters Search Tool (PMST), maintained by the Department of Agriculture, Water and the Environment (DAWE), for Matters of National Environmental Significance (MNES) relevant to the study area, including (DAWE 2020a):
  - Wetlands of international importance (Ramsar);
  - Listed threatened ecological communities;
  - Listed threatened species;
  - Listed migratory species;
  - Listed marine species.
- The Victorian Biodiversity Atlas<sup>1</sup> (VBA), for flora and fauna species recorded within the study area (DELWP 2020a);
- DELWP's NatureKit mapping, for Ecological Vegetation Classes (EVCs) (extant and pre-1750s) and location risk mapping (DELWP 2020b);
- The Native Vegetation Information Management (NVIM) system for biodiversity information relevant to the study site, including (DELWP 2020c):
  - Crown land, parks and reserves
  - Victorian bioregions
  - Catchment Management Areas
  - Native vegetation extent
  - Native vegetation condition
  - Modelled remnant vegetation patches and scattered trees;
- The Victorian Planning Schemes online (DELWP 2020d) and VicPlan mapping tool (DELWP 2020e):
  - Local government areas relevant to the study site
  - Planning zones, overlays and schedules to overlays;
- Information provided by RRV; and,
- Aerial imagery of the study area.

### 2.2 Site assessment

A site assessment of the area proposed to be impacted by the project was undertaken by two SMEC ecologists on 29 and 30 October 2020. A detailed flora and fauna assessment was conducted which involved:

- Identifying and mapping native vegetation into EVCs according to the relevant EVC benchmarks (DELWP 2020f);
- Identification of threatened ecological communities listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Flora and Fauna Guarantee Amendment Act 2019* (FFG Act); and,
- Mapping of large trees in patches and scattered native trees (by measuring the circumference (cm) of trees at 1.3 m above the ground, according to the relevant EVC benchmark); and
- Identifying flora and fauna species occurring on site, including habitat for threatened species.

### 2.3 Targeted surveys

DELWP's Habitat Importance Maps<sup>2</sup> (HIM) for rare or threatened species, identified modelled habitat for Eastern Horseshoe Bat overlapping sections of the study site (DELWP 2017; see section 2.6). As such, the detailed site assessment aimed to confirm if suitable habitat was present for this species, and to undertake further targeted

<sup>1</sup> VBA data been obtained from DELWP online resources, available at: <https://www.data.vic.gov.au/data/group/spatial-data>

<sup>2</sup> DELWP Habitat Importance Maps online resources, available at: <https://discover.data.vic.gov.au/dataset/native-vegetation-regulation-2017-habitat-importance-maps-him-for-vrots-species>

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surveys for Eastern Horseshoe Bat. Targeted surveys would confirm Eastern Horseshoe Bat use of available habitat within the study site.

The detailed assessment confirmed there may be suitable foraging habitat for Eastern Horseshoe Bat within and adjacent the study site. Suitable roost sites for this species were absent, given the relatively small size of available hollows present in trees within the study site. The likelihood of Eastern Horseshoe Bat utilising these habitat values for behaviours other than foraging was considered to be low. Given the presence of suitable foraging habitat was identified, two Wildlife Acoustics Songmeter SM4Bat acoustic recorders were deployed within the study site on 29 October 2020, left *in-situ* for 14 nights and retrieved by a SMEC ecologist on 12 November 2020.

Details of the deployed Songmeter devices are provided in Table 1 below with images of each device setup displayed in *Plate 1* and *Plate 2*.

Table 1: Eastern Horseshoe Bat survey sites.

Device Name	Section of Study Site	Easting/Northing	Habitat Topography
BAT 1	Southern	577890, 5837676	Lower slope/ creek line woodland
BAT 2	Northern	578372, 5838113	Upper slope woodland



Plate 1: BAT 1 – southern section of the study site (N. Carter 29/10/2020)



Plate 2: BAT 2 – northern section of the study site (N. Carter 29/10/2020)

Data collected from the Songmeter devices was sent to Rob Gratton, EcoAerial Environmental Services, for analysis to identify species of bat recorded.

Results from the targeted bat surveys are provided in Section 3.8 of this report.

## 2.4 Nomenclature

### 2.4.1 VBA data

The VBA database search encompassed a 10 km search radius around the study site. Multiple records for a species at a single location will refer to the most recent record in all tables and mapping associated with this project. Records prior to 1960 have also been removed from the VBA dataset.

### 2.4.2 Flora species

Common and scientific names for plants follow the VBA database (current version).

### 2.4.3 Vegetation communities

Ecological Vegetation Classes (EVCs) are the standard unit for classifying native vegetation types in Victoria. EVCs are described by a combination of floristics, lifeforms and ecological characteristics and include a benchmark for the characteristics of the vegetation type in its mature, natural (pre-1750) state (DELWP 2020f).

Other vegetation types that may occur in Victoria include 'ecological communities' listed as threatened on the Commonwealth EPBC Act and 'communities of flora and fauna' (i.e. flora communities) listed as threatened on the Victorian FFG Act. These two acts have vegetation classification systems that differ from each other and also from the EVC classification system. As such, any single patch of native vegetation occurring within the study area (or anywhere in Victoria) will be classifiable as a particular EVC and may also be classifiable as a different ecological community under the EPBC Act, and/or as another flora community under the FFG Act.

#### 2.4.4 Fauna species

Unless otherwise noted, common and scientific names for terrestrial fauna (mammals, birds, reptiles, amphibians, invertebrates) follow the VBA database (current version).

#### 2.4.5 Fauna communities

There is no official classification system for fauna communities in Victoria. Fauna communities known or potentially occurring within the study area or surrounds are only considered in this report if they are listed under either of the EPBC Act and/or the FFG Act, which list a small number of fauna communities that are considered threatened at a national or state level.

### 2.5 Native vegetation descriptions

#### 2.5.1 Native vegetation guidelines

The *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines, DELWP 2017) are incorporated into the Victoria Planning Provisions and all planning schemes in Victoria (DELWP 2017). The Guidelines replace the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (DEPI 2013). The Guidelines apply a three-step approach (avoid, minimise and offset) as part of a strategic policy to manage the removal of native vegetation, in order to achieve 'no net loss' to biodiversity as a result of the removal, destruction or lopping of native vegetation (DELWP 2017). It is treated as a precautionary approach so that the removal of native vegetation is limited to what is reasonably necessary, and that Victoria's biodiversity is appropriately compensated for any removal of native vegetation that is approved (DELWP 2017).

To assist projects with policy and planning decisions, a number of biodiversity information resources have been developed by DELWP to measure biodiversity values across Victoria and guarantee biodiversity outcomes are delivered in accordance with the Government's investment programs. The following sections provide a summary of each of these information sources that have been used to inform this preliminary biodiversity assessment.

#### 2.5.2 Bioregions

Bioregions are a landscape-scale approach to classifying the environment using a range of attributes such as climate, geomorphology, geology, soils and vegetation. There are 28 bioregions identified within Victoria and each comprises a selection of EVCs and both can be viewed on NatureKit and the NVIM tool (DELWP 2020b, DELWP 2020c).

#### 2.5.3 Native vegetation condition

Native vegetation condition is presented by the condition scores modelled (shown as *Native vegetation condition map*) on the NVIM tool which provides an indication of how relative native vegetation is to its mature, natural state, as represented by benchmarks for the relevant EVCs (DELWP 2018; DELWP 2020c). These condition scores are also used to calculate biodiversity losses associated with vegetation removal at a site.

#### 2.5.4 Location categories

There are three location categories that indicate the potential risk to biodiversity from the removal of native vegetation (DELWP 2017). These location categories include Location 3, Location 2 and Location 1 as described below:

- **Location 3** – includes locations where the removal of less than 0.5 hectares of native vegetation could have a significant impact on habitat for a rare or threatened species;
- **Location 2** – includes locations that are mapped as endangered EVCs and/or sensitive wetlands and coastal areas and are not included in Location 3; and,
- **Location 1** – includes all remaining locations in Victoria.



### 2.5.5 Assessment pathways

An assessment pathway determines how an application to remove native vegetation may impact biodiversity and the outcome of an application based on the location and extent of the native vegetation to be removed (DELWP 2017). The three assessment pathways are displayed in Table 2 and include:

- **Basic** – limited impacts on biodiversity;
- **Intermediate** – could impact on large trees, endangered EVCs, and sensitive wetlands and coastal areas; and,
- **Detailed** – could impact on large trees, endangered EVCs, sensitive wetlands and coastal areas, and could significantly impact on habitat for rare or threatened species.

Table 2: Determining the assessment pathway for native vegetation removals

Extent of Native Vegetation	Location Category		
	Location 1	Location 2	Location 3
Less than 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including $\geq 1$ large tree	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

## 2.6 Habitat for rare or threatened species

A series of *habitat importance maps* have been developed by DELWP to show areas of Victoria that are habitat for rare or threatened species (DELWP 2017). Rare or threatened species are those species listed as critically endangered, endangered, vulnerable or rare on Advisory Lists maintained by DELWP (DSE 2009; DSE 2013; DEPI 2014).

The importance of a site in the landscape as habitat for a rare or threatened species is represented by a habitat importance score (ranging between 0-1). If native vegetation is mapped as habitat for a rare or threatened species, it will have an associated habitat importance score for each species (DELWP 2017).

The presence of modelled habitat for rare or threatened species will therefore contribute to the determination of assessment pathway of an application to remove native vegetation as important habitats are used to calculate biodiversity losses and offset requirements under the Guidelines (DELWP 2017).

## 2.7 Sensitive wetlands

### 2.7.1 Directory of important wetlands in Australia

The *Directory of Important Wetlands of Australia* is a list of nationally recognised important wetlands with over 150 listed in Victoria. A wetland may be considered nationally important if it meets at least one of the following criteria:

- It is a good example of a wetland type occurring within a biogeographic region in Australia;
- It plays an important ecological or hydrological role in the natural functioning of a major wetland system or complex; and
- It is habitat for animal taxa at a vulnerable stage in their life cycles or provides a refuge when adverse conditions such as drought prevail.

A list of important wetlands in Victoria is available on the Australian Government's DAWE website located here: <http://www.environment.gov.au/cgi-bin/wetlands/search.pl?smode=DOIW> (DAWE 2020b).

### 2.7.2 Ramsar sites

The Convention on Wetlands of International Importance, especially as waterfowl habitat, otherwise known as the Ramsar Convention, came into being in Ramsar, Iran in 1971 and was ratified in 1975 (DAWE 2020c). The convention provides the framework for local, regional and national actions, and international cooperation, for the conservation and wise use of wetlands. Wetlands of international importance are selected based on their international significance in terms of ecology, botany, zoology, limnology and or hydrology.

Australia's Ramsar wetlands were protected under the EPBC Act, as of 16 July 2000, as Matters of National Environmental Significance. The EPBC Act regulates actions that will, or are likely to, have a significant impact on any matter of national environmental significance, which includes the ecological character of a Ramsar wetland. This includes relevant actions that occur outside the boundaries of a Ramsar wetland.

An action that will, or is likely to, have a significant impact on a Ramsar wetland will be subject to a rigorous environmental assessment and approval regime under the EPBC Act. Actions that are taken in contravention of

the EPBC Act may attract a civil penalty of up to \$5.5 million, or a criminal penalty of up to \$46,200 or, in extreme cases, up to seven years' imprisonment.  
An 'action' includes a project, development, undertaking or any activity or series of activities.

## 2.8 Migratory and marine species

Migratory species are those animals that migrate to Australia and its external territories or pass through or over Australian waters during their annual migration. Examples of migratory species are species of birds (e.g. shorebirds, albatrosses and petrels), mammals (e.g. whales) or reptiles (e.g. turtles).

Listed migratory species are those listed in the:

- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention);
- China-Australia Migratory Bird Agreement (CAMBA);
- Japan-Australia Migratory Bird Agreement (JAMBA); and
- Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).

All listed migratory species are MNES under the EPBC Act. An action will require approval if the action has, will have, or is likely to have, a significant impact on a listed migratory species (DoE 2013).

The term 'important habitat', as identified in the EPBC Act Policy Statement 1.1 Significant Impact Guidelines—Matters of National Environmental Significance 2009' (DoE 2013), is a significant component of managing migratory species. The widely recognised approach to identifying internationally important habitat throughout the world is using criteria adopted under the Ramsar Convention (Ramsar 1971).

Further assistance in identifying important habitats and survey guidelines for migratory species and shorebirds is available in 'EPBC Act Policy Statement 3.21—Industry Guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species' (DAWE 2017) and Referral guideline for 14 birds listed as migratory species under the EPBC Act (DoE 2015).

### 2.8.1 Important habitat for migratory shorebirds

Internationally important sites for Migratory Shorebirds of the East Asian-Australasian Flyway (EAAF) consist of wetland and coastal areas that are habitat for one or more migratory shorebird species. Important habitats in Australia for migratory shorebirds under the EPBC Act include those recognised as nationally or internationally important. According to this approach, wetland habitat should be considered internationally important if it regularly supports (DAWE 2017):

- 1 per cent of the individuals in a population of one species or subspecies of waterbird; or
- A total abundance of at least 20,000 waterbirds.

The description of nationally important habitat for migratory shorebirds is defined using a similar approach to these international criteria, that is, if it regularly supports (DAWE 2017):

- 0.1 per cent of the flyway population of a single species of migratory shorebird; or
- 2000 migratory shorebirds; or
- 15 migratory shorebird species.

### 2.8.2 Marine species

Under the United Nations Convention on the Law of the Sea, Australia has rights and responsibilities over its ocean territories. A declaration by the Minister for the Environment and Heritage under section 248 of the EPBC Act identifies all species currently listed with Marine status under the Act. It is an offence to kill, injure, take, trade, keep, or move any member of a listed marine species on Australian Government land or in Commonwealth waters without a permit (DAWE 2020d).

## 3 Results

### 3.1 Site summary

The study site comprised woodland on steep undulating terrain lining the road reserve, dominated by native flora and fauna. There were minimal amounts of introduced species detected, however it was evident that some roadside maintenance occurs. It was evident that the remnant native vegetation experienced damage in response to severe bushfires in 2019/2020. The woodland within and adjacent the study site is recovering from the fires where the canopy of trees is returning, and the groundcover is dominated largely by native indigenous understorey recruitment and pioneer flora species. The surrounding woodland of the study site is contiguous and comprised of several state and conservation reserve forests, providing habitat for both common and threatened flora and fauna species.

The Great Alpine Road is a moderately trafficked road by small and large vehicles which may cause disturbance to nearby fauna, potentially inhibiting inconspicuous behaviours such as breeding, shelter or roosting.

### 3.2 Flora

#### 3.2.1 Species summary

The VBA database contains records of 849 flora species from within the study area (DELWP 2020a). These records include 733 native species and 116 introduced species (including 16 native species outside their natural range). During the site assessment 74 flora species were observed, including 58 native and 16 introduced species. A full list of the species recorded during the site assessment is detailed in Appendix A.

#### 3.2.2 Noxious weeds

One noxious weed species listed under the *Catchment and Land Protection Act 1994* (CaLP Act) was identified within the study site, also listed as a Weed of National Significance (WONS) (DAWE 2020e) (Table 3).

Table 3: Noxious weeds recorded within the study site

Scientific Name	Common Name	Listing <sup>3</sup>
<i>Rubus polyanthemus</i>	Forest Blackberry	CaLP (C), WONS

#### 3.2.3 Protected flora

A total of 19 flora species listed as protected under the FFG Act<sup>4</sup> were recorded within the study site during the site assessment. The details of these species are provided below in Table 4.

Table 4: FFG Act protected flora species

Scientific Name	Common Name	No. for removal
<i>Acacia mearnsii</i>	Black Wattle	5
<i>Acacia verticillata</i>	Prickly Moses	5
<i>Blechnum cartilagineum</i>	Gristle-fern	25
<i>Brachyscome multifida</i>	Cut-leaf Daisy	5
<i>Brachyscome petrophila</i>	Rock Daisy	5
<i>Caladenia carnea</i> s.s.	Pink Fingers	5
<i>Caladenia moschata</i>	Musk Hood-orchid	10
<i>Caladenia congesta</i>	Black-tongue Caladenia	10
<i>Calochlaena dubia</i>	Common ground fern	10
<i>Chrysocephalum semipapposum</i>	Clustered Everlasting	10
<i>Diuris sulphurea</i>	Tiger Orchid	5
<i>Euchiton sphaericus</i>	Annual Cudweed	-

<sup>3</sup> C = Listed as Regionally Controlled under the CaLP Act; R = Listed as Restricted Weeds under the CaLP Act.

<sup>4</sup> FFG Act protected flora list: [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0011/50420/201706-FFG-protected-flora-list.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0011/50420/201706-FFG-protected-flora-list.pdf)

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Grevillea spp.	Grevillea	5
Lagenophora stipitata s.l.	Common Bottle-daisy	5
Laphangium luteoalbum	Jersey Cudweed	5
Senecio diaschides	Shingle Fireweed	50
Senecio quadridentatus	Cotton Fireweed	5
Senecio sp.	Fireweed	-
Xerochrysum bracteatum	Golden Everlasting	10

### 3.2.4 Ecological Vegetation Classes (EVCs)

DELWP's NatureKit map indicates that 18 EVCs (extant mapping) occur within the study area (DELWP 2020b). The site assessment identified two EVCs, which are presented below with their corresponding Bioregional Conservation Status (BCS) for the East Gippsland Uplands bioregion:

- Lowland Forest (EVC 16) – least concern;
- Shrubby Dry Forest (EVC 21) – least concern; and
- Lowland Herb-rich Forest (EVC 877) – least concern.



These EVCs<sup>5</sup> are described further in Table 5 and are shown in Figure 2.

Table 5: Vegetation descriptions.

Vegetation Type	Description	Photograph
EVC 16: Lowland Forest	<p>Typically, open forest to 25 m tall characterised by the diversity of species and lifeforms in each stratum. Includes a variety of heathy understorey shrubs. It grows on a wide variety of geology and soils.</p> <p>In the study site, Lowland Forest was dominated by White Stringybark (<i>Eucalyptus globoidea</i>) and Mountain Grey Gum (<i>E. cypellocarpa</i>). The shrub layer comprised Kangaroo Apple (<i>Solanum aviculare</i>) and Prickly Currant-bush (<i>Coprosma quadrifida</i>). The ground layer was dominated by Austral Bracken (<i>Pteridium esculentum</i>), Dusky Coral-pea (<i>Kennedia rubicunda</i>) and Thatch Saw-sedge (<i>Gahnia radula</i>), which a diverse range of graminoids and herbs, such as Nodding Blue Lily (<i>Stypantra glauca</i>), Pennywort (<i>Hydrocotyle</i> spp.), Shingle Fireweed (<i>Senecio diaschides</i>) and Pale Flax-lily (<i>Dianella longifolia</i> var. <i>longifolia</i>).</p>	
EVC 21: Shrubby Dry Forest	<p>This EVC is an open forest, occurring on a range of geologies, including exposed ridgelines and upper slopes. The understorey is typically lacking a secondary tree layer but has a high shrub cover. The ground layer is often sparse.</p> <p>Within the study site, Shrubby Dry Forest had a canopy dominated by Mountain Grey Gum and Red Ironbark (<i>E. tricarpa</i>). The shrub layer had been affected by the fires over summer 2019/20 but the ground cover was dominated by graminoids and herbs, such as Weeping Grass (<i>Microlaena stipoides</i> var. <i>stipoides</i>), Wattle Mat-rush (<i>Lomandra filiformis</i>) and Tussock-grass (<i>Poa</i> spp.).</p>	

<sup>5</sup> General vegetation descriptions were obtained from the DELWP EVC benchmark descriptions, available at: <https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks>

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<p>EVC 877: Lowland Herb-rich Forest</p>	<p>Lowland Herb-rich Forest is an open eucalypt forest growing to 20 m tall. A range of shrubs dominate the mid-strata and the ground layer typically comprises a dense cover of grasses, graminoids and herbs. Scramblers and climbers are typical of this EVC.</p> <p>Within the study site, this EVC was dominated by Red Strinybark (<i>E. macrorhyncha</i>), with Red Ironbark scattered throughout. The shrub layer comprised Burgan (<i>Kunzea ericoides</i>) and Prickly Currant-bush. A range of orchids were present in the understorey, such as Black-tongue Caladenia (<i>Caladenis congesta</i>) and Tiger Orchid (<i>Diuris sulphurea</i>). Other groundcovers include Tall Sundew (<i>Drosera auriculata</i>), Ivy-leaved Violet (<i>Viola hederacea</i>) and Common Bottle-daisy (<i>Lagenophora stipitata</i>).</p>	
<p>Modified areas</p>	<p>Modified, non-native vegetation covered small areas of the study site, typically on the road verge. These areas were dominated by grassy weed species such as Wimmera Rye-grass (<i>Lolium rigidum</i>).</p>	

### 3.2.5 Habitat Hectares assessment

A total of ten habitat zones were identified during the site assessment. The results of the Habitat Hectares assessment are detailed in Table 6 below.

Table 6: Habitat Hectares results

EVC #	16	21	877
EVC Name	Lowland Forest	Shrubby Dry Forest	Lowland Herb-rich Forest
Habitat Zone #	2-5, 7, 9	8	1, 6, 10
Bioregion	EGU	EGU	EGU
Large Trees	7	0	2
Canopy Cover	2	4	2
Understorey	15	15	10
Weeds	4	13	6
Recruitment	3	3	3
Organic Litter	5	5	5
Logs	3	3	3
Subtotal (out of max. 75)	39	43	31
Multiplier for treeless EVCs	n/a	n/a	n/a
<b>Adjusted subtotal (out of max. 75)</b>	<b>39</b>	<b>43</b>	<b>31</b>
Patch Size	10	10	10
Distance to Core	5	5	5
Neighbourhood	10	10	10

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Subtotal (out of max. 25)	25	25	25
Final Habitat Score (total out of 100)	64	68	56

**Note:** EGU – East Gippsland Uplands Bioregion

### 3.2.6 Large trees

A total of 20 large trees in patches were recorded within the study site, four of which are proposed to be impacted by the project. No scattered trees were recorded. These trees are documented below in Table 7, with trees proposed to be impacted highlighted in red .

Table 7: Large Trees recorded in patches.

Tree No.	Scientific Name	Common Name	Circumference (cm)
1	Eucalyptus sp.	Stag	298.45
2	Eucalyptus sp.	Stag	245.04
3	Eucalyptus sp.	Stag	245.04
4	Eucalyptus sp.	Stag	219.91
5	Eucalyptus sp.	Stag	257.61
6	Eucalyptus cypellocarpa	Mountain Grey Gum	238.76
7	Eucalyptus cypellocarpa	Mountain Grey Gum	289.03
8	Eucalyptus cypellocarpa	Mountain Grey Gum	314.16
9	Eucalyptus cypellocarpa	Mountain Grey Gum	320.44
10	Eucalyptus cypellocarpa	Mountain Grey Gum	267.04
11	Eucalyptus cypellocarpa	Mountain Grey Gum	235.62
12	Eucalyptus cypellocarpa	Mountain Grey Gum	405.27
13	Eucalyptus globoidea	White Stringybark	329.87
14	Eucalyptus globoidea	White Stringybark	226.19
15	Eucalyptus cypellocarpa	Mountain Grey Gum	276.46
16	Eucalyptus cypellocarpa	Mountain Grey Gum	339.29
17	Eucalyptus cypellocarpa	Mountain Grey Gum	226.19
18	Eucalyptus cypellocarpa	Mountain Grey Gum	267.04

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19	Eucalyptus cypelloarpa	Mountain Grey Gum	289.03
20	Eucalyptus cypelloarpa	Mountain Grey Gum	289.03

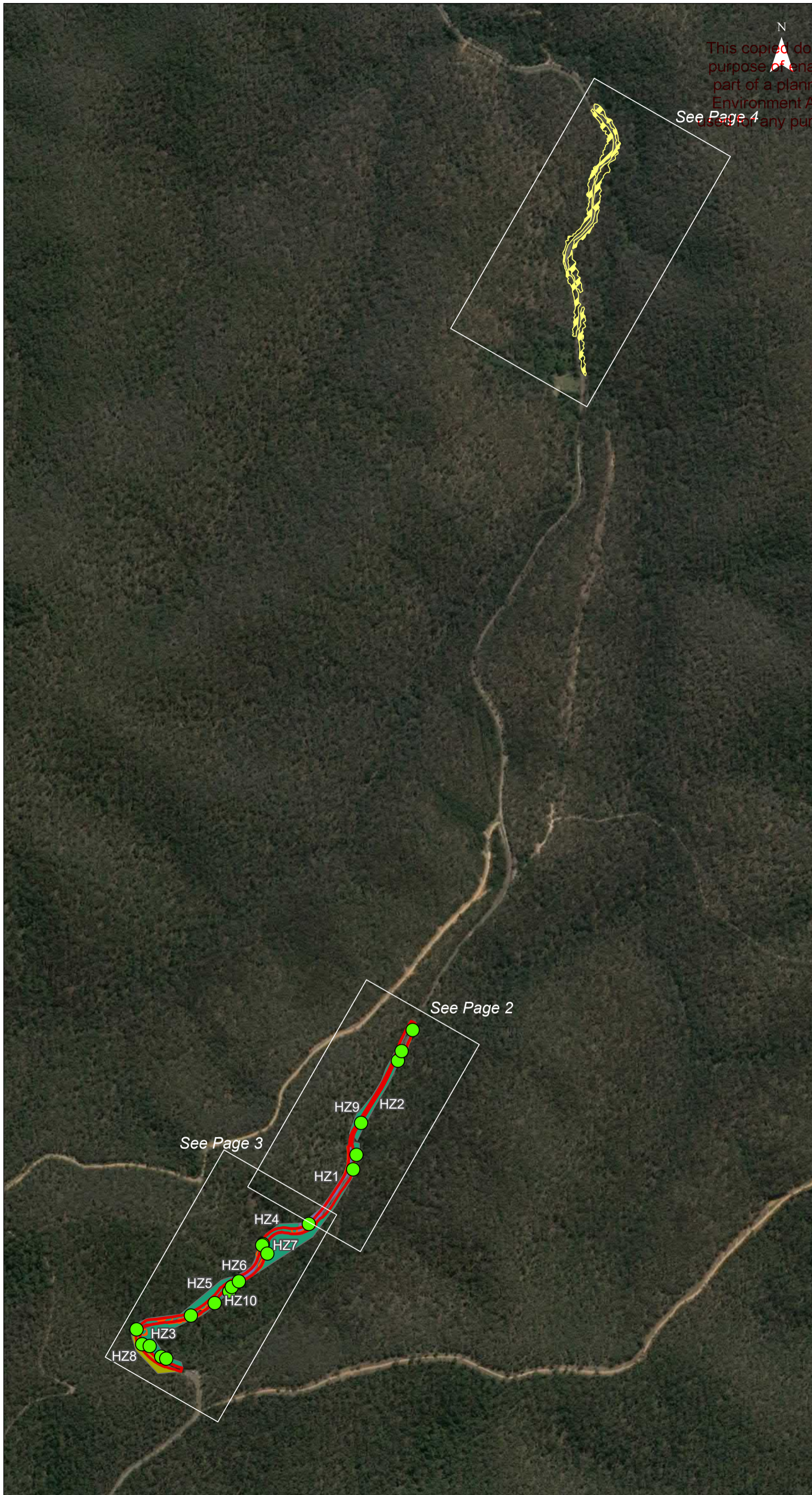
### 3.3 Native vegetation impacts

Based on the current project footprint, a total of 0.439 ha of native vegetation will be impacted for the current project, including four large trees. A total of 1.912 ha will be impacted cumulatively between this project and the Double Bridges project. The details of the impacted vegetation are provided in Table 8. Offset requirements for the project are listed in Section 4.3.3.

Table 8: Vegetation for removal

EVC	Proposed current impact area (HA)	Previous removal	Total
Lowland Forest	0.340	1.474	1.814
Lowland Herb-rich Forest	0.098	-	0.098
<b>Total</b>	<b>0.438</b>	<b>1.474</b>	<b>1.912</b>

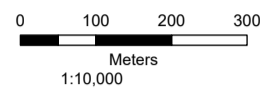
**FIGURE 2: Ecological values within study site**



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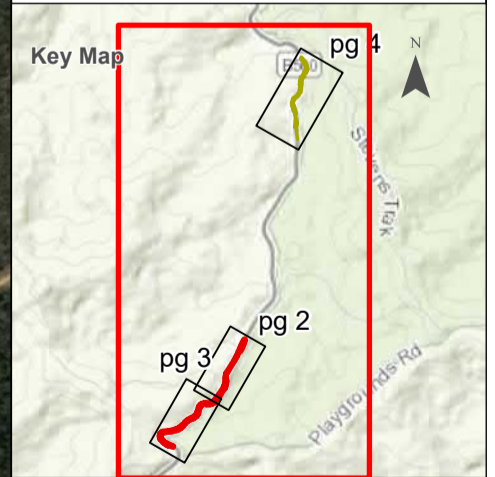
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- Legend**
- Site Boundary
  - Large Tree in Patch
  - Previous Removals
  - Vegetation to be removed
- Ecological Vegetation Class**
- 16 - Lowland Forest
  - 21 - Shrubby Dry
  - 877 - Lowland Herb-r

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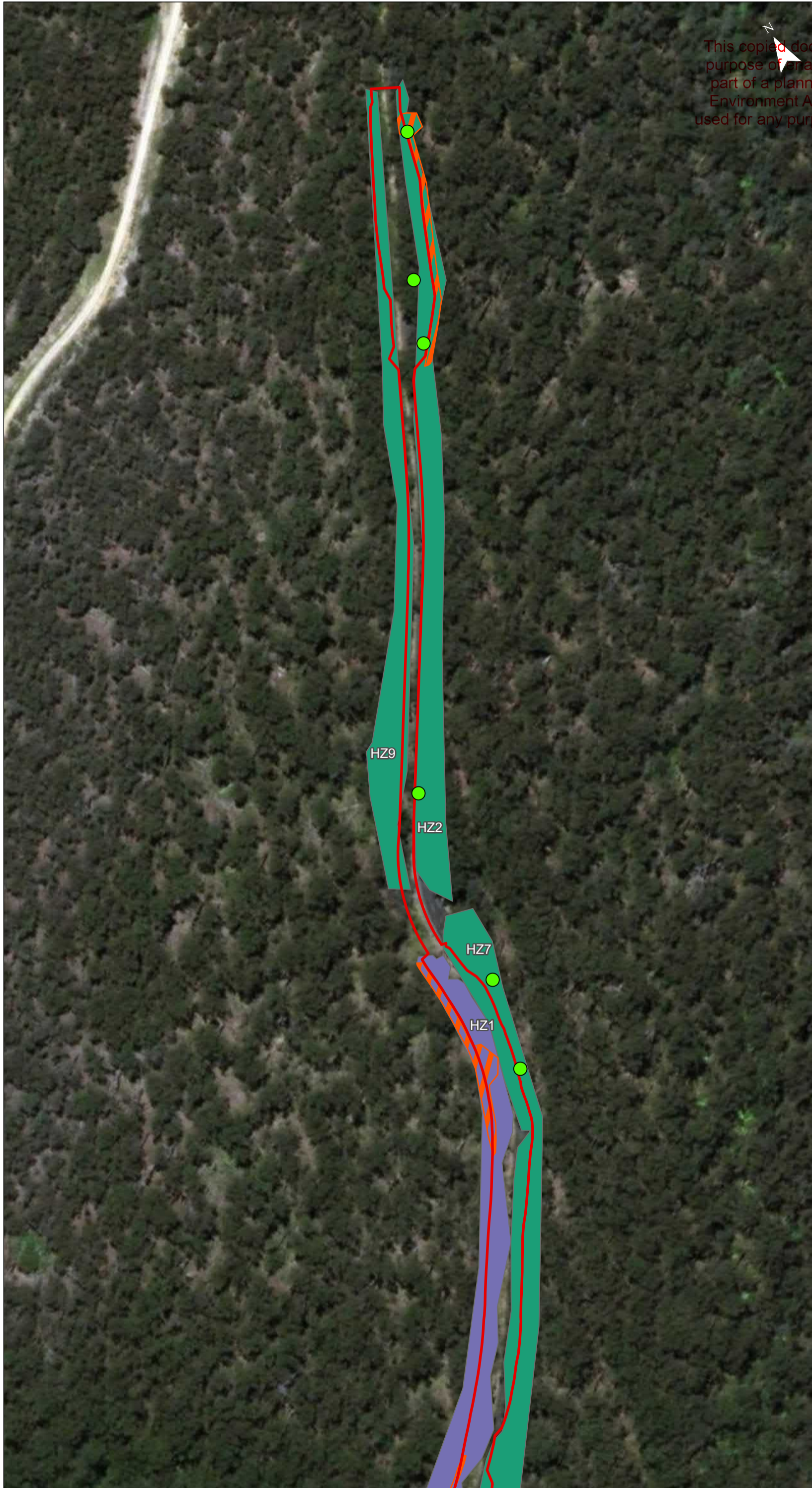


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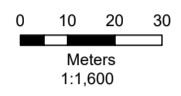
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**FIGURE 2: Ecological values within study site**



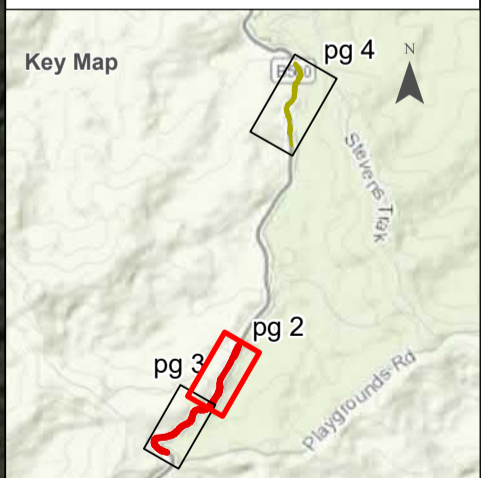
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**Legend**

- Site Boundary
- Large Tree in Patch
- Vegetation to be removed
- Ecological Vegetation Class**
- 16 - Lowland Forest
- 877 - Lowland Herb-r

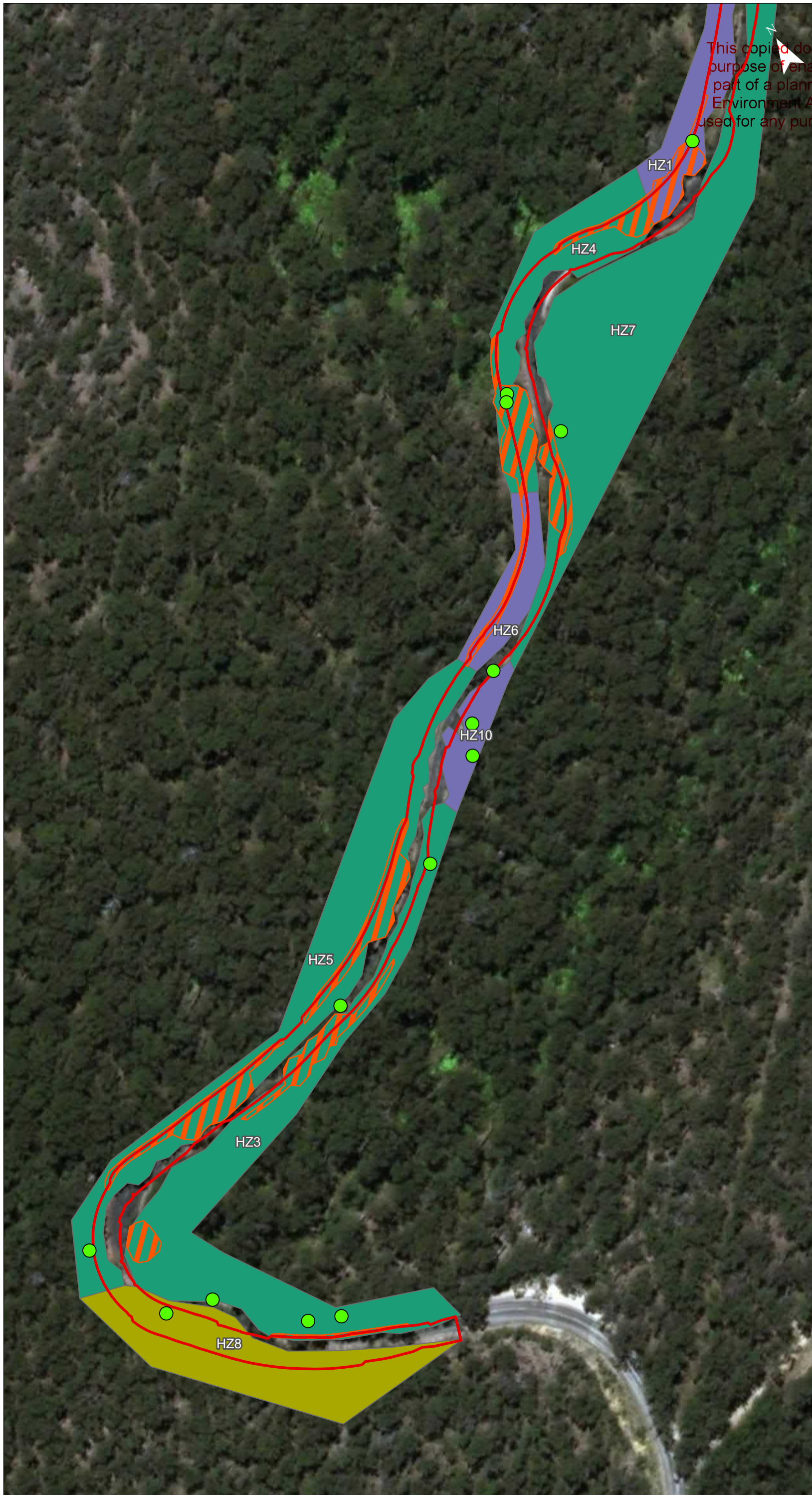
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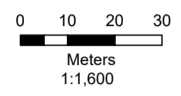
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**FIGURE 2: Ecological values within study site**

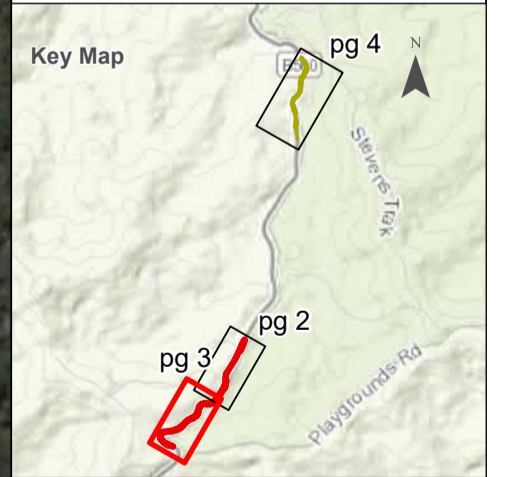


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- Legend**
- Site Boundary
  - Large Tree in Patch
  - Vegetation to be removed
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- 16 - Lowland Forest
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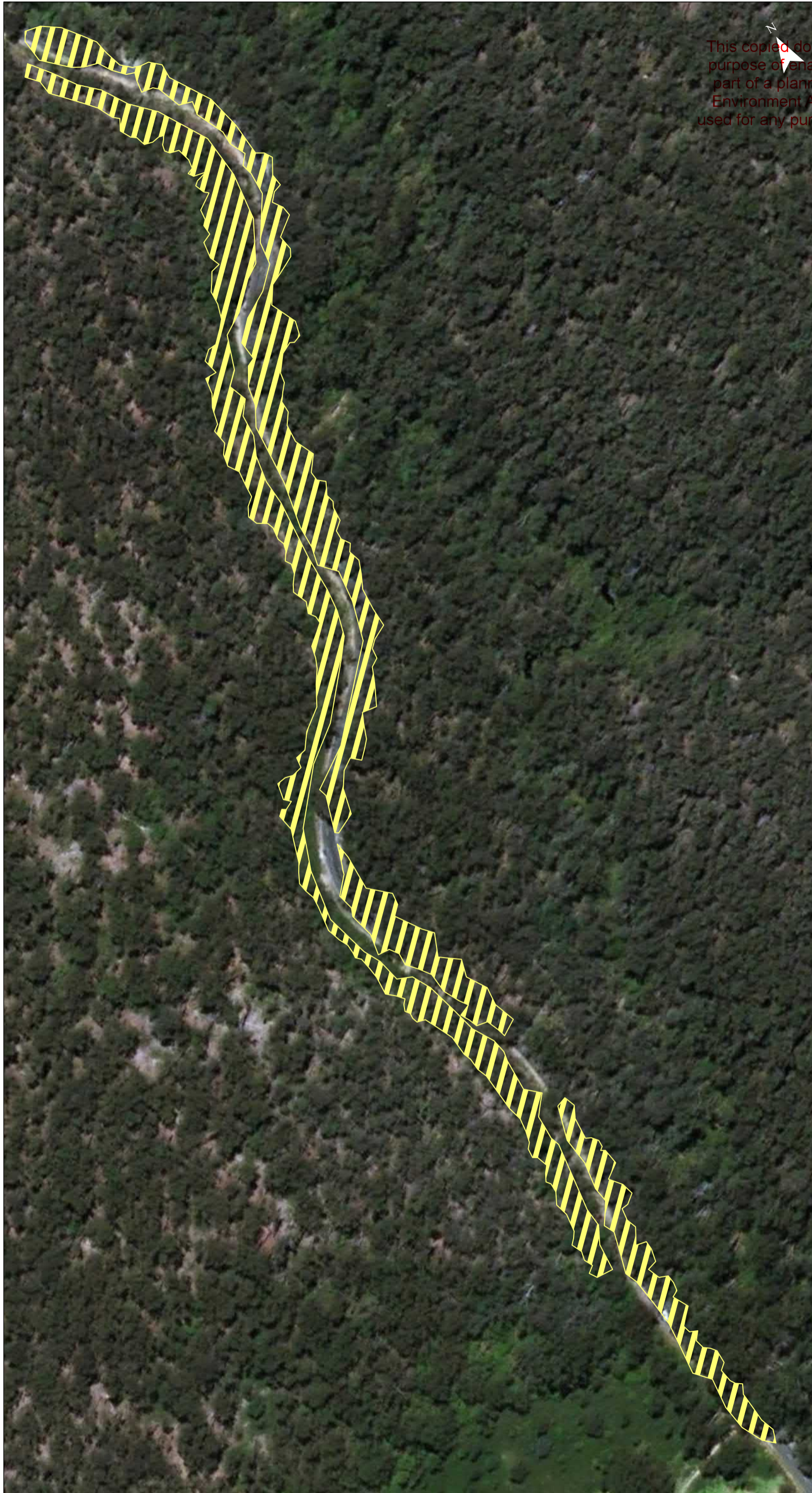
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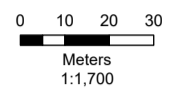
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**FIGURE 2: Ecological values within study site**

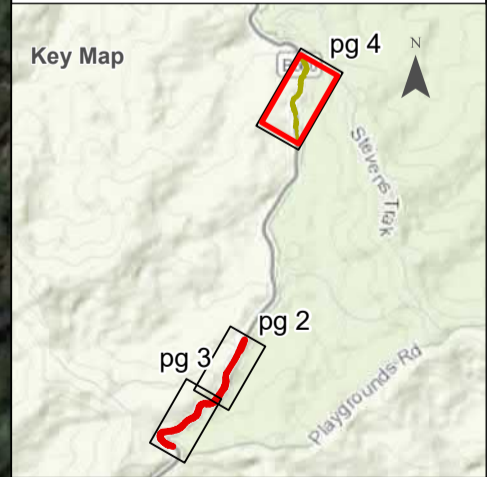


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**Legend**  
 Previous Removals

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### 3.4 Threatened flora

The VBA contains records for 51 rare or threatened flora species (DELWP 2020a) listed under one or more of the EPBC Act, FFG Act (DELWP 2019) or *Advisory list of rare or threatened plants in Victoria* (Advisory List) (DEPI 2014). The PMST lists an additional seven EPBC Act-listed flora species with potential to occur due to species modelled distributions, for which there are currently no records within the study area (DAWE 2020a). Two threatened flora species, Rock Daisy (*Brachyscome petrophila*) and Shingle Fireweed (*Senecio diaschides*), were confirmed present within the study site during the site assessment (Figure 2).

The locations of previous records for flora within the study area are provided in Figure 3. The likelihood of occurrence of threatened flora species is provided in Appendix A.

#### 3.4.1 EPBC Act-listed species

Two EPBC Act-listed species have been previously recorded within the study area (DELWP 2020a) both of which have potential habitat within the study site:

- Colquhoun Grevillea (*Grevillea celata*) – vulnerable; and
- Leafy Nematolepis (*Nematolepis frondosa*) – vulnerable.

No EPBC Act-listed flora species were recorded during the site assessment. Due to previous modification of the site, these species are considered unlikely to occur.

#### 3.4.2 FFG Act-listed species

A total of two species listed under the FFG Act have previously been recorded within the study area:

- Heath Spider-orchid (*Caladenia peisleyi*); and
- Yellow-wood (*Acronychia oblongifolia*).

No FFG Act-listed flora species were recorded during the site assessment. Due to previous modification of the site, these species are considered unlikely to occur.

#### 3.4.3 Victorian Advisory-listed species

A total of 47 species listed on the Advisory List have previously been recorded within the study area (DELWP 2020a). Two species were recorded within the study site during the site assessment: Rock Daisy (*Brachyscome petrophila*) and Shingle Fireweed (*Senecio diaschides*).

With the exception of species previously discussed above in sections 3.4.1 and 3.4.2, seven species are considered to have potential habitat within the study site:

- Wallaby-bush (*Beyeria lasiocarpa*) – rare;
- Pinkwood (*Beyeria lanceolata*) – rare;
- Wolly-head Pomaderris (*Pomaderris eriocephala*) – rare;
- Convex Pomaderris (*Pomaderris subcapitata*) – rare;
- Birch Pomaderris (*Pomaderris betulina* subsp. *betulina*) – rare;
- Monkey Mint-bush (*Prostanthera walteri*) – rare; and
- Golden Pomaderris (*Pomaderris aurea*) – rare.

Due to previous modification of the site, these species are considered unlikely to occur.

### 3.5 Threatened communities

#### 3.5.1 EPBC Act

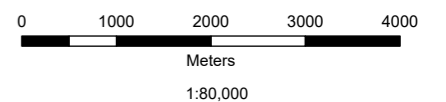
A search of the PMST database (DAWE 2020a) identified one threatened ecological community listed under the EPBC Act predicted as 'likely to occur' within the study area:

- *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* – critically endangered.

Due to the lack of key eucalypt species present, this community is not considered to occur within the study site. No EPBC Act-listed threatened vegetation communities were present or considered to occur within the study site.

#### 3.5.2 FFG Act

No FFG Act-listed communities occurs within the study site. None of the vegetation within the study site is synonymous with any FFG Act-listed threatened ecological communities.



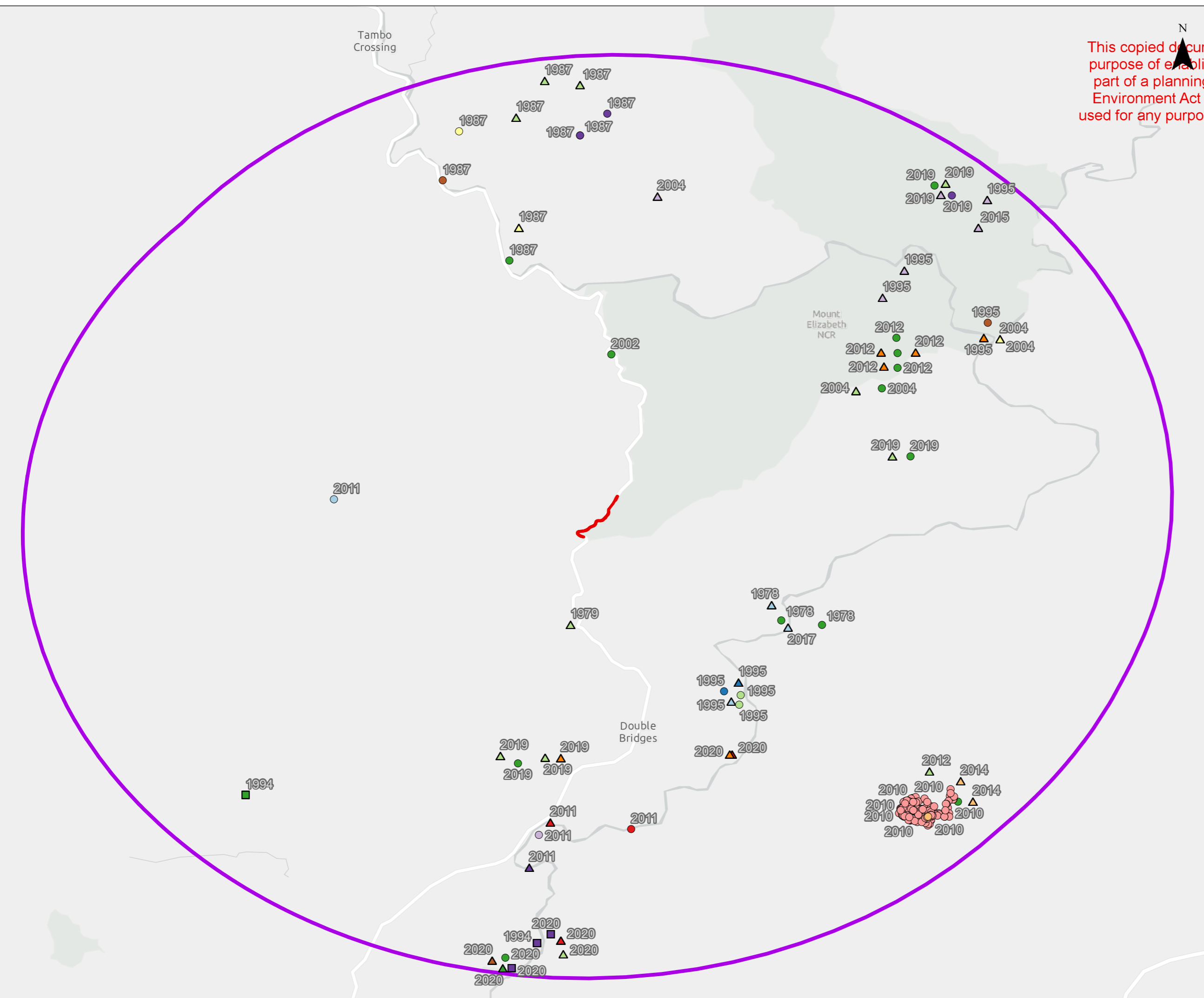
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- Study Site
  - Study Area
- Threatened Flora**
- Finger Hakea
  - ▲ Forest Phebalium
  - Poverty Wattle
  - ▲ Rock Daisy
  - Twin-flower Tea-tree
  - ▲ Wallaby-bush
  - Woolly-head Pomaderris
  - ▲ Yellow-wood
  - Birch Pomaderris
  - Colquhoun Grevillea
  - ▲ Convex Pomaderris
  - Delicate Crane's-bill
  - ▲ Eastern Bitter-bush
  - Fringed Helmet-orchid
  - ▲ Heath Spider-orchid
  - ▲ Outcrop Guinea-flower
  - ▲ Pinkwood
  - Shingle Fireweed
  - ▲ Showy Boronia
  - Slender Saw-sedge
  - ▲ Slender Wire-lily
  - Streaked Rock-orchid
  - Tight Bedstraw
  - ▲ Violet Daisy-bush
  - Water Pimpernel
  - ▲ Yellow Milk-vine

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**PROJECT NO:** 30042306  
**FIGURE NO:** 3  
**FIGURE TITLE:** Threatened Flora within study area  
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### 3.6 Fauna


#### 3.6.1 Species summary

The VBA database contains records of 297 fauna species from within the study area (DELWP 2020a). These records include 282 native species and 15 introduced species. During the site assessment, 30 native fauna species were recorded; including 28 bird, one mammal and one reptile species. No threatened or introduced fauna were observed during the site assessment. A list of the species recorded during the site assessment are detailed in Appendix B.

#### 3.6.2 Fauna habitats

Due to similar landscape and environment attributes, only one broad habitat type was identified within the study site; woodland habitat. Habitat attributes and the fauna species identified during the site assessment are summarised below in Table 9.

Table 9: Fauna habitat descriptions.

Habitat Type	Description	Photograph
Woodland	<p>Remnant woodland vegetation was the dominant habitat type surrounding and lining the road reserves of the study site. Woodland habitat has experienced severe burning during the 2019/2020 bush fires and was evident during the site assessment with a limited mid-storey vegetation present and an open canopy with a minimal amount of cover. The ground layer supported burnt fallen logs and regenerating vegetation.</p> <p>Despite the woodland recovering, the contiguous nature of the surrounding habitat would provide important resources for foraging, breeding, roosting, movement and shelter for a range of native fauna species. Both large and smaller trees with hollows of varying sizes occurred throughout the study site.</p> <p>Native fauna recorded using this habitat during the site assessment included White-throated Treecreeper (<i>Cormobates leucophaea</i>), Olive-backed Oriole (<i>Coracina tenuirostris</i>) and Cicada Bird (<i>Tachyglossus aculeatus</i>).</p> <p>No threatened fauna was observed within woodland habitat during the site assessment. However, woodland may provide habitat for threatened mammals, reptiles and birds (albeit this is likely to be reduced by the recent bushfires).</p>	

## 3.7 Threatened fauna

The VBA contains records for 24 rare or threatened fauna species listed under one or more of the EPBC Act, EFC Act or the *Advisory list of threatened vertebrate /invertebrate fauna in Victoria* (Advisory List) (DELWP 2020a, DELWP 2019; DSE 2013; DSE 2009b). The PMST lists an additional 14 EPBC Act-listed fauna species with potential to occur due to species modelled distributions, for which there are currently no records within the study area (DAWE 2020a). The locations of previous records for fauna within the study area are provided in Figure 4. The likelihood of occurrence of threatened fauna species is provided in Appendix B.

### 3.7.1 EPBC Act-listed species

A total of eight EPBC Act-listed species have been recorded within the study area (DELWP 2020a). Of the EPBC Act-listed fauna species which have been recorded (or are predicted to occur), the following species are known to, or considered to potentially occur, in habitats within or in proximity to the study site:

#### 3.7.1.1 White-throated Needletail

Listed as vulnerable under the EPBC Act, White-throated Needletail (*Hirundapus caudacutus*) is considered to be a possible visitor to the study site. This species has 26 previous records within the study area, with the most recent record occurring in 2019 (DELWP 2020a). The closest record occurs approximately 500 m south of the study site in 2001 within the Great Alpine Road reserve of Kenny State Forest (DELWP 2020b). White-throated Needletail makes annual migratory movements between northern Asia and Australia, usually occupying habitats aerially within Australia between October to May (DAWE 2020f). This species is primarily aerial and only roosts on tall eucalypt trees in woodlands (DAWE 2020f) on rare occasions.

Suitable woodland habitat is available within the study site for White-throated Needletail to roost in. However, this behaviour within Australia has rarely been reported on and is a knowledge gap for the species throughout its Australian distribution. As such, it is considered more likely for White-throated Needletail to be an opportunistic flyover visitor and forage aerially over the study site, rather than use trees marked for removal as roosting habitat. Given the low impact of works and minimal amount of vegetation marked for removal, proposed works will not have a significant impact on White-throated Needletail.

#### 3.7.1.1 Spot-tailed Quoll

Spot-tailed Quoll (*Dasyurus maculatus maculatus*), listed as endangered under the EPBC Act, occupy large home ranges (usually 250-1000 ha) which are likely to overlap with the study site, with a recent record (2014) occurring approximately 8.5 km north of the study site in Fainting Range State Forest (DAWE 2020f; DELWP 2020b). While this species may occasionally traverse the study site for foraging purposes, key habitat attributes of these species are absent, such as denning sites (caves, hollow logs). As such, Spot-tailed Quoll is unlikely to inhabit the study site on a permanent basis and proposed works will not have a significant impact on this MNES.

#### 3.7.1.2 Southern Greater Glider

Listed as vulnerable under the EPBC Act, Southern Greater Glider (*Petauroides volans*) is considered to potentially occur within the study site. This species has 17 previous records within the study area with the closest record occurring 700 m north of the study site. This species relies on large, hollow-bearing eucalypts for refuge and breeding, and woodland habitat for foraging and movement (DAWE 2020f).

Trees with suitable sized hollows were recorded within and adjacent the study site that Southern Greater Glider may use. Given the overall low-impact nature of the proposed works (i.e. removing minimal amount of native vegetation available for Southern Greater Glider), it is considered that proposed works will not have a significant impact on this MNES provided suitable mitigation measures are implemented (Section 5).

#### 3.7.1.3 Swift Parrot

Swift Parrot (*Lathamus discolor*) is listed as critically endangered under the EPBC Act and only has one previous record within the study area from 1978 (DELWP 2020a). This species is highly nomadic and migrates north from its Tasmanian breeding grounds annually to forage in woodland habitats of mainland Australia (DAWE 2020f). Given this species high nomadic nature, it is possible for Swift Parrot to visit the study site to forage on the eucalypt species present during its migration movements. However, woodland within the study site would only be visited opportunistically during its movements and would not constitute core habitat for Swift Parrot. As such, works requiring the removal of native vegetation within the study site would have negligible impacts on Swift Parrot.

#### 3.7.1.4 Remaining EPBC Act species

Based on the absence of historical records and results of the site assessment, other EPBC Act-listed fauna species are considered unlikely to regularly utilise habitat within or adjoining the study site. As such, proposed construction works are unlikely to impact other EPBC Act-listed species.

### 3.7.2 FFG Act-listed species

A total of 18 species listed as threatened under the FFG Act have been previously recorded within the study area (DELWP 2020a). Of these, with the exception of species previously mentioned above in sections 3.7.1 and 3.7.2, the following FFG Act-listed species may visit habitat within or adjoining the study site on a rare or occasional basis:

- Barking Owl (*Ninox connivens*);
- Common Bent-wing Bat (*Miniopterus schreibersii* GROUP);
- Masked Owl (*Tyto novaehollandiae*);
- Powerful Owl (*Ninox strenua*); and
- Sooty Owl (*Tyto tenebricosa*).

Threatened large forest owl species and Common Bent-wing Bat utilise woodland habitat for foraging, movement, roosting and if hollows or caves are available, breeding purposes. The contiguous woodland environment surrounding the study site would provide suitable habitat for threatened woodland fauna to exhibit all the previously mentioned behaviours, particularly foraging and movement. Although suitably sized hollow-bearing trees are available within the study site, due to the 2019/2020 bush fires these trees have lost much of their canopy providing little shelter for roosting behaviour. In conjunction, the trees would experience significant amounts of disturbance from the moderately trafficked Great Alpine Road thus potentially inhibiting breeding activity. As such, it is considered unlikely for owl species and Common Bent-wing Bat to utilise vegetation within the study site for roosting or breeding purposes.

Targeted surveys identified the bat complex "Large Forest Bat (*Vespadelus darlingtoni*) / Eastern Bent-wing Bat (*Miniopterus schreibersii oceanensis*)". However, targeted surveys collected numerous recordings of Large Forest Bat to a species level. As such, it is considered that the complex calls are more likely to have been Large Forest Bat rather than Common Bent-wing Bat and that Common Bent-wing Bat is likely to be absent from the study site. Results of the targeted surveys are further detailed below in Section 3.8. Proposed works and associated vegetation removal are unlikely to impact any threatened woodland dependent FFG Act-listed fauna species.

Based on the absence of historical records and results of the site assessment, other FFG Act-listed fauna species are considered unlikely to regularly utilise habitat within or adjacent to the study site. As such the construction works associated with the proposed road upgrades are unlikely to impact FFG Act-listed species.

### 3.7.3 Victorian Advisory-listed species

A total of 24 species listed on the Victorian Advisory List have previously been recorded within the study area (DELWP 2020a). Of these, with the exception of species previously listed above in sections 3.7.1 and 3.7.2, the following Victorian Advisory-listed species may visit habitat within or adjoining the study site on a rare or occasional basis:

- Lace Monitor (*Varanus varius*) – endangered; and
- Spotted Quail-thrush (*Cinclosoma punctatum*) – near threatened.

The above listed species have numerous previous records within the study area since 2013 (DELWP 2020a). Both species are highly mobile and may utilise the habitats along the roadside on an occasional basis for foraging or movement purposes.

## 3.8 Targeted bat surveys

### 3.8.1 Summary

Eastern Horseshoe Bat was not detected during the targeted bat surveys. Detailed results of the desktop assessment and field survey are provided below.

### 3.8.2 Previous records and species description

Although not previously recorded within the broader study area, DELWP HIM for Eastern Horseshoe Bat overlap sections of the study site (DELWP 2017; Figure 5) The species has been previously recorded within woodland habitat within 15-20 km surrounding the study site in Yowen-burrum State Forest, Haunted Stream State Forest, Buchan Cave Reserve and Colquhoun/Boyanga Gidi State Forest (DELWP 2020b).

Eastern Horseshoe Bat is listed as threatened under the FFG Act and vulnerable under the Victorian Advisory List (DELWP 2019; DSE 2013). This species utilises woodland habitats for foraging and movement behaviours where they hunt flying and non-flying insects and spiders, usually flying close to the ground or vegetation to catch prey items (Australian Museum 2020). Eastern Horseshoe Bat roost in colonies located in warm, humid caves, holes and cracks in rocks, old mines, tunnels and occasionally under buildings (Australian Museum 2020). This species has also been recorded roosting in tree hollows, albeit infrequently given the preference for cave-like structures.



### 3.8.3 Results

As the site assessment identified that this species may utilise habitat within and adjacent the study site for foraging purposes, two Songmeter acoustic recorder devices were deployed within the study site to collect data. Data collected from Songmeter devices required specialist analysis, undertaken by Robert Gration from EcoAerial Environmental Services. Devices were left *in-situ* for a total of 14 nights where a total of 3158 and 644 files were recorded from Bat1 and Bat2 Songmeter devices respectively. During deployment, Songmeter Bat2 experienced an unknown error and only collected data for six nights between 29 October to 03 November 2020. Despite the device failure, this is not considered to adversely impact detection probabilities of Eastern Horseshoe Bat. The targeted survey identified a total of six species and five call complexes (unable to identify to species level) occurring within the study site:

- Species;
  - Chocolate Wattled Bat (*Chalinolobus morio*)
  - Gould's Wattled Bat (*Chalinolobus gouldi*)
  - Large Forest Bat (*Vespadelus darlingtoni*)
  - Little Forest Bat (*Vespadelus vulturnus*)
  - Ride's Freetail Bat (*Mormopterus ridei*)
  - White-striped Freetail Bat (*Tadarida australis*)
- Complex;
  - Eastern Broad-nosed Bat (*Scotorepens orion*) / Eastern Falsistrellus (*Falsistrellus tasmaniensis*)
  - Large Forest Bat (*Vespadelus darlingtonia*) / Eastern Bent-wing Bat (*Miniopterus schreibersii oceanensis*)
  - Long-eared Bat (*Nyctophilus* sp.)
  - Forest Bat sp. (*Vespadelus darlingtonia* / *V. Regulus* / *V. vulturnus*)
  - Eastern bent-wing Bat complex (*Vespadelus darlingtonia*) / (*Miniopterus oceanensis*)

Detailed results from the Songmeter devices deployed within the study site are provided below in Table 10 and Table 11 below. Daily weather data sourced from the Australian Government Bureau of Meteorology for the duration of the survey is provided in Table 12.

### 3.8.4 Implications

Although tree hollows were located within and adjacent the study site, it is considered that Eastern Horseshoe Bat is unlikely to use these trees for roosting given the exposed nature of the habitat (i.e. disturbance from road traffic and impacts from the 2019/2020 bush fires), and relatively small size of available hollows. Additionally, habitat within the study site is not consistent with roosting habitat requirements for this species (i.e. caves, large hollows, or mineshafts). Given the absence of previous records within the study area in conjunction with lack of suitable roosting habitat and failure to detect the species during the targeted survey, it is not considered that Eastern Horseshoe Bat would utilise the study site on a frequent or permanent basis, but rather on an opportunistic basis when foraging or connecting to more suitable roosting habitat throughout the surrounding woodlands.

SMEC can enter discussions with DELWP on behalf of RRV to seek removal of the requirement for Eastern Horseshoe Bat species offsets for this project.

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Results

Table 10: Bat species recorded on Songmeter SM4, location Bat1

Identified to Species	29/10/20	30/10/20	31/10/20	01/11/20	02/11/20	03/11/20	04/11/20	05/11/20	06/11/20	07/11/20	08/11/20	09/11/20	10/11/20	11/11/20	Total
<b>Number of files</b>	60	65	51	51	375	653	6	19	524	45	70	360	618	261	3158
<b>Chocolate Wattled Bat</b> <i>Chalinolobus morio</i>	-	X	-	X	-	X	-	-	X	-	-	-	-	-	
<b>Ride's Freetall Bat</b> <i>Mormopterus ridei</i>	-	X	X	X	X	X	-	-	X	X	X	X	-	X	
<b>Gould's Wattled Bat</b> <i>Chalinolobus gouldi</i>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Large Forest Bat</b> <i>Vespadelus darlingtoni</i>	X	X	X	X	X	X	-	-	X	X	-	X	X	X	
<b>Little Forest Bat</b> <i>Vespadelus vulturnus</i>	X	-	-	-	X	X	-	-	X	-	-	X	X	X	
<b>White-striped Freetall Bat</b> <i>Tadarida australis</i>	-	-	-	-	X	X	-	-	X	-	-	-	X	X	
<b>Identified to Call Complex</b>															
<b>Number of files</b>	2	2	2	2	2	2	0	0	2	1	3	3	2	2	25
<b>Eastern Broad-nosed Bat / Eastern Falsistrellus</b> <i>Scotorepens orion / Falsistrellus tasmaniensis</i>	X	X	X	X	X	X	-	-	X	-	X	X	X	X	
<b>Large Forest Bat / Eastern Bent-wing Bat</b> <i>Vespadelus darlingtonia / Miniopterus schreibersii oceanensis</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Long-eared Bat</b> <i>Nyctophilus sp.</i>	-	-	-	-	-	-	-	-	-	-	X	-	-	-	
<b>Forest Bat sp</b> <i>Vespadelus darlingtonia / V. Regulus / V. vulturnus</i>	X	X	X	X	X	X	-	-	X	X	X	X	X	X	
<b>Eastern bent-wing Bat complex</b> <i>Vespadelus darlingtonia / Miniopterus oceanensis</i>	-	-	-	-	-	-	-	-	-	-	-	X	-	-	

Table 11: Bat species recorded on Songmeter SM4, location Bat2

Identified to Species	29/10/20	30/10/20	31/10/20	01/11/20	02/11/20	03/11/20	Total
<b>Number of files</b>	81	63	65	33	146	256	644
<b>Chocolate Wattled Bat</b> <i>Chalinolobus morio</i>	X	-	-	-	-	-	
<b>Eastern Broad-nosed Bat</b> <i>Scoterepens orion</i>	X	-	-	-	-	-	
<b>Ride's Freetall Bat</b> <i>Mormopterus ridei</i>	X	-	X	X	-	-	
<b>Gould's Wattled Bat</b> <i>Chalinolobus gouldi</i>	X	X	X	X	X	X	

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Results

Large Forest Bat <i>Vespadelus darlingtoni</i>	X	X	X	X	X	X	
Little Forest Bat <i>Vespadelus vulturnus</i>	-	-	-	-	-	X	
White-striped Freetail Bat <i>Tadarida australis</i>	-	X	X	X	X	-	
Identified to Call Complex							
Number of files	3	2	2	0	1	2	
Eastern Broad-nosed Bat / Eastern Falsistrellus <i>Scotorepens orion</i> / <i>Falsistrellus tasmaniensis</i>	X	-	X	-	-	X	
Long-eared Bat <i>Nyctophilus sp.</i>	X	X	-	-	-	-	
Forest Bat sp <i>Vespadelus darlingtoni</i> / <i>V. Regulus</i> / <i>V. vulturnus</i>	X	X	X	-	X	X	

Table 12: Weather data for targeted bat survey duration, sourced from Australian Government Bureau of Meteorology, [www.bom.gov.au/climate](http://www.bom.gov.au/climate)

Date	Day	Temps		Rain	Max wind gust			9:00 AM					3:00 PM						
		Min	Max		Dir	Spd	Time	Temp	RH	Cld	Dir	Spd	MSLP	Temp	RH	Cld	Dir	Spd	MSLP
		°C	°C																
29/10/2020	Th	11.9	19.7	0.2	ESE	30	12:58	15.2	79	5	ESE	7	1013.6	18.2	73	2	SE	20	1010.2
30/10/2020	Fr	11.5	19.8	0	ESE	37	17:20	15.3	97	8	Calm	-	1011.2	18.2	69	8	ESE	24	1010.5
31/10/2020	Sa	14	20.1	0	SE	37	12:16	17.2	74	8	E	20	1013.8	19.8	65	1	ESE	20	1014.1
1/11/2020	Su	11	19.1	0	SE	28	15:16	14.3	81	1	WNW	7	1022.8	18.2	67	4	SSE	17	1023.2
2/11/2020	Mo	7.1	22.3	0	E	33	17:17	13.7	99	-	ENE	2	1027.3	21.9	56	-	ESE	19	1024.7
3/11/2020	Tu	8	27.7	0	SE	28	13:36	18.9	74	-	ENE	9	1022.8	25	51	-	SE	20	1018.8
4/11/2020	We	15.4	25.2	0	WNW	39	9:24	23.9	50	6	WNW	17	1011.4	19.9	72	7	S	22	1009.7
5/11/2020	Th	9.3	16	7	SSW	50	10:05	11.5	69	8	WSW	22	1017.8	14.2	59	8	SSW	24	1019.3
6/11/2020	Fr	5.9	18.7	0.2	WSW	39	12:24	12.4	69	8	W	15	1020.8	16.7	55	6	SW	26	1017.9
7/11/2020	Sa	8.1	16.3	0	SW	35	8:17	12.1	63	6	WSW	17	1025.6	14.6	51	8	SSE	20	1026.5
8/11/2020	Su	5.2	18.9	0	ESE	41	14:29	14.1	60	-	ENE	17	1028.7	18.4	54	-	ESE	26	1026.6
9/11/2020	Mo	6.9	22.9	0	ESE	28	14:35	16.9	68	-	ESE	11	1025.4	21.3	54	-	ESE	17	1022.3
10/11/2020	Tu	9.2	28.8	0	E	31	17:01	20.4	59	-	N	6	1019.7	25.6	50	-	ESE	20	1016
11/11/2020	We	12.3	33.1	0	SSW	35	21:11	26.6	37	-	WNW	9	1012.4	32.1	34	-	NNE	11	1007.7
12/11/2020	Th	15.9	29.4	0.4	S	52	13:23	25.5	52	-	NNW	17	1003.3	22.5	62	3	S	33	1000.9

### 3.9 Ramsar Wetlands

The PMST lists one Ramsar wetland within 10 km of the study area (Gippsland lakes). The Gippsland Lakes Ramsar site is located approximately 10 - 20 km downstream of the study site. Double Bridges Creek intersects the southern section of the study site and is a tributary of Tambo River which flows into the Gippsland lakes Ramsar site.

The Gippsland lakes Ramsar site comprises coastal lagoons, subtidal seagrass and algal beds, and a range of saline, brackish and freshwater marsh environments which support nationally and internationally threatened wetland species, waterbird breeding and fish spawning sites (DAWE 2020c).

Based on the proposed works and proximity of the study site to this Ramsar site, there is considered to be no direct impact associated with the proposed action on the Ramsar site. However, it is recommended for a Construction Environmental Management Plan (CEMP) to be developed and implemented throughout the project's life, detailing controls to avoid and mitigate erosion and sediment runoff into Double Bridges Creek. The projects CEMP should be prepared in accordance with EPA publications such as 275, 480, 960 (EPA 1991; EPA 1996; EPA 2004). Controls may include undertaking works during periods of low-average rainfall, installation of coir logs and ensuring stockpiles are adequately secured.

### 3.10 Migratory and marine species

The PMST identified 83 migratory/marine species that may occur within the study area with a further 26 species listed as marine only (DAWE 2020a). No species listed as migratory was observed using habitat within or adjacent the study site during the site assessment. The following migratory or marine species are considered to possibly visit habitat within or adjoining the study site on a rare or occasional basis:

- Black-faced Monarch (*Monarcha melanopsis*) – migratory and marine;
- Fork-tailed Swift (*Apus pacificus*) – migratory and marine;
- Rufous Fantail (*Rhipidura rufifrons*) – migratory and marine;
- Satin Flycatcher (*Myiagra cyanoleuca*) – migratory and marine; and
- White-throated Needletail – migratory and marine.

Fork-tailed Swift and White-throated Needletail have large distributions and may visit the study site to forage aerially during their migration movements. These species may visit the study site occasionally, however, are likely to only fly-over the study site for aerial foraging rather than utilising woodland habitat for roosting behaviours. White-throated Needletail habitat requirements and likelihood of occurrence is further detailed above in section 3.7.1.1.

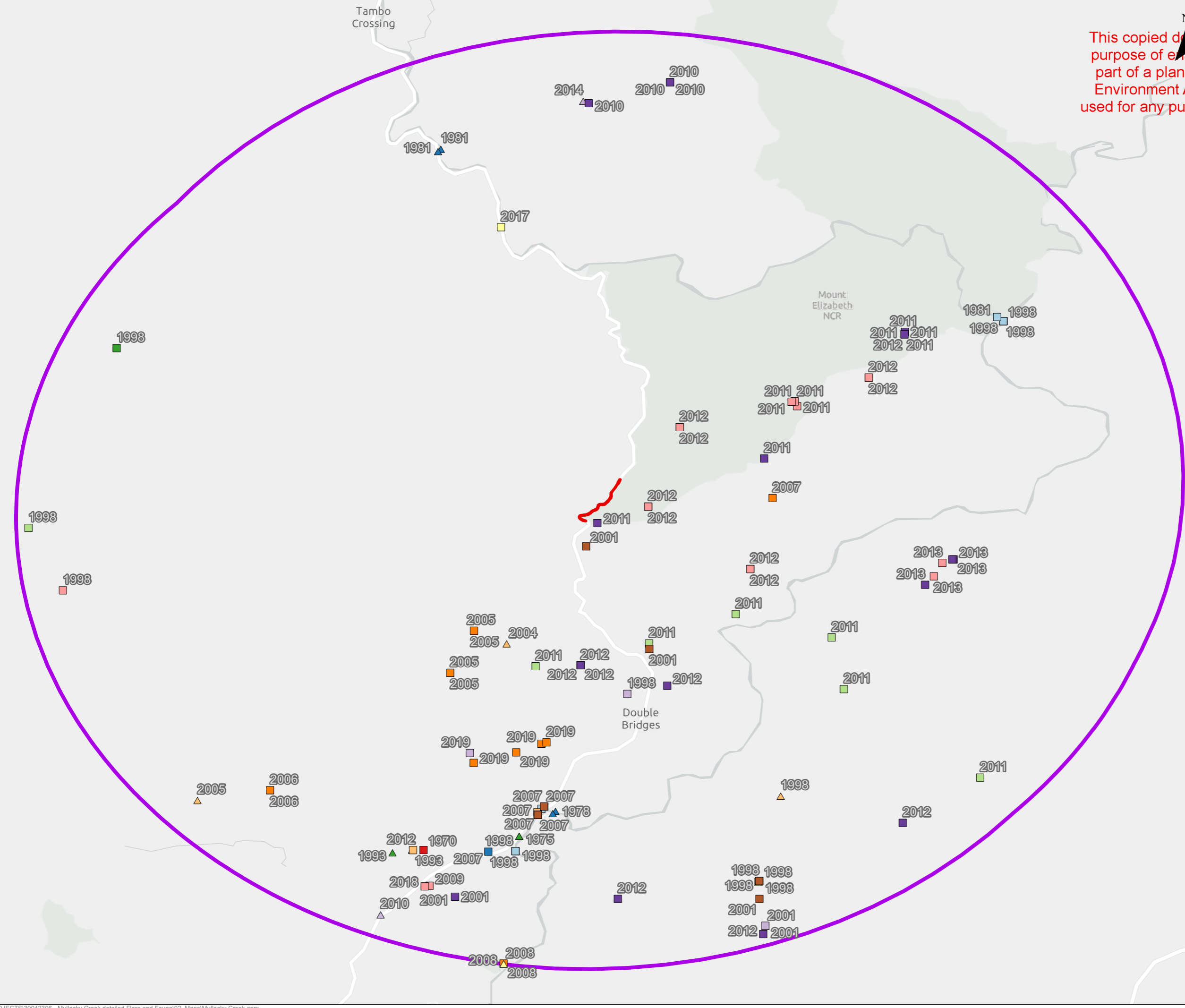
Satin Flycatcher, Black-faced Monarch and Rufous Fantail may visit the study site frequently during their summer migratory movements. All three species have been previously recorded utilising woodland habitat within the study area. Given that woodland habitat is available for these species within the study site, it is possible that Satin Flycatcher and Rufous Fantail may utilise the study site for foraging, breeding or shelter purposes. However, given the relatively exposed nature of the study site (i.e. disturbance from traffic and recently burnt understory), it is considered that these species are likely to only utilise the study site for foraging or movement purposes, rather than breeding or roosting.

Proposed works and associated vegetation removal are not considered to have a significant impact on any of the above listed migratory or marine species.

### 3.11 Project opportunities

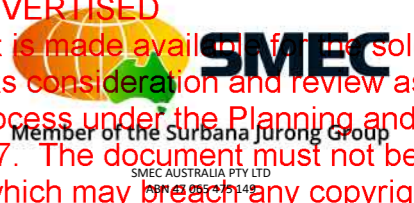
Several opportunities have been identified for the project post-construction and vegetation removal:

- Engage a suitably qualified contractor to undertake weed management to prevent establishment as well as to control any weed species already present on site to enhance local biodiversity values;
- Retain segments of removed trees (i.e. trunks and hollows) and disperse throughout woodland areas adjacent the study site to create woody debris habitat for fauna; and
- If feasible, re-vegetate cleared areas with native indigenous flora species of the study site to enhance local biodiversity value.

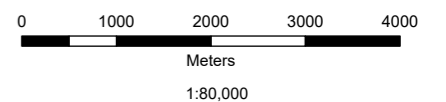


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- Legend**
- Study Area
  - Study Site
- Threatened Fauna**
- Australian Grayling
  - Azure Kingfisher
  - Coxs Gudgeon
  - Dendy's Toadlet
  - Emu
  - Flinders Pygmy Perch
  - Lace Monitor
  - Macquarie Perch
  - Platypus
  - Powerful Owl
  - Sooty Owl
  - Southern Greater Glider
  - Spot-tailed Quoll
  - Spotted Quail-thrush
  - White-bellied Sea-Eagle
  - White-footed Dunnart
  - White-throated Needle-tail

**SOURCES:**

1. Threatened Fauna © DELWP 2020
2. Basemap © Nearmap, Light Gray Base: Vicmap, Esri, HERE, Garmin, METI/NASA, USGS

Light Gray Reference: Vicmap, Esri, HERE, Garmin, METI/NASA, USGS

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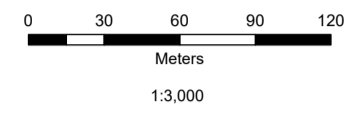
**PROJECT:** Mullocky Creek  
**PROJECT NO:** 30042306  
**FIGURE NO:** 4  
**FIGURE TITLE:** Threatened Fauna within study area  
**CREATED BY:** AR15136  
**DATE:** 12/11/2020  
**VERSION:** DRAFT 1  
**PAGE SIZE:** A3

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Page 69 of 122

**FIGURE 5: Eastern Horseshoe Bat targeted Surveys**



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- Legend**
- Bat Device
  - Study Site
- Habitat Importance Model**
- High likelihood of Horseshoe Bat habitat
  - Low likelihood of Horseshoe Bat habitat

**PROJECT NO:** 30042306  
**CREATED BY:** AR15136  
**DATE:** 11/11/2020  
**VERSION:** DRAFT 1  
**PAGE SIZE:** A3



**SOURCES:**  
 1. Roads and Waterways © DELWP 2020  
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## 4 Legislation and Policy

### 4.1 Commonwealth legislation

#### 4.1.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act provides Commonwealth legislation for the environment within Australia, particularly for MNES. The Act aims to promote the conservation of biodiversity through the protection of natural biodiversity and heritage values. MNES which are considered relevant to the proposed works under the Act include:

- Wetlands of international importance (listed as 'declared Ramsar wetlands');
- Listed threatened species and ecological communities; and
- Migratory species.

An assessment of impacts and recommendations for these MNES is summarised in Table 13 below.

Table 13: Recommendations for MNES under the EPBC Act.

MNES	Relevance to Project	Recommendation
Threatened species and communities	No threatened flora or communities were recorded during the site assessment and considered unlikely to occur.  Threatened fauna such as White-throated Needletail, Spot-tailed Quoll and Swift Parrot may visit the study site for foraging or movement purposes. Southern Greater Glider may use hollow-bearing trees within and adjacent the study site for shelter. Project works are unlikely to have a significant impact on these species.	No referral required.
Ramsar wetlands	There will be no impact to any Ramsar wetland from the project.	No referral required.
Migratory species	White-throated Needletail or Fork-tailed Swift may traverse airspace over the study site during migration movements for aerial foraging, and potentially use woodland habitat within and adjacent the study site for roosting, albeit infrequently. Satin Flycatcher, Black-faced Monarch and Rufous Fantail may forage or move through woodland habitat within and adjacent the study site. Significant impacts to these species as a result of project works are considered unlikely.	No referral required.

### 4.2 State legislation

#### 4.2.1 Flora and Fauna Guarantee Amendment Act 2019

The FFG Act is an important component of the Victorian legislation for the protection and management of threatened flora and fauna species and communities. The key objective of the FFG Act is to protect and conserve Victoria's native flora, fauna and communities through the management of potentially threatening processes. Threatening processes are listed under Section 10 of the FFG Act, and those relevant to the project include:

- Habitat fragmentation as a threatening process for fauna in Victoria;
- Increase in sediment input into Victorian rivers and streams due to human activities;
- Invasion of native vegetation by environmental weeds;
- Loss of coarse woody debris from Victorian native forests and woodlands;
- Loss of hollow bearing trees from Victorian native forests; and
- Use of Phytophthora-infected gravel in construction of roads, bridges and reservoirs.

No FFG Act-listed threatened fauna species were recorded within the study site or considered likely to occur on a permanent or frequent basis. No threatened floristic communities were present. A total of 19 protected flora species were recorded within the study site. Protected flora species list and number of individuals impacted are detailed in Section 3.2.3 above.

A permit to remove protected flora species is required.

#### 4.2.2 Environmental Effects Act 1978

The *Environmental Effects Act 1978* (EE Act) provides for an assessment of proposed projects that are capable of having a significant effect on the environment. Projects that trigger the referral criteria must be referred to the Minister administering the EE Act to decide if an Environmental Effects Statement (EES) should be prepared (DSE 2006).

Examples of EES triggers relevant to projects include removal of native vegetation identified as endangered. Loss of 1-5% of known threatened species habitat or extensive long-term effects of the health of an aquatic system. The study site does not constitute critical habitat for threatened species, and the proposed works do not trigger the requirement for referral under the EE Act.

#### 4.2.3 Catchment and Land Protection Act

The key legislation covering the management and classification of noxious weeds and pest animals throughout Victoria is the CaLP Act. The Act aims to protect primary production, Crown land, the environment and community health from the effects of noxious weeds and pest animals (Agriculture Victoria 2020). The Act requires landowners to manage noxious weeds and pest animals on their land. This includes the prevention of spread, direct management or in some instance's eradication of regionally prohibited or controlled weeds and pest animal species on their land (Agriculture Victoria 2020).

One declared noxious weeds was recorded during the site assessment; Forest Blackberry. RRV is required to ensure that construction works prevent the growth and spread of noxious weed species and pest animals during all stages of construction. It is recommended that a CEMP is developed by RRV and the contractor to ensure appropriate risk management measures are implemented during works to comply with the CaLP Act. Controls for the project may include the exclusive use of weed-free materials (i.e. soil, gravel), minimising erosion/sedimentation and thorough washing of equipment and machinery to avoid transportation of weed material/ pathogen contaminated soil.

#### 4.2.4 Wildlife Act 1975 and Wildlife Regulations 2013

The *Wildlife Act 1975* and *Wildlife Regulations 2013* are both Victorian legislation which prevent harm to wildlife through the following key objectives:

##### *Wildlife Act 1975*

1. To establish procedures in order to promote
  - (a) The protection and conservation of wildlife
  - (b) The prevention of taxa of wildlife from becoming extinct
  - (c) The sustainable use of and access to wildlife.
2. To prohibit and regulate the conduct of persons engaged in activities concerning or related to wildlife.

##### *Wildlife Regulations 2013*

3. To provide for the management and conservation of wildlife and wildlife habitat
4. To provide for humane use of and access to wildlife
5. To make further provision in relation to the licensing system established by section 22 of the Act
6. To prescribe fees, offences, royalties and various other matters for the purposes of the Act
7. To provide for exemptions from certain provisions of the Act.

A permit is required under the *Wildlife Act 1975* to carry out field investigations for the purpose of conserving, monitoring, improvement or maintaining wildlife habitat within Victoria. This also includes the removal of wildlife from a particular locality which requires a specific *Wildlife Act 1975* permit (authorised by DELWP) for the capture, handling and relocation of wildlife.

Any works requiring the removal of wildlife within or adjoining the project site must be undertaken by suitably qualified and licenced personnel. Appropriate mitigation measures must be employed during the vegetation removal, such as directional clearing towards areas of remaining habitat, and suitable protocols and contingency measures to manage any injured or displaced fauna during construction.

#### 4.2.5 Water Act 1989

The *Water Act 1989* regulates the management and use of all water under the control of the Crown in Victoria. The Act provides Water Authorities with a range of enforcement powers and imposes obligations on persons and organisations not to interfere with assets of Water Authorities, waterways and water.

The Act governs the entitlement of surface and groundwater for a range of uses including industrial and mining water use. A licence is required for works involving construction on a waterway, including temporary or permanent deviation or diversion of a waterway. The right to take water is attained in the form a licence, water share, bulk entitlement or environmental entitlement.

One waterway intersects the study site; Double Bridges Creek. As such, a 'works on waterway' permit from East Gippsland CMA for works is required if the waterway is proposed to be impacted. Sediment and erosion controls should be considered and implemented for the duration of the works and detailed in a CEMP to avoid and mitigate indirect impacts to waterways and dependent ecological values downstream (i.e. flora, fauna, wetlands).



#### 4.2.6 Planning and Environment Act 1987

The *Planning and Environment Act 1987* (P&E Act) governs the planning framework for the use, development and protection of land in Victoria. The P&E Act provides procedures for the preparation and amendment of the Victoria Planning Provisions and planning schemes.

The Act also provides avenues for the acquisition and compliance of permits under local planning schemes. The P&E Act implements the functions listed below to achieve these objectives:

- Set the broad objectives for planning in Victoria;
- Set the main rules and principles for how the Victorian planning system works;
- Set up the key planning procedures and legal instruments in the Victorian planning system; and
- Define the roles and responsibilities of the Minister, councils, government departments, the community and other stakeholders in the planning system.

##### 4.2.6.1 Victoria Planning Provisions

The Victoria Planning Provisions (VPP) are developed by the Minister for Planning under the PE Act and form the basis for all local planning schemes. The VPP provides the framework, standard provisions and State planning policy, with input from local councils, incorporated documents, planning zones and overlays, for inclusion into any new or amended planning scheme. Amendments to the VPP are made to keep policies current with relevant changes throughout local government.

One bushfire management overlay (BMO) pertains to the study site and occurs throughout the entirety of the study site.

A Memorandum of Understanding (MoU) exists between RRV and DELWP pertaining to road safety upgrades (DELWP 2018b). The road safety exemption (DELWP 2018b) applies to the project as native vegetation to be removed is <0.5 ha. As >0.5 ha of native vegetation is proposed for removal a planning permit is required to remove native vegetation (Particular Provision: Clause 52.17).

### 4.3 Victoria's Guidelines for the removal, destruction or lopping of native vegetation

#### 4.3.1 Three-step approach

Under the Guidelines, all applications for a permit to remove native vegetation in Victoria must follow a three-step approach:

1. Avoid the removal, destruction or lopping of native vegetation;
2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided; and
3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.

In accordance with the Guidelines, an application to remove native vegetation must clearly demonstrate that no options exist to further minimise the impacts of native vegetation removal, that will not undermine the objectives of the proposed use or development (DELWP 2017).

#### 4.3.2 Avoid and Minimise Statement

The following statement has been developed in accordance with decision guidelines to be considered in Table 2, page 17 of the *Assessor's handbook for applications to remove, destroy or lop native vegetation* (DELWP 2017).

The study site is one of several sections of Great Alpine Road to be upgraded between Bruthen and Cobungra. The section of Great Alpine Road within the study site contains an extremely narrow carriageway and road shoulder, which results in a steep drop-off into a valley on the eastern side of the road and poses an unacceptable safety risk for motorists<sup>6</sup>. The road upgrades are intended to improve safety, accessibility, efficiency and reliability of the Great Alpine Road.

The proposed project footprint has been designed to impact the smallest area possible, specifically to avoid overall impacts on native vegetation. The construction footprint proposes to impact 0.439 ha of native vegetation, however, must be considered cumulatively with previous removal on the Great Alpine Road at Double Bridges (SMEC 2019). This brings the current total removals to 1.912 ha. Vegetation proposed for removal includes two EVCs; Lowland Forest and Lowland Herb-rich Forest, both with a BCS of Least Concern within the East Gippsland Uplands bioregion. Some of this vegetation has been subject to past disturbance due to ongoing road maintenance activities.

<sup>6</sup> Further information regarding road upgrades along the Great Alpine Road can be found at:

<https://regionalroads.vic.gov.au/map/eastern-improvements/great-alpine-road---bruthen-to-cobungra-upgrade>

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The vegetation proposed to be removed is not considered to play a significant role in protecting water quality of the minor tributary of the Mullocky Creek downslope of the Great Alpine Road given the small amount of vegetation to be removed relative to the abundance of other surrounding vegetation.

The removal of this native vegetation will not result in the removal of an endangered EVC within the East Gippsland Uplands bioregion, important habitat for threatened fauna, flora species listed as vulnerable or endangered, or impact a sensitive wetland. The project will not result in a significant impact on Victoria's biodiversity.

A Native Vegetation Removal (NVR) report for the project has been obtained detailing offset requirements (see Table 14; Appendix C). Third party offsets will be secured via a registered offset broker or RRV's existing registered offsets.

### 4.3.3 Application of the Guidelines for this project

The location mapping for the study site (DELWP 2020c) identifies that impacts within the study site are proposed to occur within Location 3, and as such the project will follow the detailed assessment pathway.

A Native Vegetation Removal (NVR) report for the project has been obtained from DELWP and provides details of offset requirements (Table 14, Appendix C).

Eastern Horseshoe Bat was not detected during the targeted survey and is not considered to use the study site on a permanent or frequent basis. SMEC can enter discussions with DELWP on behalf of RRV to seek removal of the requirement for Eastern Horseshoe Bat species offsets.

Table 14: Native vegetation removal details

Proposed Vegetation Removal Details	
Assessment pathway	Detailed
Extent of total removal	1.912 ha
Extent of past removal	1.473
No. previous large trees removed	5
Extent of current removal	0.439
No. large trees to be removed	4
General offset amount	n/a
Species offset amount – Eastern Horseshoe Bat	0.516
Large trees	4
Minimum strategic biodiversity score	n/a

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## 5 Summary and Recommendations

SMEC recommends that RRV undertake the following steps for the project:

- Obtain a planning permit for the removal of native vegetation;
- Eastern Horseshoe Bat have not been detected during the targeted bat surveys, in conjunction with the study site not containing habitat consistent with the species requirements (i.e. caves, mineshafts or large hollows for breeding or roosting purposes). SMEC can consult with DELWP on behalf of RRV to review the requirement for Eastern Horseshoe Bat species offsets;
- Secure offsets via a registered offset broker or RRV's existing registered offsets prior to the removal of native vegetation;
- Avoid and minimise impacts to native vegetation throughout the entirety of the project (e.g. zo-go zones, reconsidering construction boundaries);
- Develop a CEMP for the project to address protection of native vegetation to be retained on site during construction, appropriate risk management measures for weeds and pest animals (to comply with CaLP Act) and implement control measures for erosion and sedimentation runoff into waterway tributaries;
- Engage a suitably qualified and licenced ecologist (arborist preferred with relevant experience working at heights and with hollow-bearing fauna) to capture and relocate fauna from vegetation if necessary, during the vegetation removal phase of the project;
- As a precautionary approach, it is recommended one-two days prior to vegetation removal that a pre-clearance nocturnal survey (i.e. spotlighting) is undertaken to confirm if fauna, in particular Southern Greater Glider, are occupying any hollow-bearing trees within the study site proposed for removal;
- Liaison with local DELWP offices is recommended to determine if further assessment for Southern Greater Glider within the study site is warranted; and
- Improve the overall quality and extent of retained native vegetation post-construction through on-site rehabilitation or revegetation works (Section 3.11).

A summary of permit requirements is provided in Table 15 below.

Table 15: Recommendations for the project.

Legislation	Assessment Result	Permit Requirement
Environment Protection and Biodiversity Conservation Act 1999	No threatened flora, fauna or communities were recorded during the site assessment. Threatened fauna may occur within the study site, however, are considered unlikely to be significantly impacted by the proposed works.	No EPBC Act referral required.
Flora and Fauna Guarantee Amendment Act 2019	No threatened flora, fauna or communities were recorded within the study site. A total of 19 protected flora recorded on site during site assessment. Results collected from targeted surveys for Eastern Horseshoe Bat are pending. Suitable foraging habitat identified for this species.	A FFG Act permit is required for the removal of protected flora species.
Environmental Effects Act 1978	Approximately 0.439 ha of native vegetation is proposed for removal for the current upgrade.	No further requirements as criteria for referral have not been triggered.
Catchment and Land Protection Act 1994	One declared noxious weed was recorded during the site assessment; Forest Blackberry.	RRV must develop a CEMP which outlines measures to prevent the spread of declared noxious weeds and pest animals during construction.
Wildlife Act 1975	Suitable habitat is available for fauna within the study site. Ecologist recommended to supervise any vegetation removal works to capture and relocate any displaced fauna.	It is recommended an ecologist is present during vegetation removal to undertake nocturnal pre-clearance survey and relocation if necessary. An arborist with relevant hollow-bearing and nocturnal fauna experience is preferred.
Water Act 1989	One waterway intersects the study site; Double Bridges Creek.	If the waterway is proposed to be impacted, a works on waterway permit will be required from East Gippsland CMA.
Planning and Environment Act 1987	Approximately 0.439 ha of native vegetation is proposed for removal for the current upgrade. The local DELWP office has advised that cumulative impacts must be considered from recent upgrades on the Great Alpine Road at Double Bridges (SMEC	As the road safety exemption does not apply to projects where vegetation removal is >0.5 ha, a planning permit is required to remove, destroy or lop native vegetation.

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Legislation	Assessment Result
	2019). A total of 1.912 ha of native vegetation removal is required for both projects.

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## Appendix A Flora Results

### Key to table:

- EPBC Commonwealth Environment Protection and Biodiversity Conservation Act 1999
- FFG Flora and Fauna Guarantee Act 1988
- VIC DELWP's Advisory List of Rare or Threatened Plants in Victoria
- CaLP Catchment and Land Protection Act 1994
- WONS Weed of National Significance

### Likelihood:

- Present Presence of species confirmed on site during site assessment or relevant reports
- Likely Suitable habitat and numerous recent or proximity species records within or adjacent study site
- Possible Potentially suitable habitat and average amounts of recent species records within or adjacent study site
- Unlikely No suitable habitat and lack of species records within or adjacent study site

### Status of species:

- CR Critically Endangered under the EPBC Act
- EN Endangered under the EPBC Act
- VU Vulnerable under the EPBC Act
- L Listed as threatened under the FFG Act
- P Listed as protected under the FFG Act
- en Endangered under the DELWP Advisory List
- vu Vulnerable under the DELWP Advisory List
- r Rare under the DELWP Advisory List
- CaLP (C) Listed as regionally controlled under the CaLP Act
- \* Introduced species
- # Native but may be alien species

Table A.1: Flora species recorded during the site assessment

Scientific name	Common name	Status
<b>Native</b>		
<i>Acacia dealbata</i>	Silver Wattle	
<i>Acacia mearnsii</i>	Black Wattle	P
<i>Acacia verticillata</i>	Prickly Moses	P
<i>Acrotriche serrulata</i>	Honey-pots	
<i>Austrostipa</i> spp.	Spear Grass	
<i>Blechnum cartilagineum</i>	Gristle-fern	P
<i>Brachyscome multifida</i>	Cut-leaf Daisy	P
<i>Brachyscome petrophila</i>	Rock Daisy	P r
<i>Caladenia carnea</i> s.s.	Pink Fingers	P
<i>Caladenia moschata</i>	Musk Hood-orchid	P
<i>Caladenis congesta</i>	Black-tongue Caladenia	P
<i>Calochlaena dubia</i>	Common ground fern	P
<i>Chrysocephalum semipapposum</i>	Clustered Everlasting	P
<i>Clematis</i> spp.	Clematis	
<i>Coprosma quadrifida</i>	Prickly Currant-bush	
<i>Daviesia mimosoides</i> subsp. <i>Mimosoides</i>	Blunt-leaf Bitter-pea	

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Scientific name	Common name	Status
<i>Dianella longifolia</i> var. <i>longifolia</i> s.l.	Pale Flax-lily	
<i>Dichondra repens</i>	Kidney-weed	
<i>Diuris sulphurea</i>	Tiger Orchid	P
<i>Drosera auriculata</i>	Tall Sundew	
<i>Drosera peltata</i> s.l.	Pale Sundew	
<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum	
<i>Eucalyptus globoidea</i>	White Stringybark	
<i>Eucalyptus macrorhyncha</i>	Red Stringybark	
<i>Eucalyptus polyanthemos</i>	Red Box	
<i>Eucalyptus tricarpa</i>	Red Ironbark	
<i>Euchiton sphaericus</i>	Annual Cudweed	P
<i>Exocarpos cupressiformis</i>	Cherry Ballart	
<i>Gahnia radula</i>	Thatch Saw-sedge	
<i>Galium</i> spp.	Galium	
<i>Geranium</i> spp.	Cranesbill	
<i>Gonocarpus tetragynus</i>	Common Raspwort	
<i>Goodenia ovata</i>	Hop Goodenia	
<i>Grevillea</i> spp.	Grevillea	P
<i>Hibbertia obtusifolia</i>	Grey Guinea-flower	
<i>Hydrocotyle</i> spp.	Pennywort	
<i>Indigofera australis</i> subsp. <i>australis</i>	Austral indigo	
<i>Kennedia rubicunda</i>	Dusky Coral-pea	
<i>Kunzea ericoides</i> s.l.	Burgan	
<i>Lagenophora stipitata</i> s.l.	Common Bottle-daisy	P
<i>Laphangium luteoalbum</i>	Jersey Cudweed	P
<i>Lomandra filiformis</i>	Wattle Mat-rush	
<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass	
<i>Oxalis</i> spp.	Wood Sorrel	
<i>Pelargonium inodorum</i>	Kopata	
<i>Poa</i> spp.	Tussock-grass	
<i>Poranthera microphylla</i>	Small Poranthera	
<i>Pteridium esculentum</i>	Austral Bracken	
<i>Rytidosperma</i> sp.	Wallaby Grass	
<i>Senecio diaschides</i>	Shingle Fireweed	P r
<i>Senecio quadridentatus</i>	Cotton Fireweed	P
<i>Senecio</i> sp.	Fireweed	P
<i>Solanum aviculare</i>	Kangaroo apple	
<i>Solanum prinophyllum</i>	Forest Nightshade	
<i>Stypantra glauca</i>	Nodding Blue Lily	



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Scientific name	Common name	Status
<i>Viola hederacea</i>	Ivy-leaved Viola	
<i>Wahlenbergia</i> sp.	Bluebell	
<i>Xerochrysum bracteatum</i>	Golden Everlasting	P
<b>Introduced</b>		
<i>Aira</i> spp.	Hair Grass	
<i>Arctotheca calendula</i>	Cape Weed	
<i>Briza maxima</i>	Large Quaking-grass	
<i>Briza minor</i>	Lesser Quaking-grass	
<i>Cerastium glomeratum</i> s.l.	Common Mouse-ear Chickweed	
<i>Cyperus eragrostis</i>	Drain Flat-sedge	
<i>Fumaria bastardii</i>	Bastard's Fumitory	
<i>Hordeum</i> sp.	Barley	
<i>Hypochaeris radicata</i>	Cat's-ear	
<i>Lolium rigidum</i>	Wimmera Rye-grass	
<i>Lysimachia arvensis</i>	Pimpernel	
<i>Malva nicaeensis</i>	Mallow of Nice	
<i>Rubus polyanthemus</i>	Forest Blackberry	CaLP (C), WONS
<i>Solanum nigrum</i>	Black Nightshade	
<i>Sonchus oleraceus</i>	Common Sow-thistle	
<i>Trifolium repens</i> var. <i>repens</i>	White Clover	

Table A.2. Threatened flora species listed within the study area

Scientific Name	Common Name	EPBC Act	FFG Act	Vic	No. Records	Last Record	Likelihood of Occurrence
<i>Acacia dawsonii</i>	Poverty Wattle	-	-	vu	4	1995	Unlikely. In Victoria, known from only a few disjunct localities in the east (Mitta Mitta and Snowy River valleys), growing in dry open-forest, usually in rocky sites.
<i>Acronychia oblongifolia</i>	Yellow-wood	-	L	r	1	2020	Unlikely. Confined to a few warm-temperate rainforest communities, usually near watercourses, from the Mitchell River gorge area to near the New South Wales border.
<i>Acrotriche leucocarpa</i>	Tall Acrotriche	-	-	r	1	1980	Unlikely. Generally uncommon species of montane open-forest, woodland or shrubland often on rocky summits or slopes of mountain ranges, east from Mt Elizabeth near Ensay, but locally frequent in the upper catchment of the Snowy River.
<i>Adriana tomentosa</i> var. <i>tomentosa</i>	Eastern Bitter-bush	-	-	r	6	2020	Unlikely. Apparently confined in Victoria to East Gippsland where often occurring in riparian habitats. Specimens previously attributed to <i>Adriana tomentosa</i> var. <i>tomentosa</i> from south-western Victoria are based on misdeterminations of <i>Adriana quadripartita</i> .
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	VU	-	-	-	N/A - PMST only	Unlikely. Apparently confined to permanent swamps principally along the Murray River Between Wodonga and Echuca, uncommon to rare in the south probably due to alteration of habitat.
<i>Beyeria lanceolata</i>	Pinkwood	-	-	r	7	2020	Likely. Apart from an isolated occurrence in the Dandenong Ranges, confined in Victoria to East Gippsland where usually found in gullies, often in rocky situations.
<i>Beyeria lasiocarpa</i>	Wallaby-bush	-	-	r	19	2020	Likely. In Victoria confined to East Gippsland where localised but sometimes locally common on sheltered slopes or near streams, usually in rocky situations.
<i>Billardiera scandens</i> s.s.	Velvet Apple-berry	-	-	r	1	1977	Unlikely. Apparently uncommon in Victoria, occurring chiefly in dry open-forests and woodlands in the north-east, with isolated occurrences near Eltham, Mt. Macedon, Hurstbridge, Eildon and Orbost.
<i>Boronia ledifolia</i>	Showy Boronia	-	-	vu	11	2019	Unlikely. Rare in Victoria and restricted to scrubby dry forest or shrubland fringing the Snowy, Tambo and Timbarra Rivers in Gippsland, usually on poor soils shallowly overlying rock.
<i>Brachyscome petrophila</i>	Rock Daisy	-	-	r	2	1995	Present. Apparently endemic to East Gippsland where it commonly grows on cliffs and rocky slopes in forests and woodlands in the vicinity of Omeo, Buchan, Gelantipy and Wulgulmerang.

Appendix A Flora Results

Scientific Name	Common Name	EPBC Act	FFG Act	Vic	No. Records	Last Record	Likelihood of Occurrence
<i>Caladenia peisleyi</i>	Heath Spider-orchid	-	L	vu	3	2014	Unlikely. In Victoria apparently confined to heathland and heathy forests of East Gippsland on well-drained sandy loams.
<i>Caladenia tessellata</i>	Thick-lipped Spider-orchid	VU	-	vu	-	N/A - PMST only	Unlikely. Occurs in coastal areas east from Port Phillip Bay, growing in heath, heathy woodland and lowland forest. There is some doubt over the identity of this species.
<i>Carex capillacea</i>	Hair Sedge	-	-	r	1	1983	Unlikely. Scattered in alpine areas, bordering high-altitude swamps and wet alpine heathlands, usually associated with Sphagnum moss, but rather uncommon (e.g. at Snowy Range, Bogong High Plains, Nunniong Plateau, Davies Plain, Cobberas).
<i>Corybas fimbriatus</i>	Fringed Helmet-orchid	-	-	r	1	2010	Unlikely. Usually forming colonies on moist, shaded sandy soil near the coast and generally east of Western Port, but with isolated occurrences near Melbourne at Gembrook, Warrandyte and Greensborough.
<i>Dendrobium striolatum</i>	Streaked Rock-orchid	-	-	r	3	2020	Unlikely. In Victoria confined to East Gippsland where sometimes locally plentiful, chiefly on granite rock faces and crevices in both sheltered and quite exposed sites.
<i>Eucalyptus globulus</i> subsp. <i>globulus</i>	Southern Blue-gum	-	#	r	3	2009	Unlikely, outside natural range. Occurs in Victoria in the area south of the Strzelecki Range.
<i>Eucalyptus sideroxylon</i> subsp. <i>sideroxylon</i>	Mugga	-	-	r	1	2010	Unlikely. In Victoria, confined to the Chiltern area, northern Warby Range and south of Winton, while the other ironbark, <i>Eucalyptus tricarpa</i> , with its 3-budded inflorescences and larger fruit is widespread.
<i>Gahnia microstachya</i>	Slender Saw-sedge	-	-	r	7	2019	Unlikely. In exposed often rocky situations in drier open-forest and woodland, uncommon and scattered.
<i>Galium curvihirtum</i>	Tight Bedstraw	-	-	r	1	1987	Unlikely. In Victoria apparently confined to the south west, usually in open-forest and woodland.
<i>Gentianella polysperes</i>	Early Forest-gentian	-	-	r	1	1977	Unlikely. Scattered through the state, usually in hilly country, e.g. Dandenong Ranges and foothills, Mt Sugarloaf, Mt Macedon (but apparently now rare at these localities), ascending to subalpine areas (e.g. Snowy Range, Mt Benambra, Mt Delusion) in the eastern ranges. Supposedly also collected from the Curdies River near Warnambool. Commonly occurring in light forest or woodland communities.
<i>Geranium</i> sp. 6	Delicate Crane's-bill	-	-	vu	1	2011	Unlikely. Apparently endemic in Victoria. Recorded from sheltered sites from central to north-east Victoria (Strathbogie Ranges, Benalla, Wangaratta and Beechworth).

Appendix A Flora Results

Scientific Name	Common Name	EPBC Act	FFG Act	Vic	No. Records	Last Record	Likelihood of Occurrence
<i>Glycine latrobeana</i>	Clover Glycine	VU	L	vu	-	N/A - PMST only	Unlikely. Widespread but of sporadic occurrence and rarely encountered. Grows mainly in grasslands and grassy woodlands.
<i>Grevillea celata</i>	Colquhoun Grevillea	VU	L	vu	164	2010	Possible. Known only from the Colquhoun State Forest east of Bruthen where growing on red siliceous or pale granitic sands in dry sclerophyll forest.
<i>Grevillea polychroma</i>	Tullach Ard Grevillea	-	#	vu	3	2007	Unlikely. It is endemic to Victoria. Its distribution is centred mainly between Buchan and Gelantipy in East Gippsland. The eastern limit of its range being in the Brodrigg Forest Block (Errinundra National Park), and the western extent being at Seldom Seen, near Dargo. <i>Grevillea polychroma</i> has a much broader altitudinal range and ecological amplitude than the similar <i>G. brevifolia</i> . It occurs between 8-94 metres above sea level. It is found in riparian sites, and open woodland to tall open forest.
<i>Gynatrix macrophylla</i>	Gippsland Hemp Bush	-	-	r	2	2006	Unlikely. Endemic in Victoria where largely confined to rocky stream sides and gullies on and south of the Dividing Range in the east (e.g. Howqua, Rose and Kiewa Rivers north of the Divide and Macalister, Buchan, Mitchell and Murrindal Rivers and their tributaries south of the Divide), and rather rare.
<i>Hakea dactyloides</i>	Finger Hakea	-	-	r	1	2011	Unlikely. Confined in Victoria to the far east, and there rather rare, occurring on rocky ridges and peaks (e.g. Mt Kaye, Mallacoota area, Howe Range).
<i>Hibbertia hermanniifolia</i> subsp. <i>recondita</i>	Outcrop Guinea-flower	-	-	r	2	1987	Unlikely. In Victoria apparently confined to dry mountain slopes and rocky summits in the east (e.g. near Dargo, Mt Elizabeth, Snowy River gorge, Pine Mountain).
<i>Hovea magnibractea</i>	Large-bract Hovea	-	-	r	1	1980	Unlikely. Apparently restricted to Mt Elizabeth, Mt Nunniong, and the Wombargo Range in eastern Victoria, grows on steep rocky slopes and edges of boulder-scrub in open montane forest.
<i>Laxmannia gracilis</i>	Slender Wire-lily	-	-	r	2	2011	Unlikely. An occasional component of saltmarsh communities along the coast, rare in saline depressions and around salt lakes of south-western Victoria.
<i>Leptospermum emarginatum</i>	Twin-flower Tea-tree	-	-	r	5	1995	Unlikely. Occasional along rocky verges of watercourses in lowlands and foothills east from Heyfield area.
<i>Marsdenia flavescens</i>	Yellow Milk-vine	-	-	r	1	2020	Unlikely. Rare in Victoria where apparently restricted to a few rainforest gullies between Bairnsdale and Cann River.
<i>Muehlenbeckia rhyticarya</i>	Wrinkle-nut Lignum	-	-	r	10	2009	Unlikely. In Victoria known from a few dryish rocky, slightly elevated sites in the Glenaladale, Bruthen-Ensay, and Buchan areas, usually near watercourses but away from riparian vegetation.

## Appendix A Flora Results

Scientific Name	Common Name	EPBC Act	FFG Act	Vic	No. Records	Last Record	Likelihood of Occurrence
<i>Nematolepis frondosa</i>	Leafy Nematolepis	VU	L	vu	1	1980	Possible. Very localized on the southern slopes of Mt Elizabeth (between Bruthen and Ensay), occurring as an understorey species in tall montane forest.
<i>Olearia iodochroa</i>	Violet Daisy-bush	-	-	r	7	2004	Unlikely. Confined in Victoria to dry, rocky, elevated country in the further east (e.g. upper Tambo River valley, Wulgulmerang, Suggan Buggan, Mt Tingaringy, upper Genoa River).
<i>Phebalium squamulosum</i> subsp. <i>squamulosum</i>	Forest Phebalium	-	-	r	4	2017	Unlikely. Scattered in foothill to montane forests from Healesville area eastwards to the New South Wales border, often on shallow rocky soils. A 1914 specimen purportedly from Wilsons Promontory may represent a southern outlier but is perhaps a result of mislabelling.
<i>Poa orthoclada</i>	Avon Tussock-grass	-	-	r	1	2005	Unlikely. Localized but rather common in dry and rocky sites in hilly country near Licola and eastwards to near Dargo, extending to subalpine areas near e.g. Mt Wellington.
<i>Pomaderris aurea</i>	Golden Pomaderris	-	-	r	3	2008	Possible. Apparently endemic in Victoria, but likely to be found in New South Wales. Scattered in dryish foothill forest and heathy woodlands in the east and north-east (e.g. Holey Hill, Stockdale, Jamieson, Beechworth, Corryong, Bruthen and upper Genoa River areas) ascending into wetter montane forests on and near the Nunning Plateau and Mt Elizabeth.
<i>Pomaderris betulina</i> subsp. <i>betulina</i>	Birch Pomaderris	-	-	r	3	1994	Possible. Confined to dry, often rocky woodland and open-forests, on slopes or beside streams, and rather rare.
<i>Pomaderris eriocephala</i>	Woolly-head Pomaderris	-	-	r	25	2020	Likely. Scattered on shallow rocky soils in dryish open forests or woodlands (sometimes riparian), where sometimes forming thickets. Mainly east of Bairnsdale, with isolated occurrences near Yackandandah, Licola and a single historic record from near Drouin.
<i>Pomaderris subcapitata</i>	Convex Pomaderris	-	-	r	11	2017	Likely. Occurs in open forest, woodland and heathland, usually in rocky sites, often near watercourses (e.g. Bright, Walwa, Mt Elizabeth).
<i>Prasophyllum</i> aff. <i>odoratum</i> l	Early Leek-orchid	-	-	r	1	2013	Unlikely. Widespread throughout much of Victoria and present in a wide range of habitats from sea-level to the subalps.
<i>Prostanthera walteri</i>	Monkey Mint-bush	-	-	r	1	1980	Possible. Scattered on (usually granitic) mountains on and east of Mts Baldhead and Elizabeth, usually in tall open-forests between c. 85 and 14 m altitude.
<i>Pterostylis chlorogramma</i>	Green-striped Greenhood	VU	L	vu	-	N/A - PMST only	Unlikely. Apparently localized in Victoria, but exact range uncertain due to confusion with closely allied species. Grows in moist areas of heathy and shrubby forest, on well-drained soils.

## Appendix A Flora Results

Scientific Name	Common Name	EPBC Act	FFG Act	Vic	No. Records	Last Record	Likelihood of Occurrence
<i>Pterostylis tunstallii</i>	Granite Greenhood	-	-	vu	2	2008	Unlikely. Scattered across southern Victoria east from Wilsons Promontory and with an isolated inland occurrence near Tallangatta. Grows in moist areas of open-forest in coastal and near-coastal districts, often near granite rock outcrops, on sand or clay loams.
<i>Samolus valerandi</i>	Water Pimpernel	-	-	r	2	1995	Unlikely. Relatively rare in Victoria, occurring on damp, often shaded banks of lowland streams in the east (e.g. Dargo, Bruthen areas, upper Snowy and Genoa Rivers, etc.).
<i>Senecio diaschides</i>	Shingle Fireweed	-	-	r	1	2011	Present. In Victoria apparently confined to river valleys in the east, with records from along the Avon, Macalister, Murrindal, Buchan and Snowy Rivers, commonly occurring in sand or amongst rocks near the watercourse.
<i>Senecio psilocarpus</i>	Swamp Fireweed	VU	-	vu	-	N/A - PMST only	Unlikely. Rare in Victoria, restricted to a few herb-rich winter-wet swamps south and west from c. Ballarat, growing on volcanic clays or peat soils.
<i>Senna aciphylla</i>	Sprawling Cassia	-	-	r	2	1984	Unlikely. In Victoria, confined to the east, usually occurring on rocky slopes in woodland and scrubs, sometimes along watercourses.
<i>Tetrarrhena turfosa</i>	Smooth Rice-grass	-	-	r	1	1998	Unlikely. Occurs in damp or wet, peaty heaths, mostly in lowlands (Grampians; Tonimbuk; Genoa area) but with isolated occurrences in sub alps (Nunniong Plateau, Mt Buffalo).
<i>Tetradlea subaphylla</i>	Leafless Pink-bells	-	-	r	1	1980	Unlikely. Confined in Victoria to the eastern half of the State, mostly in East Gippsland where it favours rocky hillsides in tall eucalypt forest.
<i>Thesium australe</i>	Austral Toadflax	VU	L	vu	-	N/A - PMST only	Unlikely. Once widespread across Victoria, but all recent collections are from highland areas in the vicinity of Wulgulmerang and it is believed to have become extinct across most of its Australian range due to loss of habitat and grazing. Grows in grasslands, woodlands and herbfields, usually in damp situations.
<i>Vittadinia tenuissima</i>	Delicate New Holland Daisy	-	-	r	1	2006	Unlikely. Rare in Victoria, and apparently confined to rather dry, rocky country in valleys of major river systems in the east (e.g. Mitchell, Tambo, Murrindal, Snowy and Genoa River valleys).
<i>Westringia glabra</i>	Violet Westringia	-	-	r	3	1984	Unlikely. Frequently occurring on skeletal soils, often on steep rocky slopes, and often associated with river gorges.
<i>Xerochrysum palustre</i>	Swamp Everlasting	VU	L	vu	-	N/A - PMST only	Unlikely. Occurs in lowland swamps, usually on black cracking clay soils, scattered from near the South Australian border north-west of Portland to Bairnsdale district, but rare due to habitat depletion.

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## Appendix B Fauna Results

### Key to table:

- EPBC Commonwealth Environment Protection and Biodiversity Conservation Act 1999
- FFG Flora and Fauna Guarantee Act 1988
- VIC DELWP Advisory List of Threatened Vertebrate / Invertebrate Fauna in Victoria
- CaLP Catchment and Land Protection Act 1994

### Likelihood:

- Present Presence of species confirmed on site during site assessment or relevant reports
- Likely Species likely to traverse and use suitable habitat within or immediately adjacent the study site
- Possible Species may traverse (including fly-over) or use semi-suitable habitat within or immediately adjacent the study site
- Unlikely No suitable habitat and lack of species records within or adjacent study site

### Status of species:

- CR Critically Endangered under the EPBC Act
- EN Endangered under the EPBC Act
- VU Vulnerable under the EPBC Act
- Mi Migratory under the EPBC Act
- Ma Marine under the EPBC Act
- L Listed as threatened under the FFG Act
- cr Critically Endangered under the DELWP Advisory List
- en Endangered under the DELWP Advisory List
- vu Vulnerable under the DELWP Advisory List
- nt Near Threatened under the DELWP Advisory List<sup>7</sup>
- \* Introduced species
- CaLP Listed as an established pest animal under the CaLP Act

Table B.1: Fauna species recorded during the site assessment.

Common Name	Scientific Name	Status
<b>Birds</b>		
Australian Magpie	Cracticus tibicen	
Australian Raven	Corvus coronoides	
Brown Thornbill	Acanthiza pusilla	
Common Cicadabird	Coracina tenuirostris	
Crimson Rosella	Platycercus elegans	
Eastern Yellow Robin	Eopsaltria australis	
Fan-tailed Cuckoo	Cacomantis flabelliformis	
Golden Whistler	Pachycephala pectoralis	
Grey Fantail	Rhipidura albiscapa	
Grey Shrike-thrush	Colluricincla harmonica	
Laughing Kookaburra	Dacelo novaeguineae	
Olive-backed Oriole	Oriolus sagittatus	
Pied Currawong	Strepera graculina	

<sup>7</sup> A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for, or is likely to qualify for, a threatened category in the near future (DSE 2013).

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Common Name	Scientific Name	Status
Red Wattlebird	<i>Anthochaera carunculata</i>	
Red-browed Treecreeper	<i>Climacteris erythroptera</i>	
Rufous Whistler	<i>Pachycephala rufiventris</i>	
Sacred Kingfisher	<i>Todiramphus sanctus</i>	
Shining Bronze-cuckoo	<i>Chalcites lucidus</i>	
Spotted Pardalote	<i>Pardalotus punctatus</i>	
Striated Pardalote	<i>Pardalotus striatus</i>	
Striated Thornbill	<i>Acanthiza lineata</i>	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	
Superb Fairy-wren	<i>Malurus cyaneus</i>	
Varied Sittella	<i>Daphoenositta chrysoptera</i>	
White-browed Scrubwren	<i>Sericornis frontalis</i>	
White-naped Honeyeater	<i>Melithreptus lunatus</i>	
White-throated Treecreeper	<i>Cormobates leucophaea</i>	
Wonga Pigeon	<i>Leucosarcia picata</i>	
<b>Mammals</b>		
Black-tailed Wallaby	<i>Wallabia bicolor</i>	
<b>Reptiles</b>		
Garden Skink	<i>Lampropholis guichenoti</i>	



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Table B.2: Threatened, migratory and marine fauna species listed within the study area

Common Name	Scientific Name	EPBC Act	FFG Act	Vic	Mi/Ma	No. Records	Last Record	Likelihood of Occurrence
<b>Amphibians</b>								
Giant Burrowing Frog	<i>Heleioporus australiacus</i>	VU	L	cr	-	1	1998	Unlikely – lack of suitable slow-flowing waterbody habitat available within the study site. Occur in a wide range of forest communities including montane sclerophyll woodland, montane riparian woodland, as well as wet and dry sclerophyll forest.
Green and Golden Bell Frog	<i>Litoria aurea</i>	VU	-	vu	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Occurs in still or slow-flowing waterbodies with a high cover of emergent and submerged vegetation. Can be found in agricultural and pastoral land with permanent waterbodies providing there is sufficient cover of emergent, fringing or submerged vegetation.
Growling Grass Frog	<i>Litoria raniformis</i>	VU	L	en	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Occurs in still or slow-flowing waterbodies with a high cover of emergent and submerged vegetation. Can be found in agricultural and pastoral land with permanent waterbodies providing there is sufficient cover of emergent, fringing or submerged vegetation.
Littlejohn's Tree Frog	<i>Litoria littlejohni</i>	VU	L	en	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Known to inhabit forest, coastal woodland and heath from 1 to 95 m above sea level.
<b>Birds</b>								
Australasian Bittern	<i>Botaurus poiciloptilus</i>	EN	L	en	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Frequents wetlands with dense reedbeds, and other vegetation in water such as cumbungi, lignum, rushes and sedges.
Australian Painted Snipe	<i>Rostratula australis</i>	EN	L	cr	Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Inhabits many different types of shallow, brackish or freshwater terrestrial wetlands. Suitable wetlands usually support a mosaic of low, patchy vegetation, as well as lignum and canegrass.
Azure Kingfisher	<i>Ceyx azureus</i>	-	-	nt	-	4	2007	Unlikely – lack of suitable waterbody habitat available within the study site. Found near water in vegetated margins of freshwater rivers and creeks as well as billabongs, lakes, swamps and dams.

Common Name	Scientific Name	EPBC Act	FFG Act	Vic	Mi/Ma	No. Records	Last Record	Lifeform or Occurrence
Barking Owl	<i>Ninox connivens</i>	-	L	en	-	1	2004	Possible – suitable woodland habitat available within the study site. Likely more to opportunistically forage or move through rather than use habitat for breeding or shelter purposes within the study site. Occurs in open woodlands and open forests, including Box Ironbark and riparian River Red Gum habitats, as well as some foothill habitats on granitic slopes.
Black-faced Monarch	<i>Monarcha melanopsis</i>	-	-	-	Mi/Ma	3	2009	Possible – suitable woodland habitat available within the study site. The Black-faced Monarch is found in rainforests, eucalypt woodlands, coastal scrub and damp gullies. It may be found in more open woodland when migrating. It is found along the coast of eastern Australia, becoming less common further south.
Chestnut-rumped Heathwren	<i>Calamanthus pyrrhopygius</i>	-	L	vu	-	1	2008	Unlikely – lack of suitable heathland habitat available within the study site. Occurs in woodlands and scrublands with a heathy understorey and in Box-Ironbark forests.
Common Sandpiper	<i>Actitis hypoleucos</i>	-	-	vu	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Found on intertidal mudflats of estuaries, lagoons, mangroves, as well as beaches, rocky shores and around lakes, dams and floodwaters.
Curlew Sandpiper	<i>Calidris ferruginea</i>	CR	L	en	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Found on intertidal mudflats of estuaries, lagoons, mangroves, as well as beaches, rocky shores and around lakes, dams and floodwaters.
Eastern Curlew	<i>Numenius madagascariensis</i>	CR	L	vu	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Found on intertidal mudflats and sandflats, often with beds of seagrass, on sheltered coasts, especially estuaries, mangrove swamps, bays, harbours and lagoons.
Emu	<i>Dromaius novaehollandiae</i>	-	-	nt	-	9	1998	Unlikely – lack of suitable savannah woodland habitat available within the study site. Habitat includes sclerophyll forest and savanna woodland.
Fork-tailed Swift	<i>Apus pacificus</i>	-	-	-	Mi/Ma	-	N/A - PMST only	Possible – suitable woodland habitat available within the study site for opportunistic foraging or roosting. The Fork-tailed Swift is a non-breeding visitor to all states and territories of Australia and widespread, but sparsely scattered in all regions of Victoria. The Fork-tailed Swift is almost exclusively aerial, flying from less than 1 m to at least 300 m above ground and

Common Name	Scientific Name	EPBC Act	FFG Act	Vic	Mi/Ma	No. Records	Last Record	Lifeform or Occurrence
								probably much higher. In Australia, they mostly occur over inland plains but sometimes above foothills or in coastal areas.
Great Egret	<i>Ardea alba</i>	-	L	vu	Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Prefer shallow water but may be seen on any watered area, including damp grasslands.
Grey Falcon	<i>Falco hypoleucos</i>	VU	L	en	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast.
Hooded Robin	<i>Melanodryas cucullata</i>	-	L	nt	-	1	1978	Unlikely – lack of suitable woodland habitat available within the study site. Found in lightly timbered woodland, mainly dominated by acacia and/or eucalypts.
Latham's Snipe	<i>Gallinago hardwickii</i>	-	-	nt	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Occurs in a variety of natural and artificial wetland habitats, including dams in pastoral land. Requires dense vegetation cover.
Masked Owl	<i>Tyto novaehollandiae</i>	-	L	en	-	2	2020	Possible – suitable woodland habitat available within the study site. Likely more to opportunistically forage or move through rather than use habitat for breeding or shelter purposes within the study site. Inhabits forests, woodlands, timbered waterways and open country on the fringe of these areas. Require large hollows for nesting.
Nankeen Night-Heron	<i>Nycticorax caledonicus</i>	-	-	nt	-	1	1978	Unlikely – lack of suitable waterbody habitat available within the study site. Frequents well-vegetated wetlands. Also occurs along shallow river margins, mangroves, floodplains, swamps, parks and gardens.
Osprey	<i>Pandion haliaetus</i>	-	-	-	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Ospreys have a wide distribution because they are able to live almost anywhere where there are safe nest sites and shallow water with abundant fish.
Painted Honeyeater	<i>Grantiella picta</i>	VU	L	vu	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Occurs in box-gum woodland and box-ironbark forests with high presence of mistletoe for foraging.

Common Name	Scientific Name	EPBC Act	FFG Act	Vic	Mi/Ma	No. Records	Last Record	Likelihood of Occurrence
Pectoral Sandpiper	<i>Calidris melanotos</i>	-	-	nt	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Prefers shallow fresh to saline wetlands. The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.
Powerful Owl	<i>Ninox strenua</i>	-	L	vu	-	23	2006	Possible – suitable woodland habitat available within the study site. Likely more to opportunistically forage or move through rather than use habitat for breeding or shelter purposes within the study site. Found in open forests and woodlands, as well as along sheltered gullies in wet forests with dense understoreys, especially along watercourses. Needs old growth trees to nest.
Regent Honeyeater	<i>Anthochaera phrygia</i>	CR	L	cr	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Occurs in dry open forest or woodlands comprising ironbarks, Yellow Box, White and Yellow Gum.
Rufous Fantail	<i>Rhipidura rufifrons</i>	-	-	-	Mi/Ma	22	2008	Possible – suitable woodland habitat available within the study site. The Rufous Fantail occurs in coastal and near coastal districts of northern and eastern Australia with breeding populations occurring from about the South Australia-Victoria border, through south and central. In east and south-east Australia, the Rufous Fantail mainly inhabits wet sclerophyll forests, often in gullies dominated by eucalypts as well as subtropical and temperate rainforests.
Satin Flycatcher	<i>Myiagra cyanoleuca</i>	-	-	-	Mi/Ma	6	2001	Possible – suitable woodland habitat available within the study site. The Satin Flycatcher is widespread in eastern Australia. Satin Flycatchers inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands, and on migration, occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	-	-	-	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Sharp-tailed Sandpiper are widespread in most regions of Victoria, especially in coastal areas, but they are sparse in north-east and north-central Victoria. They forage and roost at the edge of the water of wetlands or intertidal mudflats, either on bare wet mud or sand, or in shallow water and require dense vegetation or shelter to roost.

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Common Name	Scientific Name	EPBC Act	FFG Act	Vic	Mi/Ma	No. Records	Last Record	Lifeform or Occurrence
Sooty Owl	<i>Tyto tenebricosa</i>	-	L	vu	-	10	2019	Possible – suitable woodland habitat available within the study site. Likely more to opportunistically forage or move through rather than use habitat for breeding or shelter purposes within the study site. Occurs in montane forests and rainforest with large tree hollows for breeding.
Spotted Quail-thrush	<i>Cinclosoma punctatum</i>	-	-	nt	-	31	2013	Possible – suitable woodland habitat available within the study site. Inhabits heathlands, sclerophyll woodlands and forests on stony ridges and slopes.
Swift Parrot	<i>Lathamus discolor</i>	CR	L	en	Ma	1	1978	Possible – suitable woodland habitat available within the study site for opportunistic foraging only. Migrates to mainland Australia in winter. Forages in dry sclerophyll forests and woodlands, suburban parks and gardens and flowering fruit trees.
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	-	L	vu	Ma	5	2018	Unlikely – lack of suitable coastal habitat available within the study site. Commonly found in coastal and near coastal areas of Australia. Normally seen perched high in a tree or soaring over waterways and adjacent land.
White-throated Needletail	<i>Hirundapus caudacutus</i>	VU	L	vu	Mi/Ma	26	2019	Possible – suitable woodland habitat available within the study site for opportunistic foraging or roosting. Highly aerial species occurring over a variety of habitat types.
Yellow Wagtail	<i>Motacilla flava</i>	-	-	-	Mi/Ma	-	N/A - PMST only	Unlikely – not previously recorded the study area. Mostly distributed across coastal northern Australia, a rare vagrant to Victoria. This species occupies a range of damp or wet habitats with low vegetation, from damp meadows, marshes, waterside pastures, sewage farms and bogs.
<b>Fish</b>								
Australian Grayling	<i>Prototroctes maraena</i>	VU	L	vu	-	16	1998	Unlikely – lack of suitable waterbody habitat within the study site. Occurs within streams and rivers in both fresh and brackish water environments. Larvae and early juvenile stages occur out at sea, before juveniles return to freshwater environments.
Coxs Gudgeon	<i>Gobiomorphus coxii</i>	-	L	en	-	4	1981	Unlikely – lack of suitable waterbody habitat within the study site. Endemic to eastern Australia from about Brisbane, Queensland, to Gippsland, Victoria. Inhabits coastal and inland freshwaters to an altitude

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Common Name	Scientific Name	EPBC Act	FFG Act	Vic	Mi/Ma	No. Records	Last Record	Lifeform or Occurrence
								of about 7 m, usually in flowing, upland streams, including rapids. Juveniles often occur at lower altitudes, having been washed downstream as larvae. They migrate upstream during spring and summer, even managing to climb waterfalls and dam walls.
Flinders Pygmy Perch	Nannoperca sp. 1	-	-	vu	-	8	2015	Unlikely – lack of suitable waterbody habitat within the study site. Typically occurs in lakes, ponds and slow-flowing rivers and is usually associated with large amounts of aquatic vegetation.
Macquarie Perch	Macquaria australasica	EN	L	en	-	1	1970	Unlikely – lack of suitable waterbody habitat within the study site. Endemic to the Murray-Darling system and introduced into some Victorian river systems. Occur in Rivers, large streams and lakes.
<b>Mammals</b>								
Broad-toothed Rat	Mastacomys fuscus mordicus	VU	-	-	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Preferred habitats include alpine and subalpine heathlands, grassland adjacent to boulder outcrops, swamps, sedgelands, coastal grassy or shrubby dunes. Requires high vegetation cover.
Brush-tailed Rock-wallaby	Petrogale penicillata	VU	L	cr	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Occupy rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges, often facing north.
Common Bent-wing Bat	Miniopterus schreibersii GROUP	-	L	-	-	1	1998	Possible – suitable woodland habitat available within the study site. Distributed across northern and eastern Australia. Found in rainforests, sclerophyll forests, woodlands, monsoon forests, open grasslands, mangroves and paperbark forests.
Grey-headed Flying-fox	Pteropus poliocephalus	VU	L	vu	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Widely distributed across eastern Australia feeding on nectar from a variety of eucalypt species and fruits in rainforest habitats and farmland.
Long-nosed Potoroo	Potorous tridactylus trisulcatus	VU	L	nt	-	1	1975	Unlikely – lack of suitable heathland and shrubland habitat available within the study site. Occurs in a range of vegetation types characterized by dense understoreys, including shrublands, coastal scrub, heathlands, forest and woodlands, and rainforests. It is often most likely to occur near creeks or gullies. Optimal habitat often includes a mosaic of different

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Appendix B Fauna Results

Common Name	Scientific Name	EPBC Act	FFG Act	Vic	Mi/Ma	No. Records	Last Record	Comments on Occurrence
								vegetation types, with denser vegetation used for shelter and more open areas for foraging.
Southern Brown Bandicoot	<i>Isoodon obesulus obesulus</i>	EN	L	nt	-	-	N/A - PMST only	Unlikely – not previously recorded the study area. Occurs in scrubby habitats with dense, low ground and shrub cover.
Southern Greater Glider	<i>Petauroides volans</i>	VU	L	vu	-	17	2019	Possible – suitable woodland habitat available within the study site. May use hollow-bearing trees within the study site for shelter. Occurs in montane forests with large tree hollows for refuge and breeding.
Spot-tailed Quoll	<i>Dasyurus maculatus maculatus</i>	EN	L	en	-	2	2014	Possible – suitable woodland habitat available within the study site. Likely to use the study site for opportunistic foraging or movement purposes rather than breeding or denning. Occurs in forested areas with suitable denning sites (i.e. rocky outcrops, caves, hollow logs etc.)
White-footed Dunnart	<i>Sminthopsis leucopus</i>	-	L	nt	-	2	2008	Unlikely – lack of suitable coastal forest habitat available within the study site. Occurs in coastal dune vegetation, coastal forest, tussock grassland and sedgeland, heathland, woodland and forest.
<b>Reptiles</b>								
Lace Monitor	<i>Varanus varius</i>	-	-	en	-	35	2018	Possible – suitable woodland habitat available within the study site. Predominantly occurs in forest or woodland habitats, unlikely to traverse open farmland.

# Appendix C Native Vegetation Removal Report

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# Native vegetation removal report

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This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report is not an assessment by DELWP of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Date of issue: 16/12/2020  
Time of issue: 1:02 pm

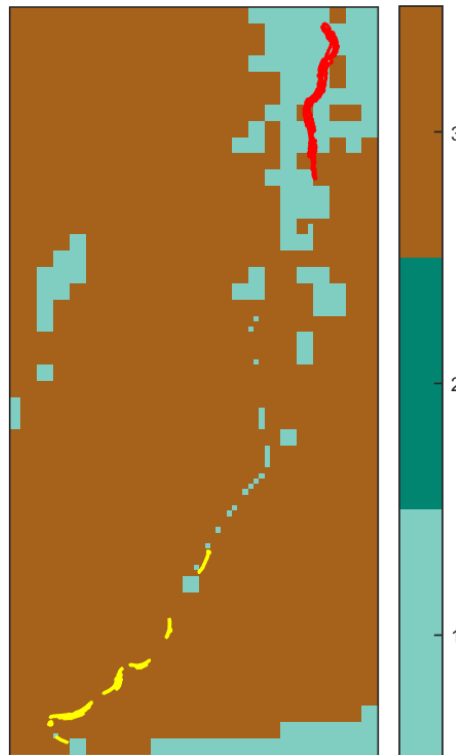
Report ID: SME\_2020\_018

Project ID	30042306_GAR Mullocky Creek_Veg Removal_20201112_Past removal
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## Assessment pathway

Assessment pathway	Detailed Assessment Pathway
Extent including past and proposed	1.912 ha
Extent of past removal	1.473 ha
Extent of proposed removal	0.439 ha
No. Large trees proposed to be removed	4
Location category of proposed removal	Location 3 The native vegetation is in an area where the removal of less than 0.5 hectares could have a significant impact on habitat for one or more rare or threatened species.

### 1. Location map



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## Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

<b>Species offset amount<sup>1</sup></b>	0.516 species units of habitat for Eastern Horseshoe Bat, <i>Rhinolophus megaphyllus megaphyllus</i>
Large trees	4 trees

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 includes information about the native vegetation to be removed

Appendix 2 includes information about the rare or threatened species mapped at the site.

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

<sup>1</sup> The species offset amount(s) required is the sum of all species habitat units in Appendix 1.

## Next steps

Any proposal to remove native vegetation must meet the application requirements of the Detailed Assessment Pathway and it will be assessed under the Detailed Assessment Pathway.

If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. Council will refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

This *Native vegetation removal report* must be submitted with your application for a permit to remove, destroy or lop native vegetation.

Refer to the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) for a full list of application requirements. This report provides information that meets the following application requirements:

- The assessment pathway and reason for the assessment pathway
- A description of the native vegetation to be removed (partly met)
- Maps showing the native vegetation and property (partly met)
- Information about the impacts on rare or threatened species.
- The offset requirements determined in accordance with section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- Recent dated photographs
- Details of past native vegetation removal
- An avoid and minimise statement
- A copy of any Property Vegetation Plan that applies
- A defensible space statement as applicable
- A statement about the Native Vegetation Precinct Plan as applicable
- A site assessment report including a habitat hectare assessment of any patches of native vegetation and details of trees
- An offset statement that explains that an offset has been identified and how it will be secured.

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Obtaining this publication does not guarantee that an application will meet the requirements of Clauses 52.16 or 52.17 of the Victoria Planning Provisions and Victorian planning schemes or that a permit to remove native vegetation will be granted.

Notwithstanding anything else contained in this publication, you must ensure that you comply with all relevant laws, legislation, awards or orders and that you obtain and comply with all permits, approvals and the like that affect, are applicable or are necessary to undertake any action to remove, lop or destroy or otherwise deal with any native vegetation or that apply to matters within the scope of Clauses 52.16 or 52.17 of the Victoria Planning Provisions and Victorian planning schemes.

## Appendix 1: Description of native vegetation to be removed

The species-general offset test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the species offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact is above the species offset threshold a species offset is required. This test is done for all species mapped at the site. Multiple species offsets will be required if the species offset threshold is exceeded for multiple species.

Where a zone requires species offset(s), the species habitat units for each species in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{Species habitat units} = \text{extent} \times \text{condition} \times \text{species landscape factor} \times 2, \text{ where the species landscape factor} = 0.5 + (\text{habitat importance score}/2)$$

The species offset amount(s) required is the sum of all species habitat units per zone

Where a zone does not require a species offset, the general habitat units in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{General habitat units} = \text{extent} \times \text{condition} \times \text{general landscape factor} \times 1.5, \text{ where the general landscape factor} = 0.5 + (\text{strategic biodiversity value score}/2)$$

The general offset amount required is the sum of all general habitat units per zone.

### Native vegetation to be removed

Zone	Information provided by or on behalf of the applicant in a GIS file						Information calculated by EnSym					
	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
1-a	Patch	egu_0016	Least Concern	1	no	0.640	0.031	0.031	0.511	0.895	0.038	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>
12-a	Patch	egu_0877	Least Concern	0	no	0.560	0.037	0.037	0.559	0.892	0.039	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>
10-a	Patch	egu_0877	Least Concern	1	no	0.560	0.042	0.042	0.590	0.890	0.044	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>
11-a	Patch	egu_0016	Least Concern	0	no	0.640	0.026	0.026	0.590	0.890	0.032	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>
8-a	Patch	egu_0016	Least Concern	2	no	0.640	0.060	0.060	0.617	0.890	0.072	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>
9-a	Patch	egu_0877	Least Concern	0	no	0.560	0.021	0.021	0.670	0.890	0.022	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>
6-a	Patch	egu_0016	Least Concern	0	no	0.640	0.043	0.043	0.529	0.891	0.052	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>
7-a	Patch	egu_0016	Least Concern	0	no	0.640	0.059	0.059	0.551	0.890	0.071	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus</i>

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Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
4-a	Patch	egu_0016	Least Concern	0	no	0.640	0.059	0.059	0.520	0.900	0.072	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus megaphyllus</i>
5-a	Patch	egu_0016	Least Concern	0	no	0.640	0.009	0.009	0.520	0.890	0.010	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus megaphyllus</i>
2-a	Patch	egu_0016	Least Concern	0	no	0.640	0.018	0.018	0.520	0.891	0.022	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus megaphyllus</i>
3-a	Patch	egu_0016	Least Concern	0	no	0.640	0.035	0.035	0.611	0.890	0.042	11303 Eastern Horseshoe Bat <i>Rhinolophus megaphyllus megaphyllus</i>

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## Appendix 2: Information about impacts to rare or threatened species' habitats on site

This table lists all rare or threatened species' habitats mapped at the site.

Species common name	Species scientific name	Species number	Conservation status	Group	Habitat impacted	% habitat value affected
Eastern Horseshoe Bat	<i>Rhinolophus megaphyllus megaphyllus</i>	11303	Vulnerable	Dispersed	Top ranking map	0.0106
Austral Moonwort	<i>Botrychium australe</i>	500445	Vulnerable	Dispersed	Habitat importance map	0.0005
Eastern Horseshoe Bat	<i>Rhinolophus megaphyllus megaphyllus</i>	11303	Vulnerable	Dispersed	Habitat importance map	0.0005
Wallaby-bush	<i>Beyeria lasiocarpa</i>	500393	Rare	Dispersed	Habitat importance map	0.0004
Woolly-head Pomaderris	<i>Pomaderris eriocephala</i>	502657	Rare	Dispersed	Habitat importance map	0.0003
Slender Saw-sedge	<i>Gahnia microstachya</i>	501393	Rare	Dispersed	Habitat importance map	0.0002
Tight Bedstraw	<i>Galium curviflorum</i>	501407	Rare	Dispersed	Habitat importance map	0.0002
Slender Mint-bush	<i>Prostanthera saxicola var. bracteolata</i>	502750	Rare	Dispersed	Habitat importance map	0.0002
Avon Tussock-grass	<i>Poa orthoclada</i>	504510	Rare	Dispersed	Habitat importance map	0.0002
Delicate New Holland Daisy	<i>Vittadinia tenuissima</i>	503543	Rare	Dispersed	Habitat importance map	0.0002
Sprawling Cassia	<i>Senna aciphylla</i>	500662	Rare	Dispersed	Habitat importance map	0.0002
Pinkwood	<i>Beyeria lanceolata</i>	500396	Rare	Dispersed	Habitat importance map	0.0002
Delicate Crane's-bill	<i>Geranium sp. 6</i>	505347	Vulnerable	Dispersed	Habitat importance map	0.0002
Bear's-ear	<i>Cymbonotus lawsonianus</i>	500902	Rare	Dispersed	Habitat importance map	0.0002
Birch Pomaderris	<i>Pomaderris betulina subsp. betulina</i>	502652	Rare	Dispersed	Habitat importance map	0.0002
Silky Kidney-weed	<i>Dichondra sp. 1</i>	505786	Rare	Dispersed	Habitat importance map	0.0002
Fish's Greenhood	<i>Pterostylis fischii</i>	502795	Rare	Dispersed	Habitat importance map	0.0001
Golden Pomaderris	<i>Pomaderris aurea</i>	502651	Rare	Dispersed	Habitat importance map	0.0001

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Lanky Buttons	<i>Leptorhynchus elongatus</i>	501941	Endangered	Dispersed	Habitat importance map	0.0001
Outcrop Guinea-flower	<i>Hibbertia hermanniifolia</i> subsp. <i>recondita</i>	501669	Rare	Dispersed	Habitat importance map	0.0001
Powerful Owl	<i>Ninox strenua</i>	10248	Vulnerable	Dispersed	Habitat importance map	0.0001
Lace Monitor	<i>Varanus varius</i>	12283	Endangered	Dispersed	Habitat importance map	0.0001
Masked Owl	<i>Tyto novaehollandiae novaehollandiae</i>	10250	Endangered	Dispersed	Habitat importance map	0.0001
Greater Glider	<i>Petauroides volans</i>	11133	Vulnerable	Dispersed	Habitat importance map	0.0001
Broad Shield-fern	<i>Polystichum formosum</i>	502644	Rare	Dispersed	Habitat importance map	0.0001
Tremont Bundy	<i>Eucalyptus</i> aff. <i>goniocalyx</i> ( <i>Dandenong Ranges</i> )	507008	Vulnerable	Dispersed	Habitat importance map	0.0000
Showy Boronia	<i>Boronia ledifolia</i>	500426	Vulnerable	Dispersed	Habitat importance map	0.0000
Grey Beard-heath	<i>Leucopogon attenuatus</i>	501971	Rare	Dispersed	Habitat importance map	0.0000
Sooty Owl	<i>Tyto tenebricosa tenebricosa</i>	10253	Vulnerable	Dispersed	Habitat importance map	0.0000
Tullach Ard Grevillea	<i>Grevillea polychroma</i>	505490	Vulnerable	Dispersed	Habitat importance map	0.0000

#### Habitat group

- Highly localised habitat means there is 2000 hectares or less mapped habitat for the species
- Dispersed habitat means there is more than 2000 hectares of mapped habitat for the species

#### Habitat impacted

- Habitat importance maps are the maps defined in the Guidelines that include all the mapped habitat for a rare or threatened species
- Top ranking maps are the maps defined in the Guidelines that depict the important areas of a dispersed species habitat, developed from the highest habitat importance scores in dispersed species habitat maps and selected VBA records
- Selected VBA record is an area in Victoria that represents a large population, roosting or breeding site etc.

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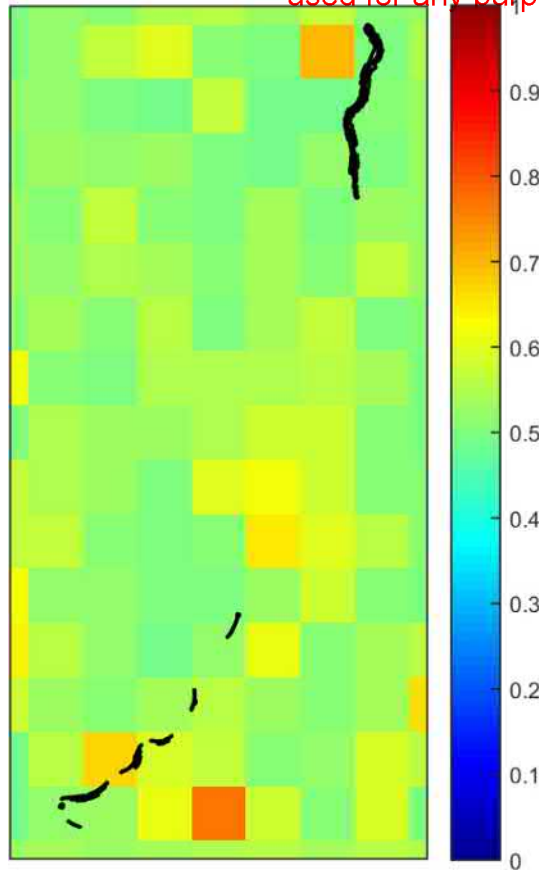
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## Appendix 3 – Images of mapped native vegetation

### 2. Strategic biodiversity values map



### 3. Aerial photograph showing mapped native vegetation

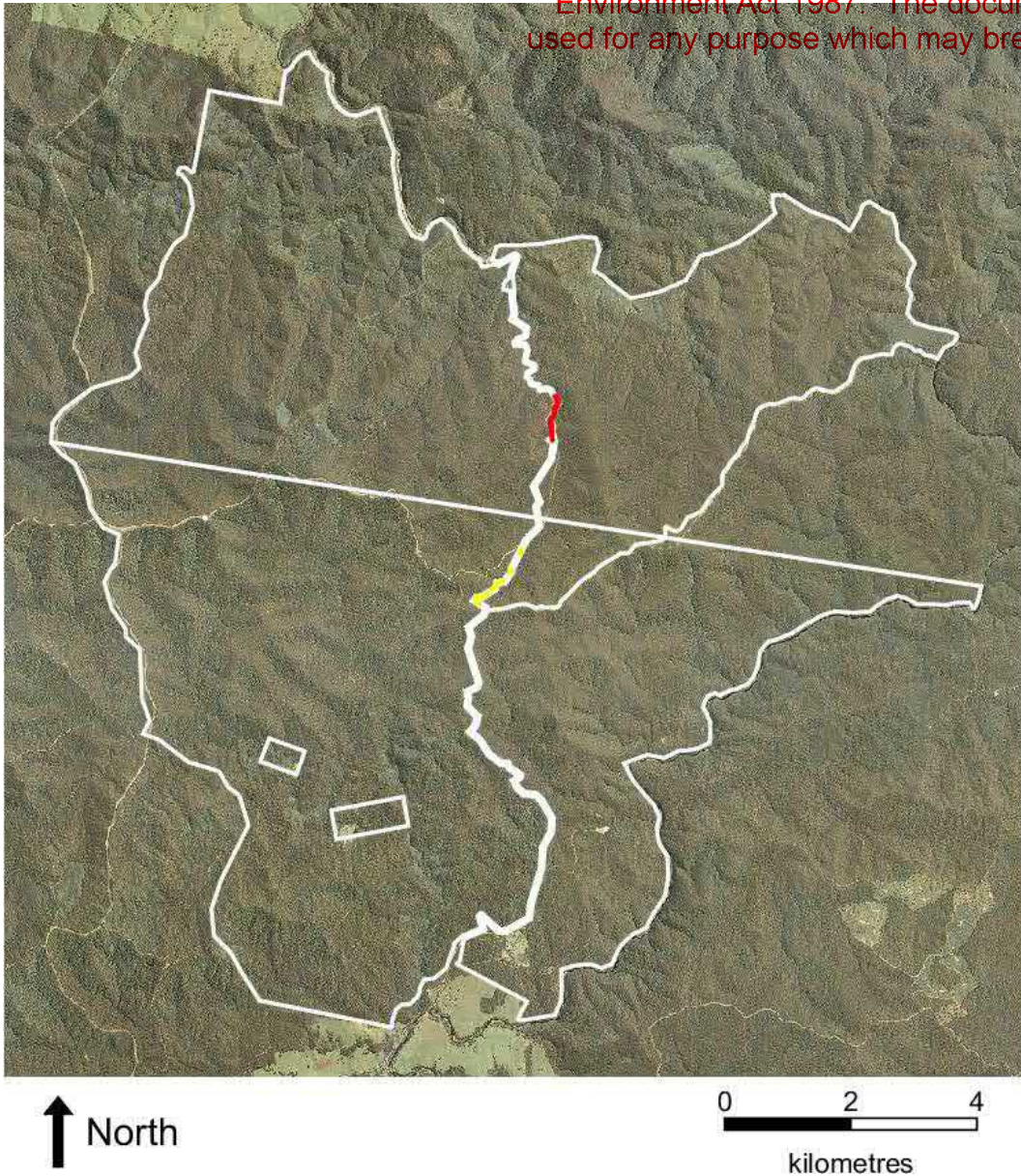




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**4. Map of the property in context**



Yellow boundaries denote areas of proposed native vegetation removal.

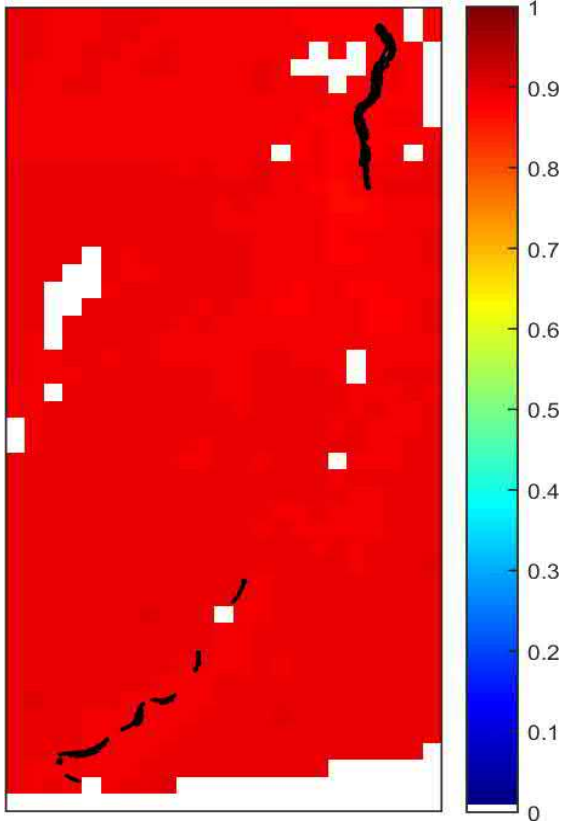
Red boundaries denote areas of past removal.

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**4. Habitat importance maps**

Eastern Horseshoe Bat  
*Rhinolophus megaphyllus megaphyllus*  
11303



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# Great Alpine Road – Walsh's Cutting

Date: 13 November 2020

Author: Jeremy Hill – Department of Transport Heritage Advisor – Heritage and Native Title Practice

## Heritage due diligence assessment

### Introduction

This heritage due diligence assessment (DDA) has been undertaken in relation to the proposed works for corner treatments along the Great Alpine Road (the activity area). The activity area is located within the East Gippsland local government area, Double Bridges and Tambo Crossing, Victoria. This advice is given in relation to both Aboriginal and historic heritage management and how the following legislation applies:

- Aboriginal Heritage Act 2006 (as amended),
- Aboriginal Heritage Regulations 2018,
- Heritage Act 2017,
- The Planning and Environment Act 1987,
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth),
- Native Title Act 1993 (Commonwealth).

This assessment did not include a field visit. The Gunaikurnai Land and Waters is the registered Aboriginal party (RAP) for the activity area. No consultation has been undertaken as part of this DDA. This DDA assessed the design provided by Sajini Sirisena, attached in Attachment A. No construction designs were reviewed as part of this DDA. The DDA only accounts for the predicted impact as outlined in the provided designs.

### Scope of works

The works will include:

- Site clearing and grubbing.
- Widening of the road by cutting into the bedrock batters and using the cut material to fill some locations.
- Use of a stock site at Tambo Crossing to import and store fill (Tambo Crossing).

Note that no finalised engineering designs were reviewed as part of this advice. The advice has been based on information supplied to Department of Transport Heritage Advisor Jeremy Hill on 26 August 2020 by Sajini Sirisena. Should the designs change a new DDA may be required.

### Aboriginal Heritage Act and Aboriginal Heritage Regulations

The Aboriginal Heritage Act 2006 provides blanket protection for Aboriginal cultural heritage. If any Aboriginal objects (artefacts), sites, places or skeletal material are identified before or during an activity, they cannot be harmed until either a Cultural Heritage Permit (CHP) to harm, or a Cultural Heritage Management Plan (CHMP) that specifically permits harm to that place has been prepared and approved. Under certain circumstances a mandatory CHMP may be required before any works proceed.

For the purposes of determining if a CHMP is required, a determination must be made if the works are considered exempt from this process.

## Does the activity trigger a mandatory CHMP?

With reference to r.7 of the regulations, a CHMP is required if:

- All or part of the activity is located within a defined **area of cultural heritage sensitivity**; and,
- All of part of the activity is defined as a **high impact activity** (that would result in **significant ground disturbance**).

**Note: Significant ground disturbance** is defined in the regulations as the disturbance of –

- a) The topsoil or surface rock layer of the ground; or,
- b) A waterway –

By machinery in the course of digging, dredging, or deep ripping, but does not include ploughing other than deep ripping.

## High impact activities

Regulation 47(1) (High Impact Activities – Constructing specified items of infrastructure) states:

'The construction of any more or one of the following is a high impact activity if the construction would result in significant ground disturbance –

- e) A road with a length exceeding 100 metres'

## Areas of cultural heritage sensitivity

There are two areas of cultural heritage sensitivity. These are defined under r.26 (land within 200m of a creek – Double Bridges) and r.32 (National Park – Mount Elizabeth Nature Conservation Reserve). At the stack site, there are two areas of cultural heritage sensitivity, both defined under r.26 being land within 200m of a creek, Tambo River and Lockup Creek

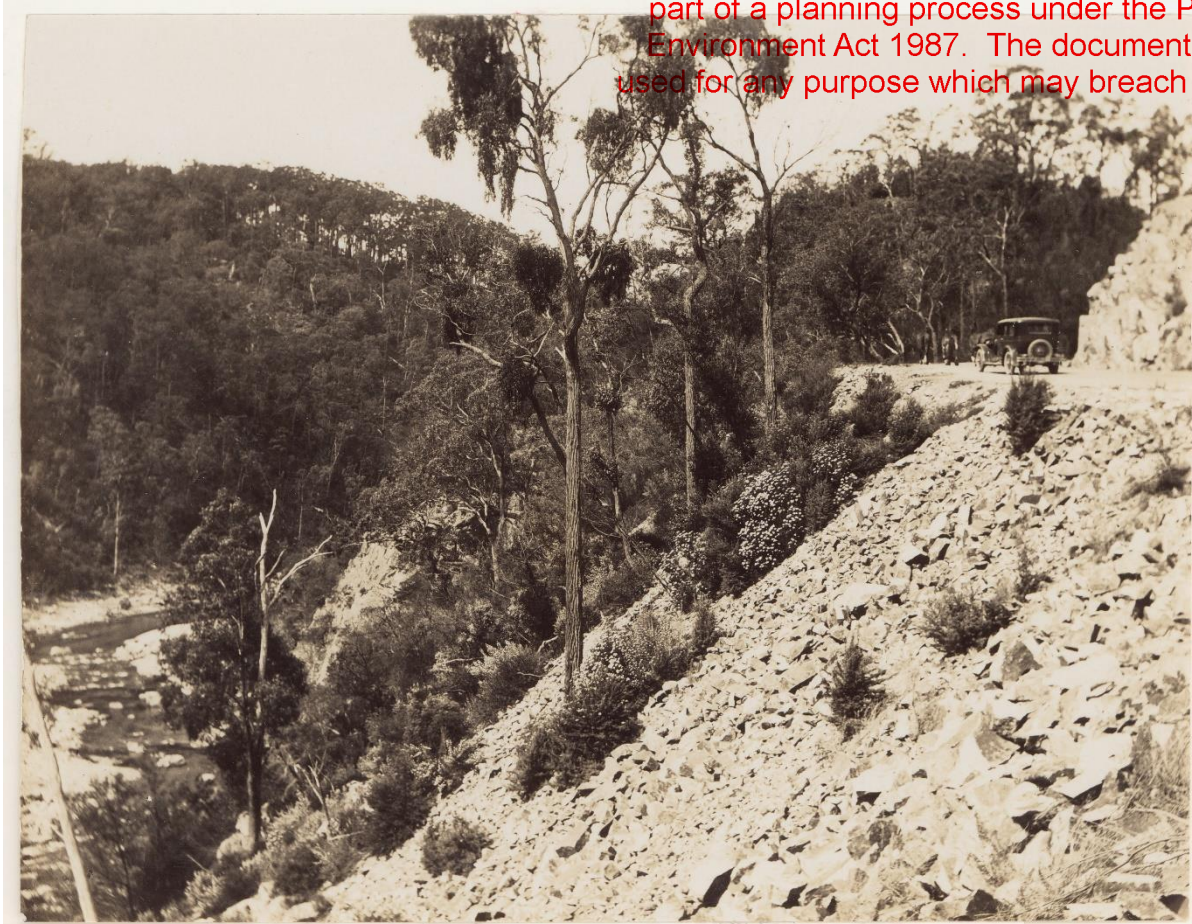
It should be noted that a historic Aboriginal site located to the south of the stack site. This site is a massacre site located to the south. There is no associated area of cultural heritage sensitivity recorded with the site, however, all vehicles and pedestrians are to avoid the area.

It should be noted that any area of cultural heritage sensitivity that has been subjected to significant ground disturbance, it is no longer an area of cultural heritage sensitivity. The land use history below shows the disturbance that has been undertaken within the activity area.

It is therefore considered that the activity area has undergone significant ground disturbance and as a result, the areas of cultural heritage sensitivity no longer exist and the project does not meet both trigger requirements to prepare a CHMP.

## Land use history

The Great Alpine Road has been in continuous operation since the 1840s, being continually modified. Photograph 1, below, shows the destructive construction process that was used to construct the road. This is likely to have removed any archaeological potential. There was a hotel at the nearby Double Bridges township, but this has since been destroyed. Bullocky Creek to the north of the activity area was named after the bullock teams who would camp along its banks, indicating that the Great Alpine Road was a major transport route in the early east Gippsland region.



Tambo Valley and highway, about 1924

**Photograph 1** Photograph showing the Great Alpine Road in the 1920s showing the results of construction and the disturbance it caused (State Library of Victoria).

**Aerial Imagery**

Aerial imagery was obtained from Landata on 27 November 2019. This image indicates that the activity area has undergone little change since its original construction in the 1840s.



**Photograph 2 1952 Mapsheet photography Bruthen (Run 5, Image 42254). Activity area shown in red.**

### Previous archaeological reports

Frezlov was engaged by Regional Roads Victoria to undertake a cultural heritage management plan for similar works approximately 250 metres to the north of the current activity area. The assessed landform is the same in the current activity area. The desktop assessment concluded that Aboriginal sites would be located along spurs leading to permanent sources of fresh water. The activity area does not contain this landform and as a result it is considered that the archaeological potential is low. No Aboriginal cultural heritage material was identified during the CHMP and based on previous assessments, landforms and access to water Frezlov concluded that the area of interest was of low archaeological potential. However, a standard assessment was undertaken to confirm the results of the desktop assessment.

A standard assessment was undertaken which identified a skeletal layer of topsoil over basal sandstone and that the area had been subjected to a high amount of significant disturbance. As a result it removed the archaeological potential and a complex assessment was not required (Frezlov, 2018).

### Should a voluntary CHMP be undertaken?

Based on previous archaeological work, the brief desktop assessment and fieldwork, there is little to no potential impact to Aboriginal cultural heritage or cultural heritage values and as a result a voluntary CHMP would be considered excessive. Potential impacts to Aboriginal cultural heritage material and values can be managed via the attached contingency plans.

### Heritage Act 2017

The Heritage Act 2017 provides the framework for historic heritage assessment, management and approvals in Victoria. The Victorian Heritage Database (VHD) includes state significant heritage items (buildings, structures, archaeological sites, landscapes or other features). State significant archaeological sites are listed on the Victorian Heritage Inventory (VHI), while all other state significant sites are listed on the Victorian Heritage Register (VHR). All items listed on the VHR or VHI

are protected under the Heritage Act 2017 and cannot be harmed or modified without consent from the Victorian Heritage Council (VHC).

The VHD was accessed on 7 September 2020 and there are no sites in or near the activity area.

## Planning and Environment Act 1987

Heritage overlays are part of local council planning schemes and include places of local significance as well as places of state significance (see above). Local councils are responsible for issuing permits for the use and development of these locally listed heritage places under the Planning and Environment Act 1987. The East Gippsland planning scheme was accessed via Planning Maps Online on 7 September 2020 which indicated that there are no sites in or near the activity area.

## Environment Protection and Biodiversity Conservation Act 1999

Under the Environment Protection and Biodiversity Conservation Act 1987, actions that have or are likely to have, a significant impact on a matter of national heritage significance require approval from the Australian Government Minister for the Environment. Actions encompass site preparation and construction, operation and maintenance, and closure and completion stages of a project, as well as alterations or modifications to existing infrastructure. Among other things, matters of national heritage significance include:

- World heritage places and properties,
- Commonwealth heritage places and properties (places and properties that the Commonwealth Government own and operate),
- National heritage places and properties.

As part of this DDA, a search of the Australia Government Protected Matters search tool was undertaken. It revealed that there are no sites in or near the activity area.

## Native Title Act 1993

It is incumbent on the project manager to understand the land tenure on which the activity is taking place. The activity and land tenure may have ramifications under the Native Title Act 1993 (including any Future Acts notices).

Where the activity area is located within a native title determination, further consultation may be required with the native title holders.

# Recommendations

## Recommendation 1

While the activity is considered high impact and within an area of cultural heritage sensitivity, the activity area has been subjected to high amounts of significant ground disturbance and as such the requirement to prepare a CHMP is not triggered. There are no historic heritage sites/items listed in the activity area and as a result there is no requirement to undertake any further historic heritage assessments.

## Recommendation 2

The following should be undertaken where practicable:

- a) Where necessary to establish parking or set down areas, these areas must be located on previously disturbed areas (e.g. stack sites, established driveways, adjacent roads, etc).



- b) Where necessary to established turning areas, these areas must be located on previously disturbed areas (e.g. stack sites, established driveways, adjacent roads, etc).
- c) Under no circumstances should vehicles, plant, equipment or materials be driven, parked, transported or stored on any road reserve outside the previously disturbed areas identified in points a) & b) above. These activities must be confined within these defined areas of disturbance and/or confined to previously disturbed areas (e.g. stack sites, established driveways, adjacent roads, etc).
- d) Designated 'no go' zones should be established to delineate the extent of work areas identified in points a) – c) above. Any unnecessary disturbance and exposure of earth, in previously undisturbed areas, will increase the risk of harm to heritage values.

### Recommendation 3

Should suspected human remains be identified during the activity, the Skeletal Remains Contingency in Attachment B - Contingency for the discovery of human skeletal remains **must** be followed.

### Recommendation 4

Should suspected Aboriginal cultural heritage be identified during the activity, the Aboriginal Cultural Heritage Contingency in Attachment C – Contingency for the discovery of Aboriginal cultural heritage material **must** be followed.

### Recommendation 5

Should suspected historic heritage places or objects be identified during the activity, the Historic Heritage Contingency in Attachment D – Contingency for the discovery of historic heritage material **must** be followed.

### Recommendation 6

The Department of Transport contingency measures for the discovery of historic and Aboriginal cultural heritage should be incorporated into employee inductions, workplace toolbox meetings and as a component of the broader project environmental plan.

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## Attachment A

### Designs provided for assessment

## Attachment B - Contingency for the discovery of human skeletal remains

Where there is no approved CHMP or CHP in place and in the event human skeletal remains are found during the activity, **the activity must cease**, and the following five step contingency plan implemented:

1. Discovery:
  - If suspected human remains are discovered, all activity in the vicinity **must stop**; and,
  - The remains must be left in place and protected from harm or damage.
2. Notification
  - Once suspected human remains have been found, the Coroners Office and Victoria Police must be notified immediately;
  - If there are reasonable grounds to believe the remains are Aboriginal ancestral remains, the Coronial Admissions and Enquiries hotline must be contact on 1300 888 544; and,
  - All details of the location and nature of the human remains must be provided to the relevant authorities; and,
  - If it is confirmed by these authorities that the discovered remains are Aboriginal ancestral remains, the person responsible for the activity must, as soon as practicable, report the existence of the Aboriginal ancestral remains to the Victorian Aboriginal Heritage Council in accordance with s.17 of the Act.
3. Impact mitigation or salvage
  - The Victorian Aboriginal Heritage Council, after taking reasonable steps to consult with any Aboriginal person or body with an interest in the Aboriginal ancestral remains, will determine the appropriate course of action as required by s.18(2)(b) of the Act; and,
  - An appropriate impact mitigation or salvage as determined by the Victorian Aboriginal Heritage Council must be implement by the sponsor.
4. Curation and analysis
  - The treatment of the salvage Aboriginal ancestral remains must be in accordance with the direction of the Victorian Aboriginal Heritage council
5. Reburial
  - Any reburial site(s) must be fully documented by an experience and qualified archaeologist, clearly marked and all details provided to AV;
  - Appropriate management measures must be implemented to ensure that the remains are not disturbed in the future.

## Attachment C – Contingency for the discovery of Aboriginal cultural heritage material

Where there is no approved CHMP or CHP in place, and in the event that Aboriginal cultural heritage material is identified during the activity, **these works must cease**, and the following contingency plan implemented:

- Any person who discovered suspected Aboriginal cultural heritage during the activity (if not the supervisor/manager of the activity) **must immediately stop work** and notify the supervisor/manager of the activity.
- The supervisor/manager of the activity must report the discovery as soon as practicable to the appropriate Department of Transport Heritage Advisor.
- Where confirmed as Aboriginal cultural heritage, the Department of Transport Heritage Advisor will organise notification to Department of Transport, Aboriginal Victoria and a Registered Aboriginal Party (where one exists) or any other relevant Aboriginal community/s. This must occur within **two** business days of identification.
- The supervisor/manager of the activity must also ensure that the works at the location of the discovery are suspended and an appropriate buffer established around the suspected heritage site and/or object (i.e. 25 metres)
- If necessary to prevent any further disturbance, the location should be isolated by a fence, safety webbing, or other suitable barrier, with clear 'no-go zone' or similar signage. All relevant personnel must be advised of the established exclusion zone.
- Works may recommence outside of this area of exclusion. Should additional Aboriginal cultural heritage material be identified, this must be addressed as per the above steps.
- A RAP representative or other relevant Aboriginal community representative (whichever is relevant and required) and a Heritage Advisor will evaluate the Aboriginal cultural heritage to determine if it is part of a previously registered Aboriginal place or should be registered as a new Aboriginal place. This must occur within two business days of identification.
- If it necessary to recommence work within the area of exclusion, those works can commence:
  - ✓ Where the relevant Aboriginal cultural heritage records have been updated and/or completed; and,
  - ✓ Where all parties agree there is no other prudent or feasible course of action; and,
  - ✓ Only when all necessary approvals and/or authorisations have been granted (i.e. a *Cultural Heritage Management Plan or Cultural Heritage Permit*).

## Attachment D – Contingency for the discovery of historic heritage material

In Victoria, the Heritage Act 2017 specifies that an archaeological place or relic must be at least 75 years old. A historical archaeological site may include above ground features such as ruins and below ground features such as buried building foundations and objects associated with non-Aboriginal settlement and activity in Victoria.

In the event that a suspected historical archaeological site or relic (meeting the definition above) is found during work activities, **these works must cease**, and the following contingency plan implemented:

- A person who discovers the suspected historical archaeological site or relic during the activity (if not the supervisor/manager of the activity) will immediately notify the supervisor/manager of the activity.
- The site supervisor/manager must report the discovery as soon as practicable to the appropriate Department of Transport Heritage Advisor. Where confirmed as an archaeological place or relic, Department of Transport will attend and assess the site and notify Heritage Victoria and any other relevant organisation.
- The supervisor/manager must also ensure that works at the location of the discovery are suspended and an appropriate buffer established around the heritage site and/or object (i.e. 25 metres).
- If necessary to prevent any further disturbance, the location should be isolated by a fence, safety webbing, or other suitable barrier.
- Works may recommence outside this area of exclusion, unless other suspected sites or relics are identified.
- If it is necessary to recommence work within the area of exclusion, those works can commence:
  - ✓ Where any necessary heritage records have been updated, and;
  - ✓ Only when all necessary approvals and/ or authorisations have been granted.



Department of Environment,  
Land, Water & Planning

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574 Main St  
Bairnsdale Victoria 3875  
Tel: (03) 5152 0400  
Fax: (03) 5152 0444

9 December 2020

DELWP Ref: 16L9-3912

Attn: Sajini Sirena  
Senior Projects Engineer  
Regional Roads Victoria – Eastern Region  
120 Kay Street  
TRARALGON VIC 3844

Email: [Sajini.Sirisena@roads.vic.gov.au](mailto:Sajini.Sirisena@roads.vic.gov.au)

Dear Sajini

**RE: REQUEST FOR LAND MANAGER CONSENT TO APPLY FOR A PLANNING PERMIT –  
PROPOSED ROAD WIDENING GREAT ALPINE ROAD**

The Department of Environment Land Water and Planning, as Public Land Manager for the Crown land associated with the proposed application, acknowledges your request for landowner consent to apply for a planning permit to undertake road widening works including the removal of native vegetation, along the Great Alpine Road between Mullocky Creek and Walsh's Cutting.

The department hereby consents to the lodging of a planning permit application with the East Gippsland Shire.

Native Title rights and interests are fully extinguished over the government road associated with the proposed road widening works (as per your map provided in email dated 30 November 2020) as long as all works remain entirely within the road footprint.

Please note that the department has the right to further comment on your planning permit application, when circulated through the planning permit process coordinated by the East Gippsland Shire.

This consent is subject to any other consents, permits and approvals required to be obtained prior to undertaking any work.

Should you have any further queries, I can be contacted at our Main Street Office Bairnsdale, on telephone 0436 622 540.

Sincerely

*Angenita Hughes*

Angenita Hughes  
Program Officer  
Land & Built Environment  
Bairnsdale

*Privacy Statement*

Any personal information about you or a third party in your correspondence will be protected under the provisions of the Privacy and Data Protection Act 2014. It will only be used or disclosed to appropriate Ministerial, Statutory Authority, or departmental staff in regard to the purpose for which it was provided, unless required or authorised by law. Enquiries about access to information about you held by the Department should be directed to the Privacy Coordinator, Department of Environment, Land, Water and Planning, PO Box 500, East Melbourne, Victoria 8002

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VICTORIA  
State  
Government

7 December 2020

Our Reference: VLQ-6360

Your Reference: Great Alpine Road

Blythe Vogel  
 Regional Roads Victoria  
 Email: Blythe.Vogel@roads.vic.gov.au

Dear Blythe,

**RE: Quotation for the supply of Native Vegetation Credits**

Vegetation Link is an accredited offset provider with the Department of Environment, Land, Water & Planning (DELWP). We offer a specialised brokerage service to enable permit holders and developers to identify suitable native vegetation credits to meet their planning permit offset requirements.

Based upon the information you provided, I understand you require the following native vegetation offset:

Offset Type	Attributes	SHU
Specific	Eastern Horseshoe Bat ( <i>Rhinolophus megaphyllus</i> )	0.516

To meet your offset requirements, you can purchase native vegetation credits from a third party as per the options quoted below<sup>1</sup>. This quotation is valid for 14 days, subject to credit availability and landholder pricing.

<b>Option 1: CTA Pathway – offset site located in the Yarra Ranges Shire Council area (approx. 2-5 week turnaround from acceptance of quote)</b>	
Cost of Native Vegetation Credits – invoiced by DELWP	\$129,000.00
Transaction Fees – invoiced by Vegetation Link	\$1,470.00
<b>Total (ex GST)</b>	<b>\$130,470.00</b>
Total (Inc. GST)	\$143,517.00

<b>Option 2: CTA Pathway – offset site located in the Yarra Ranges Shire Council area (approx. 2-5 week turnaround from acceptance of quote)</b>	
Cost of Native Vegetation Credits – invoiced by DELWP	\$56,760.00
Transaction Fees – invoiced by Vegetation Link	\$1,020.00
<b>Total (ex GST)</b>	<b>\$57,780.00</b>
Total (Inc. GST)	\$63,558.00

If you would like to purchase credits let us know that you accept the quote, and return the attached Purchaser Details Form by email. If more than one quotation option is provided above, specify which option you choose.

Upon receipt of the form, we will begin the trade process. Further details of the process for credit allocation is in the FAQ below.

<sup>1</sup> Note that the Transaction Fee includes DELWP NVOR transfer and allocation fees and a Vegetation Link fee

Should you have any queries, please do not hesitate to contact us on (03) 5470 5222 or email [offsets@vegetationlink.com.au](mailto:offsets@vegetationlink.com.au).

Sincerely,



**Lisa Gormley**  
Biodiversity Offset Broker

## FAQs:

### What is a third party offset?

A third party offset is an offset site owned by another landowner who manages and protects native vegetation on their land. Landowners who establish these offset sites are required to:

- Enter into a Landowner Agreement for the specified offset site. A landowner agreement is in perpetuity and is binding upon the current and future landowners of the site. It permanently restricts use of the site for many purposes.
- Implement a detailed 10-year Management Plan endorsed by the DELWP Native Vegetation Offset Register to manage and improve the biodiversity values of the site.

### How is the price of Native Vegetation Offset Credits (GHUs, GBEUs etc.) determined?

Landowners who own offset sites set their own price for native vegetation credits. They determine the price based on numerous factors. This includes but not limited to site establishment, the cost to manage the site in perpetuity (e.g., maintain fencing, control pest species), foregone use cost, and administrative costs. Depending on how the site is registered, the credit fee may be paid to either DELWP or directly to the landowner.

Further information about the work some of our landowners are doing can be found here:

<https://www.vegetationlink.com.au/landowner-profiles>

Further information on pricing can be found here:

[https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0030/329466/Info-sheet-Pricing-native-vegetation-credits.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0030/329466/Info-sheet-Pricing-native-vegetation-credits.pdf)

### What is the process after I accept the Quote?

After you accept the quote and return the Purchaser Table, the following steps will be undertaken:

1. We will set up a contract between the parties involved and send the contract out for signing by all parties.
2. Once the contract is signed by all parties, invoices will be issued for the fees listed in the quotation. We will send you two invoices, one for our transaction fee invoiced by



Vegetation Link and one for the credit fee, usually to be paid by DELWP or the landowner. We recommend providing remittances for your payments.

3. Once payments are received, Vegetation Link will send you an Allocated Credit Extract from the Native Vegetation Offset Register and your Executed Contract as evidence that you have purchased the offset.

### How long will the process take? When will I get my credits?

Generally the process from quote acceptance to having evidence of allocated credits takes between 2-6 weeks. This is dependent on a range of factors including the type of landholder agreement, contract types and organisational workflows. We work as quickly as possible to get your credits to you within this time period.

We note that you cannot remove vegetation until you have been given permission by the Responsible Authority (usually the Council that has issued your permit).

### What happens if I don't have a permit yet?

When people are buying credits before a permit is issued the following three options are most common:

1. You can pay for the offsets before the planning permit is available, and then the offsets are allocated to the permit when it is available. This will incur an additional \$50 fee from DELWP. When considering this option, it is important to realise that your estimated offset requirements may be different than the actual permit requirements.
2. You can wait for the planning permit to be approved first and then request a quote to meet the requirements in your permit. Should credits be available, you can then start the offset purchase process. We then use the planning permit number for allocating the credits. Allocating credits to the permit is evidence that you have purchased your offset.
3. You can request a quote to confirm availability and to get an idea of the cost of offsetting before you apply for a permit. Once you receive the planning permit you can request an updated quote. It is at this point that you can then go through the offset purchase process.

We cannot guarantee credit availability until a) contracts are executed, or b) credits have been held via a pending trade lodged with DELWP Native Vegetation Offset Register.

We cannot guarantee price until a) a quote has been accepted within 14 days, and b) a Credit Trading Agreement is signed within 21 days, and c) the invoice for the Credits is paid within 28 days of the date the invoice is issued.

### If I sign the contract, does that mean I MUST pay for the credits?

Yes, you have entered into a contract agreeing to pay for the offset credits therein and are required to pay for those credits. The Credits must be paid for within 28 days of the date of the invoice.

Can you hold the credits for me, as I want to pay later?

We are unable to hold credits for later payment. Please also see 'What happens if I don't have a permit yet?' above.

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For further information, see our website or look at the DELWP website:

<http://www.vegetationlink.com.au/> OR <https://www.environment.vic.gov.au/native-vegetation/native-vegetation/offsets-for-the-removal-of-native-vegetation>