



Proposed service station and convenience restaurant, 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria: Cultural Heritage Management Plan 14173

Proposed medical and child care centres, 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria: Cultural Heritage Management Plan 14173 Amendment

Sponsor: TAG-Ferntree Gully TAG-Azzure Nominees Pty Ltd

Heritage Advisors

Author:

1-December-2016 20 March 2020



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*Aboriginal Heritage Act 2006*  
Section 65

## Cultural Heritage Management Plan – Notice of Approval

**CHMP NAME:** Proposed Service Station and convenience restaurant, 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria.

**CHMP NUMBER:** 14173

**SPONSOR:** Tag-Azure Management Pty Ltd

**ACN/ABN:** 79 972 874 985

**Heritage Advisor(s):**

**Author(s):**

**Cover date:** 28 November 2016

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**Received for approval:** 1 December 2016

**Resubmitted under  
s.65(2C)(b):** 1 December 2016

**TO BE COMPLETED BY THE SECRETARY (OR DELEGATE)**

**I have considered the Evaluation Report for this CHMP and:**

I am satisfied that the CHMP has been prepared in accordance with the standards prescribed for the purposes of section 53 (in the Aboriginal Heritage Regulations 2007 and the Approved Form).

Yes

No

✓

I am satisfied that the CHMP adequately addresses the matters set out in section 61.

✓

In considering this application, I consulted with and considered the views of Aboriginal persons or bodies I considered relevant to the application.

✓

I have given proper consideration to any relevant human rights

✓

[Redacted] Acting Director Heritage Services Aboriginal Victoria, acting under authority delegated to me by the Secretary, Department of Premier and Cabinet, and pursuant to section 65(2) of the *Aboriginal Heritage Act 2006* hereby approve / refuse to approve this cultural heritage management plan:

Signed:

Dated:

29.12.16

This notice of approval should be inserted after the title page and bound with the body of the management plan.

The recommendations in this management plan are now compliance requirements. Officers from the Department of Premier and Cabinet may attend the subject land to monitor compliance with the recommendations.



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## Document information

Activity:	Proposed service station and convenience restaurant Proposed medical and child care centres
Location:	1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria
CHMP No.	14173
Size:	Small
Assessment:	Complex
Sponsor:	TAG-Ferntree Gully ABN 79 972 874 985 TAG-Azzure Nominees Pty Ltd ACN: 609 857 696 ABN: 66 609 857 696
Heritage Advisors:	
Author:	
Date:	1 December 2016 19 March 2020
Biosis project no.:	21697 31371
File name:	21697.Service Station Burwood Hwy Upper Ferntree Gully.CA.CHMP.FIN03.TMJL20161128.docx 31371.Medical Centre and Child Care Burwood Hwy Upper Ferntree Gully.CA.CHMP.Amendment02.FNL02.20200317
Citation:	Biosis 2016. Proposed service station and convenience restaurant, 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria: CHMP 14173. Report for Tag-Azzure Management Pty Ltd. Author: James Lee, T. Biosis Pty Ltd, Melbourne. Project no 21697 Biosis 2020. Proposed medical and child care centres, 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria: CHMP 14173 Amendment. Report for TAG-Azzure Nominees Pty Ltd. Author: [redacted] and [redacted] Biosis Pty Ltd, Melbourne. Project no 21697/31371

### Mapping

In accordance with the approved form, the following projected spatial data has been forwarded to AV for this CHMP: Activity Area boundary; ground survey areas and subsurface testing locations.

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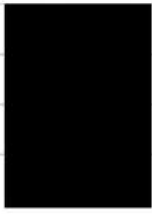
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## Document control

Version	Internal reviewer	Date issued
Draft version 01		13/07/2016
Final version 01		24/10/2016
Amendment Draft 01		28/01/2020

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## Executive summary

### Activity

This is a mandatory Cultural Heritage Management Plan (CHMP) under Section 46(a) of the *Aboriginal Heritage Act 2006*. The Sponsor intends to build a mixed-use development with a ~~service station and convenience restaurant within the Activity Area~~ a medical centre and child care centre within the Activity Area.

~~The proposed activity is a high impact activity under Regulation 43(1)(b)(xxi) (a service station) of the *Aboriginal Heritage Regulations 2007*. The Activity Area is in an area of cultural heritage sensitivity under Regulation 23(1) (land within 200 metres of a waterway, Ferny Creek) of the *Aboriginal Heritage Regulations 2007*.~~

The Victorian Aboriginal Heritage Register (VAHR) has allocated CHMP number 14173 to this assessment.

At the time of preparation of this assessment, there is no Registered Aboriginal Party (RAP) for the region that includes the Activity Area.

A Notice of Intent (NOI) to amend approved CHMP 14173 was lodged with the VAHR on 14 January 2020. This CHMP has been amended to allow for a change in the proposed Activity. The extent of the Activity Area remains the same as that within approved CHMP 14173. The amended proposed activity is a high impact activity under Regulation 46(1)(b)(v) (a child care centre) of the *Aboriginal Heritage Regulations 2018*. The Activity Area is in an area of cultural heritage sensitivity under Regulation 26(1) (land within 200 metres of a waterway, Ferny Creek) of the *Aboriginal Heritage Regulations 2018*.

This amendment is to change the proposed activity from the high impact mixed-use development with a service station, convenience restaurant and medical and dental clinics to the high impact mixed-use development with a single medical centre and a single child care centre and associated car parking, shared bin area and landscaping. Excavation to depths of 3.5 metres for installation of fuel tanks will no longer be undertaken. Depth of excavation required for the amended proposed medical centre, child care centre, car parking, shared bin area, landscaping and associated retaining wall is approximately between 0.1 and 3.6 metres (Appendix 2a). Excavation along the northern boundary of the Activity Area is required to a total depth of 7.32 metres for the retaining wall as stated within approved CHMP 14173 (Appendix 2a).

In the absence of a Registered Aboriginal Party (RAP) Aboriginal Victoria will evaluate the amendment to the plan.

Amendments to the CHMP have been made in purple.

### Activity Area

The Activity Area is located 1157-1165 Burwood Highway, Upper Ferntree Gully Victoria. The extent of the Activity Area covered by this CHMP comprises Lot 1 TP97141, Lot 1 TP97142, Lot 1 TP108858, Lot 1 TP97053, Lot 1 TP97052 (Map 1 ~~Map 1a~~). The Activity Area is located between the highway to the south-west and a cycle trail and the reserve of the Belgrave line railway to the north-east. The Upper Ferntree Gully trail station is 520 metres to the south-east. Approximately 50 metres to the north-east is Ferntree Gully Quarry Reserve. North of the quarry reserve is the Dandenong Ranges National Park. Ferny Creek is approximately 115 metres to the south-west of the Activity Area, and borders St Joseph's College. Apart from the reserve and national park, the immediate area is a mix of retail, residential and industrial uses.



## Assessment

A Desktop Assessment was undertaken to provide background information on the activity and its impacts, other archaeological studies, previously recorded Aboriginal places, the environment and to develop a prediction model for the Activity Area.

A Standard Assessment was undertaken to provide information on the ground surface visibility, previous disturbance to the Activity Area and identify areas of archaeological potential.

A Complex Assessment was undertaken to test the prediction model and areas of archaeological potential within the Activity Area.

Consultation with Aboriginal representatives occurred throughout the CHMP.

Amendments to the CHMP have been made in purple.

## Results

### Desktop Assessment

Amendments to the Desktop Assessment, both here and within the body of the document, have been made in purple.

The geographic region lies on the *Eastern Uplands*, which are characterized by variable elevations and follow a meandering, sometimes obscure, path as a parting of north and south draining river systems in an extensive area of high plateau-like surfaces and mountain ridges. The geographic region includes the *Landscapes below 500 m of low relief* the western and central parts of the geographic region, with the *Dissected landscapes at a range of elevations* in the east. The former is characterised by low relief landscapes and in the south occurs as a dissected plateau-like surface, the Nillumbik Terrain. The latter includes a range of landforms that extend from remnant plateau surfaces to the emergence of the drainage systems; it is dominated by high ridges and deep valleys formed by dissection of the major stream systems that include prominent summits at high elevation, at intermediate elevation and escarpments. The geographic region falls into three third tier geomorphological units. The *Low relief landscapes at low elevation (Cann River to border, Silvan, Templestowe)* geomorphological unit is present in the central western and southern parts of the geographic region. It is characterised by the dissected plateau-like surface of hills, the Nillumbik Terrain. The *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit comprises alluvial terraces, floodplains and the alluvial or colluvial fans that occur within the main valleys where the streams have reached a stable gradient. The *Deeply dissected ridge and valley landscapes (headwaters of major rivers such as the Wonnangatta, King and Kiewa Rivers, Mt Coopracambra)* unit is present in the eastern third of the geographic region and is characterised by high, narrow-topped ridges which form the divides between the major streams, steep spurs and side slopes which extend down to steeply graded streams.

The Activity Area is located at the foot of the Dandenong Ranges and slopes from approximately 114 metres above sea level (ASL) in the north-east to 107 metres ASL in the south-west. The Activity Area lies on *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit. Geological mapping indicates the Activity Area lies on the *Unnamed alluvium (Qa)* formation, dating to the last 2.588 million years. The Activity Area is likely to contain alluvium and colluvium deposits such as gravel, sand silt and clay.

A search of the Victorian Aboriginal Heritage Register (VAHR) identified 51 previously recorded Aboriginal places within the geographic region. The predominant Aboriginal place types in the geographic region are artefact scatters (n=37) and scarred trees (n=1). The remainder are low density artefact distributions (LDADs) (n=2) and one multi-component place. There are no Aboriginal places in the Activity Area, or within 200 metres.



A search of the Victorian Aboriginal Heritage Register (VAHR) was conducted on 15 January 2020 for the amendment to Approved CHMP 14173. The search identified 81 previously recorded Aboriginal places within the geographic region (Plate 1a). The predominant Aboriginal archaeological place types in the geographic region are artefact scatters (n=38) and low density artefact distributions (LDADs) (n=27). The remainder are scarred trees (n=9), object collections (n=6) and one Aboriginal Historic place. Most Aboriginal Places within the geographic region are located within the *Terraces, Fans and flood plains (Kiewa Valley, Wonnangatta Valley)* geomorphic unit.

~~Only two Complex Assessment CHMPs have been completed within 2 kilometres of the Activity Area; therefore detail on subsurface conditions of Aboriginal cultural heritage which can inform the present Activity Area is lacking.~~ Based on previous archaeological assessment of the geographic region, in particular Aboriginal cultural heritage places on the *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit, the predictive model identified there is moderate potential for surface and subsurface artefact distributions to be present in the Activity Area if there are flat rises, gentle slopes or terraces present. There is low to moderate potential for scarred trees to be present in the Activity Area as Upper Ferntree Gully's early history relates to timber mills supplying timber to Melbourne and Victoria during the boom time of the gold rush era. Additionally, no *mature* eucalypts were identified in the recent biodiversity assessment of the Activity Area. Ferny Creek is 125 metres to the south-west of the Activity Area; there is low to moderate potential for shell and fish middens associated with seasonal fishing and gathering to be present within the Activity Area. Little historical information on the use of the Activity Area could shed any detail into possible disturbance that may have occurred there.

While a large amount of subsurface testing has been undertaken within the geographic region generally, only a limited amount is located within reasonable proximity to the Activity Area. Even though the amount of archaeological testing has significantly increased since the approval of CHMP 14173, only one additional Complex Assessment CHMP has been completed within 2 kilometres of the Activity Area since the approval of CHMP 14173. The soils, geomorphology, disturbance and lack of Aboriginal Places identified within the activity area of CHMP 16415 supports the information reported within approved CHMP 14173. The landform investigated during the process of CHMP 16415 was shown to be significantly disturbed to depths of between 350 and 1300 mm. Fills replaced topsoil within the activity area and the basal clay was very stiff. No aboriginal cultural heritage was located during the assessment.

### Standard Assessment

The Standard Assessment survey encountered dense weedy vegetation and disturbance across the Activity Area. The Activity Area has an uneven ground surface, with a fill terrace built up along the south-western boundary, accessed by a narrow vehicle track from the Burwood Highway. No Aboriginal places were recorded during the Standard Assessment.

No further Standard Assessment was completed as part of the CHMP amendment.

### Complex Assessment

All subsurface testing locations except test pit 2 had been substantially disturbed to depths of 250-750 millimetres. Test pit 2 could not be confidently interpreted as disturbed, although its hard, compact nature indicated it may well have been impacted by heavy machinery.

No artefacts or other forms of Aboriginal cultural heritage were identified during the Complex Assessment.

No new Aboriginal places were identified during the Complex Assessment.

No further Complex Assessment was completed as part of the CHMP amendment.



## Aboriginal places

No Aboriginal cultural heritage places were identified during the course of this CHMP. Due to the original slope of the Activity Area, which would have resulted in sheetwash of any low density surface artefacts present and the subsequent 19th and 20th century disturbance throughout most of the Activity Area, the Activity Area is considered to have extremely low potential for Aboriginal cultural heritage.

Therefore avoidance, minimisation or mitigation measures for Aboriginal cultural heritage are considered not to be warranted for the present Activity Area.

No Aboriginal cultural heritage places were identified during the course of the amendment of approved CHMP 14173.

## Management conditions

As the assessment has established that there is extremely low potential for Aboriginal cultural heritage to be present in the Activity Area, specific management requirements are not considered warranted in this case.



## Acknowledgements

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Biosis acknowledges the contribution of the following people and organisations in undertaking this CHMP:

- [REDACTED] Ratio Consultants Pty Ltd
- [REDACTED] Boon Wurrung Foundation
- [REDACTED] Bunurong Land Council Aboriginal Corporation
- [REDACTED] Bunurong Land and Sea Association Incorporated
- [REDACTED] Wurundjeri Tribe Land and Compensation Cultural Heritage Council Incorporated
- [REDACTED] Biosis Pty Ltd.



# Abbreviations

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AAG	Activity Advisory Group
BWF	Boon Wurrung Foundation
BLASAI	Bunurong Land and Sea Association Incorporated
BLCAC	Bunurong Land Council Aboriginal Corporation
CHMP	Cultural Heritage Management Plan
DGPS	Differential Global Positioning System
DPC	Department of Premier and Cabinet
GDA94	Geodetic Datum Australia 1994
GSV	Ground Surface Visibility
LDAD	Low density artefact distribution
MGA	Map Grid of Australia
RAP	Registered Aboriginal Party
VAHR	Victorian Aboriginal Heritage Register
WTLaCCHC	Wurundjeri Tribe Land and Compensation Cultural Heritage Council Incorporated



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## PART 1 – CULTURAL HERITAGE ASSESSMENT

---



# 1 Introduction

This is a mandatory Cultural Heritage Management Plan (CHMP) under Section 46(a) of the *Aboriginal Heritage Act 2006*. The Sponsor intends to build a mixed-use development with a service station and convenience restaurant within the Activity Area a medical centre and child care centre within the Activity Area.

The Activity Area is in an area of cultural heritage sensitivity under Regulation 23(1) (land within 200 metres of a waterway, Ferny Creek) of the *Aboriginal Heritage Regulations 2007*.

A Notice of Intent to Prepare a CHMP was submitted to the Secretary, Department of Premier and Cabinet (DPC) on 7 March 2016 (Appendix 1).

The Victorian Aboriginal Heritage Register (VAHR) has allocated CHMP number 14173 to this assessment.

At the time of preparation of this assessment, there is no Registered Aboriginal Party (RAP) for the region that includes the Activity Area.

A Notice of Intent to amend CHMP 14173 was lodged with the VAHR on 14 January 2020 (Appendix 1a). This CHMP has been amended to allow for a change in the proposed Activity. The extent of the Activity Area remains the same as that within Approved CHMP 14173. The proposed activity is a high impact activity under Regulation 46(1)(b)(v) (a child care centre) of the *Aboriginal Heritage Regulations 2018*. The Activity Area is in an area of cultural heritage sensitivity under Regulation 26(1) (land within 200 metres of a waterway, Ferny Creek) of the *Aboriginal Heritage Regulations 2018*.

This amendment is to change the proposed activity from the high impact mixed-use development with a service station, convenience restaurant and medical and dental clinics to the high impact mixed-use development with a single medical centre and a single child care centre and associated car parking, shared bin area and landscaping. Excavation to depths of 3.5 metres for installation of fuel tanks will no longer be undertaken. Depth of excavation required for the amended proposed medical centre, child care centre, car parking, shared bin area, landscaping and associated retaining wall is approximately between 0.1 and 3.6 metres (Appendix 2a). Excavation along the northern boundary of the Activity Area is required to a total depth of 7.32 metres for the retaining wall as stated within approved CHMP 14173 (Appendix 2a).

In the absence of a Registered Aboriginal Party (RAP) Aboriginal Victoria will evaluate the amendment to the plan.

## 1.1 Sponsor

### **TAG-Ferntree Gully**

Postal address: PO Box 5027 South Melbourne VIC 3205

Landline: 03 9690 2022

ABN: 79 972 874 985.



**TAG-Azzure Nominees Pty Ltd**

ACN: 609 857 696

ABN: 66 609 857 696

Sole Director & Secretary: [REDACTED]

Phone: (03) 9690 2022

**Sponsor's Agent**

Ratio Consultants Pty Ltd

Address: 9 Clifton Street Richmond VIC 3121

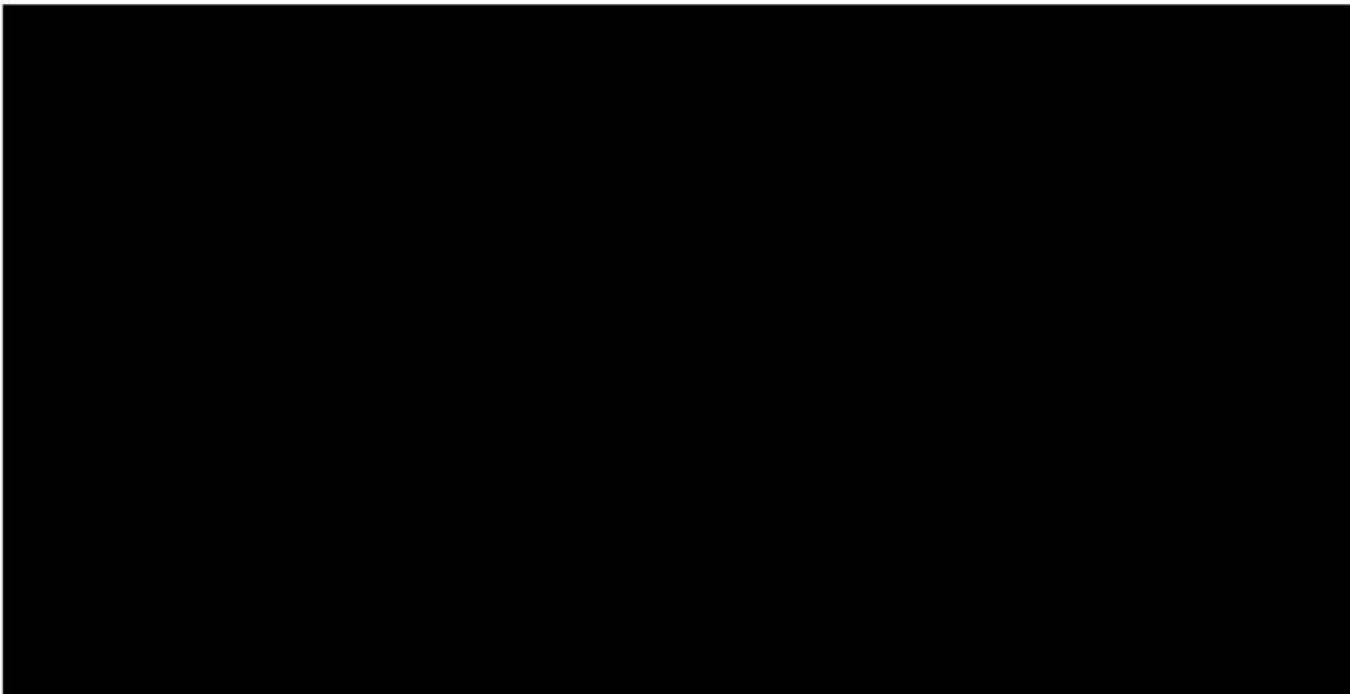
Landline: 03 9429 3111

## 1.2 Heritage advisors

The Heritage Advisors (HAs) for this CHMP are [REDACTED] Biosis Pty Ltd.

The Heritage Advisor (HA) for the amendment to approved CHMP 14173 is [REDACTED] Biosis Pty Ltd.





### 1.3 Location of the Activity Area

The location of the Activity Area is indicated on Map 4 Map 1a. It is located on a 4,000 square metre parcel of land at 1157-1165 Burwood Highway, Upper Ferntree Gully, approximately 30 kilometres south-east of the Melbourne CBD.

**Table 1 Cadastral information for the Activity Area**

<b>Address</b>	1155-1165 Burwood Highway, Upper Ferntree Gully, Victoria
<b>Local Government Authority</b>	City of Knox
<b>Lot/Plan</b>	Lot 1 TP97141, Lot 1 TP97142, Lot 1 TP108858, Lot 1 TP97053, Lot 1 TP97052
<b>Planning Zone</b>	General Residential Zone (R3Z)
<b>Coordinates*</b>	350639.374, 5804948.924, Zone 55
<b>Melways</b>	74 D5

\* All geographic coordinates in this CHMP are referenced to the Victorian Government Standard GDA94 MGA.

### 1.4 Owner/Occupier

The Sponsor is the owner of the Activity Area.

### 1.5 RAP

There is currently no Registered Aboriginal Party (RAP) appointed for the region that includes the Activity Area. Under Section 65 (b)(i) of the *Aboriginal Heritage Act 2006*, a Sponsor may apply to the Secretary, DPC for approval of a CHMP if there is no relevant RAP.

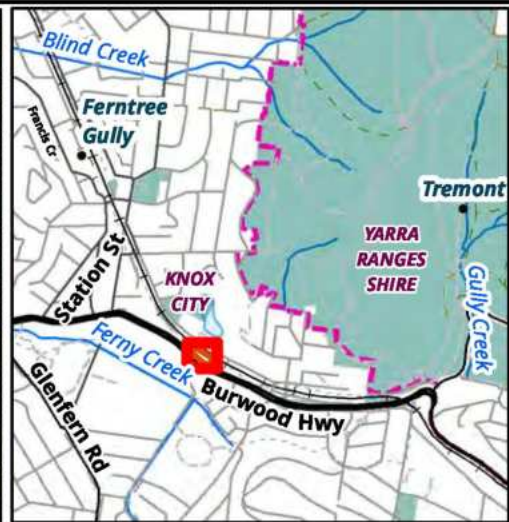


## 1.6 Activity Advisory Group

At the time the NOI was lodged, the amendments to the *Aboriginal Heritage Act 2006* had not been enacted. Therefore at the time the assessments were undertaken, no Activity Advisory Group (AAG) was required to be appointed. During the course of the assessments, the following to groups were consulted:

- Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated
- Boon Wurrung Foundation
- Bunurong Land Council Aboriginal Corporation
- Bunurong Land and Sea Association Incorporated





**Legend**

- Activity Area
- Local government area

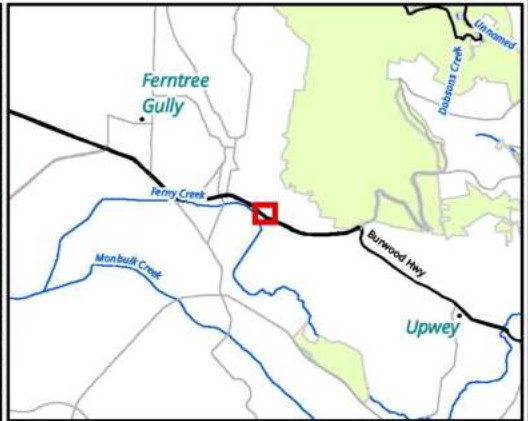
**Map 1 Extent of the Activity Area**

0 5 10 15 20 25  
Metres  
Scale: 1:500 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

**biosis**  
Biosis Pty Ltd

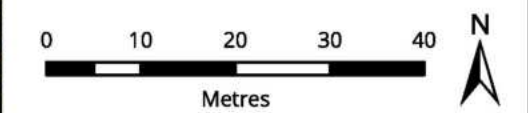
Ballarat, Brisbane, Canberra, Hobart, Melbourne, Newcastle, Sydney, Wangaratta & Wollongong





**Legend**  
Activity Area

**Map 1a Amended  
Extent of the Activity  
Area**



Scale: 1:800 @ A3  
Coordinate System: GDA 1994 MGA Zone 55





## 2 Activity description

The Sponsor proposes to develop the Activity Area for a mixed-use development with a service station, convenience restaurant and medical and dental clinics (Appendix 2). The service station and convenience restaurant will be located on the ground and therefore dictate the footprint of the impacts to the ground surface. The medical and dental clinics will be located on the upper level above the service station and convenience restaurant, and will be accessed by a vehicle ramp along the north-east boundary.

The service station will comprise:

- Service station canopy & forecourt (514 square metres)
- Service kiosk (200 square metres)
- Eight car park spaces
- Water and air bay

The convenience restaurant will be adjacent the service station kiosk and comprise:

- Restaurant building (257 square metres)
- Outdoor seating area (22 square metres)
- Service yard (41 square metres)
- Drive through road including order bay and pick up area
- Sixteen car park spaces
- Loading bay

A retaining wall will be required along the north-west boundary of the Activity Area.

The Activity within approved CHMP 14173 has been amended. The sponsor now proposes to develop the Activity Area for a mixed development with a single medical centre and a single child care centre (Appendix 2a). The medical and child care centres will be located upon the ground and therefore dictate the footprint of the impacts to the ground surface. The footprint on the ground surface for the proposed medical centre is 200 square metres. The proposed child care centre is two-storey and the ground surface footprint of the foundation for the child care centre is 207 square metres. The ground surface footprint of the landscaping within the Activity Area measures 1620.2 square metres.

The proposed Medical Centre will comprise:

- Medical centre building (200 square metres)
- Fifteen carpark spaces
- Eight bike parking spaces
- Loading/ delivery bay
- Drop off area
- Retaining wall
- Concrete driveway

The proposed Childcare Centre will comprise:

- Child care building 207 square metres
- Twenty three car park spaces in a concrete sealed car park



- Two outdoor play areas
  - Area A is 67 square metres
  - Area B is 38 square metres
- Covered Verandah area 15 square metres

Landscaping of 1620 square metres and a retaining wall along the north eastern extent of the medical centre car park and the child care centre and the associated concrete car parking will be required. And a common rubbish disposal areas (common bin) of ten square metres along the Burwood Highway frontage is proposed.

## 2.1 Activity Impacts to Ground Surface

The proposed activity will have impacts to the ground surface as follows.

The service station will require:

- Excavation for underground fuel tanks to a depth of approximately 3.5 metres
- Excavation for the service kiosk foundations to a depth of approximately 0.8 metres
- The service station canopy & forecourt will require excavation to a depth of approximately 1.5 metres (canopy footings)
- Trenching to a depth of approximately 0.6 metres will be required for water, sewer, electrical and telecommunication assets
- The car park spaces and water and air bay will require excavation to a depth of approximately 0.3 metres.

The convenience restaurant will require:

- Excavation for the restaurant building foundations to a depth of approximately 0.8 metres
- Excavation for the service yard to a depth of approximately 0.8 metres
- Excavation for the drive through road to a depth of approximately 0.3 metres
- Trenching to a depth of approximately 0.6 metres will be required for water, sewer, electrical and telecommunication assets
- The car park spaces and loading bay will require excavation to a depth of approximately 0.3 metres.

The retaining wall will require cutting along the north-eastern boundary to a depth of 7.32 metres. The entire development will require the excavation of the existing ground surface to create a level terrace for the forecourt, buildings and carpark.

A small amount of fill will be required along the south-western boundary of the Activity Area.

The northern extent of the Activity Area is not currently planned for specific development; however it will be subject to the retaining wall and excavation for the level terrace along the extent of the north-eastern boundary.



The amended proposed activity, will impact the ground surface. Depth of excavation required for the proposed medical centre, child care centre, car parking and the shared bin area is approximately between 0.1 and 3.6 metres (Appendix 2a).

The approximate maximum depth of excavation for the medical centre is:

- Medical centre building: 0.1 metres
- Concrete driveway: 3.6 metres
- Car parking: 1.5 metres
- Shared bin area: 0.5 metres
- Trenching to a depth of approximately 0.6 metres will be required for water, sewer, electrical and telecommunication assets

The approximate maximum depth of excavation for the child care centre is:

- Child care centre building: 1.5 metres
- Drop off area: 0.5 metres
- Car parking: 1.4 metres
- Trenching to a depth of approximately 0.6 metres will be required for water, sewer, electrical and telecommunication assets

Excavation along the northern boundary of the Activity Area is required to a total depth of 7.32 metres for the retaining wall as stated within approved CHMP 14173.



### 3 Extent of the Activity Area

---

The extent of the Activity Area is indicated in ~~Map 1~~ **Map 1a**. The Activity Area is located between the reserve of the Belgrave railway line to the north-east and the highway to the south-east; it measures approximately 115 by 37 metres at its widest and longest points. A bicycle trail runs parallel to its north-eastern boundary. The Ferntree Gully Quarry Recreation Reserve is 50 metres to the north-east and St Joseph's College ca. 140 metres to the south-west. Although the Activity Area is generally surrounded by built up mixed retail and residential areas, the Dandenong Ranges National Park is 430 metres to the north-east.

The Activity Area is currently an unused area with weedy vegetation growth.



## 4 Documentation of consultation

### 4.1 Consultation in relation to the assessment

**Table 2 Consultation in relation to the assessment**

Date	Name	Organisation	Nature of Consultation
7/03/2016		Biosis	lodged NOI with VAHR.
7/03/2016		Biosis	emailed request for 1 rep to attend
		Boon Wurrung Foundation	Standard & Complex Assessment on 16-17/3/2016.
7/03/2016		Biosis	emailed request for 1 rep to attend
		Bunurong Land Council Aboriginal Corporation	Standard & Complex Assessment on 16-17/3/2016.
7/03/2016		Biosis	emailed request for 1 rep to attend
		Bunurong Land and Sea Association Incorporated	Standard & Complex Assessment on 16-17/3/2016.
8/03/2016		Biosis	emailed request for 1 rep to attend
		Wurundjeri Tribe Land and Compensation Cultural Heritage Council	Standard & Complex Assessment on 16-17/3/2016.
1/07/2016		Bunurong Land Council Aboriginal Corporation & Bunurong Land and Sea Association Incorporated	Official letter announcing the merger of the two Traditional Owner groups.
		Biosis	
14/01/2020		Biosis	Submitted a Notice of Intent to Amend Approved CHMP 14173 to VAHR.
11/02/2020		Biosis	Notified groups of the amendment of the proposed activity within approved CHMP 14173.
		Bunurong Land Council Aboriginal Corporation	
		Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated	
		Boon Wurrung Foundation	
19/03/2020		Biosis	Sent Notice of Intent to Amend Approved CHMP 14173 to Knox city council.



## 4.2 Participation in the conduct of the assessment

**Table 3 Participation in the conduct of the assessment**

Date	Name	Organisation	Nature of Consultation
16/03/2016		Biosis	<b>Standard Assessment survey:</b> the team members walked over the Activity Area and noted disturbance over about 90%. GSV was extremely poor due to weedy grass and trees. <b>Complex Assessment subsurface testing:</b> 1x TP & 2 x STPs dug.
		Boon Wurrung Foundation	
		Bunurong Land Council Aboriginal Corporation	
		Bunurong Land and Sea Association Incorporated	
		Wurundjeri Tribe Land and Compensation Cultural Heritage Council	
17/03/2016		Biosis	<b>Complex Assessment subsurface testing:</b> 6 x STPs dug.
		Boon Wurrung Foundation	
		Bunurong Land Council Aboriginal Corporation	
		Bunurong Land and Sea Association Incorporated	
		Wurundjeri Tribe Land and Compensation Cultural Heritage Council	

## 4.3 Consultation in relation to the conditions

**Table 4 Consultation in relation to the conditions**

Date	Name	Organisation	Nature of Consultation
17/03/2016		Biosis	Discussion of results at the end of Complex Assessment.
		Boon Wurrung Foundation	
		Bunurong Land Council Aboriginal Corporation	
		Bunurong Land and Sea Association Incorporated	
		Wurundjeri Tribe Land and Compensation Cultural Heritage Council	
15/07/2016		Biosis	[REDACTED] emailed the draft of the CHMP to the TOs for comment.
		Boon Wurrung Foundation	
		Bunurong Land Council Aboriginal	



Date	Name	Organisation	Nature of Consultation
18/07/2016		Corporation Bunurong Land and Sea Association Incorporated	
		Wurundjeri Tribe Land and Compensation Cultural Heritage Council	
		Wurundjeri Tribe Land and Compensation Cultural Heritage Council	Delta replied via email "Thank you for providing the draft report for feedback, Wurundjeri are satisfied with the results."
		Biosis	

## 4.4 Summary of outcomes of consultation

On 16 March 2016, the field team walked over the Activity Area for the Standard Assessment survey. In spite of the extremely poor ground visibility, the flat nature of the north-west part of the Activity Area and the built up terrace visible in the profile at the south-eastern end of the Activity Area indicated that it had been substantially modified.

The Complex Assessment immediately followed the Standard Assessment, on 16 March 2016. The first test pit location proved to contain road metal and the sediment was compacted, hard and difficult to dig. The team discussed the conditions and came to conclusion that the test pit had been placed in a former vehicle track, running roughly parallel to the rail line, although the thick weeds largely obscured this on the ground surface. The team agreed that continuing to dig in the highly modified location wouldn't inform much about the natural stratigraphy of the Activity Area. A location approximately 7 metres to the west of the first test pit, on a gentle slope, had a more natural appearance, and the team chose this for the second test pit. No road metal was present in the second test pit, although the sediment was again hard and compacted, and the team agreed to dig a sondage from 300 millimetres to identify a natural, culturally sterile base clay. The team discussed whether mechanical excavation was warranted, and tentative plans were made for a mechanical sieve and backhoe to be booked for the following day, on the proviso that base clay could not be reached during manual excavation. [redacted] of the Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated visited the Activity Area at approximately midday. Later that day, at 800 millimetres depth, silty clay was reached in the sondage of test pit 2. This resulted in the use of a mechanical backhoe and sieve redundant. [redacted] Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated, who had been tentatively organising the mechanical back hoe and sieve, expressed his displeasure with the manual subsurface testing.

On the second day of Complex Assessment on 17 March 2016 [redacted] continued to express his displeasure at manual subsurface testing. The team members all expressed dissatisfaction of the difficult nature of digging in such hard, compacted silts. All four representatives of the Traditional Owner groups choose to work on each shovel test probe together. A meeting of all team members was had to make sure that the location of shovel test pits was a group decision, aiming to target areas that would be less disturbed. Tony Garvey expressed his displeasure and walked away from the group discussion, and refused to talk to the CHA for the rest of the day. After shovel test probe eight was completed, the representatives of the Traditional Owners stated they were satisfied that enough subsurface testing had been conducted and that the Activity Area had been disturbed to such an extent that there was very low potential for Aboriginal cultural heritage to be present. [redacted] asked if they would excavate one or two more shovel test pits. The representatives refused.

[redacted] subsequently discussed the Complex Assessment issues with [redacted] Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated. They were



satisfied that appropriate consultation had occurred during the fieldwork and that Wurundjeri elders were only able to direct fieldwork *inside* the Wurundjeri RAP area. The Activity Area is not inside the Wurundjeri RAP area.

On Friday 1 July 2016, the merger of the Bunurong Land Council Aboriginal Corporation and the Bunurong Land and Sea Association Incorporated was officially announced.

On Tuesday 12 July 2016, the CHA, Dr [REDACTED] emailed a draft of the CHMP for comment to all three Traditional Owner groups – the Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated, the Bunurong Land Council Aboriginal Corporation and the Boon Wurrung Foundation. Wurundjeri replied that they were satisfied with the draft report; no comment was received from Boon Wurrung or the Bunurong Land Council.

Consultation with Traditional Owner Groups was undertaken throughout the assessment process for Approved CHMP 14173. No Aboriginal cultural heritage places were identified during the course of Approved CHMP 14173. Activity Area within Approved CHMP 14173 is considered to have extremely low potential for Aboriginal cultural heritage due to sheetwash (caused by the original slope of the Activity Area), would have resulted in displacement of any low density surface artefacts present and the 19th and 20th century disturbance throughout most of the Activity Area within Approved CHMP 14173. Depth of excavation required for the proposed medical centre, child care centre, car parking, shared bin area, landscaping and associated retaining wall is approximately between 0.1 and 3.6 metres (Appendix 2a). Depth of impact of the proposed amended activity description (see Section 2) will not exceed the previously approved maximum depth of 7.32 metres.

An email was sent to the groups consulted during the assessment process of Approved CHMP 14173 by [REDACTED] of Biosis on 11 February 2020 notifying them of the amendment of the proposed activity within approved CHMP 14173 (Table 2).

An email was sent to Knox City Council by [REDACTED] of Biosis on 19 March 2020 notifying them of the amendment of the proposed activity within approved CHMP 14173 (Table 2).



## 5 Desktop Assessment

### 5.1 Search of the Victorian Aboriginal Heritage Register

A search of the VAHR was undertaken by [REDACTED] Biosis Pty Ltd on 10 March 2016.

A search of the VAHR for the amendment to approved CHMP 14173 was undertaken by [REDACTED] Biosis Pty Ltd, on 15 January 2020.

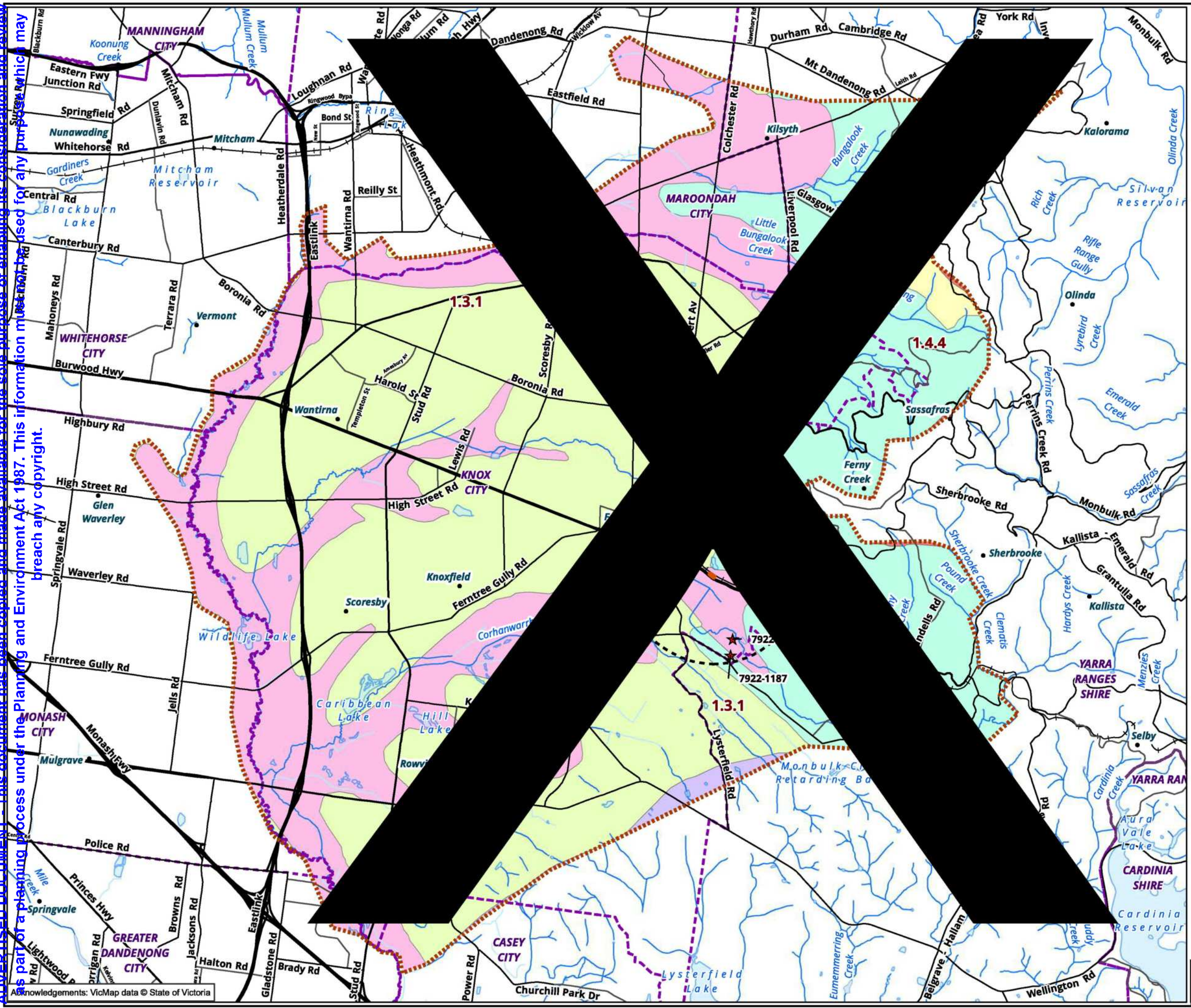
### 5.2 Geographic region

The geographic region for the Activity Area has been selected to represent a range of landforms and resources that would be accessible from the Activity Area. The geographic region runs roughly parallel with Dandenong Creek in the west, following the edge of the *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* third tier geomorphological unit to the north around Wantirna, Bayswater and Kilsyth South to Kalorama. The boundary then turns south-southeast and skirts west of the suburb of Mount Dandenong, following the edge of the *Plateau and broad ridges (Strathbogie, Koetong-Shelly, Errinundra, Kinglake, Olinda)* third tier geomorphological unit, excluding the suburbs of Olinda, Sassafras, Tremont and Sherbrooke. The boundary then aligns with Sherbrooke Creek, which joins Monbulk Creek and continues approximately south to Belgrave. The geographic region boundary then turns west and south-west, including the suburbs of Upwey and Rowville, but excluding Lysterfield. The geographic region includes Dandenong, Blind, Corhanwarrabul and Ferny Creeks. The eastern, western and southern borders of the geographic region are less built up than the central 70%, which has seen substantial urban expansion in the previous 30 years. The eastern section of the geographic region has steeper slopes and higher ridgelines compared to the central and western areas, which comprise undulating hills and floodplains.

The geographic region is shown in Map2 Map 2a.



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**Legend**

- Activity Area
- VAHR Places
- Activity Area 1600m buffer
- Geographic region
- Local government area

**Geomorphological units**

- 1.2.1 Moderate elevation plateaux and broad ridges
- 1.3.1 Low relief landscapes at low elevation
- 1.3.3 Low elevation terraces fans and floodplains
- 1.4.2 Prominent summits between 500 and 1200 m
- 1.4.3 Escarpments and gorges
- 1.4.4 Deeply dissected ridge and valley landscapes
- 1.4.5 Moderately dissected ridge and valley landscapes

**Map 2 Geographic Region including the Activity Area**

0 0.5 1 1.5 2 2.5  
Kilometers

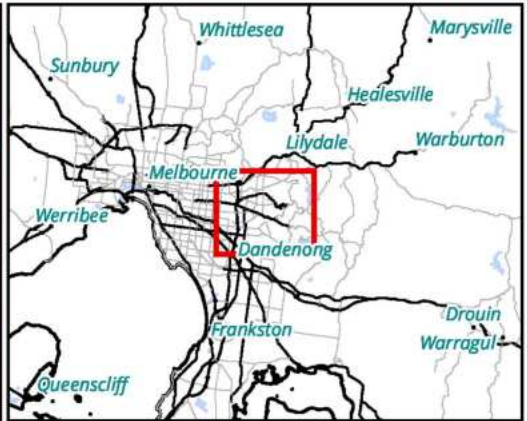
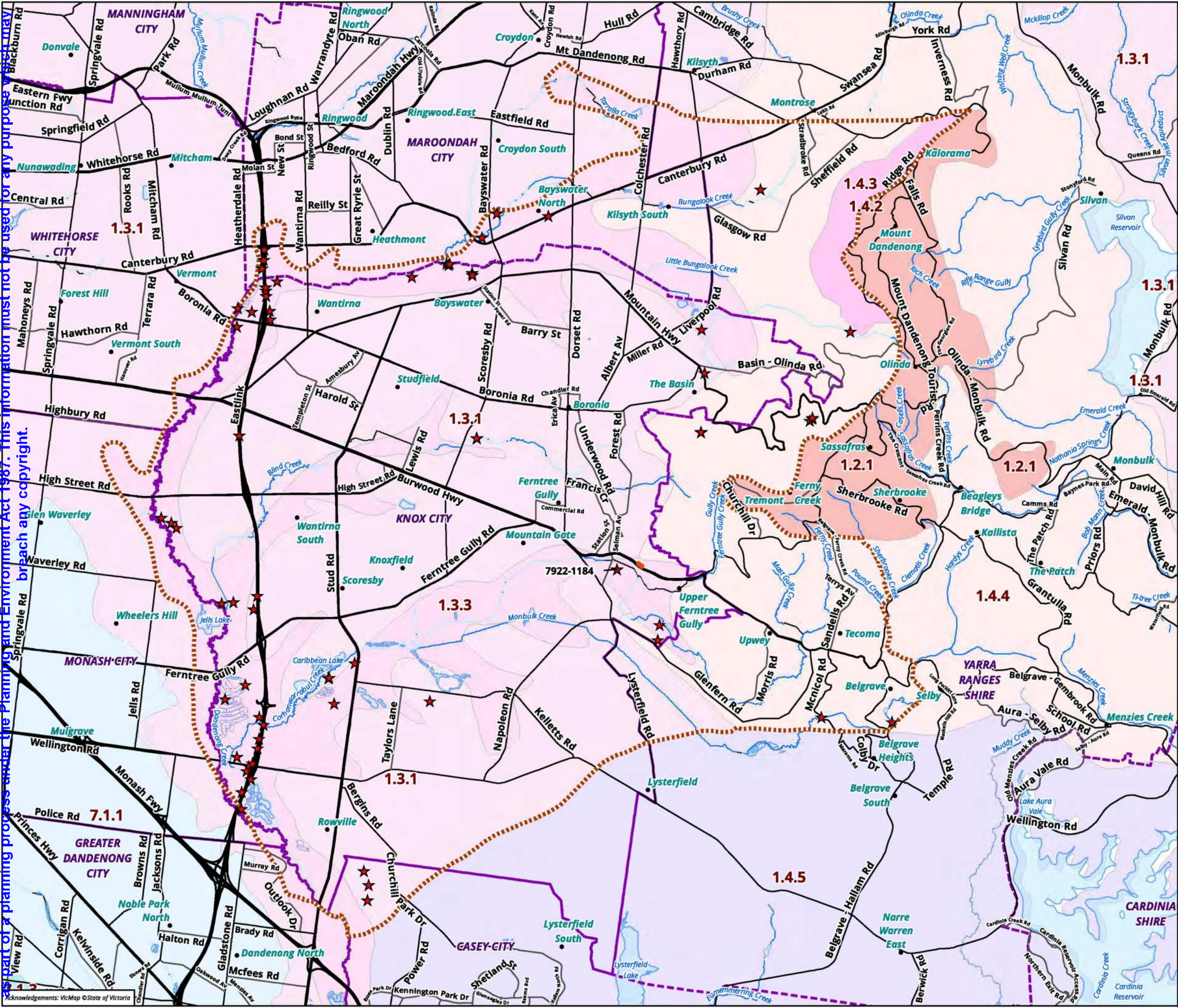
Scale: 1:65,000 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

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LDM, Last edited by: Imiline  
Mapping

17





**Legend**

- ★ VAHR place
- Activity Area
- Geographic\_Region

**Geomorphological units**

- 1.2.1 Moderate elevation plateaux and broad ridges
- 1.3.1 Low relief landscapes at low elevation
- 1.3.3 Low elevation terraces fans and floodplains
- 1.4.2 Prominent summits between 500 and 1200 m
- 1.4.3 Escarpments and gorges
- 1.4.4 Deeply dissected ridge and valley landscapes
- 1.4.5 Moderately dissected ridge and valley landscapes
- 7.1.1 Coastal plains with ridges and dunefields
- 7.1.3 Sunkland former swamps and lagoonal deposits

**Map 2a Amended Geographic region including the Activity Area**

0 0.5 1 1.5 2 2.5  
Kilometers

Scale: 1:70,000 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

**biosis**

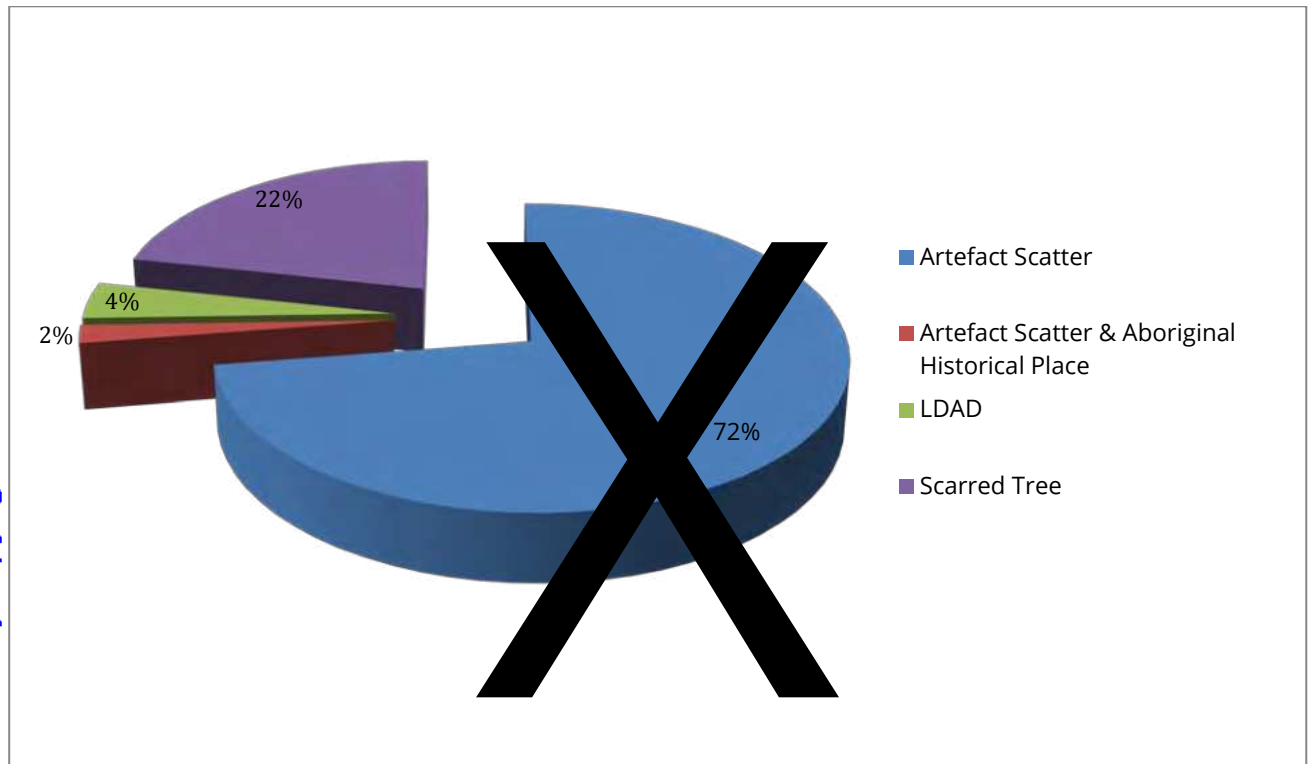
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### 5.3 Aboriginal places in the geographic region

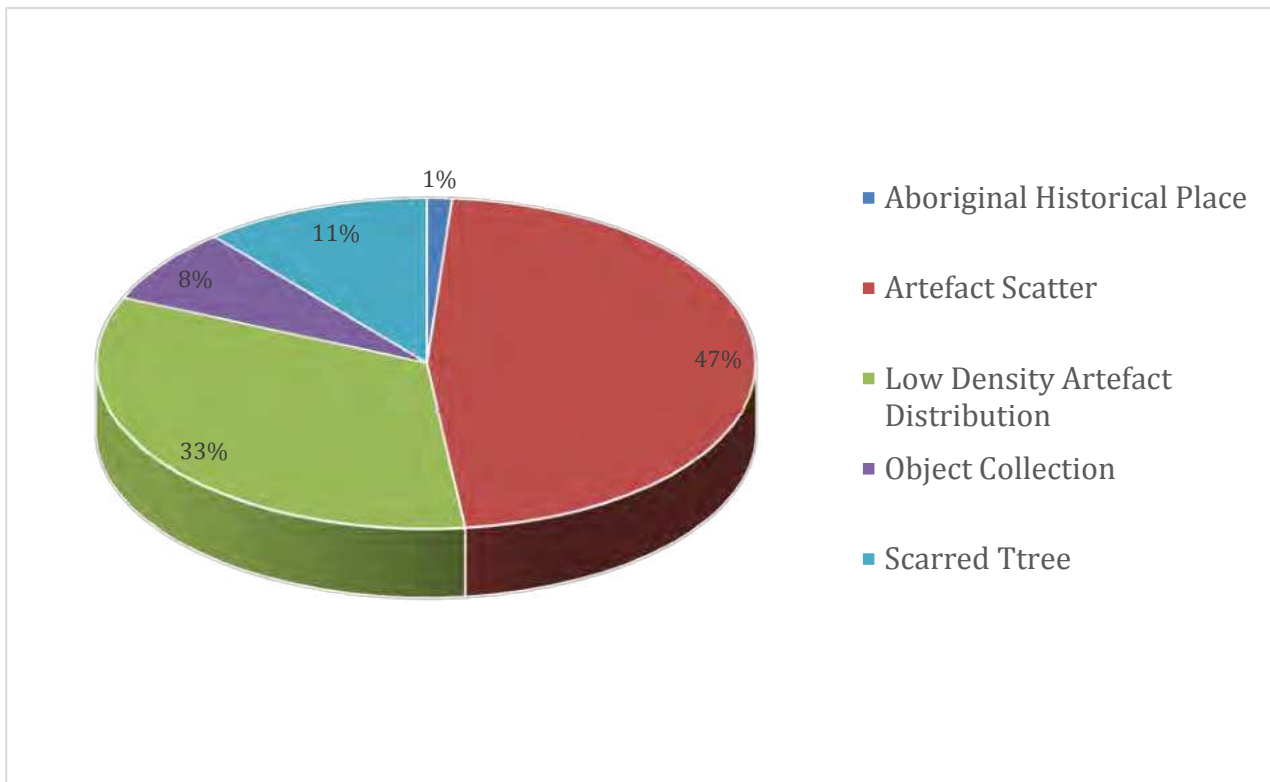
A search of the Victorian Aboriginal Heritage Register (VAHR) was conducted on 10 March 2016 and subsequently updated in 21 October 2016. The search identified 51 previously recorded Aboriginal places within the geographic region (Plate 1). The predominant Aboriginal archaeological place types in the geographic region are artefact scatters (n=37) and scarred trees (n=1). The remainder are low density artefact distributions (LDADs) (n=2) and one multi-component place.



**Plate 1 — VAHR place types in the geographic region.**

A search of the Victorian Aboriginal Heritage Register (VAHR) was conducted on 15 January 2020 for the amendment to Approved CHMP 14173. The search identified 81 previously recorded Aboriginal places within the geographic region (Plate 1a). The predominant Aboriginal archaeological place types in the geographic region are artefact scatters (n=38) and low density artefact distributions (LDADs) (n=27). The remainder are scarred trees (n=9), object collections (n=6) and one Aboriginal Historic place. Most Aboriginal Places within the geographic region are located within the *Terraces, Fans and flood plains (Kiewa Valley, Wonnangatta Valley)* geomorphic unit.





**Plate 1a VAHR place types in the geographic region.**

There are no Aboriginal places in the Activity Area.

There are no Aboriginal places within 200 metres of the Activity Area.

There are two Aboriginal places within 1.6 kilometres of the Activity Area. Aboriginal place **157 Glenfern Road, Upwey 1 (VAHR 7922-1187)** was recorded in May 2010 under CHMP 11252, with its primary grid co-ordinate (PGC) 1.47 kilometres south-east of the present Activity Area, ca. 250 metres west of Ferny Creek in the *Deeply dissected ridge and valley landscapes* geomorphological unit. It is a subsurface artefact scatter on the crest of a hill in brown (Munsell 7.5YR 4/3) clay loam soils immediately below the topsoil. It comprised one silcrete medial flake artefact, found at a depth of 100 millimetres. Radial shovel probe extent testing did not recover and further cultural heritage. The record states that it had most likely been disturbed by previous vegetation clearance and was therefore not in situ.

Aboriginal place **157 Glenfern Road, Upwey 2 (VAHR 7922-1186)** was also recorded in May 2010 under CHMP 11252, with its primary grid co-ordinate (PGC) from the Activity Area, ca. 70 metres west of Ferny Creek in the *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit (the same as the present Activity Area). It is a subsurface artefact scatter on a gentle slope on the edge of the Ferny Creek floodplain above flats. The artefacts comprised chert, silcrete and quartzite blades, flakes and angular fragments. The scatter comprises nine artefacts recovered between 0 and 200 millimetres depth in moist, light grey-brown (Munsell 7.5YR 7/1), weakly cemented, silty clay loam. This artefact distribution was also considered to have been disturbed by previous vegetation clearance.

## 5.4 Previous work in the geographic region

There are a total of 80 of archaeological reports and assessments form within the geographic region (Table 5). The most common type of report is Complex Assessment CHMPs, with 36 having been completed, including four within 2 kilometres of the Activity Area. Four test excavations have also been undertaken. While there is a



large amount of subsurface testing dating within the geographic region generally, only a limited amount is in reasonable proximity to the Activity Area. Therefore, the inferences based on previous cultural heritage assessments in the geographic region may not be as robust as desired.

**Table 5 — Types of Aboriginal archaeological assessments within the geographic region.**

Report type	n	relative frequency (%; 1 d.p.)
Complex Assessment CHMP	36	39.6
Survey	30	33.0
Desktop / Paper / Due Diligence / Other	12	13.2
Standard Assessment CHMP	4	4.4
Desktop Assessment CHMP	3	3.3
Test Excavation	3	3.3
Heritage Management	1	1.1
Site Specific Investigation (not excavation)	1	1.1
Test Excavation and Survey	1	1.1
<b>TOTAL</b>	<b>91</b>	<b>100.0</b>

There are a total of 129 archaeological reports and assessments which have been completed within the geographic region (Table 5a). The most common type of report is Complex Assessment CHMPs, with 61 having been completed, including five within 2 kilometres of the Activity Area. Four test excavations have also been undertaken. While there is a large amount of subsurface testing within the geographic region generally, only a limited amount is located within reasonable proximity to the Activity Area. Even though the amount of archaeological testing has significantly increased since the approval of CHMP 14173, only one additional Complex Assessment CHMP has been completed within 2 kilometres of the Activity Area since the approval of CHMP 14173.

**Table 5a — Types of Aboriginal archaeological assessments within the geographic region.**

Report type	Number	Relative frequency (%; 2 d.p.)
CHMP - Complex Assessment	61	47.29
CHMP - Desktop Assessment	5	3.88
CHMP - Standard Assessment	6	4.65
Desktop / Paper / Due Diligence / Other	18	13.95
Heritage Management	1	0.78
Site Specific Investigation (not excavation)	1	0.78
Survey	33	25.58
Test Excavation	3	2.33
Test Excavation and Survey	1	0.78
<b>TOTAL</b>	<b>129</b>	<b>100.0</b>



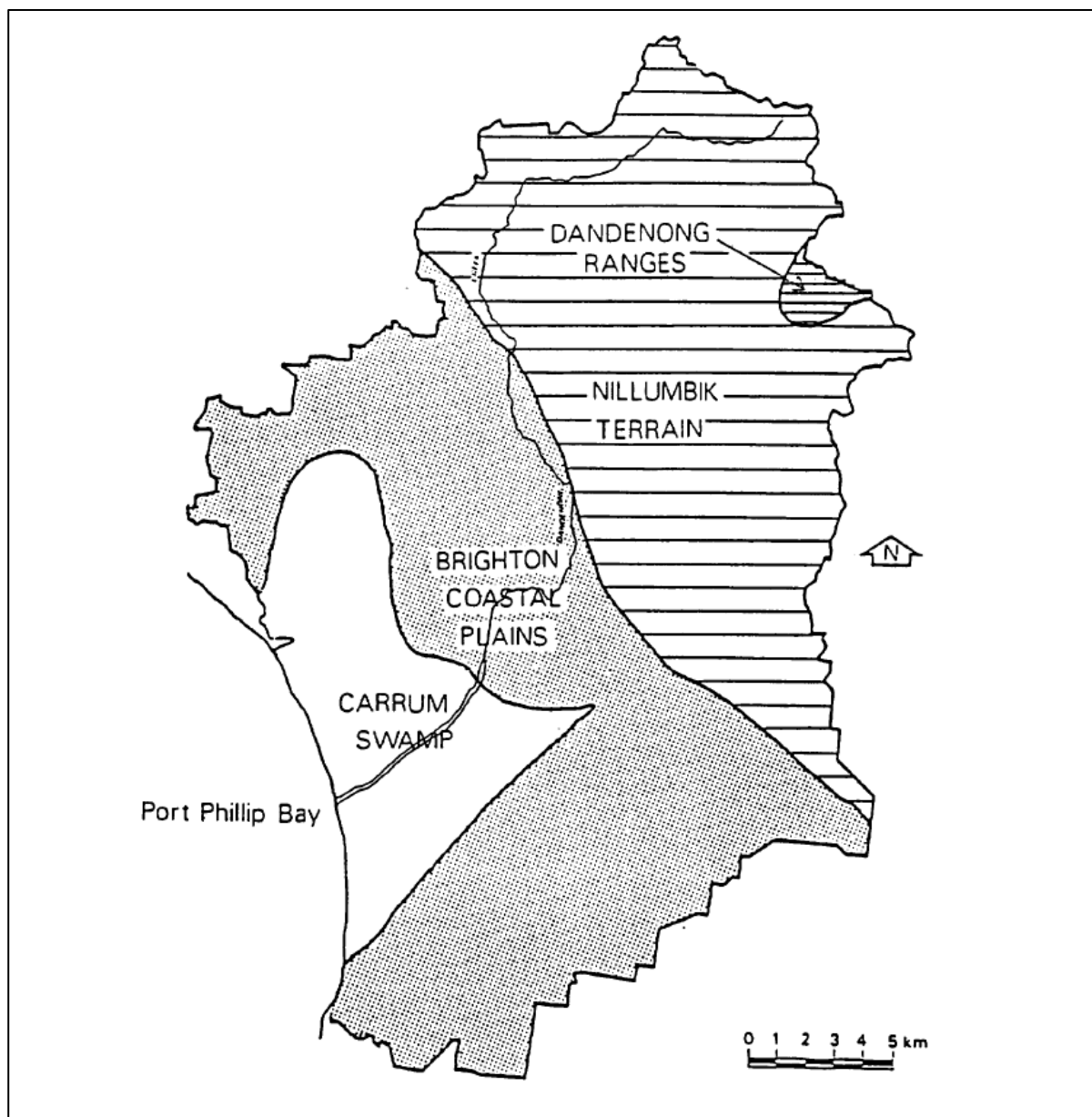
A detailed summary of reports which share a similar geographical and environmental context as the Activity Area is included below. Testing strategies of CHMPs relevant to the Activity Area are provided in Table 11.

### Regional reports

[REDACTED] (1988) archaeological survey of the Upper Yarra Valley and Dandenong Ranges was one of the first systematic studies undertaken in the region. It covered the eastern third of geographic region, including the present Activity Area. The study area was divided into a number of environmental units, with the current study area corresponding to the 'Hills' unit. Although du Cros did not survey the current Activity Area, she did record 14 Aboriginal places within the general 'Hills' unit. Of these 14, seven were stone artefact scatters, four were scarred trees, a stone arrangement, a quarry and a ceremonial ground. Five of the Aboriginal places were located on hill or ridge tops, five on hill slopes, two at the base of slopes, and two on creek or river flats. Du Cros' predictive model for Aboriginal archaeological place in the 'Hills' unit suggested that scarred trees were most likely to be found along creeks and major watercourses, stone artefact scatters on river flats or near permanent water, with smaller artefact scatters or isolated artefacts on ridge tops.

A subsequent survey of the Dandenong Creek and Patterson River by **Rhodes** (1990) covered approximately 30% of the current geographic region, including the present Activity Area. The Activity Area may fall on the edge of Rhodes' 'Dandenong Ranges' study unit, but is more likely to lie on the much larger 'Nillumbik Terrain' study unit; the scale of the original map makes this difficult to confirm (Plate 2) (Rhodes, 1990). The former is described as steeply dissected, strongly undulating terrain with elevations up to 600 metres, on a residual erosion surface of the Dandenong Volcanics, with Upper Devonian Dandenong Volcanic geology including rhyolite, rhyodacite and minor rhyodacite and soils comprising brown, gradational fine silty loam on the surface. The Nillumbik Terrain study unit comprises gently undulating hills dissected by Dandenong Creek and tributaries as well as the Wheelers Hill fault. The geology of this unit comprises the Silurian-Dargile formation (sandstone, interbedded mudstone and shale) west of Dandenong Creek and the Devonian-Humevale (siltstone, minor sandstone and limestone) formation east of Dandenong Creek. The soils of the Nillumbik Terrain unit are brown mottle-duplex with a silty loam surface and clay based subsoils.



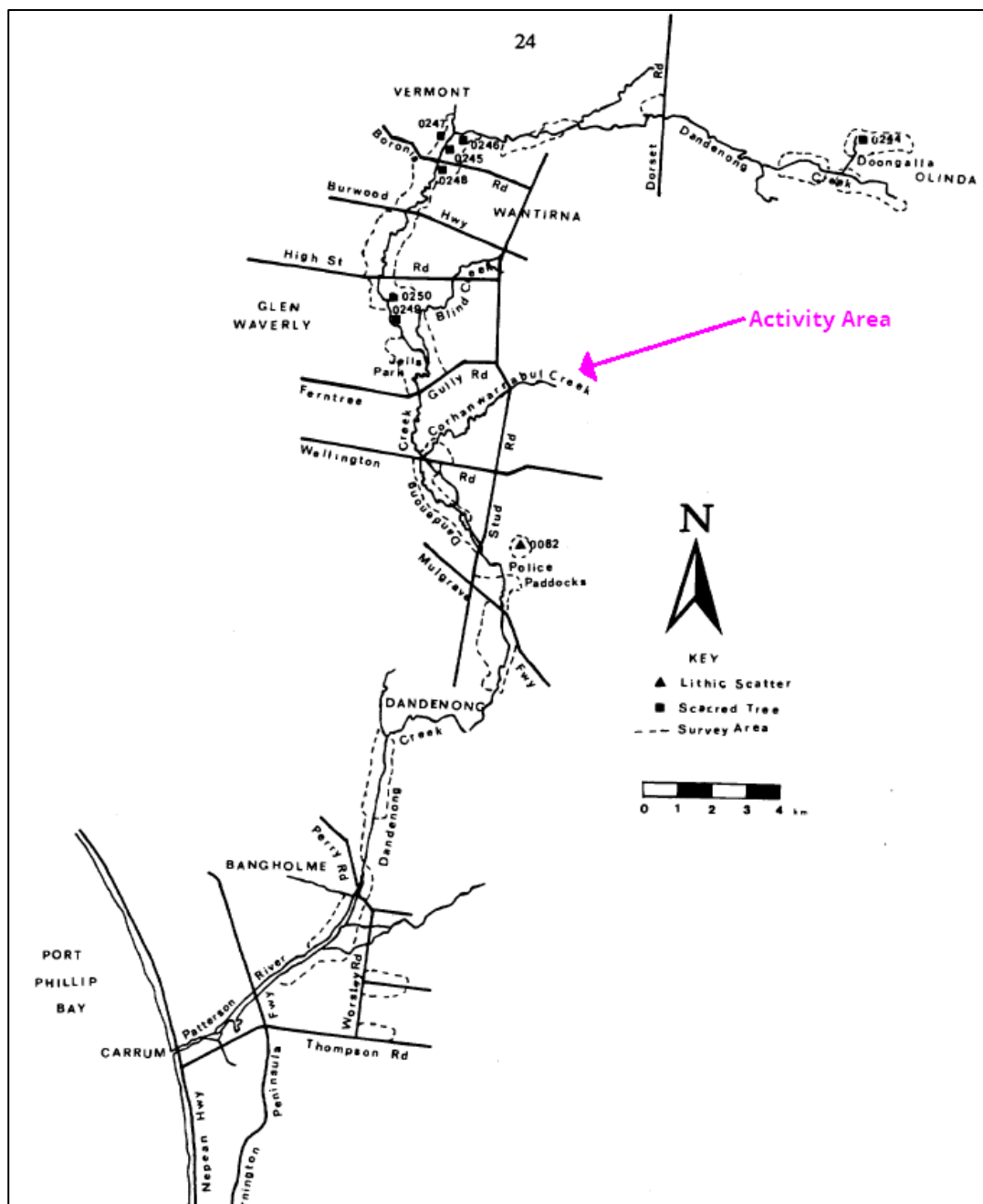


**Plate 2 Study units of the Dandenong Creek and Patetrsob River survey (Rhodes, 1990, p. 6).**

The background research noted that it was difficult to make any statement about the distribution of Aboriginal places in relation to landforms as the numbers recorded were low and much of their study area had been subject to urban development, resulting in disturbance of Aboriginal cultural heritage. Additionally, few surveys had been previously undertaken. The predominant place type was scarred tree, with low proportions of isolated artefacts and artefact scatters.

During the survey, surface visibility over most of the study area was poor due to dense vegetation. A total of eight Aboriginal places were recorded during the survey, comprising seven scarred trees and one artefact scatter (Plate 3).





**Plate 3 Results of the Dandenong Creek and Patterson River survey (Rhodes, 1990, p. 24).**

The scarred trees were mainly Manna Gum *Eucalyptus viminalis*, with one *Stringy Bark E. obliqua*, and were located in the Dandenong Ranges at the head of Bruces Creek, Doongalla and on The Dandenong Creek floodplain (landform unit 3) between Vermont/Wantirna and Wantirna South. The artefact scatter comprised three silcrete artefacts (two flakes, one scraper) and was located on a ridge in the Police Paddocks, Dandenong.

Rhodes suggested that Aboriginal places such as artefact scatters in the Dandenong Ranges section of his study area could occur in the low foothills at the base of the Dandenong Ranges and around the headwaters of creeks. Scarred trees could occur throughout the foothills, valley slopes and at the tops of ranges (Rhodes, 1990, p. 36).



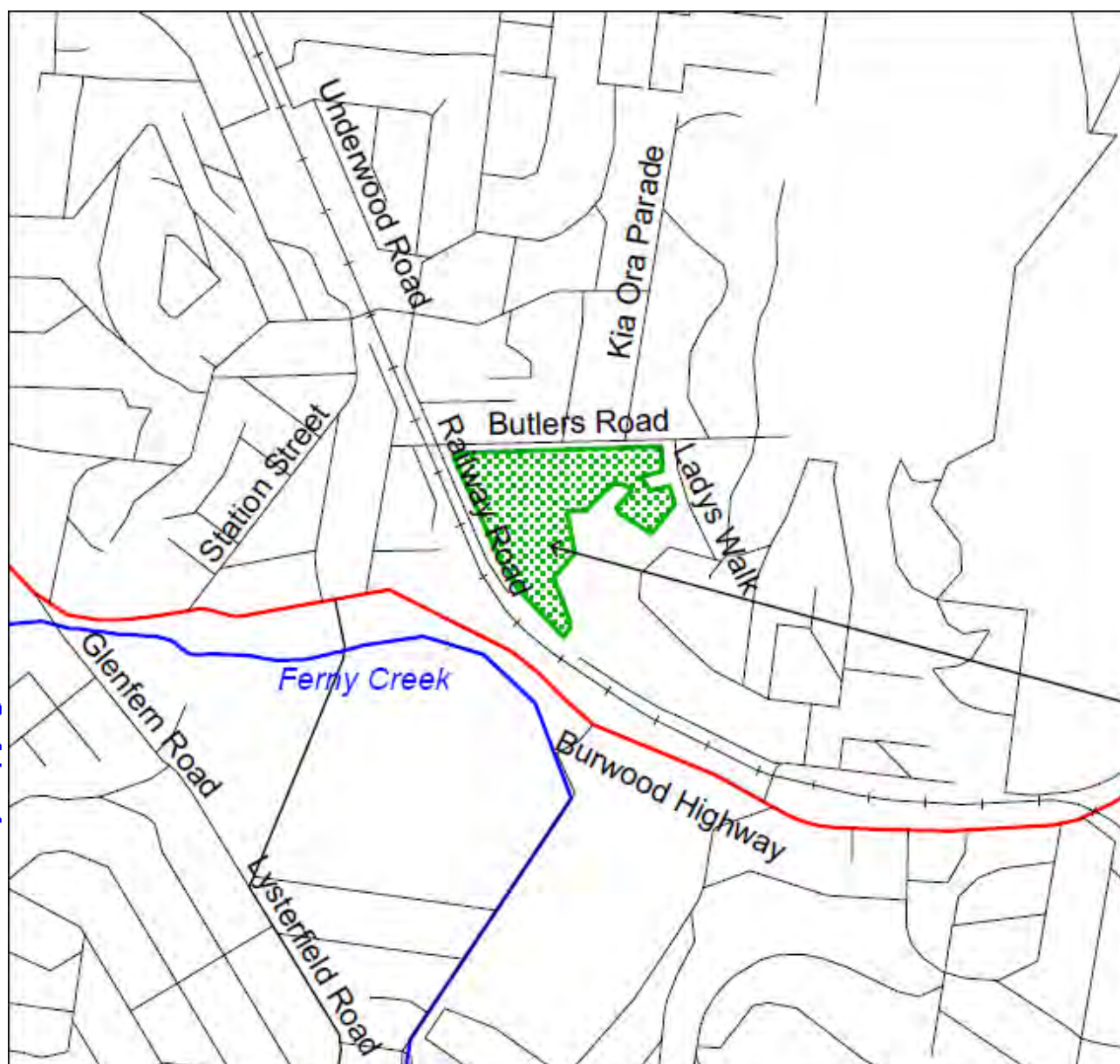
██████ (1993) prepared a draft desktop assessment of the archaeology of the Central Highlands for the Central Highlands Regional Assessment Project, which focused on forested areas and forest heritage, covering the eastern half of Melbourne and as far north as Seymour and Merton, as far east as Jamieson, Woods Point and Erica and to the south included Wonthaggi and the Mornington Peninsula. The Central Highlands study area mostly comprised the East Victorian Uplands, which is dissected mountainous terrain and foothills of the Divide and contain mainly tall eucalyptus forests and woodlands. The topography ranges from gentle undulating foothills to rugged mountains. Plateaus are also present, sometimes with steep escarpments; flat crests of ridges and mountains are remnant ancient surfaces. Two landforms dominate the Central Highlands, gentle to moderate hills and steep mountains and hills. Plains also appear in smaller areas. The lithology of the Central Highlands falls into three categories; granites and gneisses, sedimentary rocks and volcanic rocks. The Uplands were visited by Wurundjeri and Taungurung peoples mainly in summer for a wide range of animal and plant resources; tree fern was thought likely to be an important food in upland areas. The study area contained a total of 291 Aboriginal places; 202 of these occurred within the East Victorian Uplands. The majority of places were concentrated on the Ringwood mapsheet, as the result of a number of surveys being conducted in outer urban fringes and metropolitan areas. Surface artefact scatters, isolated artefacts and scarred trees were the most common place type in the study area. Most recorded Aboriginal places were found on sedimentary land systems, with about two-thirds on gentle slopes. Again this is a result of surveys on the urban fringes in foothills. In steeper sloping land systems topography determines Aboriginal place location, with flat or gently sloping areas preferred. Although a wide range of Aboriginal place types had been identified in forested area, the bulk of the archaeological record was made up of sparse artefact scatters. Proximity to perennial creeks, rivers and swamps increased potential for Aboriginal places on forested slopes. Artefact densities may also increase along crests, ridges, valley flats and floodplains. The Central Highlands study area was divided into eastern and western zone on the basis landforms. The eastern zone is dominated by steep mountains and rugged topography with small areas of high plateaus; the geology is comprised of igneous and metamorphic rocks. The western zone ranges from gentle and moderate hills to steep mountains, with alluvial plains associated with major rivers; the geology is sedimentary based, with some igneous intrusions such as the Dandenong Ranges. The available archaeological data for the Central Highlands study area mainly related to the western zone.

██████ (1994) prepared a heritage significance assessment for the Aboriginal archaeology component of the Central Highlands Regional Assessment Project, covering the same study area as Bird (1993). The heritage values were assessed against the Australian Heritage Commission National Estate Criteria. The report is focused on assessing heritage values of recorded Aboriginal places, and with no emphasis on interpretation of the landscape of the archaeology or any predictive modelling. It did note, however, that place types in the Central Highlands region recorded to date included surface artefact scatters, scarred trees, grinding grooves, a burial, mounds, a quarry, stone arrangements, an artefact collection and a section exposure.

### Local Reports

██████ (2002) conducted an archaeological survey of CSR Land at Butlers and Railway Roads, Ferntree Gully (Plate 4), ca. 90 metres to the north of the present Activity Area. It is almost entirely situated on the *Low relief landscapes at low elevations* geomorphology unit, with small areas of the *Deeply dissected ridge and valley landscapes* and *Terraces, fans and floodplains* units in the southern corner.



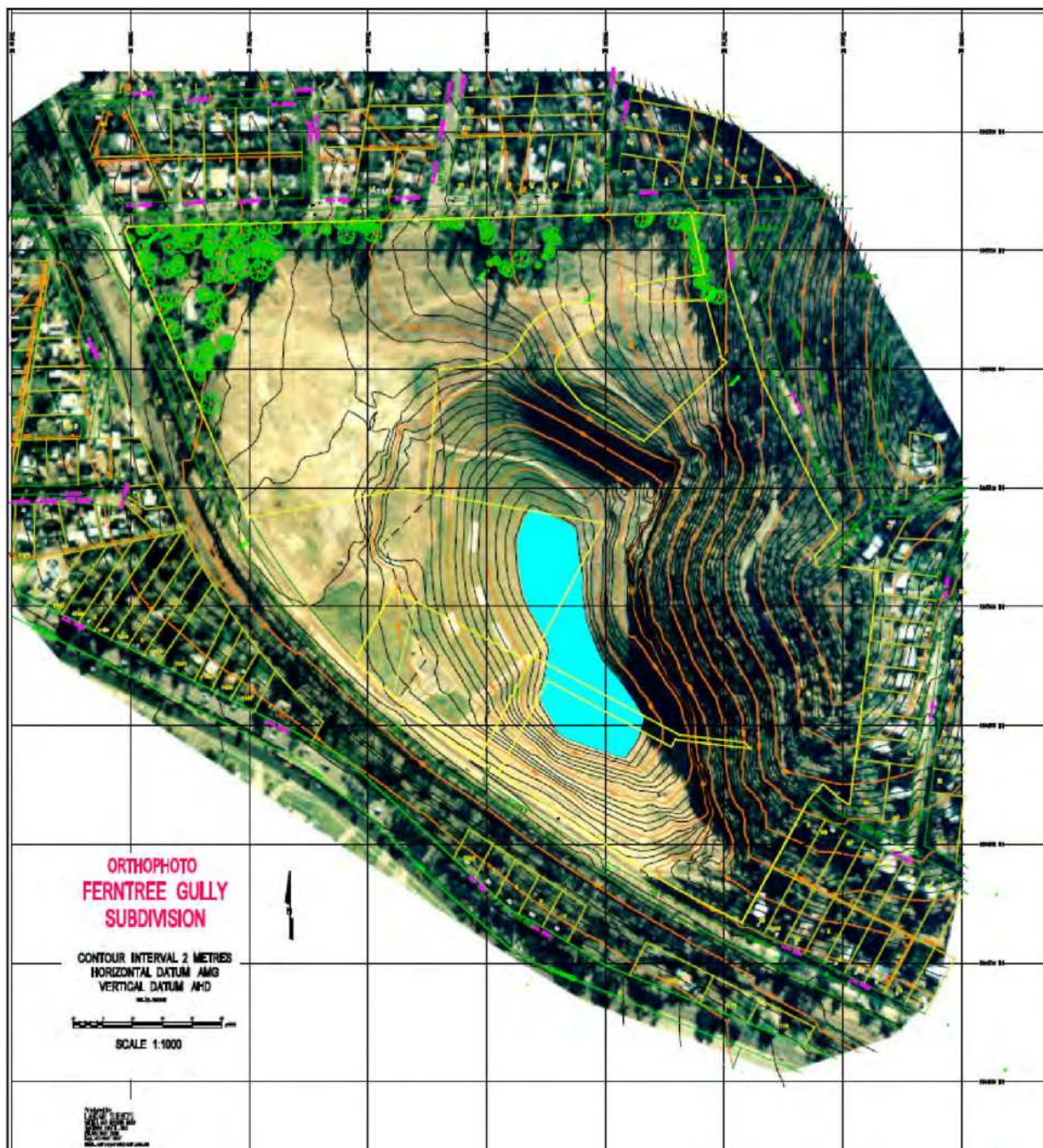


**Plate 4 Butlers and Railway Roads study area (Muir, 2002).**

The study area is located at a disused quarry in Ferntree Gully, north of Burwood Highway, approximately eight hectares in size (Plate 5). The majority of the study area had been substantially cleared of native vegetation with the exception of an area of modified woodland along the western and northern perimeters. The geology of area is extremely variable and includes rocks of sedimentary, igneous and metamorphic origin. Soils in the area are predominantly red and brown friable earths, associated with the Upper Devonian volcanics, particularly basalts, which turn to a red clay following rain.

The study area itself had been used as a quarry for approximately 100 years. Land for the quarry was first reserved in 1879, and was opened by the Laudehr brothers to supply metal for the extension of the railway. An extensive network of tramways connected the various rock faces with a tram track connecting the to the Upper Ferntree Gully station. The economic crisis of 1890 forced the quarry into receivership, and the site was taken over by the Commercial Bank. The quarry recommenced operations in 1916, by which time road transport had made the tramways redundant. Kerrs later took over the quarry, which was later acquired by Boral and by CSR. The quarry closed in the late 1990s.





**Plate 5 Butlers and Railway Roads study area (2002).**

Relatively little archaeological fieldwork had been undertaken in the Dandenong Ranges region and no Aboriginal archaeological places had been recorded within 5 kilometres of the study area. Isolated artefacts, artefact scatters and scarred trees may be found in the foothills of the Dandenong Ranges and close to waterways, with scarred trees possibly located on ridge-lines and hill tops. However, the dearth of systematic survey in the region, and the often highly disturbed nature or poor surface visibility of the areas that have been surveyed, has meant that relatively few Aboriginal places have been recorded in the broader region.

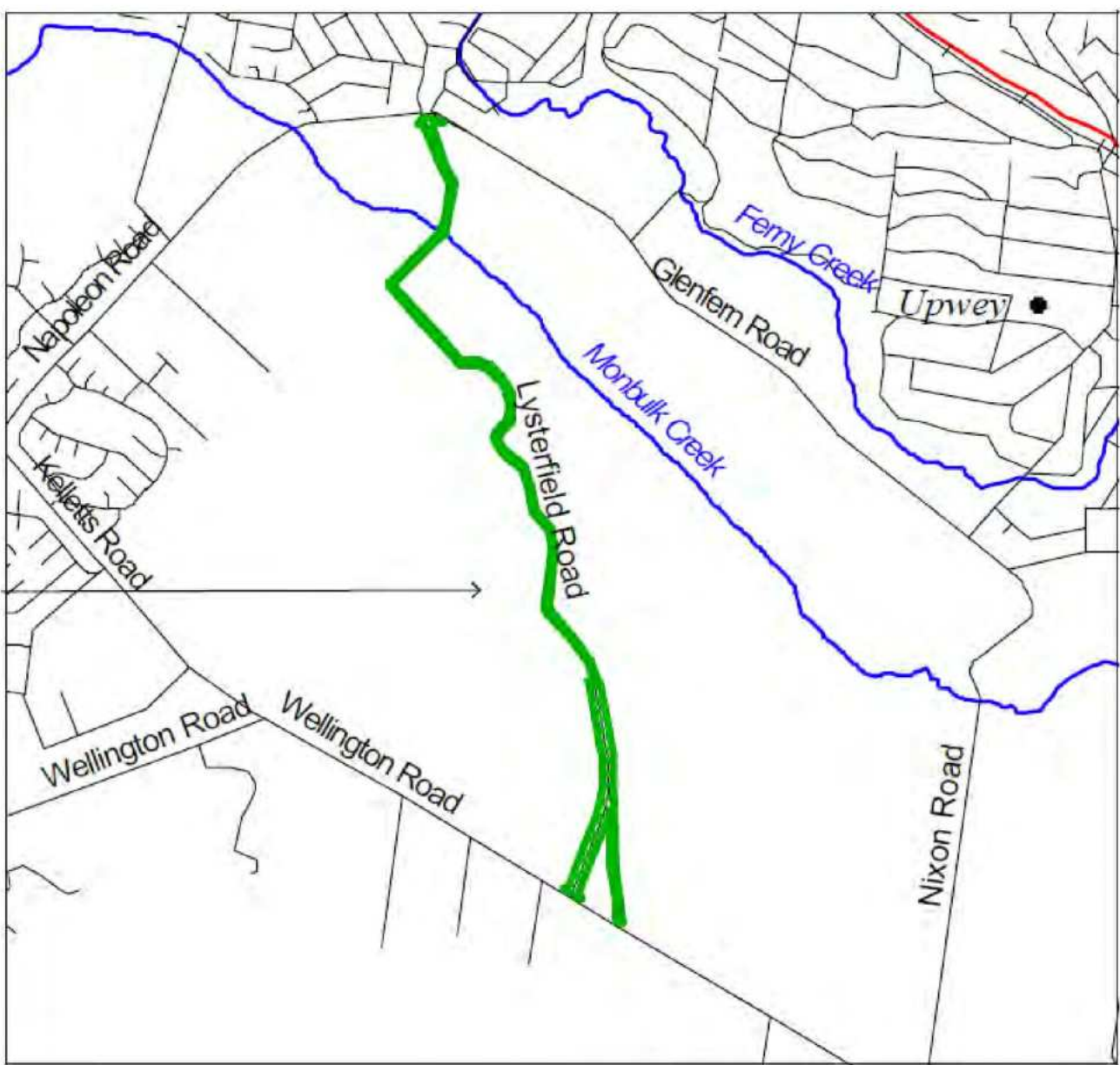
The field survey encountered extremely variable surface visibility, so the survey targeted areas of improved ground visibility such as erosion scars, fence-lines and tracks. Very high levels of ground disturbance were



noted over the entirety of the study area from quarry activities. Most, if not all, of the area's original ground surface had been disturbed. No Aboriginal places were recorded in the study area.

The report concluded that the study area's historical use as a quarry and the subsequent lack of original ground surface or vegetation indicated that the study area had little or no potential to contain Aboriginal archaeological places.

██████ (2003) conducted a cultural heritage survey of a 4.2 kilometre long section of Lysterfield Road (Plate 6), between Napoleon Road and Wellington Road, Lysterfield, 1.2 kilometres south-west of the present Activity Area. The study area lay on the *Low relief landscapes at low elevations* geomorphology unit.



**Plate 6** Lysterfield Road study area (Muir, 2003, p. 30).

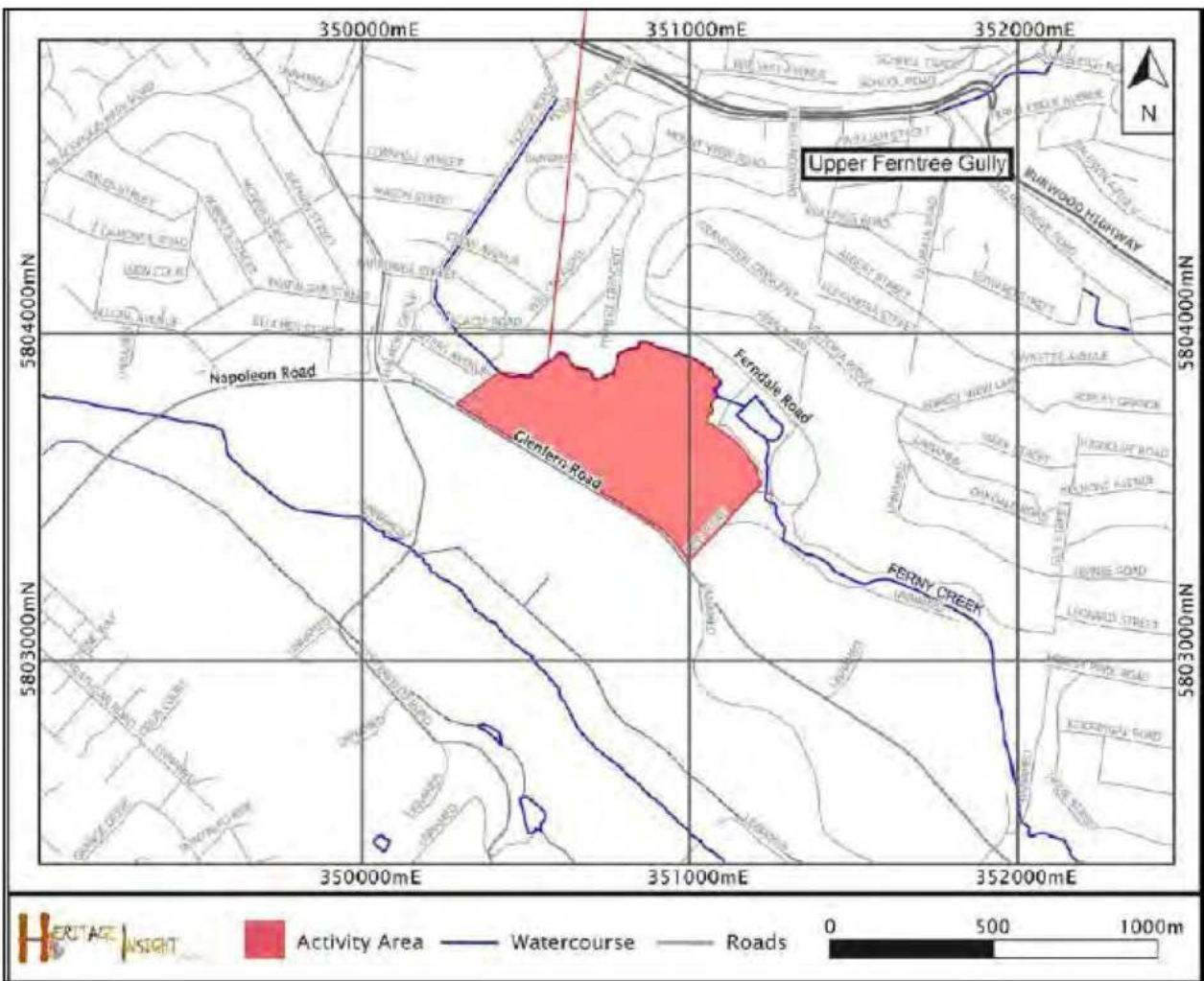
The study area was located in a floodplain valley crossed by the Ferny and Monbulk Creek channels. These channels form part of the stream system draining the Dandenong Ranges area. The geology of the study area was largely comprised of alluvium deposited by the Ferny and Monbulk Creeks during the Quaternary period. Immediately surrounding the alluvium is Silurian to Lower Devonian bedrock sediments. These form the undulating foothills of the Dandenong Ranges. Lower Devonian and Silurian sediments are interbedded



muddy sandstones and shales that are predominantly non-calcareous. The soil of the study area was a fine textured, yellowish brown to dark brown loam.

As the study area showed evidence in the road cuts of being composed largely of fill, and/or having been heavily disturbed, a targeted survey approach was taken. Ground surface visibility was generally non-existent and effective survey was often prevented by the narrowness of the study area. However, it was evident that the study area had high levels of disturbance, and parts of the road reserve, particularly on steep slopes, were composed of fill used to build up the road level. Sections of the Lysterfield valley to either side of Monbulk Creek were noted to have suffered slightly less disturbance. No Aboriginal archaeological places were located during the survey. The area within 50 metres of Monbulk Creek was noted to be of potential low to moderate archaeological sensitivity but was not likely to be impacted.

██████████ (2010) prepared a Complex Assessment CHMP (11252) for a proposed residential subdivision at 157-173 Glenfern Road, Upper Ferntree Gully, 1 kilometre to the south of the present Activity Area. The proposed residential subdivision Activity Area was located half on the third tier *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit (the same as the present Activity Area) and half on the *Deeply dissected ridge and valley landscapes (headwaters of major rivers such as the Wonnangatta, King and Kiewa Rivers Mt Cooperacambra)* unit, immediately south of Ferny Creek (Plate 7, Plate 8).



**Plate 7** Activity Area of the Glenfern Road CHMP (11252) (██████████, 2010, p. 3).





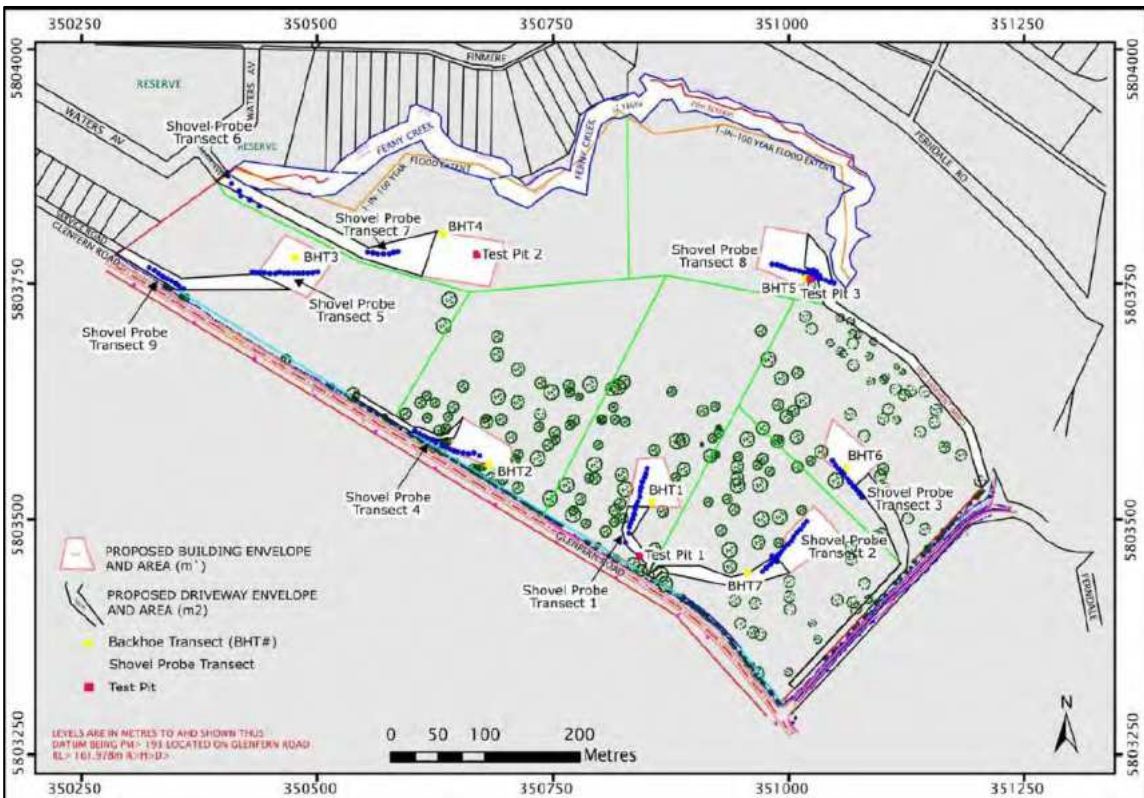
**Plate 8 Aerial image of Glenfern Road CHMP (11252) Activity Area, ca. 2010** [REDACTED] 2010, p. 9).

The Desktop Assessment identified that the Glenfern Road Activity Area had not been subject to previous archaeological assessment and no Aboriginal places had been recorded on the property. Only 15 registered Aboriginal cultural heritage places had previously been recorded within the geographic region, all of which were artefact scatters, comprising both surface and buried deposits. Disturbance from historical vegetation clearance and pastoral activity were considered likely to have resulted in extensive disturbance to, or destruction of, any Aboriginal cultural heritage within the Activity Area.

The Standard Assessment survey identified that the Activity Area contained two landforms - a floodplain of the adjacent Ferry Creek in the north of the Activity Area and a low-lying ridgeline and sloping landform down to the floodplain. The survey encountered poor ground surface visibility (GSV) due to dense grass coverage; several mature eucalypt trees were identified. Soils present within the Activity Area were noted as brown clay loams at the base of the trees throughout the slopes in the south and east of the Activity Area. No Aboriginal cultural heritage places were identified during the Standard Assessment survey; however the two landforms present, the ridgeline and floodplain, were identified as having potential to contain cultural heritage places.

The Complex Assessment comprised three test pits (1.0 x 1.0 metres; 0.5 x 0.5 metres), nine shovel test pits (0.3 x 0.3 metres) and seven mechanical transects (1.2 x 2.0 metres) (Plate 9). Test pit 1 was placed near the southern corner of the Activity Area on the flat crest of the hill. Three deposits were identified in test pit 1: a brown clayey loam overlying a compact dry, light grey loam with some sandstone rubble; excavation ceased at 0.37 metres depth due to the increasing presence of larger sandstone boulders in the pale brown clayey loam (Plate 10, Table 6).





**Plate 9** Subsurface testing locations in the Glenfern Road CHMP (11252) Complex Assessment (Barker, 2010, p. 43).



**Plate 10** Profile of test pit 1 in the Glenfern Road CHMP (11252) Complex Assessment (Barker, 2010, p. 54).



**Table 6 Stratigraphic summary for test pit 1 of the Glenfern Road CHMP (11252) Complex Assessment (Barker, 2010, p. 43).**

Test Pit 1	Soil colour	pH	Inclusions
Spit 1 (0–0.05/0.10m)	Brown clayey loam (Munsell 7.5YR 5/4)	6	Grass rootlets
Spit 2 (0.05/0.10m – 0.70/0.20m)	Compact, dry, light grey loam (Munsell 7.5YR N7)	7.5	Sandstone rubble
Spit 3 (0.70/0.20m – 0.370m)	Very compact, pale brown clayey loam (Munsell 10YR 7/4)	8	Increasingly larger sandstone boulders, excavation became impossible at 370mm.

The second test pit was placed on the flat floodplain landform to test the stratigraphy of the unnamed swamp deposits. It was excavated by context to a depth of 0.60 metres (Plate 11). The hand excavation of the test pit ceased at this point as the clay was highly compacted and difficult to remove by hand; the deposit at this depth was considered to be a sterile layer. Three deposits were identified – a wet, dark brown clayey loam, overlying a stiff, wet, compact, grey-brown clay on the wet, sticky, dark brown base clay (Table 7).





**Plate 11** Profile of test pit 2 in the Glenfern Road CHMP (11252) Complex Assessment (Barker, 2010, p. 56).

**Table 7** Stratigraphic summary for test pit 2 of the Glenfern Road CHMP (11252) Complex Assessment (Barker, 2010, p. 55).

Test Pit 1	Soil colour	pH	Inclusions
Spit 1 (0–0.05m)	Wet, dark brown clayey loam (Munsell 7.5YR 5/4)	6	Grass rootlets
Spit 2 (0.05–0.33m)	Stiff, wet, compact, grey-brown clay (Munsell 7.5YR 5/4)	6	-
Spit 3 (0.33– 0.60m)	Wet, sticky, dark brown clay (Munsell 7.5YR 5/4)	-	-

A third test pit was excavated after lithic artefacts were recovered in shovel test pit transect 8. Test pit 3 (0.5 x 0.5 metres) was placed on the relatively flat crest of an alluvial rise adjacent to Ferny Creek (Plate 12). Four deposits were identified; an A horizon of brown clayey loam, overlying a compact, pale brown alluvial silt; a third horizon of compact, light brown-grey alluvial clayey silt mottled with light grey alluvial clayey silt, and yellowish-red clay, and the final horizon of compacted, hard, yellowish-brown clay (Table 8). The test pit was excavated to a depth of 0.57 metres; excavation ceased at this point as the clay was interpreted as culturally sterile. Two stone artefacts were recovered at depths of 0.05 and 0.08 metres in the A horizon and the compact pale brown alluvial silt immediately below. The northern half of the Activity Area was characterised



by wet, dense, dark brown clay soils. The hills and ridgelines forming the south and south-east of the Activity Area contained increasing dense sandstone boulders from 0.20 metres depth. A series of 2 metre backhoe transects were dug prior to the excavation of the shovel probe transects In order to try and determine the extent of soil disturbance in the Activity Area and to provide a more extensive sample of the surface and subsurface soils. The shallow soils on the hills landform contained increasing dense sandstone boulders from 0.20 metres whilst the clays on the floodplain were extremely dense and waterlogged. Hand excavation to depth was considered to be unfeasible in both cases.



**Plate 12** Profile of test pit 3 in the Glenfern Road CHMP (11252) Complex Assessment (Barker, 2010, p. 58).

**Table 8** Stratigraphic summary for test pit 3 of the Glenfern Road CHMP (11252) Complex Assessment (Barker, 2010, p. 55).

Test Pit 1	Soil colour	pH	Inclusions
Spit 1 (0–0.05m)	Brown clayey loam (Munsell 7.5YR 5/4)	6	Grass rootlets
Spit 2 (0.05–0.12m)	Compact, pale brown alluvial silt (10YR 7/4)	5.5	-
Spit 3 (0.12– 0.51m)	Compact, mottled light brown-grey alluvial clayey silt (7.5YR 5/4), light grey (7.5YR N7) alluvial clayey silt, yellowish red (5YR 5/8) clay	-	Sandstone rubble towards base, charcoal inclusions
Spit 4 (0.51– 0.57m)	Compacted, hard, yellowish-brown clay (5YR 5/8)	6	Sandstone rubble

Backhoe transects 1-2 and 6-7 investigated the housing envelopes located on the hills and ridgelines. The stratigraphy of backhoe transects 1-2 and 6-7 was essentially identical and comprised brown clayey loam, overlying compact, dry light grey loam with sandstone rubble, very compact pale brown clay loam with increasingly larger sandstone boulders with depth to 0.600-0.700 metres when a layer of stiff, very dry and



compact clay was encountered. On the lower gentle slopes the layer of sandstone boulders was absent and a layer of compact, light grey silt was noted immediately below the surface layer; extending to a layer of stiff, very dry, compact clay at 0.65 metres (backhoe transects 3 and 5). On the floodplain the dense clay profile identified in test pit 2 continued to 0.80 metres, becoming increasingly hard and dense with depth (backhoe transect 4).

A series of nine shovel pit transects were excavated at intervals of 5 metres in order to try and determine the extent of soil disturbance in the Activity Area and to provide a more extensive sample of the surface and subsurface soils. The shovel test pit transects aimed to further assess the likelihood of Indigenous cultural material being located on the rise in the centre north of the Activity Area, and to determine the extent of ground disturbance caused by land clearance and grazing. One silcrete artefact was recovered from transect 2 at a depth of 0.10 metres at the interface of a dark brown clayey loam (Munsell 7.5YR 5/4) onto brown clayey loam (Munsell 10YR 7/4). In transect 8 nine lithic artefacts were recovered over 36 square metres from 40-48 metres along Transect 8, at depths of 0.05-0.30 metres in depth in mottled light brown-grey compact alluvial clayey silts.

The cultural material recovered during the Complex Assessment was recorded as two Aboriginal places.

**Glenfern Road, Upwey 1 (VAHR 7922-1186)** comprised nine artefacts and was identified in a relatively flat rise adjacent the Ferny Creek floodplain in partially disturbed soils, approximately 30 metres south-west of Ferny Creek. This is recorded on the *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit, the same as the present Activity Area.

**Glenfern Road, Upwey 2 (VAHR 7922-1187)** comprised an isolated silcrete flake and was identified on the crest of the hill in the south-eastern corner of the Activity Area. This is recorded on the *Deeply dissected ridge and valley landscapes (headwaters of major rivers such as the Wonnangatta, King and Kiewa Rivers Mt Cooperacambra)* unit.

The Complex Assessment concluded that the remainder of the Activity Area outside of the housing envelopes comprised mostly steep slopes (on the southern and south-eastern section) and floodplain (northern section). Both of these landforms were sampled during the complex assessment and no cultural material was located. The steep slopes and the floodplain were assessed as having extremely low potential for Aboriginal cultural heritage; it was considered highly unlikely that Aboriginal people would have established campsites on these landforms.

██████████ (2013) prepared a Complex Assessment CHMP (12740) for a proposed subdivision at 95 Blackwood Park Road, Ferntree Gully (Plate 13), 1.6 kilometres to the south of the present Activity Area and ca. 80-100 metres north-east of Corhanwarrabul Creek.





**Plate 13** 95 Blackwood Park Road CHMP (12740) Activity Area [REDACTED] 2013, p. 17).

The subdivision is located half on the third tier *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit (the same as the present Activity Area) and half on the *Low relief landscapes at low elevations (Cann River to border, Silvan, Templestowe)* unit. The Desktop Assessment identified that no Aboriginal cultural heritage places had previously been recorded within the subdivision Activity Area and the Activity Area had not been the subject of prior archaeological investigations. All Aboriginal places within the geographic region had been identified within 200 metres of a named waterway. The most common Aboriginal place types in the geographic region were isolated finds and stone artefact scatters of silcrete and quartz. Excavation within the geographic region had identified that the ground soil layer over the basalt or clay foundation is shallow and subsurface artefacts tended to be located in the top 200 millimetres. The majority



of finds in the area were surface artefacts located in ploughed paddocks. The Activity Area had been impacted by disturbance associated with vegetation clearance, an existing dwelling, outbuildings, former vineyards and agricultural activities. It was concluded that Aboriginal occupation of the region was intensive with a focus on creek resources and terrace margins overlooking rich riparian zones such as Monbulk Creek, Ferny Creek, Dandenong Creek and Corhanwarrabul Creek.

The Standard Assessment field survey encountered poor ground surface visibility (<1%). A number of structures associated with the dwelling were present in the rear yard at the time of survey. Leaning against some of these structures in the north of the Activity Area was a large, deceased eucalyptus tree, which proved not to have any Aboriginal scarring. The Activity Area straddled a sloping landform comprising a middle and lower slope, with the crest of the spur further to the north outside the Activity Area. Ground conditions were generally dry in the upper middle slope area (the northern boundary) although conditions in the south of the Activity Area (on the low-lying landform) were boggy and damp. Other features observed include a disused vineyard, a linear trench housing a recently installed stormwater drain and numerous post and wire fences. The Standard Assessment concluded that the sections of the Activity Area had been subject to ground disturbance although large areas were generally intact. It was predicted that slope wash may have stripped sediment from the middle slope area and the upper slope/crest landform behind the Activity Area prior to the dwelling construction and redeposited the sediment across the lower slope landform. It was also predicted that Corhanwarrabul Creek may have flooded the lower landform in the Activity Area. The dwellings between the Activity Area and the creek were relatively new at the time of the Standard Assessment. No Aboriginal cultural heritage places were identified during the Standard Assessment.

The Complex Assessment comprised two 1 x 1 metre test pits and 24 shovel test pits (0.5 x 0.5 metres) (Plate 14). One test pit was excavated on the low-lying landform in the south-west of the Activity Area (TP1, Plate 15) and the second (TP2, Plate 16) was excavated on the middle slope landform in the central section. The test pits indicated that heavy brown loams were present across the Activity Area to a depth of 0.50-0.60 metres and that a consistent plasticine clay base was present as a basal deposit at depths greater than 0.60 metres (Table 9, Table 10). This was consistent across all subsurface testing locations. Deeper loam deposits across the low lying areas indicated the re-deposition of sediment from higher landforms within the Activity Area. A thin gravel lens containing rounded nodules was also identified at 0.40-0.45 metres in shovel test pits on the lower landform; this was interpreted as representing a prior flood episode from the nearby Corhanwarrabul Creek. No Aboriginal cultural heritage places were identified during the Complex Assessment. The CHMP concluded there was low potential for Aboriginal cultural heritage within the Activity Area due to the prevalence of the middle slope landform within the Activity Area.





Plate 14    Complex Assessment of 95 Blackwood Park Road CHMP (12740) [REDACTED] 2013, p. 51).





**Plate 15** Profile of test pit 1 from 95 Blackwood Park Road CHMP (12740) (2013, p. 44).



**Plate 16** Profile of test pit 2 from 95 Blackwood Park Road CHMP (12740) (2013, p. 45).



**Table 9 Stratigraphic summary for test pit 1 of 95 Blackwood Park Road CHMP (12740)**  
**[REDACTED], 2013, pp. 43-4).**

Test Pit 1	Soil colour	pH	Inclusions
Spit 1 (0–0.10m)	Dark brown loam (Munsell 10 YR 3/3)	7.5	Two glass fragments and fibrous roots.
Spit 2 (0.10–0.20m)	Dark brown loam (Munsell 10 YR 3/3)	7.5	Fibrous roots
Spit 3 (0.20–0.30m)	Dark brown clayey loam (Munsell 10 YR 3/3)	8	Two glass fragments and fibrous roots. Increase in clay particles
Spit 4 (0.30–0.40m)	Dark brown loamy clay (Munsell 10 YR 3/3)	8	-
Sondage (0.40–0.50m)	Dark brown loamy clay (Munsell 10 YR 3/3) onto Light grey clay (Munsell 2.5 Y 7/1)	8	-
Sondage (0.50–0.60m)	Light grey clay (Munsell 2.5 Y 7/1)	8	-


**Table 10 Stratigraphic summary for test pit 2 of 95 Blackwood Park Road CHMP (12740)**  
**(Stevens, 2013, pp. 43-4).**

Test Pit 2	Soil colour	pH	Inclusions
Spit 1 (0–0.10m)	Dark Brown Loam Munsell 10 YR 3/3	7.5	Fibrous roots and three sandstone aggregates
Spit 2 (0.10–0.20m)	Dark Brown Loam Munsell 10 YR 3/3	7.5	Three glass fragments, fibrous roots
Spit 3 (0.20–0.30m)	Dark brown loam (Munsell 10 YR 3/3)	8	Fibrous roots
Spit 4 (0.30–0.40m)	Dark brown loam (Munsell 10 YR 3/3)	8	-
Spit 5 (0.40–0.50m)	Dark brown loam (Munsell 10 YR 3/3)	8	-
Sondage (0.50–0.60m)	Dark brown loamy clay (Munsell 10 YR 3/3) onto light grey clay (Munsell 2.5 Y 7/1)		
Sondage (0.60–0.65m)	Light grey clay (Munsell 2.5 Y 7/1)	8	-

[REDACTED] (2016) prepared a Desktop Assessment CHMP (14069) for a residential development at 1145 Burwood Highway, Ferntree Gully (although it is listed in ACHRIS as a Complex Assessment). It is approximately 230 metres north-west of the present Activity Area, on the *Deeply dissected ridge and valley landscapes* geomorphic unit, also between the Burwood Highway and the Belgrave rail line. It covered approximately 970 square metres on a mid-slope between ferny Creek 150 metres to the south and a large basaltic rise to the north and north-east. It was speculated that the quarrying of the basalt rise and the construction of the Belgrave railway line is likely to have had some impact on the northern part of the Activity Area. During the early 1950s it was subdivided and developed into a residential allotment. A dwelling, associated subsurface utilities, shedding and gravel driveway were constructed within the Activity Area from the 1950s to the 1970s. According to the former landowner and a former neighbour, the Activity Area had been affected by significant erosion in the past which resulted in movement and erosion of topsoils from the northern part of them Activity Area and the gravel driveway. The northern part of the Activity Area was stripped of topsoil and vegetation by machine in 2012.



The Desktop Assessment identified four previously recorded Aboriginal places within the Ferntree Gully, Upper Ferntree Gully and Tremont area. No Aboriginal places were located within the Activity Area or within 1 kilometre. The two closest Aboriginal places were located on an alluvial terrace and a flat hill crest overlooking Ferny Creek. The activity area is unlikely to have any potential to contain Aboriginal cultural heritage as the activity area is not situated within an archaeologically sensitive landform or close to any areas known to be archaeologically sensitive for Aboriginal archaeological sites. The activity area is located on moderately sloping land with an average height of 112 metres above sea level, that falls by 9 metres from the northern to the southern boundary, a distance of 57 metres. The Activity Area was located on a mid-slope landform between Ferny Creek, approximately 150 metres to the south, and a large basaltic rise that peaks at approximately 200 metres above sea level to the north-east of the Activity Area but which has been extensively quarried. Aboriginal places in the region are most likely to occur on alluvial terraces or the crests of hills or rises overlooking waterways. The Activity Area had a 65 year history of development and construction, resulting in the disturbance of the vast majority of the Activity Area. This disturbance had occurred as a result of cut and fill activities, the installation of building foundations, the construction of a shed, the construction and renewal of a gravel driveway, the installation of subsurface utilities and landscaping activities, including the construction of fencing, planting of vegetation and large scale mechanical vegetation clearance. Therefore it was concluded that it was unlikely that any Aboriginal cultural heritage or areas of Aboriginal archaeological potential would be present within the Activity Area.

 (2016) prepared a Complex Assessment CHMP 14377 for a proposed retail and residential development at 1242 Burwood Highway, Upper Ferntree Gully (Plate 17), 880 metres south-east of the present Activity Area. It was located on the same *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphic unit as the present Activity Area and covered an area of 460 square metres.



**Plate 17** Extent of at 1242 Burwood Highway CHMP (14377) Activity Area (Barker & Young, 2016, p. 7)



The Desktop Assessment noted that the limited amount of previous archaeological work in the broader region had demonstrated a pattern of Aboriginal place distribution associated with creeks and wetlands, characterised by diffuse subsurface scatters or isolated occurrences of stone artefacts. No previous archaeological assessment had been conducted of the Activity Area. CHMPs prepared in areas of intensive residential development have failed to find evidence of Aboriginal cultural heritage and have indicated that their respective study areas have been subject to intensive ground disturbance (Burch, 2016; Stevens, 2013). This was likely to be related to intensive residential development destroying Aboriginal cultural heritage, rather than as an indication of the intensity of past Aboriginal settlement in one particular location. The most likely Aboriginal place types to be found within the Activity Area were stone artefact scatters or isolated artefacts. Stone artefact deposits were most likely to be in a subsurface context, within 0- 400 millimetres depth in unconsolidated alluvial deposits. The results of previous studies in the geographic region appear to indicate that the location of Aboriginal places is correlated to the location of well drained topographically higher ground. Furthermore, the majority of Aboriginal places in the geographic region are located in areas not previously subject to intensive residential development.

During the Standard Assessment, disturbance from native vegetation clearance during the 19th century was surmised, as well as cutting and levelling of the ground surface for the retail subdivision and construction of the existing shop and associated infrastructure was identified. No Aboriginal cultural heritage places were identified. Representatives from the Bunurong Land and Sea Association Inc. and the Bunurong Land Council Aboriginal Corporation agreed that although the Activity Area had been subject to considerable disturbance from past land use practices, there was still some potential for in situ deposits of Aboriginal cultural material within the location of the proposed works.

The Complex Assessment comprised one test pit (1x1 metre) and five shovel test pits (0.3x0.3 - 0.4x0.4 metres) (Plate 18).



**Plate 18** Complex Assessment at 1242 Burwood Highway CHMP (14377) [REDACTED] 2016, p. 33)



The test pit encountered an A horizon (0-190/280 millimetres) of brown clayey loam with grass roots (Munsell 7.5YR 5/4, pH 6) and inclusions of asbestos fragments, gravel, brick and concrete. This overlay a second horizon (190/280-470/510 millimetres) of dark brown clayey loam (Munsell 7.5YR 5/4, pH 6) with no inclusions. The third horizon (470/510-700 millimetres) comprised a compact, firm, yellowish brown, hard, compacted clay (Munsell 5YR 5/8) with light grey (Munsell 7.5YR N7) clay inclusions (7.5YR 5/4, pH 6). The A horizon was interpreted as disturbed and the third horizon as the culturally sterile base layer. No artefacts were recovered from the test pit. The five shovel test pits contained similar stratigraphic profiles. No Aboriginal cultural material was located in the shovel test pits. The Complex Assessment has demonstrated that the Activity Area had low potential for Aboriginal cultural deposits.

(2019) prepared Complex CHMP 16415 for a proposed expansion of the Knox Region Netball Centre in Ferntree Gully, approximately 1.7 kilometres west, north-west from the Activity Area. It was located on the same *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphic unit as the present Activity Area and covered an area of 7282 square metres. CHMP 16415 involved a Desktop and Complex Assessment. The Complex Assessment comprised eight test pits. Hand excavation of one 1 x 1 metre test pit and three 0.5 x 0.5 metre shovel test pits was impeded by common gravel fill. Due to this, the Complex Assessment continued using a machine for the excavation of five 2 x 0.9 metre test pits. Topsoil had been introduced to the activity area (original topsoil had been stripped in the past). Rocky, gravel fill was immediately underlying the topsoil. Dark brown, silty clay fill was identified to depths approximating 700 millimetres. The basal deposit comprised very stiff, yellow brown, silty clay (Plate 19). No Aboriginal cultural heritage was located during the preparation of the Complex CHMP 16415. Juers et al. (2019) concluded that no Aboriginal cultural heritage places are present within the activity area nor was it likely to uncover or harm any during the activity. The stratigraphic nature of the landform was shown to be significantly disturbed to depths of between 350 and 1300 millimetres. The natural basal clay sediments investigated below the fill did not contain Aboriginal heritage and consisted of the substrate layer only, as original surface sediments were missing.



**Plate 19** Disturbed soil profile from Test Pit 5 excavated during the Complex Assessment of CHMP 16415 (2019, p. 40).



## Conclusions from previous archaeological assessments

While some wider regional desktop assessments have been undertaken within the geographic region, little in the way of subsurface testing or Complex Assessment CHMPs has been carried out within proximity of the Activity Area in Upper Ferntree Gully. Previously recorded surface artefact scatters have been found in the low foothills at the base of the Dandenong Ranges and around the headwaters of creeks, while scarred trees occur throughout the foothills, valley slopes and at the tops of ranges. ~~Three~~ **Five** Complex Assessment CHMPs have been conducted within 2.0 kilometres of the Activity Area (Table 11), with all at least partially on the same geomorphological unit as the present Activity Area (*Terraces, fans and floodplains*, etc.). While all identified disturbance within their Activity Areas, the Glenfern Road CHMP (11252) still encountered Aboriginal cultural heritage (Barker, 2010), in particular **Glenfern Road, Upwey 1 (VAHR 7922-1186)**. This comprised nine artefacts, in a relatively flat rise adjacent the Ferny Creek floodplain, in partially disturbed soils, approximately 30 metres south-west of Ferny Creek. This was recorded on the *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit, the same as the present Activity Area. The artefacts were recovered at depths of 0.05-0.30 metres in mottled, light brown-grey, compact alluvial clayey silts.

These previous assessments indicate the topography or specific landform of the Activity Area and specific land use histories play a large factor in determining areas of potential for Aboriginal cultural heritage.

The soils, geomorphology, disturbance and lack of Aboriginal Places identified within the activity area of CHMP 16415 supports the information reported within approved CHMP 14173. The landform investigated during the process of CHMP 16415 was shown to be significantly disturbed to depths of between 350 and 1300 millimetres. Fills replaced topsoil within the activity area and the basal clay was very stiff. No Aboriginal cultural heritage was located during the assessment.

**Table 11 Testing strategies of Complex Assessment CHMPs within 2.0 kilometres of the Activity Area.**

CHMP No.	Location	Testing Method	Results	VAHR No.
11252	1.0km S of Activity Area; 28.349ha; Geomorph: <i>Terraces, fans and floodplains</i> and <i>Deeply dissected ridge and valley landscapes</i>	3 x TP (1x1m, two 0.5x0.5m) 9 x STP (0.5x0.5m) 12 x mechanical trench (2.0x1.2m)	Total area excavated= 32.55m <sup>2</sup> ; Max depth excavated = 0.80m Depths cultural heritage = 0.05-0.30m Disturbance identified? Y	7922-1186 7922-1187
12740	1.6km S of Activity Area; 1.336 ha; Geomorph: <i>Terraces, fans and floodplains</i> and <i>Low relief landscapes at low elevations</i>	2 x TP (1x1m) 24 x STP (0.5x0.5m)	Total area excavated= 6.0m <sup>2</sup> ; Max depth excavated = 0.60m Depths cultural heritage = n/a Disturbance identified Y	-
14377	880m SE of Activity Area; 0.046ha; Geomorph: <i>Terraces, fans and floodplains</i> unit	1 x TP (1x1m) 5 x STP (0.3x0.3 - 0.4x0.4m)	Total area excavated= 1.45-1.80m <sup>2</sup> ; Max depth excavated = 0.7m Depths cultural heritage = n/a Disturbance identified? Y	-



CHMP No.	Location	Testing Method	Results	VAHR No.
16415	1.7 Km WNW of Activity Area; 0.00017 ha; Geomorph: Terraces, fans and floodplains	1x TP (1 x 1m) 3 x STP (0.5 x 0.5m) 5 x mechanical trench (2 x 0.9m)	Total area excavated= 10.75m <sup>2</sup> Max Depth excavated= 1.3m Depths Cultural Heritage = n/a Disturbance identified Y	-

## 5.5 Historical and ethno-historical accounts in the geographic region

For the purposes of this assessment, information about Aboriginal Victorian pre and post contact history has been sourced from nineteenth and twentieth century primary and secondary ethnographic/historical records.

### 5.5.1 Ethno-historical accounts of Aboriginal people

#### Linguistic boundaries and social organisation

Prior to European colonisation, the Victorian landscape was delineated by socio-dialectical groups who shared a common language and who as a group identified as owning particular areas of land, with individually owned tracts of country. This was a system of spatial organisation based on land tenure (Clark, 1990).

Aboriginal groups mapped natural features as boundaries for their ranges, estates and economic territories. The *Bun wurrung* held land south of the Yarra River to the coast of Port Phillip Bay, from the Werribee River in the west to the Tarwin River in the east (Clark, 1990, p. 363). The *Woi wurrung* clans inhabited land north of the Yarra River, from Westernport in the east to the Werribee River in the west (Clark, 1990, pp. 379-80).

Land ownership and access rights or responsibilities centred on the smaller named groups that formed the broader language grouping. These groups are often called 'clans' or 'local descent groups', however as (Wesson, 2000, p. 8) reasons, they are better described as 'named groups', as the membership structure of these groups, and their degree of division from other groups, could vary. In most instances, primary allegiance was owed to this named group, although this could vary according to context and location. Commonly, named groups were led by senior elders who exercised internal political and religious authority, as well as being recognised as their spokesperson when dealing with other groups (Atkinson & Berryman, 1983). Particularly influential group leaders could also assume authority over the leaders of other culturally affiliated groups (Wesson, 2000). The named group who occupied the Activity Area were the *Ngaruk willam* (Clark, 1990, p. 367). They are known to have been present at Brighton, Mordialloc, Dandenong and between Mt Eliza and Mt Martha (Clark, 1990, p. 367). *Ngaruk willam* means 'stone dwellers'. The *Wurundjeri willam* clan of the *Woi wurrung* were located along the Yarra and Plenty Rivers, with Billibillary's mob known at the north bank of the Yarra near Kew, at Melbourne, west of the Darebin Creek to the east bank of the Maribyrnong River and Jacksons Creek, north to Mt William quarry. Jacky Jacky's mob were known on the south bank of the Yarra River from Gardiners Creek upstream to the Yarra flats and the northern slopes of the Dandenong mountains (Clark, 1990, p. 385).

Social activity involving neighbouring named or socio-dialectical groups was usually held in warmer periods, held at the intersection of group boundary's and arranged by a person assigned of the responsibility of travelling between groups to organise the time, place, and events of the meeting. This person could speak a number of different dialects and acted as intermediaries in negotiations between the groups. Activities would include sports and dancing, with up to 500 men, women and children attending (Atkinson & Berryman, 1983).



The succession or inheritance of lands and named-group estates could occur in a number of ways. Individuals and groups could inherit lands from their father, their mother, through their birthplace, conception place, the burial place of their ancestors, and through totemic connections (Wesson, 2000). Access rights also crossed generations and marriage partners. Howitt wrote that:

The right to hunt and to procure food in any particular tract of country belonged to the group of people born there, and could not be infringed by others without permission. But there were places which such a group of people claimed for some special reason, and in which the whole of the tribe had interest. Such a place was the stone quarry at Mt. William near Lancefield, from which the material for making tomahawks was procured. The family proprietorship in the quarry had wide ramifications... when neighbouring groups wished for some stone they sent a messenger to Bill-billeri saying that they would send goods in exchange for it, for instance, skin-rugs (1904, p. 311).

People would often travel or reside in the territory of another named-group so that they could fulfil religious or family obligations, or exercise the privilege, granted to them by family or moiety associations, of exploiting the resources of another estate (Barwick, 1984). For daily activities and the exploitation of local estates, people are thought to have travelled in small residential units or extended family groups - often termed bands (Wesson, 2000).

### Moiety affiliation

A further level of social organisation was moiety affiliation. The *Ngaruk willam* were affiliated with the Bunjil moiety (Clark, 1990, p. 368).

Membership to a named group is variably defined by a localised matrilineal or patrilineal descent group, with female member of the group partnering with men outside of their group (exogamous) and across moiety lines; however they maintained an identity of belonging to their father's group. Men then had to adhere to certain duties such as providing food to their father-in-law. Social engagement could be influenced by appropriate conduct between family members, for example men had avoidance behaviours they had to adhere to in the presence of their mother-in-law, and there were other speech or special duties which were expected in family relationships (Atkinson & Berryman, 1983).

### Religion

Knowledge of Aboriginal religion was recorded and maintained through visual and oral tradition which ensured the maintenance of social structures through generations. Such knowledge was not always readily shared with non-Indigenous social observers and as such limited written versions from early settlers, explorers or government employees exist for Victoria. Ceremonies were occasionally performed to entertain Europeans however the meaning behind these performances was never fully explained (Robinson, 1840). Private ceremonies and locations, such as age initiations were actively kept secret (Presland, 1994).

### Economy and resource utilisation

Certain individuals within Aboriginal groups had responsibilities assigned to them for the management of natural resources. Anthropogenic manipulation of the environment was observed by the first Europeans within northern Victoria, for example fire regimes which cleared tracks also aided in hunting and dissuaded settlers for entering Aboriginal territory (Atkinson & Berryman, 1983).

Canoes were cut from the bark of river red-gums and box trees with stone axe heads in spring to early summer, shaped over a fire, seasoned in the sun, then the end blocked with clay (Edwards R. , 1975). Hooped nets made from fibre were used to catch crayfish, yabbies and fish, while cross-line nets were strung low above the water for catching ducks or below the water to catch schools of fish (Gott & Conran, 1991). Line



nets were also used to catch emus and kangaroos; a strategically placed group of people drove the animals towards the nets. Reed spears with hafted bone, carved barbs, stone pieces or hardened wooden points set into the head were used for catching larger marsupials. Oven mounds (cooking pits), were then constructed to bake the game or large volumes of vegetables (Atkinson & Berryman, 1983).

### 5.5.2 Historical accounts of Aboriginal people

The rapid spread of European colonisation altered Victorian Aboriginal society. The increased presence of settlers resulted in dispossession of Aboriginal people from their traditional land and diminished access to resources. These factors combined with population decline from introduced diseases and conflict, transformed Aboriginal society.

In 1839 an Aboriginal Protectorate Scheme was established in Victoria; the Protectorates provided religious instruction, rations, homes and medical care to Aboriginal people whilst recording population information (Broome, 2005). Official inquiries into the welfare of Aboriginal people were held in 1849 and again in 1858. Although informants at the inquiries remarked on the rapid fall in the Aboriginal population, it was a number of years before any action was taken. The latter inquiry led to the formation of the Aboriginal Protection Board in 1860 which encouraged Aboriginal people to move onto reserves (Edwards W. , 1988). In 1869, the Aborigines Act was passed to give the Governor of Victoria power to dictate where Aboriginal people could reside, what activities they could undertake on and off reserves and the authority to take charge of Aboriginal children (Edwards W. , 1988).

Records indicate that the *Ngaruk willam* were present at Brighton, in Dandenong, the beach from Mount Eliza to Mount Martha, south of Mount Dandenong, at the head of the La Trobe River, around Cranbourne, Westernport Bay and Mordialloc (Clark, 1990, p. 367). The term *Ngaruk willam* means 'stone dwellers'. Little contact period history is available for the *Ngaruk willam*. The Arweet listed for the *Ngaruk willam* named group is Tuolwing (also variously referred to as Tooglooim, Tukulneen, Tukulveau, Old King George), who lived from approximately 1770 until 1839. He had two sons Nunnuptune (Nalnaptune, Mr Langhorne) ca. 1821-1849 and Mumba (Mumbo) ca. 1825-1846 in the Native Police Corps. Poliorong was conferred Captain Lonsdale's name in 1836; he also received clothing from the Captain until 1846 (Clark, 1990, pp. 367-8).

## 5.6 Landforms and/or geomorphology of the Activity Area

The Activity Area is located at the foot of the Dandenong Ranges; metro contour data indicates the Activity Area slopes from approximately 114 metres ASL in the north-east to 107 metres ASL in the south-west. The contours also indicate that the surface is undulating in a non-uniform manner.

The Activity Area lies on the third tier *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit. The *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit comprises alluvial terraces, floodplains and the alluvial or colluvial fans that occur within the main valleys where the streams have reached a stable gradient. The valleys are depositing sediments that have been derived from slow, natural erosion. This erosion includes slope processes on the steeper valley sides and the deepening and widening of the stream channels. However, in some stream systems, post-European settlement erosion has added significant amounts of sediment to the floodplains. The effect of sea level changes on the extent and vertical separation of the terraces of the northern stream systems differs from the southern streams. In cross-section, the lower parts of the valleys of the southern streams are mostly V-shaped and lack significant sediment fill. In some streams, three narrow river terraces may be present, the highest up to 30 metres above the present stream level. The *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* emerge from the confining hilly landscapes onto the Eastern Plain where the higher parts of the landscape are ancient marine terraces also confine the largely younger riverine landforms. In the upper valleys, the soils on the older fans and upper terraces are mainly red and brown gradational soils (dermosols)



on well-weathered sediments. Red and brown acid texture contrast soils (kurosols) are dominant in the drier parts of the lower valleys. The soils on the intermediate members of the terrace and fan sequence are typically gradational soils with weak B-horizon structure (kandosols). The flood plains have recently deposited sediments that may show clear stratification (stratic rudosols) (State of Victoria Department of Economic Development, Jobs, Transport and Resources, 2016).

Since the Activity Area is less steep than the slopes to the north-east, it is likely to be stable, moister and have red and brown gradational soils (dermosols) (State of Victoria Department of Economic Development, Jobs, Transport and Resources, 2016).

Geological mapping indicates the Activity Area lies on the *Unnamed alluvium* (Qa) formation, dating to the last 2.588 million years. The Activity Area is likely to contain alluvium and colluvium deposits such as gravel, sand silt and clay (State of Victoria Department of Economic Development, Jobs, Transport and Resources, 2016c).

## 5.7 Land use history of the Activity Area

Rural development in the Yarra Valley and Ranges began several years after the founding of Melbourne. In 1837, the Reverend James Clow took possession of the Corhanwarrabul run, which included the land around Rowville, Ferntree Gully and the foot of the Dandenong Ranges. [REDACTED] settled on the second portion of the Corhanwarrabul run, Glenfern, in 1849, then secured title to the portion of land between Ferny and Ferntree Gully creeks in 1853. Beilby finally took over Clow's Tirhatuan property in 1854 (Plate 19 Plate 20) [REDACTED] 1991, p. 23). Spreadborough and Anderson indicate that the Activity Area was located in the Monbulk (or Monbulk) run (Plate 20 Plate 21), covering 8 square miles, which was first held by [REDACTED] in 1838 (1983, p. 274).





**Plate 19** — Runs in the vicinity of Upper Ferntree Gully (Spreadborough & Anderson, 1983).

**Plate 20** — Runs in the vicinity of Upper Ferntree Gully (Spreadborough & Anderson, 1983).



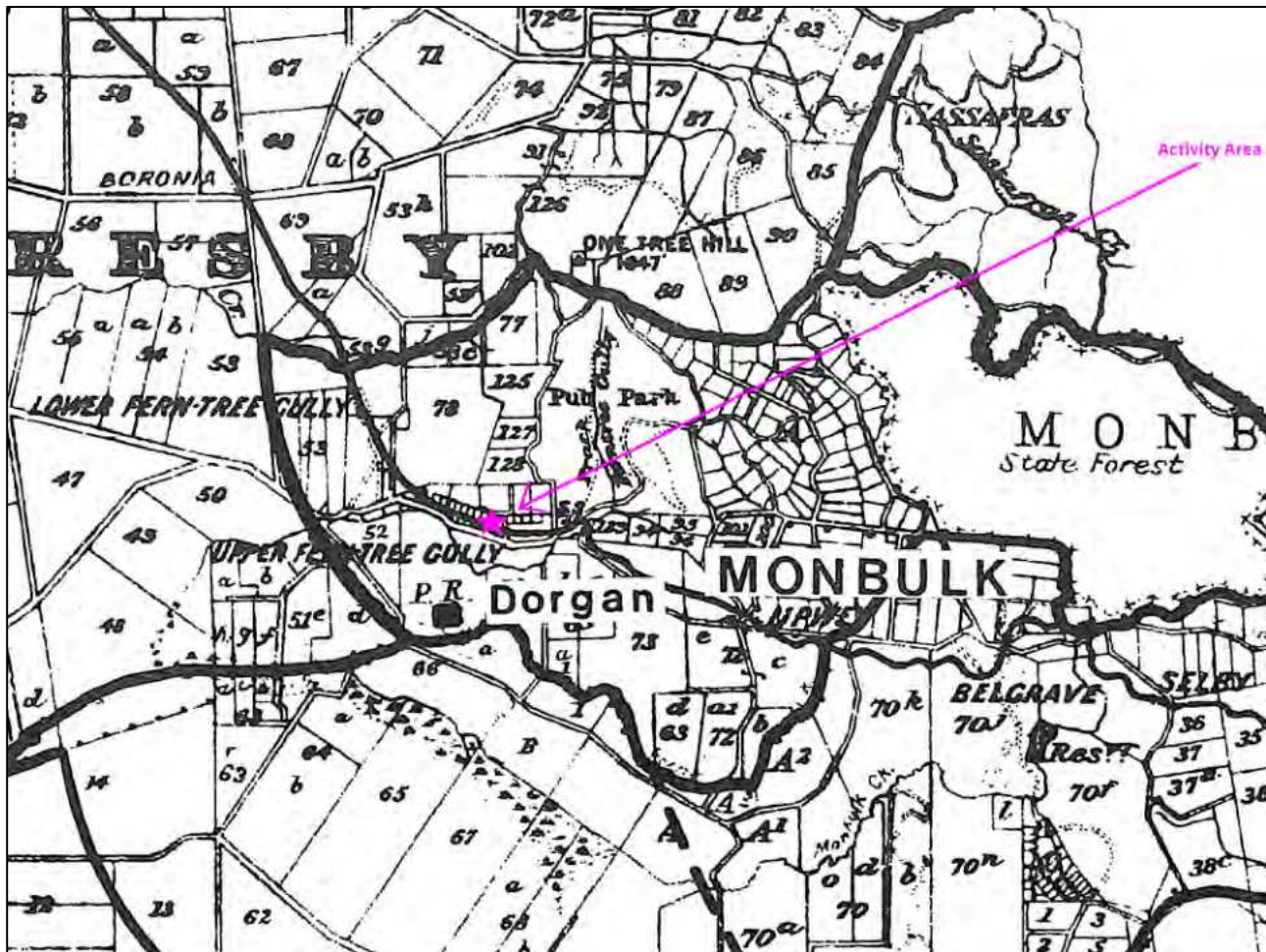


Plate 20 — Approximate location of the Activity Area in the Monbulk run (Spreadborough & Anderson, 1983).

Plate 21 — Approximate location of the Activity Area in the Monbulk run (Spreadborough & Anderson, 1983).



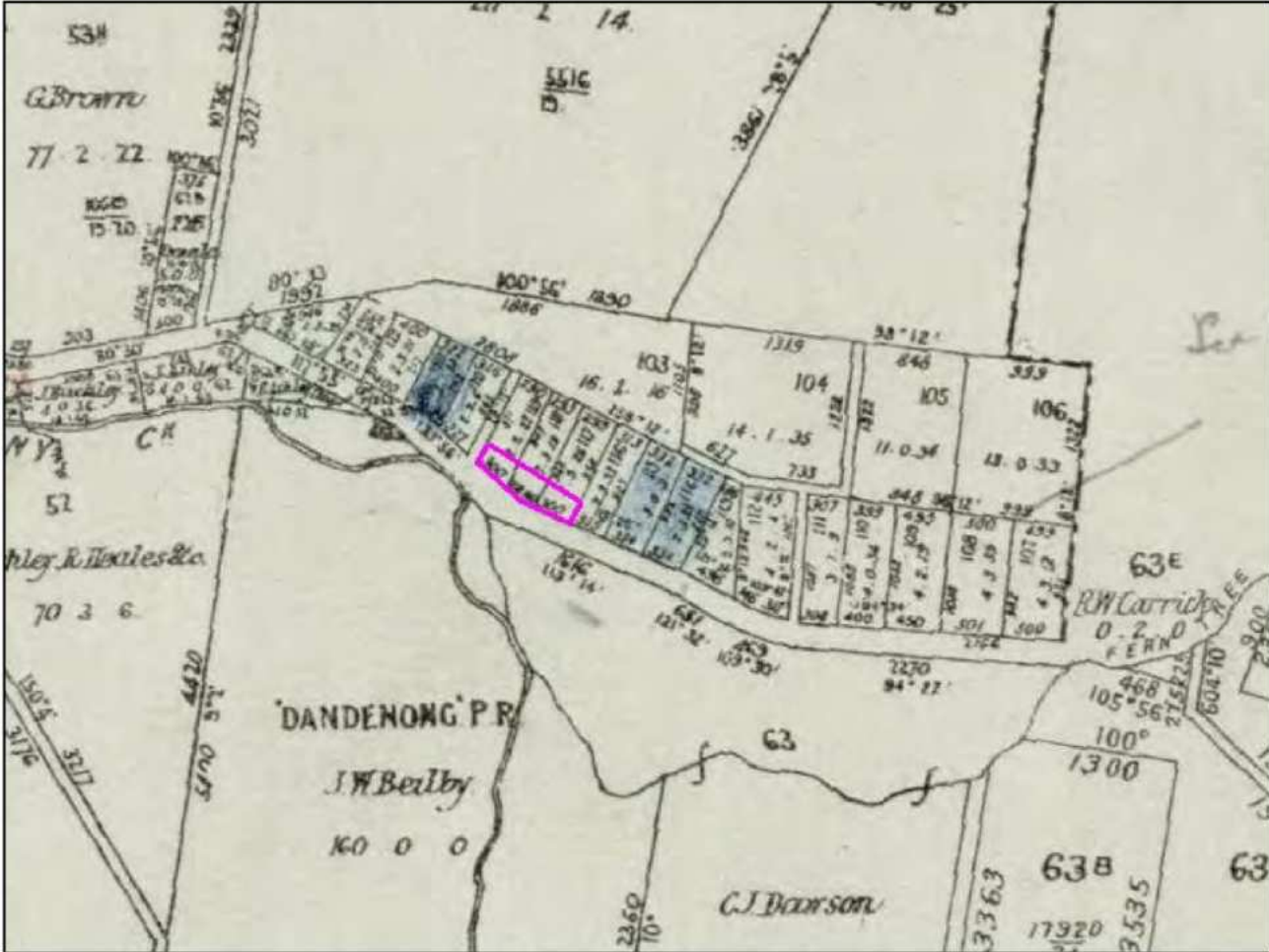
This is a historical cadastral map of Dandenong, Victoria, Australia. The map shows the layout of land parcels, many of which are owned by individuals with names like W. Murphy, E. Murphy, W. Fickert, E. Ellington, J. Hiers, C. J. Broom, W. Warrick, R. Warrick, F. E. Selman, J. Fergusson, and J. Henderson. The map is titled 'DANDENONG' and 'STATE FOREST'. A red dot marks the 'Lower Parkville' area. The map also shows the 'Dandenong P.M.' and 'Dandenong' areas. A scale bar at the bottom indicates distances in miles and feet.

**Plate 22** Close up of the Parish of Scoresby (ca.1878) in the Upper Ferntree Gully area.



Subsequently it was held by [REDACTED] (dates not stated); in August 1850 [REDACTED] took over the run, which he forfeited in August 1864. The forfeiture was revoked the same year.

The survey plan of the Parish of Scoresby shown in Plate 22 Plate 23 is from the mid to late 19th century, possibly 1878. This is likely as the allotments on the north side of the Burwood Highway are known to have been surveyed in 1877 (Honman & Piper, 2015, p. 14). The survey plan shows small parcels surveyed along the north-eastern side of the Burwood Highway at Upper Ferntree Gully, prior to the construction of the railway line (completed in 1889). The Activity Area appears to cross three of these small parcels.

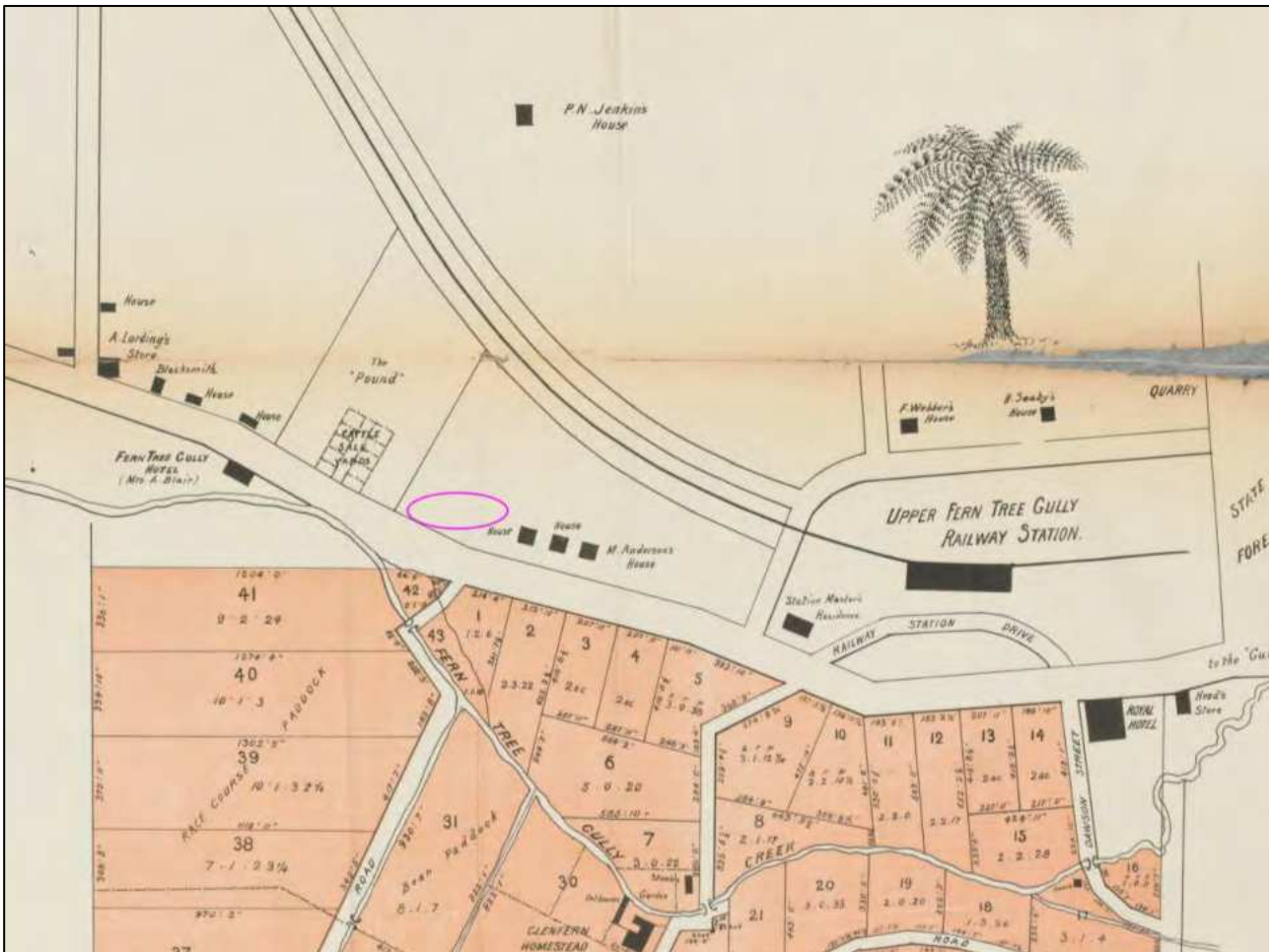


**Plate 22** — Close up of the Parish of Scoresby (during the 19th century) showing location of the Activity Area (pink).

**Plate 23** — Close up of the Parish of Scoresby (during the 19th century) showing location of the Activity Area (pink).



An 1893 advertisement for the auction of parcels in the subdivision of the Glen Fern Estate (Plate 23 Plate 24) on the south side of the Burwood Highway is able to be spatially referenced by the location of the corner of Acacia Road with the Burwood Highway to the south. Although the survey plan does not show parcel detail on the north side of the Burwood, it does indicate buildings and other features of interest in the area. Three houses are marked to the south-east of the Activity Area (including one belonging to M. Anderson). 'The Pound' is annotated to the north-west of the Activity Area, and contains cattle sale yards. There are no buildings or features indicated in the approximate location of the Activity Area.

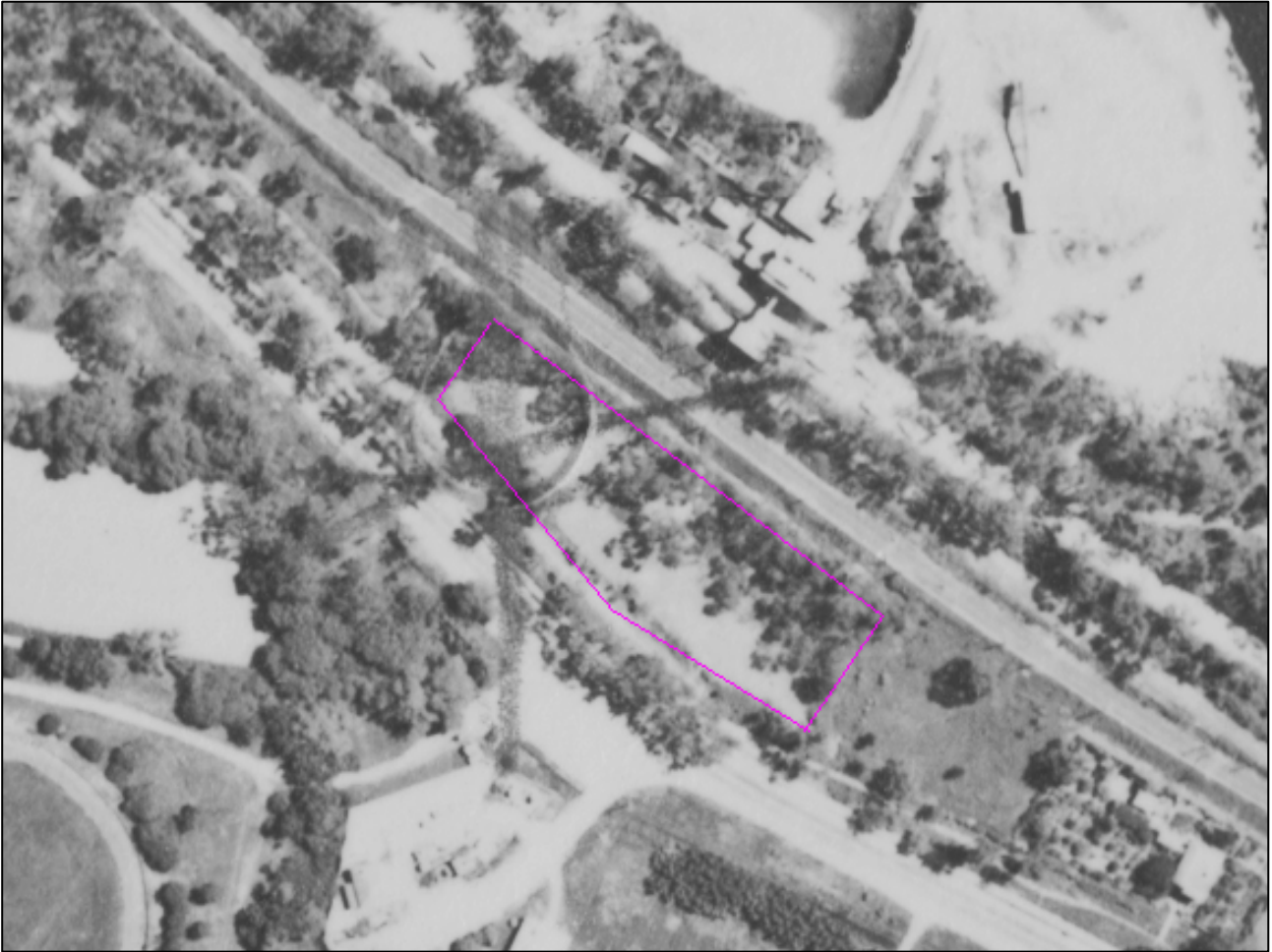


**Plate 23** Close up of a 1893 advertisement showing approximate location of the Activity Area (pink); "Glen Fern Estate (Burwood Highway, Acacia and Ferndale Roads)".

**Plate 24** Close up of a 1893 advertisement showing approximate location of the Activity Area (pink); "Glen Fern Estate (Burwood Highway, Acacia and Ferndale Roads)".



A search of historical aerial photos at the Landata Aerial Photo Library, Laverton North (DELWP) was undertaken to identify past land uses. Unfortunately imagery from the 1950s is missing, so the earliest imagery available with reasonable detail is from November 1962 (Plate 24 Plate 25). The image has been hand marked on the north-west end of the Activity Area, but trees are visible along the north-east boundary and the south-east corner in particular. Faint shading along the boundary with the road reserve possibly indicates a terrace escarpment. The remainder of the Activity Area is clear of trees but it cannot be determined if this is exposed ground surface or grass and weeds. An informal path or vehicle track is visible immediately to the north-east of the Activity Area, and the rail reserve beyond that. Another track also runs parallel to the north-west boundary of the Activity Area and then turns north-west, parallel to the Burwood Highway.



**Plate 24** — Landata (DELWP) aerial imagery of the Activity Area (pink) from November 1962 (Project M18N 454, Run 2, Film 1638, Print 65).

**Plate 25** — Landata (DELWP) aerial imagery of the Activity Area (pink) from November 1962 (Project M18N 454, Run 2, Film 1638, Print 65).



By 1973 (Plate 25 Plate 26) and 1988 (Plate 26 Plate 27) the main visible difference in the Activity Area is that the tree canopy is denser.



**Plate 25** — ~~Landata (DELWP) aerial imagery of the Activity Area (pink) from January 1973 (Project M38N 1044, Run 9, Film 2720, Print 160).~~

**Plate 26**    Landata (DELWP) aerial imagery of the Activity Area (pink) from January 1973 (Project M38N 1044, Run 9, Film 2720, Print 160).





**Plate 26 — Landata (DELWP) aerial imagery of the Activity Area (pink) from December 1988 (Project 7922N15 7922-2, Run 10, Film 4229, Print 60).**

**Plate 27 — Landata (DELWP) aerial imagery of the Activity Area (pink) from December 1988 (Project 7922N15 7922-2, Run 10, Film 4229, Print 60).**

Recent Google Earth satellite imagery from 2006, 2012, 2014 and 2015 (Plate 27-Plate 30 Plate 28-Plate 31) also show little change with in the Activity Area, apart from a reduced tree canopy between 2006 and 2012. This probably relates to the modern-era bush fire which [REDACTED] (2016) noted evidence of on trees in their report.





**Plate 27** — Google Earth satellite imagery of the Activity Area (pink) from March 2006.

**Plate 28** — Google Earth satellite imagery of the Activity Area (pink) from March 2006.



**Plate 28** — Google Earth satellite imagery of the Activity Area (pink) from December 2012.

**Plate 29** — Google Earth satellite imagery of the Activity Area (pink) from December 2012.





**Plate 29** — Google Earth satellite imagery of the Activity Area (pink) from January 2014.

**Plate 30** — Google Earth satellite imagery of the Activity Area (pink) from January 2014.



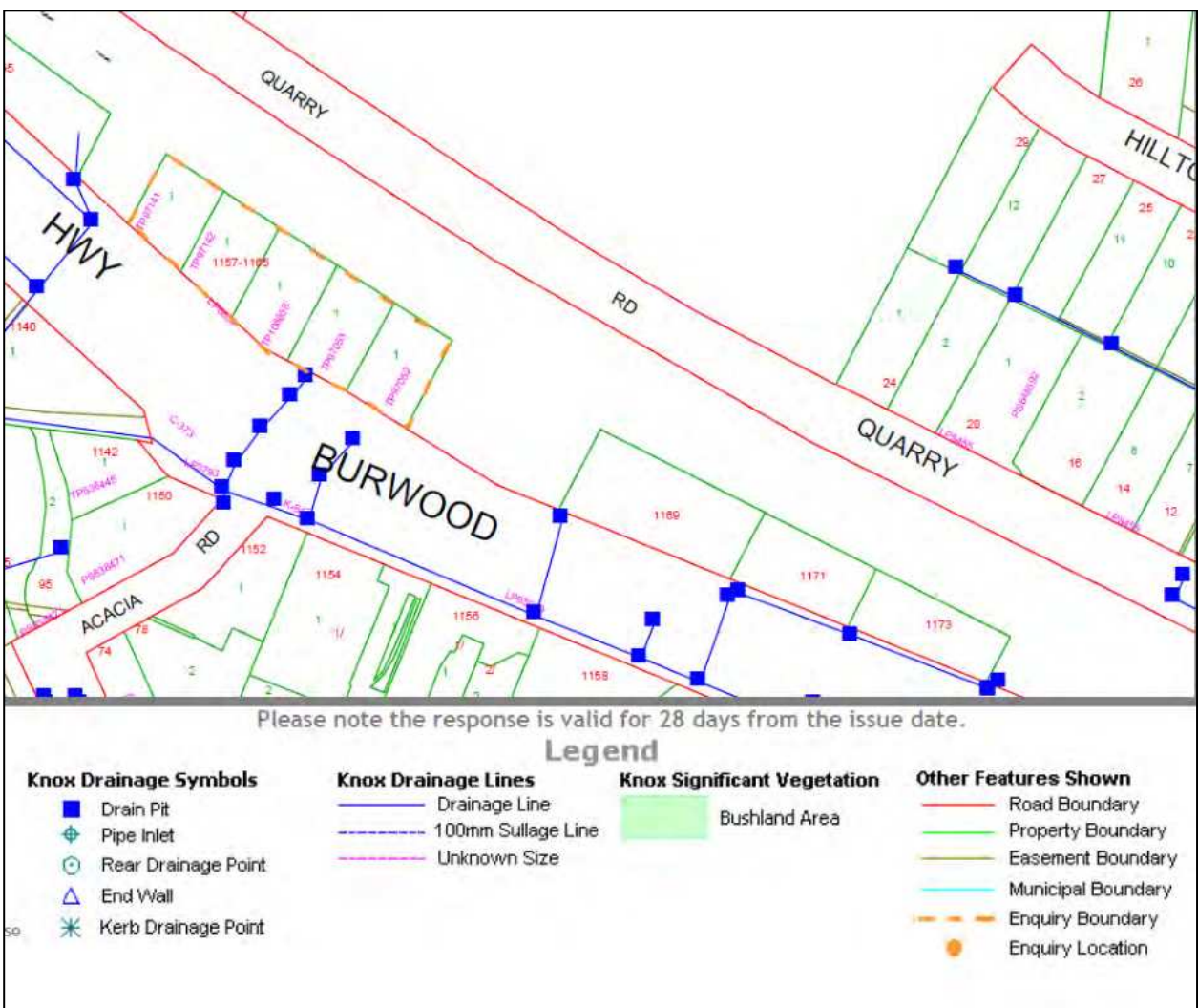
**Plate 30** — Google Earth satellite imagery of the Activity Area (pink) from October 2015.

**Plate 31** — Google Earth satellite imagery of the Activity Area (pink) from October 2015.



A Dial Before You Dig search was undertaken for the Activity Area. No electricity, gas, water mains, or VicTrack assets are recorded as being located within the Activity Area.

There is one City of Knox stormwater drain drainage pit on the south-east boundary of the Activity Area (Plate 31-Plate 32).



**Plate 31** — City of Knox stormwater drainage assets.

**Plate 32** — City of Knox stormwater drainage assets.

**Land Use History Summary**

In summary, tantalisingly little information can be found on the previous uses of the Activity Area, particularly prior to 1962. With the surveying and release of land on the north side of the Burwood Highway at Upper Ferntree Gully in 1877, it is likely that the Activity Area may have been used by occupants of the houses that were present to its south-east by 1893. It could have been used for a market garden or a small orchard, which were common in the 1890s to 1910s.

Considering its proximity to the rail reserve, it is also possible that the Activity Area may have been used during construction of the Upper Ferntree Gully and Belgrave rail lines; the quarry to the north-west of the Activity Area was certainly involved in providing materials for the railway. It is possible that the laying of the railway line, which required even gentle benching for the laying of sleepers and rails, may have caused



disturbance or introduced fill to the Activity Area. Additionally, it may have been associated with timber milling activities, which was a common industry in the area as early as the 1850s with the arrival of the Victorian gold rushes.

## 5.8 Conclusions from the Desktop Assessment

The geographic region lies on the first tier geomorphological unit the *Eastern Uplands*, which are variable in height and follow a meandering, sometimes obscure path between the north and south draining river systems in an extensive area of high plateau-like surfaces and mountain ridges. The second tier geomorphological unit *Landscapes below 500 m of low relief* is present in the western and central parts of the geographic region and is characterised by low relief landscapes at the bottom of the geomorphological erosional sequence, where further down-cutting of the drainage system is limited by regional base-levels. On the southern side of the Eastern Uplands this landscape occurs as a dissected plateau-like surface, the Nillumbik Terrain. The *Dissected landscapes at a range of elevations* second tier geomorphological unit is present in the eastern third of the geographic region. It is dominated by high ridges and deep valleys formed by dissection of the major stream systems, and includes prominent summits at high elevation, at intermediate elevation and escarpments. These steep landscapes gradually become landscapes of low ridges and isolated hills, with shallow valleys and some low level plateaus.

The geographic region contains three third tier geomorphological units. The *Low relief landscapes at low elevation (Cann River to border, Silvan, Templestowe)* geomorphological unit is present in the central western and southern parts of the geographic region. It is characterised by the dissected plateau-like surface of hills, the Nillumbik Terrain (State of Victoria Department of Economic Development, Jobs, Transport and Resources, 2016b). The *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit comprises alluvial terraces, floodplains and the alluvial or colluvial fans that occur within the main valleys where the streams have reached a stable gradient. The *Deeply dissected ridge and valley landscapes (headwaters of major rivers such as the Wonnangatta, King and Kiewa Rivers, Mt Coopracambra)* unit is present in the eastern third of the geographic region. It comprises high, narrow-topped ridges which form the divides between the major streams, steep spurs and side slopes which extend down to steeply graded streams.

The geographic region contains four main geological groups or formations: the *Unnamed alluvium (Qa)*, *Mount Dandenong Igneous Complex (Dj)*, *Humevale Siltstone (Dxh)* and the *Unnamed (SDh)* formation. These encompass sedimentary, igneous and metamorphic origins, with lithologies including alluvium, ignimbrite, sandstone, marine mudstone, minor sandstone and marlstone.

The Activity Area is located at the foot of the Dandenong Ranges and 125 metres north of Ferny Creek; it lies on the third tier *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit. The topography of the Activity Area slopes from 114 metres ASL in the north-east to 107 metres ASL in the south-west. The Activity Area lies on the *Unnamed alluvium (Qa)* geological formation, dating to the last 2.588 million years. It is therefore likely to contain alluvium and colluvium deposits such as gravel, sand silt and clay (State of Victoria Department of Economic Development, Jobs, Transport and Resources, 2016c).

A search of the VAHR identified 54 81 previously recorded Aboriginal places within the geographic region, with the predominant Aboriginal archaeological place types being artefact scatters and scarred trees. The remainder are LDADs and one multi-component place. There are no Aboriginal places within 200 metres of the Activity Area. There are no Aboriginal places in the Activity Area.

The limited number of previous Previous archaeological surveys within the geographic region has have identified surface artefact scatters in the low foothills at the base of the Dandenong Ranges and around the headwaters of creeks, while scarred trees occur throughout the foothills, valley slopes and at the tops of ranges. Little in the way of subsurface testing has been carried out within proximity of the Activity Area in



Upper Ferntree Gully; three 470/510+mm: Compact, firm yellowish brown hard compacted clay (5YR 5/8) with light grey (7.5YR N7) clay inclusions (7.5YR 5/4, pH 6). Complex Assessment CHMPs have been conducted within 1.6 kilometres of the present Activity Area. One of these, the Glenfern Road CHMP (11252), encountered Aboriginal cultural heritage despite some prior disturbance, and in particular indicates that there is potential for subsurface artefacts to be present in flat rise landforms adjacent the Ferny Creek floodplain at depths of 0.05-0.30 metres in mottled, light brown-grey, compact alluvial clayey silts.

A review of the land use history indicates that while the Activity Area was subdivided in the 1880s during the boom tourism period that spurred the growth of Upper Ferntree Gully, there is no firm evidence to indicate if it has been used for any specific purpose. Aerial photos indicate that it has remained vacant since at least the 1960s.

### Place Prediction Model

Based on the above review of the geographic region, including its environment, recorded Aboriginal places, previous archaeological assessments and information on the activities of Aboriginal people, a place prediction model has been developed. The place prediction model utilises the existing regional information in order to target landforms which might have archaeological potential during the Standard Assessment. The place prediction model acts as a guideline for designing the ground survey strategy and identifies key points for consideration.

Therefore the following Aboriginal place types likely to be found within the Activity Area are:

- **Artefact distributions** consisting of one or more stone artefacts are associated with tool production, domestic activities and resource procurement. Scatters and isolated finds are most likely to occur on low foothills, river or creek flats, terraces or slopes within 100 metres of major water courses. Ferny Creek is 125 metres to the south-west of the Activity Area; the landform of the Activity Area appears to slope downhill towards the creek. However, it is not as steep as the slopes of Mount Dandenong immediately to the north of the Activity Area and rail reserve. There is moderate potential for surface and subsurface artefact distributions to be present in the Activity Area if there are flat rises, gentle slopes or terraces present. Artefact distributions are the most common place type in the geographic region.
- **Scarred trees** represent cultural modifications of trees to obtain the bark for use as shelters, canoes and shields. Despite widespread removal of native forest which has resulted in little remnant vegetation; scarred trees may occur where remnant vegetation exists. There is low to moderate potential for scarred trees to be present in the Activity Area as Upper Ferntree Gully's early history relates to timber mills supplying timber to Melbourne and Victoria during the boom time of the gold rush era. Additionally, no *mature* eucalypts were identified in the Activity Area by Mueck and Gilmore (2016), who also noted evidence of modern bushfires.
- **Shell middens** contain the remains of consumed shellfish and are located in coastal areas or associated with inland waterways. Ferny Creek is 125 metres to the south-west of the Activity Area; there is low to moderate potential for shell and fish middens associated with seasonal fishing and gathering to be present within the Activity Area. There are no fish and shellfish middens recorded in the geographic region.

The following place types are considered unlikely to be identified with the Activity Area:

- **Quarries** consist of negative flaking scars on rocky outcrops where Aboriginal people procured their lithic resources. Outcrops are considered unlikely to occur in the *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* geomorphological unit on which the Activity Area is located, as it comprises alluvium and colluvium deposits. There is considered to be extremely low potential for quarries to be present in the Activity Area.



- **Burials** of human remains can occur where the subsurface deposit is suitable for digging, with soft soil and sand being the most probable. The alluvial deposits within the Activity Area are unlikely to be suitable for digging for burials. There are no recorded burials with the geographic region. There is considered to be extremely low potential for burials to be present in the Activity Area.
- **Earth features and mounds** can include evidence of occupation such as charcoal, burnt clay, lithic material, animal bones and shells. They are usually identified in preserved landscapes where the material has been covered by successive deposits of alluvium and elevated ridges or rises, or within proximity to water sources. There are no earth mounds or features recorded in the geographic region. There is considered to be extremely low potential for earth features and mounds to be present in the Activity Area.
- **Rock art** includes stencils, prints and drawings in rock shelters and engravings in limestone caves. There is no rock art recorded in the geographic region. There is considered to be extremely low potential for rock shelters, caves or rock art to be present in the Activity Area.
- **Stone arrangements** are places where Aboriginal people have positioned stones deliberately to form shapes or patterns. The purpose of these arrangements is often unknown. There are no stone arrangements recorded in the geographic region. There is considered to be extremely low potential for stone arrangements to be present in the Activity Area.

The results of the Desktop Assessment have indicated there is a potential for unidentified Aboriginal cultural heritage material within the Activity Area. For completion of this CHMP, it is therefore necessary to undertake a Standard Assessment to assess the presence of potential unidentified Aboriginal cultural heritage and the sensitivity of landforms within the Activity Area to contain such material.

Thirty new Aboriginal Places have been registered within the geographic region and one CHMP (CHMP 16415) have been approved since the approval of CHMP 14173. The majority of the newly registered sites are located upon the *Terraces, Fans and flood plains (Kiewa Valley, Wonnangatta Valley)* geomorphic unit as predicted within approved CHMP 14173. No Aboriginal cultural heritage was located within the Activity Area.

The findings of newly approved CHMP 16415 (i.e. regarding the soils, geomorphology and disturbance to depths of between 350 and 1300 millimetres) are consistent with the information and site prediction model presented within approved CHMP 11491.



## 6 Standard Assessment

### 6.1 Aims

The aims of the Standard Assessment are to:

- identify and record any surface Aboriginal cultural heritage material
- identify landforms with the potential for subsurface Aboriginal cultural heritage material
- assess whether a Complex Assessment is required.

### 6.2 Methodology

The Standard Assessment was completed on 16 March 2016. The ground survey was supervised by [REDACTED], [REDACTED] Biosis Pty Ltd with the involvement of [REDACTED] (Bunurong Land and Sea Association Incorporated), [REDACTED] (Bunurong Land Council Aboriginal Corporation), [REDACTED] (Boon Wurrung Foundation) and [REDACTED] (Wurundjeri Tribe Land and Compensation Cultural Heritage Council).

The Standard Assessment was completed by traversing the Activity Area on foot. Full survey coverage of the Activity Area was undertaken and views of the Activity Area were recorded using digital photography. Field notes were also taken recording ground conditions, the vegetation type, landform and details of areas of archaeological potential for Aboriginal cultural heritage.

Mature indigenous trees were inspected to determine if scars, carvings or other modifications were present and likely artefacts were inspected with a 10x hand lens for evidence of human modification.

Locations of identified Aboriginal cultural heritage material and areas of archaeological potential were recorded in accordance with Aboriginal Victoria's (2008; 2013) guidelines.

Following the completion of the ground survey, discussions were held with the Aboriginal representatives to establish cultural heritage management requirements for the Activity Area including whether a Complex Assessment was required.



## 6.3 Results

The Activity Area is reached by a narrow short vehicle track from Burwood Highway up an artificial terrace made of fill. The Activity Area is covered in grass, weeds, trees and shrubs; there are no buildings or other structures present (Plate 32 Plate 33). The Activity Area slopes downhill to the south-west from the adjacent cycle trail and rail reserve (Plate 33 Plate 34).



**Plate 32 — Activity Area facing south-east (print 175).**

**Plate 33 — Activity Area facing south-east (print 175).**



**Plate 33 — Activity Area facing north-west (print 179).**

**Plate 34 — Activity Area facing north-west (print 179).**



The ground surface has been levelled for the adjacent cycle trail and rail reserve, and it is likely that the formation of the rail reserve and cycle trail has required cutting and benching inside the Activity Area. Additionally, a flat terrace area in the northern corner of the Activity Area shows further evidence of cutting (Plate 34 Plate 35). Along the south-western boundary, the ground surface is flat and has likely been formed with either fill or material cut from the original upper slope during construction of the rail reserve (Plate 35 Plate 36).



**Plate 34 — Activity Area facing south-east (print 184).**

**Plate 35 — Activity Area facing south-east (print 184).**





**Plate 35 — Activity Area facing south-east (print 186).**

**Plate 36 Activity Area facing south-east (print 186).**

### 6.3.1 Landforms

The Activity Area is on the foothills or lower slopes of the Dandenong Ranges, immediately adjacent the edge of the Ferny Creek floodplain (Plate 36 Plate 37).





**Plate 36** — **Foothill landform; facing north-west (print 197).**

**Plate 37** — **Foothill landform; facing north-west (print 197).**

### 6.3.2 Previous ground disturbance

The ground survey concluded that most of the Activity Area had been subject to previous ground disturbance (Plate 32 to plate 35 Plate 33 to Plate 36). The only area considered to not be disturbed is a seemingly natural, gentle slope in the centre and south-east of the Activity Area. In addition, it was observed that the south-western part of the Activity Area, parallel to the Burwood Highway, had been built up with fill to form an artificial terrace (Plate 37 Plate 38). The survey team speculated that the Activity Area may have been used for a house or ballast for the construction of the adjacent railway line. No indication of a natural alluvial terrace surface was identified.





**Plate 37** — ~~Terrace built up with fill adjacent to the Burwood Highway, taken from just south-east of the Activity Area, facing north-west (print 196).~~

**Plate 38** — Terrace built up with fill adjacent to the Burwood Highway, taken from just south-east of the Activity Area, facing north-west (print 196).

### 6.3.3 Ground surface visibility

A number of factors hinder the identification of surface Aboriginal cultural heritage material. Ground surface visibility (GSV) can be defined as how much of the ground surface is visible and what other factors (such as vegetation, gravels or leaf litter) may limit the detection of Aboriginal cultural heritage material (Burke & Smith, 2004). The higher the level of GSV, the more easily Aboriginal cultural heritage material can be identified; therefore an Activity Area with a good GSV will enable a better representation of Aboriginal cultural heritage material than an Activity Area where the ground surface is obscured (Ellender & Weaver, 1994).

Overall, GSV in the Activity Area was extremely poor due to the dense coverage of weedy vegetation. ~~Plate 38~~ Plate 39 indicates typical ground surface visibility within the Activity Area.





**Plate 38** — Typical ground surface visibility (print 188).

**Plate 39** Typical ground surface visibility (print 188).

Closely associated with GSV is GSE, which looks at the prevailing sedimentation conditions within the Activity Area. This includes whether survey units are aggrading, eroding or stable; and the kinds of exposures that are apparent as a result of these processes (Burke & Smith, 2004). This is used to indicate the effective survey coverage of the Activity Area and provide an indication of the potential for Aboriginal cultural heritage material to be found.

The total survey coverage is shown in Map 3 Map 3a, however effective survey coverage achieved during the survey was extremely low and overall estimated at 2% of the total Activity Area (Table 12).

**Table 12 Effective survey coverage.**

Feature	Activity Area (%)	Visibility (%)	Effective Survey Coverage (%)
Weedy vegetation	100.0	2.0	2.0
<b>TOTAL</b>	-	-	<b>2.0</b>

**6.3.4 Mature indigenous tree species**

No mature, suitable species of indigenous tree that might show cultural modification by Aboriginal people were recorded within the Activity Area.

**6.3.5 Caves, rock shelters and cave entrances**

No caves, rock shelters or cave entrances were located in the Activity Area.



### 6.3.6 Area of archaeological potential

The ground survey concluded that while much of the Activity Area had been disturbed, there were potentially subsurface deposits which may not have been disturbed and could contain Aboriginal cultural heritage. This is likely because the Activity Area lies on the geomorphological unit *Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)* which comprises alluvial terraces, floodplains and alluvial or colluvial fans. Alluvial terraces could have formed as a result of flood and erosion events in Ferny Creek, depositing gravel, sand silt and clay sediments. These events may have buried previously deposited cultural heritage material.

Therefore, while it is unlikely that any of the existing ground surface in its highly disturbed state exhibited potential for Aboriginal cultural heritage, there is considered to be potential for undisturbed subsurface alluvial deposit which may contain Aboriginal cultural heritage.

### 6.3.7 Aboriginal places

No new Aboriginal archaeological places were recorded as a result of the Standard Assessment (Map 3a).





- Legend**
- Activity Area
  - Photo points
  - Area of ground survey
  - Area of archaeological potential
  - Areas of Ground Disturbance

**Map 3 Results of the Standard Assessment**

0 5 10 15 20  
Metres

Scale: 1:400 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

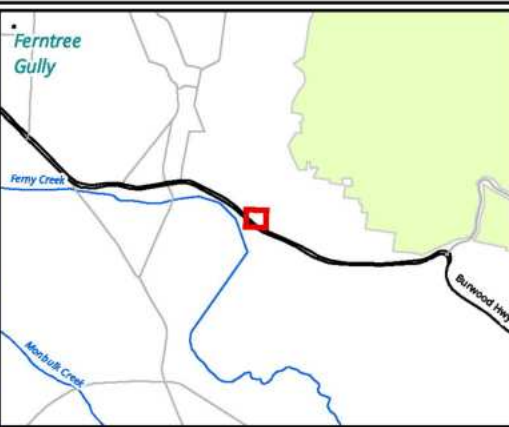
**biosis**  
Biosis Pty Ltd

Ballarat, Brisbane, Canberra, Melbourne,  
Newcastle, Sydney, Wangaratta & Wollongong

LDM, Last edited by: Imilne  
Mapping  
ment.mxd

71





- Legend**
- ▲ Photo points
  - Activity Area and area of ground survey
  - Area of archaeological potential
  - Area of ground disturbance

**Map 3a Amended Results of the Standard Assessment**

0 3 6 9 12 15  
Metres

Scale: 1:400 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

**biosis**

MP 14173  
2020,  
Drawn by: SKM, Last edited by: smitchell  
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## 6.4 Conclusions from the Standard Assessment

The Standard Assessment survey encountered dense weedy vegetation and disturbance across the Activity Area. The Activity Area has an uneven ground surface, with a fill terrace built up along the south-western boundary, accessed by a narrow vehicle track from the Burwood Highway.

Ground surface visibility was extremely poor due to the extensive weedy vegetation coverage.

Disturbance is apparent across most of the Activity Area – bar a small area of gentle natural slope near the centre – associated with the original construction of the adjacent railway line and reserve, and later the bicycle path.

Although the surface indicated that most of the Activity Area had been disturbed with cutting and filling to create an uneven terrace, there remained the possibility that undisturbed alluvial terrace deposits containing Aboriginal cultural heritage could remain buried below the ground surface.

No Aboriginal places were recorded during the Standard Assessment.

As the Activity Area contains areas where a Standard Assessment has not resolved the potential for Aboriginal archaeological material to be identified within the Activity Area, it is necessary to undertake a Complex Assessment.

No additional Standard Assessment was carried out during the current amendment as the entirety of Activity Area was appropriately surveyed during the Standard Assessment of Approved CHMP 14173.



## 7 Complex Assessment

### 7.1 Aims

The aims of the Complex Assessment are to:

- Investigate the areas of archaeological potential
- Identify and record any subsurface Aboriginal cultural heritage material
- Ascertain the nature and extent of any Aboriginal places.

### 7.2 Methodology

The Complex Assessment was completed on 16 and 17 March 2016. The subsurface testing was supervised by [REDACTED] Biosis Pty Ltd with the involvement of James Brown (Bunurong Land and Sea Association Incorporated), [REDACTED] Bunurong Land Council Aboriginal Corporation), [REDACTED] Boon Wurrung Foundation) and [REDACTED] Wurundjeri Tribe Land and Compensation Cultural Heritage Council Incorporated).

The stratigraphy and general subsurface nature of the Activity Area was determined by controlled excavation of a 1x1 metre test pit in each landform. Each test pit was excavated with trowel, hand pick and shovel in arbitrary 100 millimetre spits. Each test pit was excavated until a sterile layer was reached and 100 per cent of excavated soil was screened through 5 millimetre hand sieves. A test pit log was recorded with stratigraphic details including soil colour (Munsell), pH and description (Appendix 3). Each test pit was spatially recorded using a Topcon GRS-1 DGPS and later post-processed to sub 1 metre accuracy (Map 3). Each test pit was backfilled at the completion of excavation.

Assessment of the remainder of the Activity Area was completed by controlled excavation of 50x50 centimetre shovel test pits. Each shovel test pit was excavated with trowel, hand pick and shovel in arbitrary 100 millimetre spits. Each shovel test pit was excavated until a sterile layer was reached and 100 per cent of excavated soil was screened through 5 millimetre hand sieves. A shovel test pit log was recorded with stratigraphic details including soil colour (Munsell), pH and description (Appendix 3). Each shovel test pit was spatially recorded using a Topcon GRS-1 DGPS and later post-processed to sub 1 metre accuracy (Map 3). Where Aboriginal cultural heritage material was identified in a shovel test pit it was expanded to a 1x1 metre test pit. Each shovel test pit was backfilled at the completion of excavation.

Locations of identified Aboriginal cultural heritage material were recorded in accordance with Aboriginal Victoria's (2008) and (2013) guidelines.

Following the completion of the subsurface testing, discussions were held with the Aboriginal representatives to establish cultural heritage management requirements for the Activity Area.

### 7.3 Results

Several obstacles were encountered during the course of the Complex Assessment. The disturbed nature of the landform was compacted, hard and cemented, and was difficult to excavate manually. Progress was very slow and the possibility of mechanical excavation was discussed if a culturally sterile base could not be identified within 1.2 metres depth. However, a culturally sterile base was identified before the test pit reached



1.2 metres' depth, so the Heritage Advisor could not justify the methodology and extra cost to the client's agent. Some of the Traditional Owner representatives were displeased that mechanical excavation would not be undertaken and their attitude to completing the project fieldwork was not as co-operative as during the Standard Assessment. One of the Traditional Owners wanted to use his mechanical excavator and sieve and was clearly frustrated. Additionally he represented a RAP group but was not inside the approved RAP area, so was not used to not having the final decision in the field methodology.

### 7.3.1 Test pits

#### Test Pit 1

Test pit 1 was placed in a flat location (~~Plate 39~~ **Plate 40**) and cleared of weeds with a fire rake. The first 200 millimetres encountered hard, compacted sandy silt fill containing road metal (~~Plate 40~~ **Plate 41**). No artefacts were recovered in test pit 1. The team agreed that the location appeared to be a former vehicle track of some kind. It was agreed to cease excavating test pit 1 and to start a second test pit in a location that appeared to have a natural slope and contour, with more potential for undisturbed surface deposits.



~~Plate 39~~ — ~~Location of test pit 1 facing north (print 193).~~

**Plate 40** — **Location of test pit 1 facing north (print 193).**





**Plate 40 — Stratigraphy of test pit 1 facing north (print 192).**

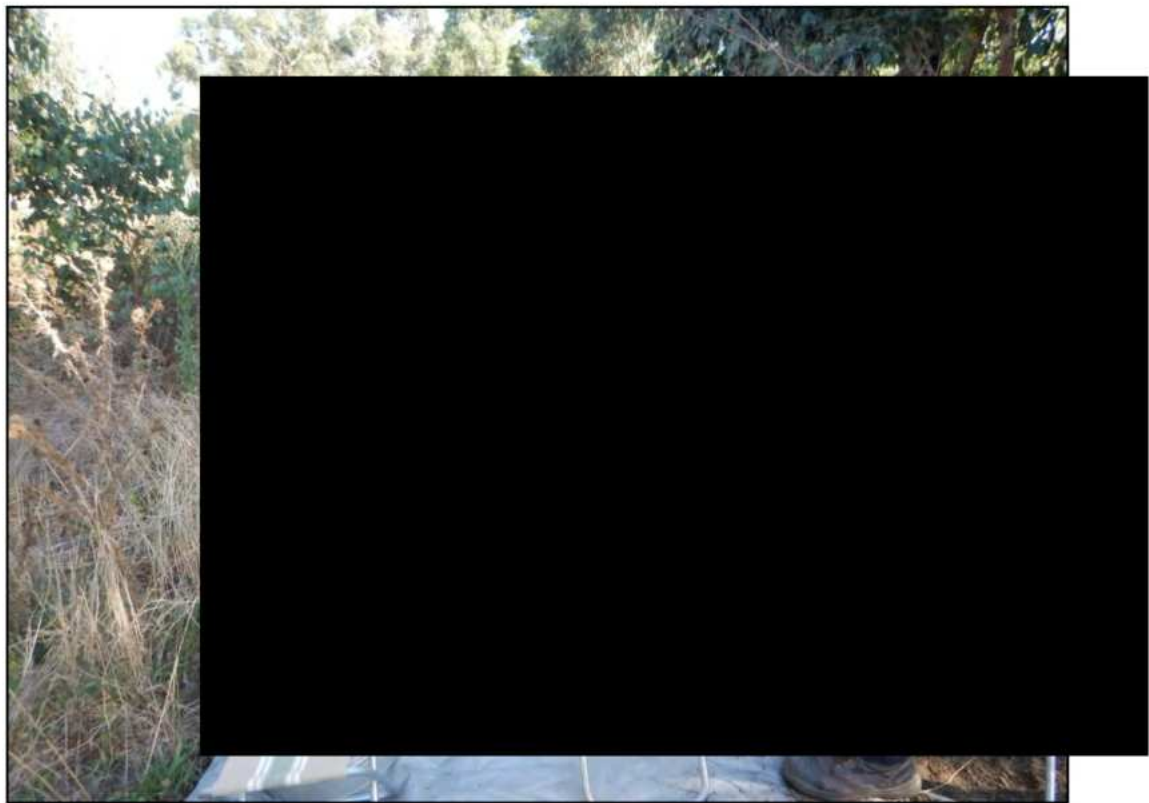
**Plate 41 — Stratigraphy of test pit 1 facing north (print 192).**

## Test Pit 2

Test pit 2 was placed approximately 7 metres west of test pit 1, where there was a slight slope downhill to the south-west (Plate 41 Plate 42). The A horizon (0-80 millimetres) was a very dark greyish brown (Munsell 10YR 3/2), dry, humic, coarse and medium grained sandy silt with rootlets, road metal and glass fragments and a neutral pH of 7.0 (Plate 42 Plate 43). The second horizon (80-150 millimetres) was an olive brown (Munsell 2.5Y 4/4), dry, medium grained sandy silt with no inclusions and a pH of 6.0. The third horizon (150-200 millimetres) was a dark grey (2.5Y 4/1), dry, fine sandy silt with a pH of 6.5. The fourth horizon (200-800 millimetres) was a very dark grey (2.5Y 3/1), dry, hard, weakly cemented but friable sandy silt with inclusions of charcoal and buckshot, the latter increasing in frequency with depth. Due to the hard, compact nature of sediment, the team agreed that from the depth of 300 millimetres the test pit would continue as a sondage in the north-west corner, in order to determine if a culturally sterile base clay could be identified. The fourth horizon also had a pH of 6.5. Excavation ceased at 800 millimetres where a brown (Munsell 10YR 5/3), mottled sandy clay was encountered and the team agreed this was a culturally sterile base clay. No artefacts were recovered from any of the deposits in test pit 2.

The stratigraphy of test pit 2 could not be confidently interpreted as disturbed, although it's hard, compact nature indicated it may well have been impacted by heavy machinery.





**Plate 41** — Location of test pit 2 facing north (print 194).

**Plate 42** — Location of test pit 2 facing north (print 194).



**Plate 42** — Stratigraphy of test pit 2 facing north (print 195).

**Plate 43** — Stratigraphy of test pit 2 facing north (print 195).



### 7.3.2 Shovel test pits

To assess landforms and areas of archaeological potential within the Activity Area, 0.5 x 0.5 metre shovel test probes were excavated (Map-4 Map 4a). Each shovel test pit was excavated with a spade, crowbar and mattock until a sterile layer was reached and 100% of excavated soil was sieved through a 5 millimetre hand sieve.

A shovel test pit log was recorded with soil colour ( ), pH and description (Appendix 3). The stratigraphic details of each shovel test pit, including inclusions and observations were noted on individual recording forms. Each shovel probe was spatially recorded using a Topcon GRS-1 DGPS and post-processed to sub 1 metre accuracy as per AV (2008) target standard for recording Aboriginal places.

The placement of shovel test pits was based on testing the locations of identified disturbance (STPs 1-6) and moderate potential (STPs 7 and 8) from the Standard Assessment (Map-4 Map 4a) and test pit results (Plate 43 Plate 44). The stratigraphy of all of the shovel test probes was variable, and the only consistent result was that the soil was identified as fill or road metal was identified in every single shovel test probe; confirming that almost the entire Activity Area had been disturbed, probably during construction of the adjacent railway line. Some members of the team speculated the fill was ballast from the railway line. Disturbance was identified to depths of 250-750 millimetres (Appendix 3).



**Plate 43** — Shovel test pit locations (pink arrows; facing north-west).

**Plate 44** — Shovel test pit locations (pink arrows; facing north-west).

### 7.3.3 Aboriginal places

No new Aboriginal archaeological places were recorded as a result of the Complex Assessment (Map-4) Map 4a.





**Legend**

- Activity Area
- Photo points
- Disturbance

**Subsurface testing - no artefacts**

- Shovel Probe
- Test Pit

**Map 4 Results of the Complex Assessment**

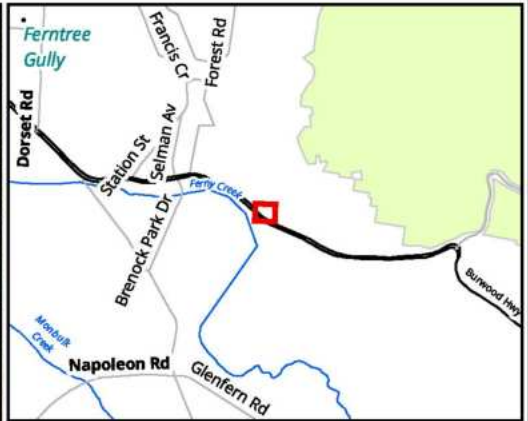


Metres  
Scale: 1:400 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

 **biosis**  
Biosis Pty Ltd  
Ballarat, Brisbane, Canberra, Melbourne,  
Newcastle, Sydney, Wangaratta & Wollongong

Matter: 216005121697 Mapping  
Date: 24 Oct 2017  
Checked by: [redacted]  
Location: P:\216005121697 Mapping\21697\_M4\_Complex\_Assessment  
Last edited by: Imilne





- Legend**
- Activity Area
  - Photo points
  - Area of ground disturbance
- Subsurface testing - no artefacts**
- Shovel Test Pit
  - Test Pit

Map 4a Amended Results of the Complex Assessment

0 4 8 12 16 20 N  
Metres  
Scale: 1:400 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

**biosis**

Matter: 31371, CHMP 14173  
Date: 16 January 2020  
Checked by: [redacted] Last edited by: smitchell  
Location: P:\31300s\31371\Mapping\31371\_M4\_Complex.mxd



## 7.4 Conclusions from the Complex Assessment

To substantiate the results of the Desktop and Standard Assessments, the Complex Assessment subsurface testing program was designed to confirm the areas identified as disturbed and the area of moderate potential on the gentle upper slope along the north-eastern boundary of the Activity Area.

All subsurface testing locations except test pit 2 had been substantially disturbed to depths of 250-750 millimetres. Test pit 2 could not be confidently interpreted as disturbed, although it's hard, compact nature indicated it may well have been impacted by heavy machinery.

No artefacts or other forms of Aboriginal cultural heritage were identified during the Complex Assessment.

No new Aboriginal places were identified during the Complex Assessment.

The area of disturbance identified in the Standard Assessment can be extended over most, if not all of the Activity Area. The location of test pit 2 may be a natural slope and deposit and therefore not contain introduced fill, ballast, or disturbed topsoil from further up slope.

The assessment has identified extensive disturbance over the Activity Area and concluded that as Ferny Creek is a relatively minor waterway, in an undulating landscape with many minor waterways, substantial alluvial terraces are unlikely to have formed. Additionally, as Ferny Creek is one of many minor waterways, it would not have held significant attraction for the ancestors of the Traditional Owners, in comparison to a major water course such as the Yarra River. Therefore, the original landform slope of the Activity Area would have been unlikely to have even occasional low density artefact distributions; subsequent to the large amounts of disturbance in the Activity Area from the construction of the railway, any Aboriginal cultural heritage which did remain on the surface prior to European arrival in Upper Ferntree Gully would have been completely destroyed.

No additional assessment was undertaken during this phase of the amendment to Approved CHMP 14173. This is because the Complex Assessment of Approved CHMP 14173 established there is a very low potential for Aboriginal cultural heritage to be present within the Activity Area.



## 8 Details of Aboriginal cultural heritage in the Activity Area

---

*No new Aboriginal places were recorded as part of this CHMP.*

*No Aboriginal cultural heritage places were identified during the course of the amendment of approved CHMP 14173.*



## 9 Consideration of Section 61 matters – Impact Assessment

---

In accordance with Section 61 of the *Aboriginal Heritage Act 2006*, a CHMP must consider contingency plans in relation to disputes, delays and obstacles that may affect the conduct of the activity and relating to the custody and management of Aboriginal cultural heritage during the course of the activity. The contingencies are presented in full in Section 11. Custody and management of any discovered or identified Aboriginal cultural heritage during the course of the Activity is subject to contingency plans detailed in Section 11.3.

A CHMP must also consider whether the activity will be conducted in a way that avoids harm to Aboriginal cultural heritage.

The assessment has identified extensive disturbance over the Activity Area and concluded that as Ferny Creek is a relatively minor waterway, in an undulating landscape with many minor waterways, substantial alluvial terraces are unlikely to have formed. Additionally, as Ferny Creek is one of many minor waterways, it would not have held significant attraction for the ancestors of the Traditional Owners, in comparison to a major water course such as the Yarra River. The assessment has therefore established that there is very low potential for Aboriginal cultural heritage to be present in the Activity Area.

There is very low potential for the proposed activity to disturb Aboriginal cultural heritage within the Activity Area.



## PART 2 – CULTURAL HERITAGE MANAGEMENT CONDITIONS

---

~~These conditions become compliance requirements once this CHMP is approved. Failure to comply with an approved CHMP condition is an offence under Section 67A of the *Aboriginal Heritage Act 2006*.~~

These conditions become compliance requirements once the amendment to approved CHMP 14173 is approved. Failure to comply with an approved CHMP condition is an offence under Section 67A of the *Aboriginal Heritage Act 2006*.



## 10 Specific cultural heritage management requirements

---

*As the assessment has established that there is extremely low potential for Aboriginal cultural heritage to be present in the Activity Area, specific management requirements are not considered warranted in this case.*



## 11 Contingency plans

### 11.1 Dispute resolution

Where the Secretary, DPC is evaluating the CHMP, this requirement has no application.

### 11.2 Reviewing compliance

Compliance with the conditions of an approved CHMP is a requirement of the *Aboriginal Heritage Act 2006*. A compliance checklist is included in Appendix 7. Any action carried out contrary to the recommendations and provisions of an approved CHMP which causes harm to Aboriginal cultural heritage is an offence.

In the instance that the reconditions of a CHMP have been contravened resulting in harm being caused to Aboriginal cultural heritage, the Minister for Aboriginal Affairs may order a Cultural Heritage Audit under Section 80 of the *Aboriginal Heritage Act 2006*. Should a Cultural Heritage Audit be ordered, a Stop Order requiring the activity to cease immediately will also be issued to the Sponsor (under Section 88 of the *Aboriginal Heritage Act 2006*). A Stop Order can be issued in any instance where an activity is harming, is likely to harm, or may harm Aboriginal cultural heritage, regardless of whether the Minister has ordered a Cultural Heritage Audit (under Section 87 of the *Aboriginal Heritage Act 2006*).

Should any and all parties have any concerns regarding non-compliance with the CHMP they will consult with the Sponsor's heritage advisor in the first instance. If it appears that there is a breach of the CHMP, then notification should be made to Aboriginal Victoria. Under Section 81 of the *Aboriginal Heritage Act 2006*, a Cultural Heritage Audit can be ordered by the Minister if non-compliance is suspected. If the Secretary, DPC directs a Sponsor to engage a heritage advisor to conduct a Cultural Heritage Audit, the Sponsor must comply with the direction. The report of a Cultural Heritage Audit may:

- Identify non-compliance with an approved CHMP
- Recommend amendments to the recommendations in the approved CHMP
- Recommend arrangements for the access of inspectors to the location at which the activity is being carried out
- Recommend other measures in relation to the conduct of the activity to avoid or minimise harm to Aboriginal cultural heritage.

It should be noted that under Sections 27 and 28 of the *Aboriginal Heritage Act 2006*, harming, or doing an act likely to harm Aboriginal cultural heritage is unlawful, except under the authority of a Cultural Heritage Permit or a CHMP. A range of penalties apply.

Where non-compliance with the CHMP is identified, the following actions must be taken:

- Where the non-compliance harms or is likely to harm Aboriginal cultural heritage, the Sponsor shall provide notice of the non-compliance to Aboriginal Victoria within 24 hours of identifying the non-compliance. A copy of the proposed and/or implemented actions for any non-compliance shall be provided to the relevant heritage advisor and Aboriginal Victoria within one week of identifying the non-compliance
- Where the non-compliance has not and will not harm Aboriginal cultural heritage, the Sponsor shall provide a copy of the proposed and/or implemented actions for the non-compliance to the relevant heritage advisor within two weeks of identifying the non-compliance.



## 11.3 Management of Aboriginal cultural heritage found during the activity

The processes outlined below include the notification of the identification of Aboriginal cultural heritage found during the activity.

### 11.3.1 Unexpected discovery of human remains

If suspected human remains are discovered, you must contact the Victoria Police and the State Coroner's Office immediately. If there are reasonable grounds to believe that the remains are Aboriginal, the Coronial Admissions and Enquiries hotline must be contacted on 1300 888 544. This advice has been developed further and is described in the following 5 step contingency plan. Any such discovery at the activity area must follow these steps.

- 1 Discovery
  - If suspected human remains are discovered, all activity in the vicinity must stop.
  - The remains must be left in place, and protected from harm or damage.
- 2 Notification
  - Once suspected human remains have been found, the Coroner's Office and Victoria Police must be notified immediately
  - If there is reasonable grounds to believe that the remains are Aboriginal Ancestral Remains, the Coronial Admissions and Enquiries hotline must be contacted on 1300 888 544
  - All details of the location and nature of the human remains must be provided to the relevant authorities
  - 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 Section 17 of the *Aboriginal Heritage Act 2006*.
- 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 Section 18(2)(b) of the *Aboriginal Heritage Act 2006*
  - An appropriate impact mitigation or salvage strategy as determined by the Victorian Aboriginal Heritage Council must be implemented by the Sponsor.
- 4 Curation and further analysis
  - The treatment of salvaged 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 experienced and qualified archaeologist, clearly marked and all details provided to the VAHR
  - Appropriate management measures must be implemented to ensure that the remains are not disturbed in the future.



### 11.3.2 Unexpected discovery of other Aboriginal cultural heritage

If Aboriginal cultural heritage material is found, works must stop in the relevant area and the following process be followed:

- 1 Discovery
  - If suspected Aboriginal cultural heritage is identified, all activity within a 20 metre buffer must stop. The activity can proceed outside the buffer
  - The Aboriginal cultural heritage must be left in place, and protected from harm or damage.
- 2 Notification
  - The person in charge of the activity must notify a heritage advisor of the identification of Aboriginal cultural heritage within 24 hours if its discovery
  - The heritage advisor will notify the Secretary, DPC of the identification of Aboriginal cultural heritage material in accordance with Section 24 of the *Aboriginal Heritage Act 2006*
  - All details of the location and nature of the Aboriginal cultural heritage must be provided to the VAHR.
- 6 Impact Mitigation or Salvage
  - An appropriate impact mitigation or salvage strategy as determined by the RAP/Secretary, DPC in accordance with relevant Aboriginal Victoria guidelines and practice notes must be implemented by the Sponsor.
- 7 Curation and further analysis
  - The treatment of salvaged Aboriginal cultural heritage must be in accordance with the direction of the RAP/Secretary, DPC and relevant Aboriginal Victoria guidelines and practice notes
- 8 Reburial
  - Any reburial site(s) must be fully documented by an experienced and qualified archaeologist, clearly marked and all details provided to the VAHR
  - Appropriate management measures must be implemented to ensure that the Aboriginal cultural heritage is not disturbed in the future.

### 11.4 Custody of Aboriginal cultural heritage discovered during works

The custody of all Aboriginal cultural heritage material found during the activity must be assigned to the RAP (in accordance with Section 12 of the *Aboriginal Heritage Act 2006*). Where there is no RAP it should be assigned to the following in order of priority: relevant registered Native Title Holder, any relevant Native Title Party, any relevant person/s with traditional or familial links, any relevant Aboriginal body with historical or contemporary interests, the land owner, the Museum of Victoria.



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## Appendices

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## Appendix 1 Notice of intention to prepare a CHMP

---



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## Notice of Intent to prepare a Cultural Heritage Management Plan for the purposes of the *Aboriginal Heritage Act 2006*

This form can be used by the Sponsor of a Cultural Heritage Management Plan to complete the notification provisions pursuant to s.54 of the *Aboriginal Heritage Act 2006* (the "Act").

For clarification on any of the following please contact Victorian Aboriginal Heritage Register (VAHR) enquiries on 1800-726-003.

### SECTION 1 - Sponsor information

Sponsor: Tag-Azzure Management Pty Ltd

ABN/ACN: 601 714 256

Contact Name:

Postal Address: PO Box 5027 South Melbourne VIC 3205

Business Number: 03 9690 2022

Mobile:

Email Address:

### Sponsor's agent (if relevant)

Company: Ratio Consultants Pty Ltd

Contact Name:

Postal Address: 9 Clifton Street Richmond VIC 3121

Business Number: 03 9429 3111

Mobile:

Email Address:

### SECTION 2 - Description of proposed activity and location

Project Name: Proposed service station, fast food outlet, medical and dental clinics at 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria

Municipal district: Knox City Council

Clearly identify the proposed activity for which the cultural heritage management plan is to be prepared (ie. Mining, road construction, housing subdivision)

Service station

### SECTION 3 - Cultural Heritage Advisor

Name: Biosis

Company:

Email address:

### SECTION 4 - Expected start and finish date for the cultural heritage management plan

Start Date: 07-Mar-2016

Finish Date: 19-Dec-2016

Submitted on: 07 Mar 2016





## SECTION 5 - Why are you preparing this cultural heritage management plan?



A cultural heritage management Plan is required by the Aboriginal Heritage Regulations 2007

*What is the high Impact Activity as it is listed in the regulations?*

Service station

Is any part of the activity an area of cultural heritage sensitivity, as listed in the regulations? Yes



Other Reasons (Voluntary)



An Environmental Effects Statement is required



A Cultural Heritage Management Plan is required by the Minister for Aboriginal Affairs.

## SECTION 6 - List the relevant registered Aboriginal parties (if any)

*This section is to be completed where there are registered Aboriginal parties in relation to the management plan.*

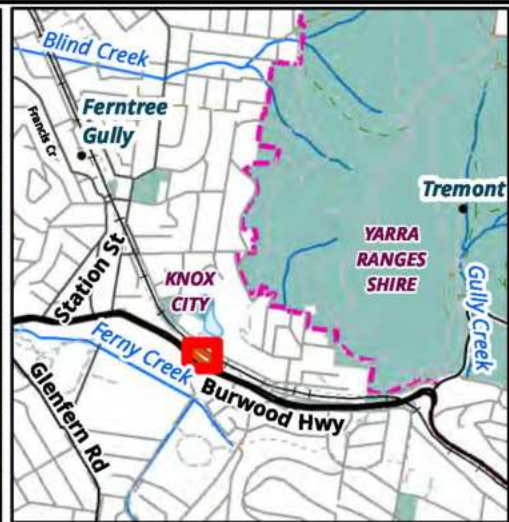
## SECTION 7 - Notification checklist

Ensure that any relevant registered Aboriginal party/s is also notified. A copy of this notice with a map attached may be used for this purpose.

A registered Aboriginal party is allowed up to 14 days to provide a written response to a notification specifying whether or not it intends to evaluate the management plan.)

In addition to notifying the Deputy Director and any relevant registered Aboriginal party/s, a Sponsor must also notify any owner and/or occupier of any land within the area to which the management plan relates. A copy of this notice with a map attached may be used for this purpose.






**Legend**

- Activity Area
- Local government area

**Map 1 Extent of the Activity Area**

0 5 10 15 20 25  
Metres  
Scale: 1:500 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

 **biosis**  
Biosis Pty Ltd

Ballarat, Brisbane, Canberra, Hobart, Melbourne, Newcastle, Sydney, Wangaratta & Wollongong



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## Appendix 1a Notice of intention to amend approved CHMP 14173

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# Notice of Intention to prepare an amendment to an approved Cultural Heritage Management Plan

This form can be used by the Sponsor of an amendment to an approved Cultural Heritage Management Plan to complete the notification provisions pursuant to section 54 of the *Aboriginal Heritage Act 2006* (the Act).

For clarification on any of the following please contact Victorian Aboriginal Heritage Register (VAHR) enquiries on 1800-762-003.

## SECTION 1 – Sponsor information (mandatory)

Sponsor (natural person or body corporate seeking to undertake the activity): TAG – Ferntree Gully Pty Ltd

ABN/ACN: 79 972 874 985

Contact name:

Postal Address: PO Box 5027 South Melbourne VIC 3205

Telephone Number: 03 9690 2022

Fax number:

Mobile:

Email Address:

## Sponsor's agent (if relevant)

Company: Ratio Consultants Pty Ltd

Contact name:

Postal Address: 9 Clifton Street RICHMOND VIC 3121

Telephone Number: 9429 3111

Fax number:

Mobile:

Email Address:

## SECTION 2 – Description of the approved CHMP

CHMP number: 14173

CHMP name: 1157-1165 Burwood Highway, Ferntree Gully Upper

Approval date: 29/12/16

## SECTION 3 – Description of proposed activity and location

Project Name: 1157-1165 Burwood Highway, Ferntree Gully Upper

List the relevant municipal district/s (ie, Local Council or Shire): City of Knox

Clearly identify the proposed **activity** for which the proposed amendment is to be prepared (ie, mining, road construction, housing subdivision):

Mixed Development including Medical Centre and Childcare Centre

Clearly identify the **location** (such as listing cadastral information, attaching a copy of a title search, or indicating the street address):

1155-1165 Burwood Highway, Upper Ferntree Gully, Victoria ; Lot 1 TP97141, Lot 1 TP97142, Lot 1 TP108858, Lot 1 TP97053, Lot 1 TP97052; 350639.374, 5804948.924, Zone 55



Attach a map (to scale, with a north arrow and indicating the municipal district - if any) that clearly identifies the activity area and its boundaries in respect of which the cultural heritage management plan is to be or was prepared.

Please ensure the map refers to existing roads and features, rather than proposed roads and features, and includes their names.

Please ensure the map has the activity area outlined on it (this area should include all works relating to the proposed activity including location of temporary buildings, space for machinery, etc).

The map should have a legend; at least three readily identifiable geographical locations (such as road intersections, parcel boundaries, or road/river crossings) and should state the map's projection.

**Spatial data (ie a GIS file) containing the Activity Area will assist in the processing of your notification.** Please refer to "Lodging Spatial Data in the VAHR" on the AV website for further information.

#### SECTION 4 – Heritage Advisor

If you would like a Heritage Advisor [a person who has the qualifications or experience (or both) required under section 189 of the Act] notified of the status of this Cultural Heritage Management Plan amendment, please provide the following details for that person:

Lauren Prossor

Biosis

lprossor@biosis.com.au

Name

Company (if any)

Email address

#### SECTION 5 – Expected start and finish date for the amendment to the Cultural Heritage Management Plan

Start date 14 / 01 / 20

Finish date 14 / 02 / 20

#### SECTION 6 – List the relevant Registered Aboriginal Party/Parties (if any)

*This section is to be completed only where there is a Registered Aboriginal Party in relation to the management plan.*

N/A

#### SECTION 7A – List the relevant Aboriginal groups or Aboriginal people with whom the Sponsor intends to consult (if any)

*This section is to be completed only if the proposed activity in the management plan is to be carried out in an area where there is **no** Registered Aboriginal Party.*

*Consultation is for the purpose of obtaining an adequate assessment of the existence and significance of Aboriginal cultural heritage. Traditional Owner groups, inclusively representing individual Traditional Owners, are more likely to be the relevant bodies with which to consult in preparing a CHMP. Sponsors should endeavor to consult accordingly.*

*This information may also assist the Secretary in determining whether to appoint an Activity Advisory Group for the activity and who to appoint to that group.*

N/A – Consultation with Wurundjeri Tribe Land Compensation and Cultural Heritage Council Inc. and the Boon Wurrung Foundation

and the Bunurong Land and Sea Association were undertaken throughout the process of approved CHMP 14173



## SECTION 7B – Describe the intended consultation process (if any)

*This section is to be completed only if the proposed activity in the management plan is to be carried out in an area where there is **no Registered Aboriginal Party**.*

*The scope and terms of consultation with relevant Traditional Owners in a non-RAP area is entirely a matter for the Sponsor. The benefit of commencing with a shared understanding of the consultation required, and following a considered consultation plan, is to provide more certainty to all parties, reduce the risk of unexpected delays or further assessment being required on evaluation of a CHMP.*

*This information may also assist the Secretary in determining whether to appoint an Activity Advisory Group for the activity and who to appoint to that group.*

N/A – Consultation with Wurundjeri Tribe Land Compensation and Cultural Heritage Council Inc. and the Boon Wurrung Foundation and the Bunurong Land and Sea Association were undertaken throughout the process of approved CHMP 14173.

## SECTION 10 – Notification Checklist

☐ Ensure appropriate attachment/s are completed and attached to this notification (see section 3 and 11 of this form).

Ensure this notice and all attached items are sent to the:

Director Heritage Services  
Aboriginal Victoria  
Department of Premier and Cabinet  
GPO Box 4912  
**MELBOURNE VIC 3001**

OR

Email: [vahr@dpc.vic.gov.au](mailto:vahr@dpc.vic.gov.au)

Ensure that any relevant Registered Aboriginal Party/Parties are also notified.

- A copy of this notice may be used for this purpose.
- A Registered Aboriginal Party is allowed up to 14 days to provide a written response to a notification specifying whether or not it intends to evaluate the amendment to the management plan.

Ensure any owner and/or occupier of any land within the area to which the management plan relates is notified.

- A copy of this notice may be used for this purpose.

Ensure any municipal council whose municipal district includes an area to which the cultural heritage management plan relates is notified.

- A copy of this notice may be used for this purpose.

## SECTION 11 – Notice of Intention is accompanied by the prescribed fee (mandatory)

*To ensure this Notice of Intention to prepare an amendment to an approved Cultural Heritage Management Plan is accompanied by the prescribed fee(s)\**

- \* Prescribed fee(s):
- 8 fee units

Refer to <http://www.legislation.vic.gov.au/> under "Legislative Information" for current value of a fee unit.

## SECTION 12 – Signature of Sponsor

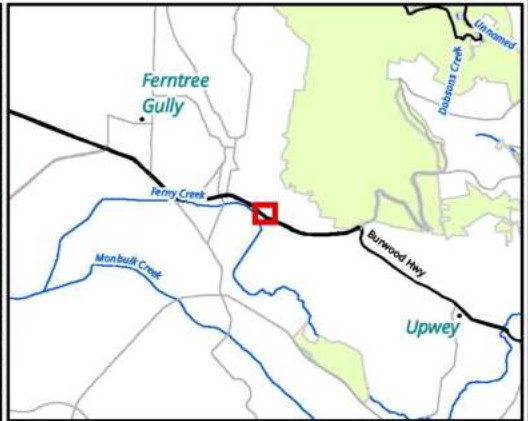
I certify that to the best of my knowledge and belief that the information supplied is correct and complete.

Signature

Date: 14 / 01 / 2020

[Sponsor]





**Legend**  
Activity Area

**Map 1 Extent of the Activity Area**

0 10 20 30 40  
Metres  
Scale: 1:800 @ A3  
Coordinate System: GDA 1994 MGA Zone 55  
**biosis**



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## Appendix 2 Activity plans

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1 SITE ANALYSIS PLAN  
SCALE: 1 : 500 @A1

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

TOWN PLANNING

date:  
15.06.2016

SITE ANALYSIS PLAN

project no:  
1506.06

drawing no:  
TP01

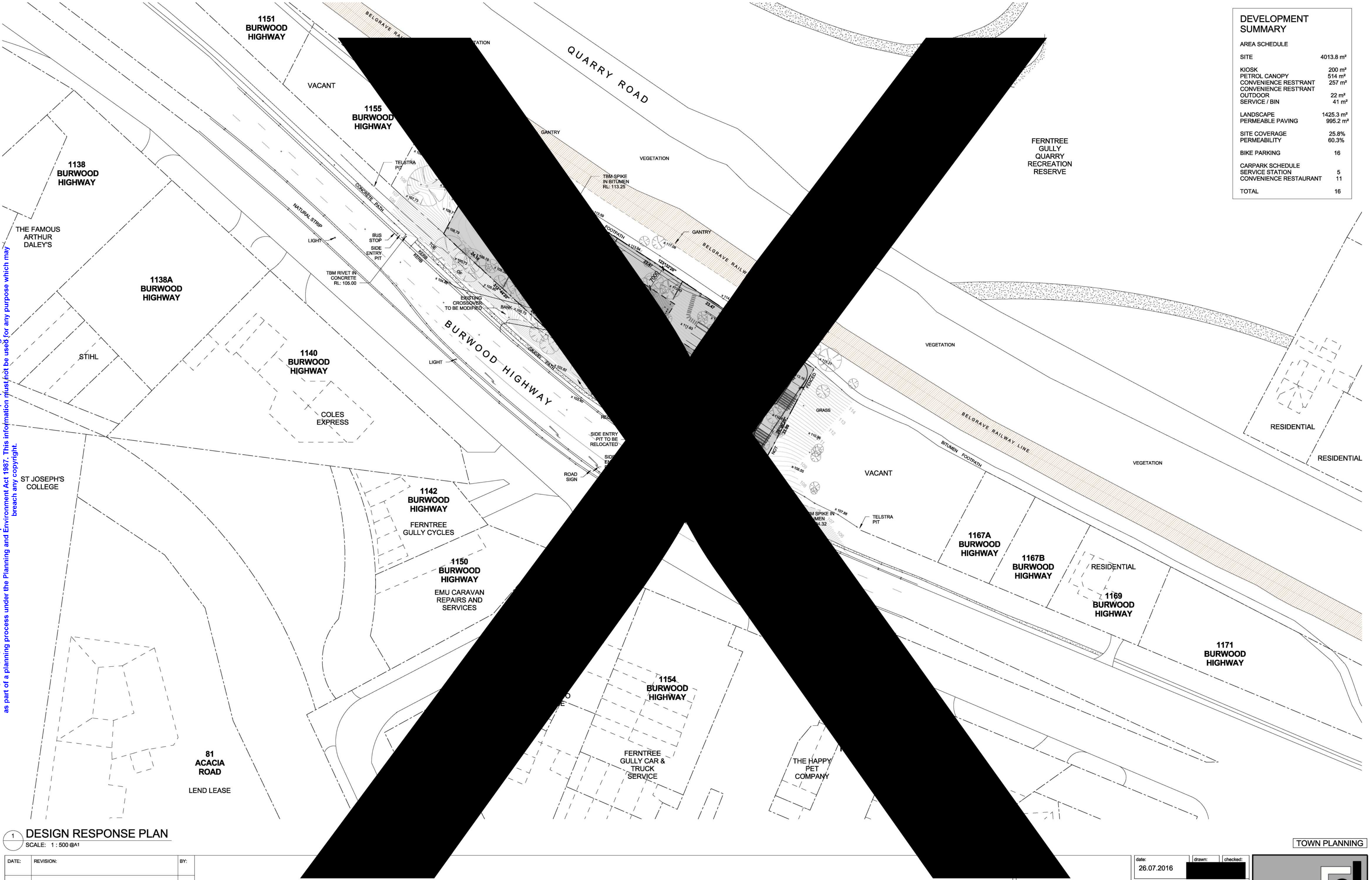




Fd Architects Pty. Ltd.  
T: (03) 9005 9598  
E: info@fdarchitects.com.au  
A: 5/752 Blackburn Road,  
Clayton, VIC, 3168



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DEVELOPMENT SUMMARY	
AREA SCHEDULE	
SITE	4013.8 m²
KIOSK	200 m²
PETROL CANOPY	514 m²
CONVENIENCE REST'NANT	257 m²
OUTDOOR SERVICE / BIN	22 m²
LANDSCAPE PERMEABLE PAVING	1425.3 m²
SITE COVERAGE PERMEABILITY	25.8% 60.3%
BIKE PARKING	16
CARPARK SCHEDULE	
SERVICE STATION	5
CONVENIENCE RESTAURANT	11
TOTAL	16

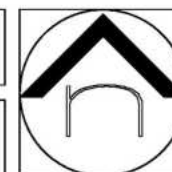
1 DESIGN RESPONSE PLAN  
SCALE: 1 : 500 @A1

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

date:	26.07.2016	drawn:		checked:	
DESIGN RESPONSE PLAN					
project no:	1506.06				
drawing no:	TP02				

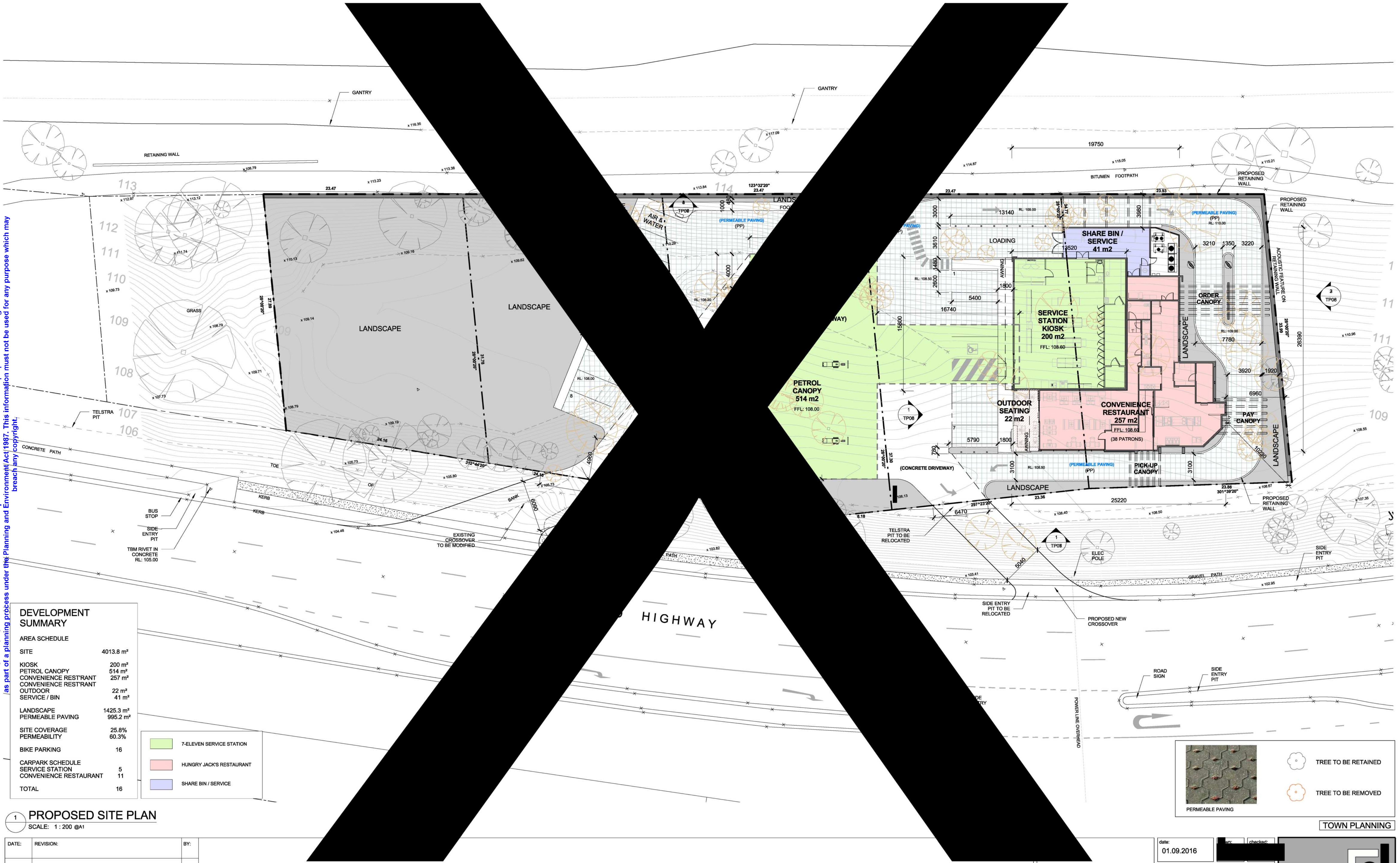


TOWN PLANNING

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Clayton, VIC, 3168



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DEVELOPMENT SUMMARY	
AREA SCHEDULE	
SITE	4013.8 m²
KIOSK	200 m²
PETROL CANOPY	514 m²
CONVENIENCE RESTRAINT	257 m²
CONVENIENCE RESTRAINT	257 m²
OUTDOOR SEATING	22 m²
SERVICE / BIN	41 m²
LANDSCAPE	1425.3 m²
PERMEABLE PAVING	995.2 m²
SITE COVERAGE	25.8%
PERMEABILITY	60.3%
BIKE PARKING	16
CARPARK SCHEDULE	
SERVICE STATION	5
CONVENIENCE RESTAURANT	11
TOTAL	16

7-ELEVEN SERVICE STATION

HUNGRY JACK'S RESTAURANT

SHARE BIN / SERVICE

1 PROPOSED SITE PLAN  
SCALE: 1 : 200 @A1

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG



PERMEABLE PAVING


TREE TO BE RETAINED

TREE TO BE REMOVED

TOWN PLANNING

date: 01.09.2016  
PROPOSED SITE PLAN

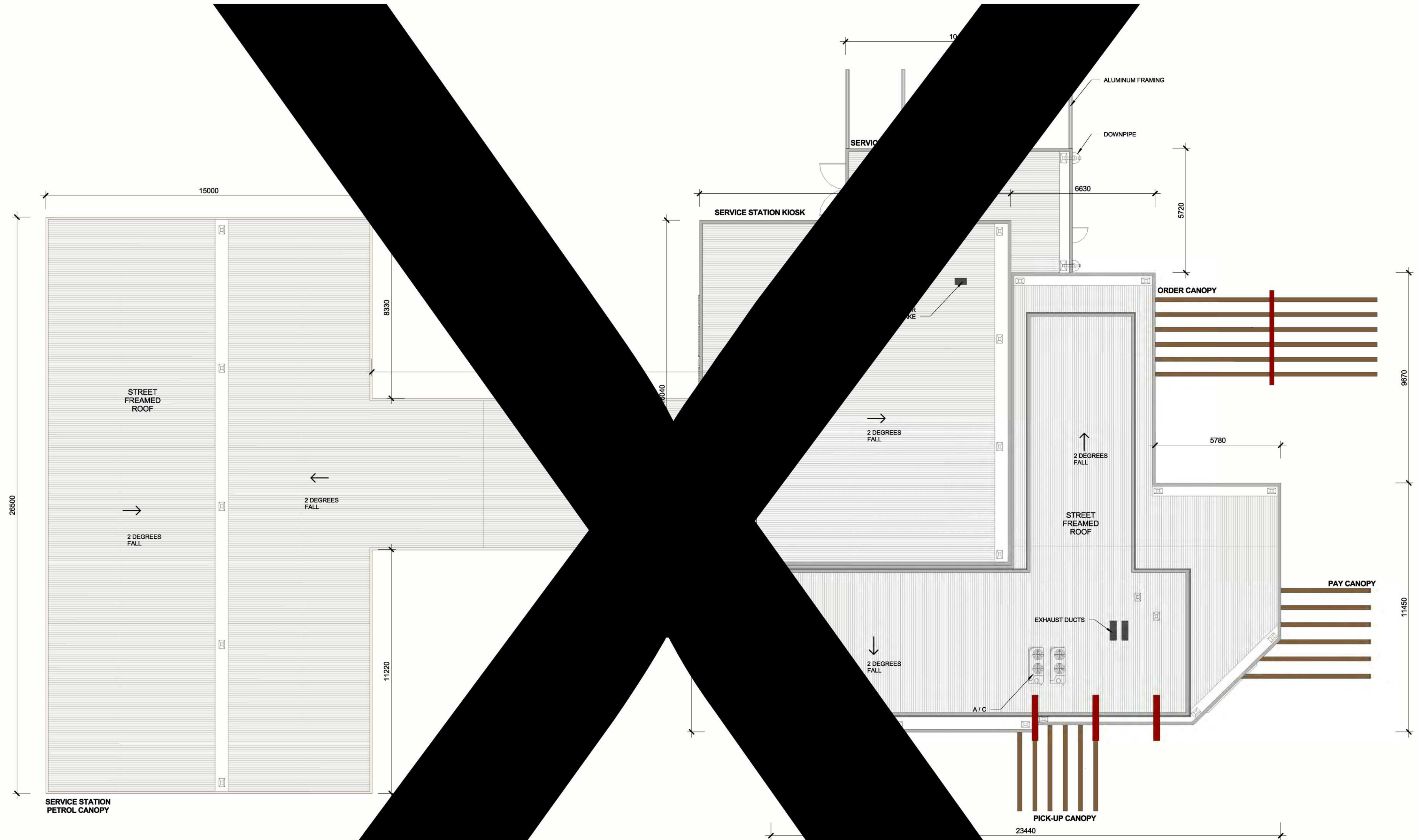
project no: 1506.06  
drawing no: TP03



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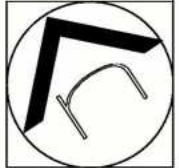
1 PROPOSED ROOF PLAN

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

date:	26.07.2016	drawn:		checked:	
PROPOSED ROOF PLAN					
project no:	1506.06				
drawing no:	TP04				



TOWN PLANNING

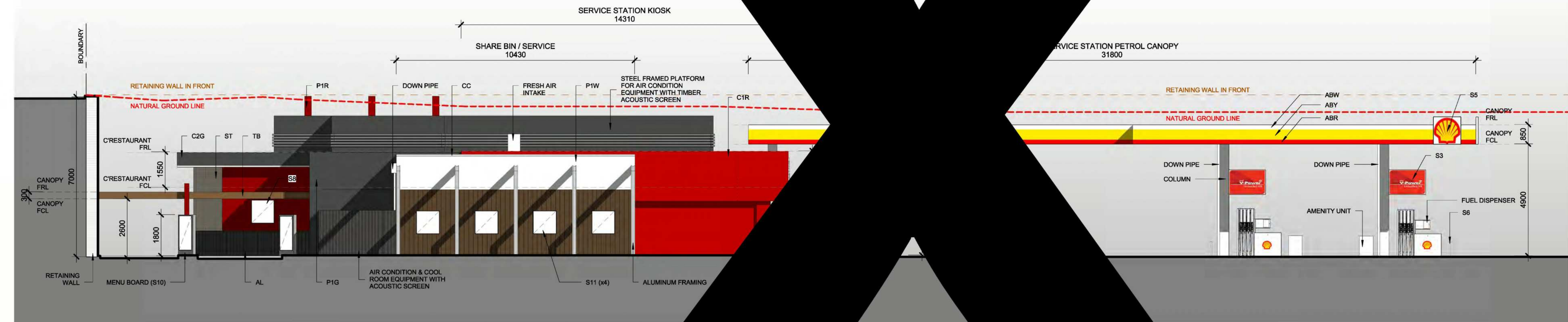
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1 PROPOSED SOUTH ELEVATION  
SCALE: 1 : 100 @A1



2 PROPOSED NORTH ELEVATION  
SCALE: 1 : 100 @A1

SCHEDULE				
RETAINED RED ACM PANEL BUILDING'S	CG		CLEAR GLAZING	P1R  HUNGRY JACK'S SELECTED RED PAINT TO RENDERED EXTERNAL PRECAST CONCRETE WALL
TRIPE	C2G		DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: MT EDEN PAINT FINISH TO LIGHT WEIGHT CLADDING FASCIA	ST  HUNGRY JACK'S SELECTED STONE TILES
NR	ABR		INTERNALLY ILLUMINATED LIGHT WEIGHT CLADDING FASCIA WITH SELECTED RED ACRYLIC FINISH	PP  PERMEABLE PAVING
P1W	ABY		INTERNALLY ILLUMINATED LIGHT WEIGHT CLADDING FASCIA WITH SELECTED YELLOW ACRYLIC FINISH	TB  SELECTED TIMBER TO EXTERNAL SCREEN / FEATURE WALL
P2R	ABW		INTERNALLY ILLUMINATED LIGHT WEIGHT CLADDING FASCIA WITH SELECTED WHITE ACRYLIC FINISH	
P1G			COLORBOND FACED INSULATED WALL CLADDING PANEL: KINGSPAN "IRONSTONE GREY"	

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

date:  
01.09.2016

PROJECT NO:  
1506.06

DRAWING NO:  
TP05

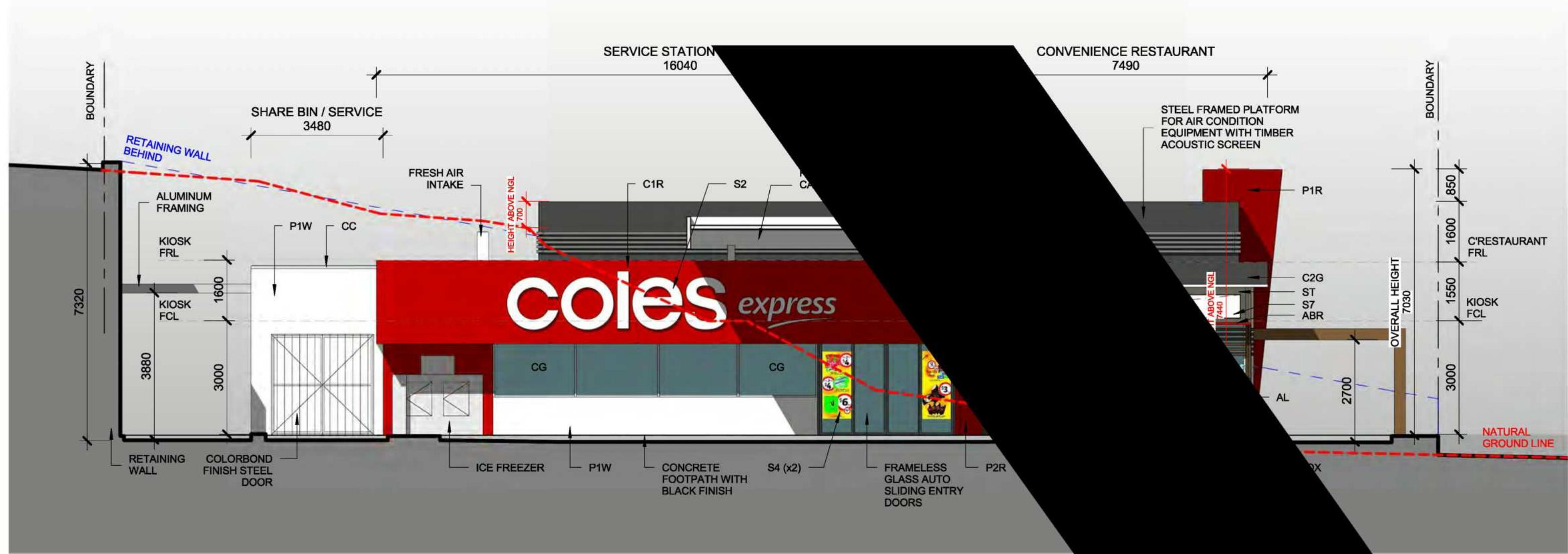
PROPOSED ELEVATIONS  
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TOWN PLANNING

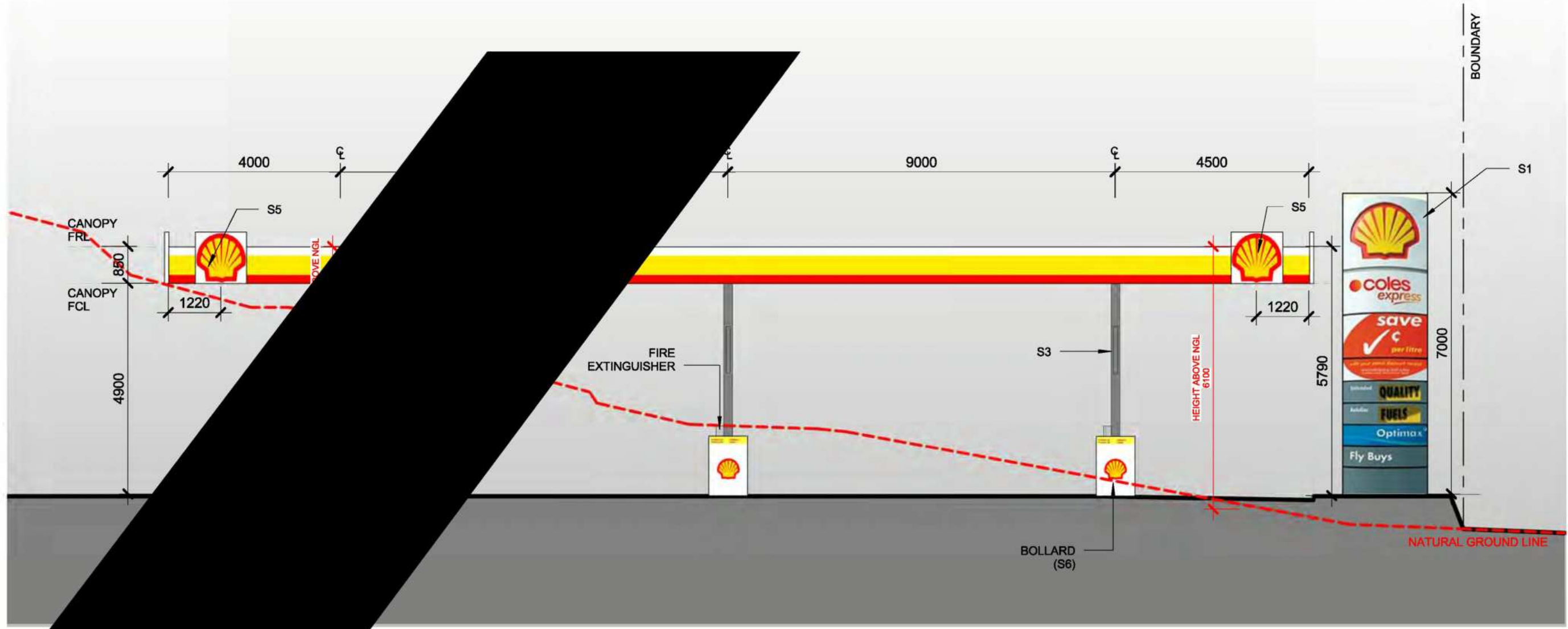
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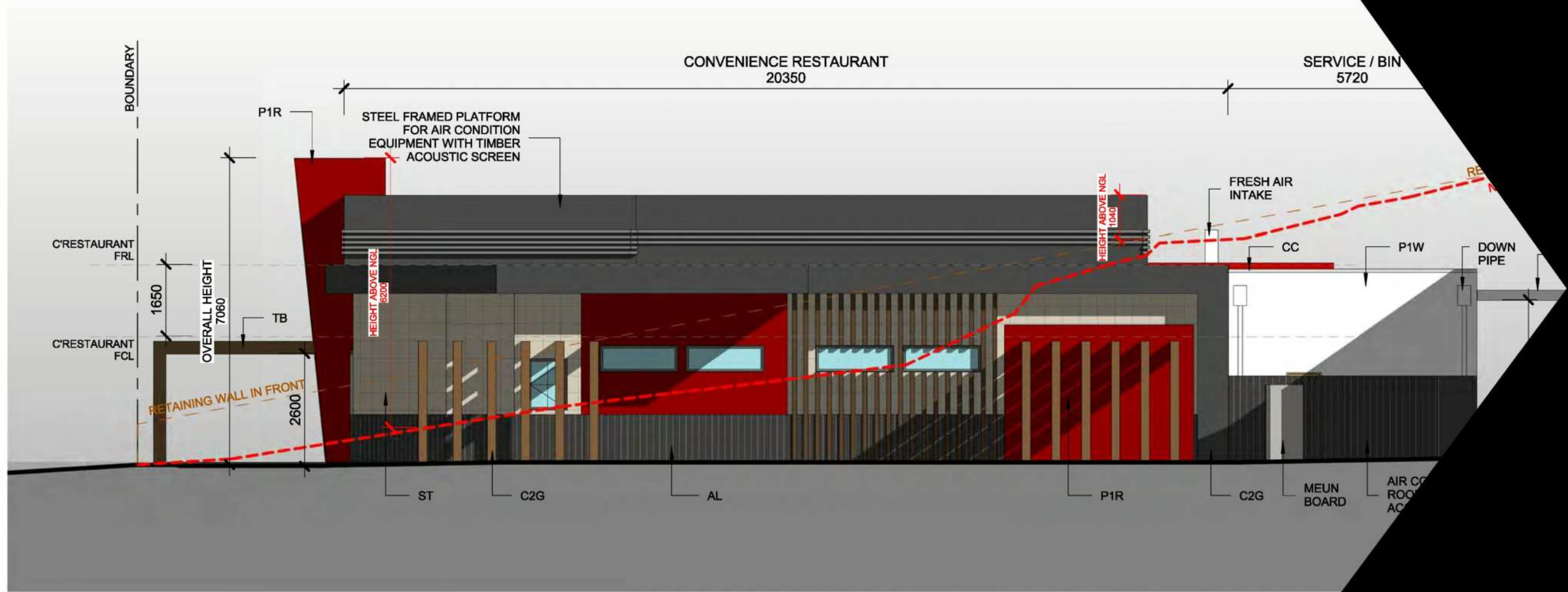
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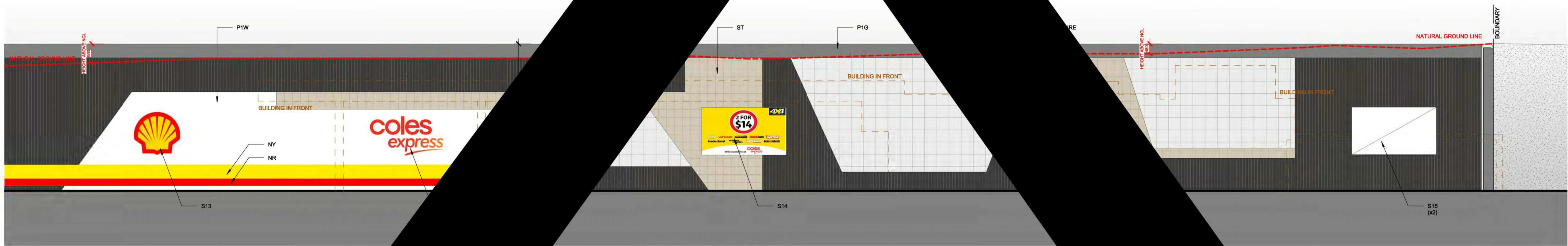
1 PROPOSED WEST ELEVATION (KIOSK)  
SCALE: 1 : 100 @A1



ELEVATION (PETROL CANOPY)



2 PROPOSED EAST ELEVATION  
SCALE: 1 : 100 @A1



4 PROPOSE RETAINING WALL SOUTH ELEVATION (PA)  
SCALE: 1 : 100 @A1

#### MATERIAL & COLOUR SCHEDULE

C1R	CLADDING (COLES SELECTED RED ACM PANEL) BUILDING'S FASCIA	CG	CLEAR GLAZING	P1R	HUNGRY JACK'S SELECTED RED PAINT TO RENDERED EXTERNAL PRECAST CONCRETE WALL
NG	NON-ILLUMINATED YELLOW VINYL STRIPE	C2G	DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: MT EDEN PAINT FINISH TO LIGHT WEIGHT CLADDING FASCIA	ST	HUNGRY JACK'S SELECTED STONE TILES
NR	NON-ILLUMINATED RED VINYL STRIPE	ABR	INTERNALLY ILLUMINATED LIGHT WEIGHT CLADDING FASCIA WITH SELECTED RED ACRYLIC FINISH	PP	PERMEABLE PAVING
P1W	DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: 7-ELEVEN GONDOLA GREY PAINT FINISH TO RENDERED EXTERNAL PRECAST CONCRETE PANEL WALL	ABY	INTERNALLY ILLUMINATED LIGHT WEIGHT CLADDING FASCIA WITH SELECTED YELLOW ACRYLIC FINISH	TB	SELECTED TIMBER TO EXTERNAL SCREEN / FEATURE WALL
	COLES EXPRESS SELECTED RED PAINT FINISH TO RENDERED EXTERNAL PRECAST CONCRETE PANEL WALLS	ABW	INTERNALLY ILLUMINATED LIGHT WEIGHT CLADDING FASCIA WITH SELECTED WHITE ACRYLIC FINISH		
	DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: GREY PAINT FINISH TO RENDERED EXTERNAL PRECAST CONCRETE PANEL WALL	AL	COLORBOND FACED INSULATED WALL CLADDING PANEL, KINGSPAN 'IRONSTONE GREY'		

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

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DATE:	REVISION:	BY:

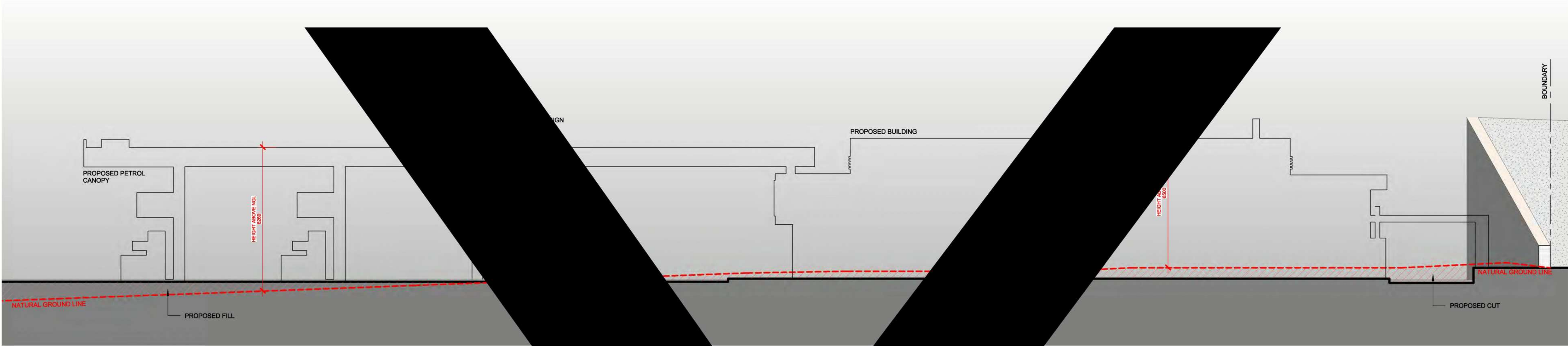
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project no:	1506.06	drawing no:	TP06		

TOWN PLANNING

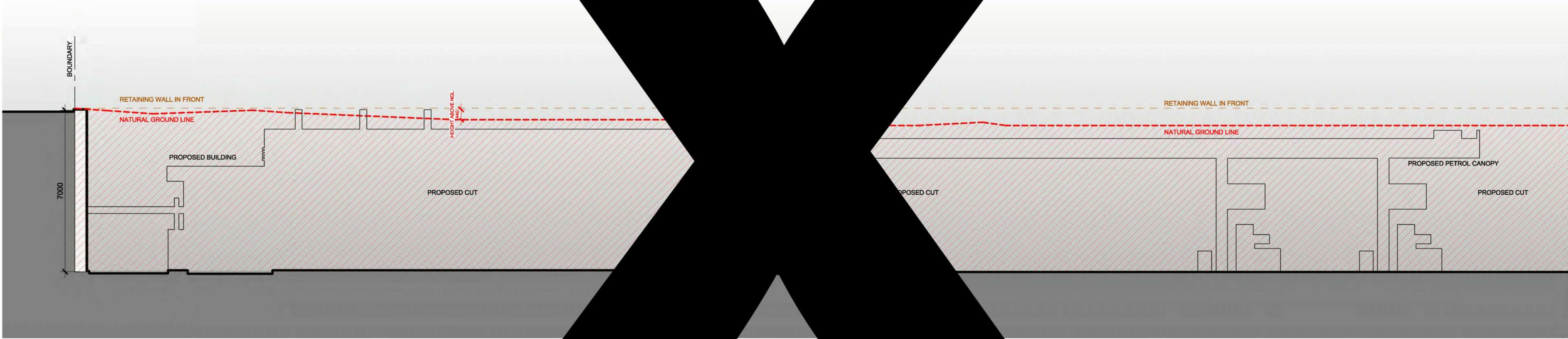
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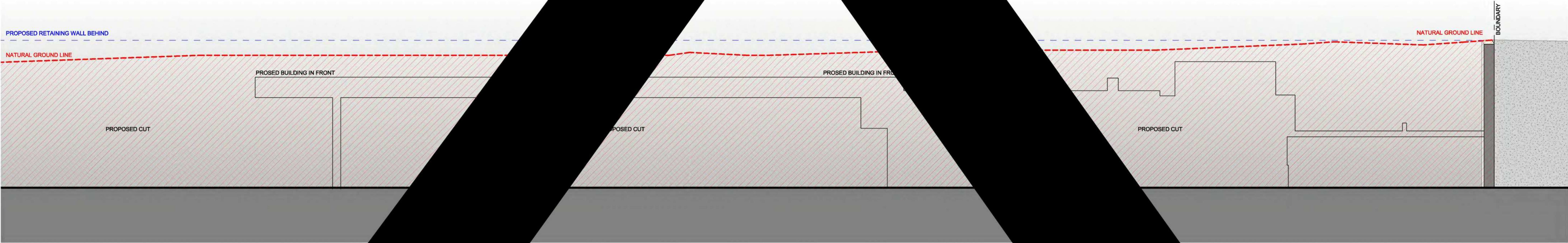
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1 PROPOSED SOUTH ELEVATION-CUT & FILL DETAILS  
SCALE: 1 : 100 @A1



2 PROPOSED NORTH ELEVATION-CUT & FILL DETAILS  
SCALE: 1 : 100 @A1



3 PROPOSE RETAINING WALL SOUTH ELEVATION (PARTIAL)  
SCALE: 1 : 100 @A1

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

date:	01.09.2016
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project no:	1506.06
drawing no:	TP07

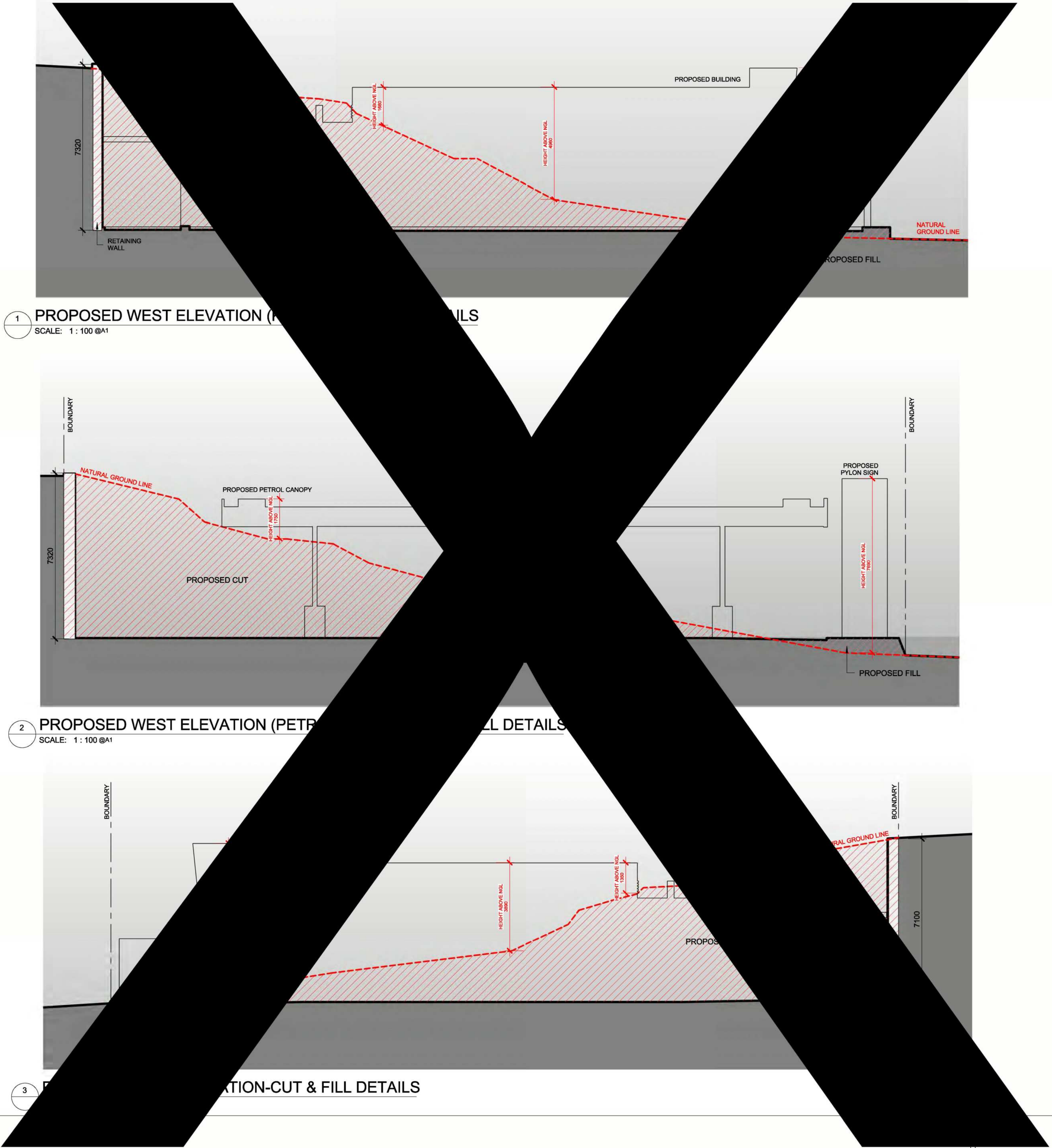
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PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

DATE:	REVISION:	BY:

date:	01.09.2016
project no:	1506.06
drawing no:	TP08

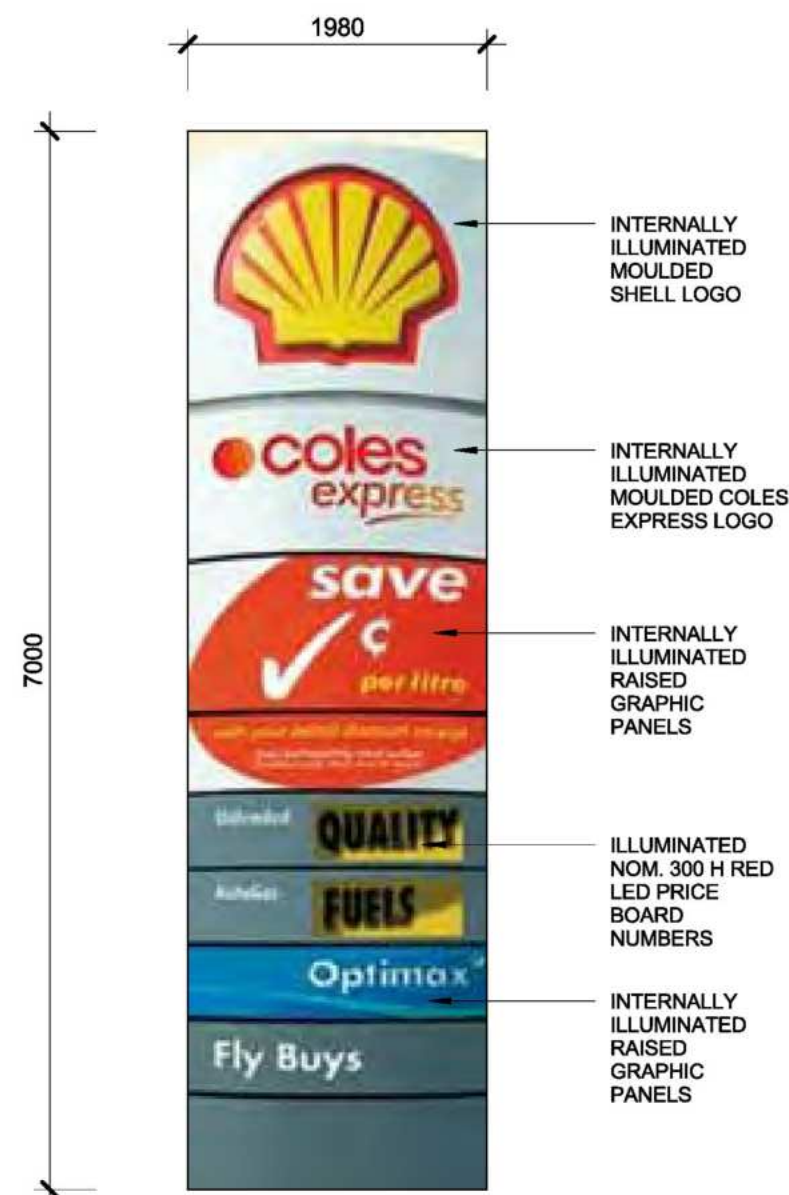
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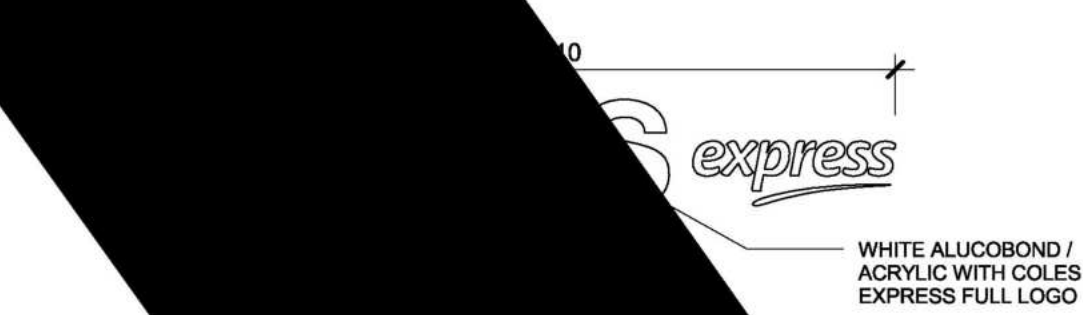
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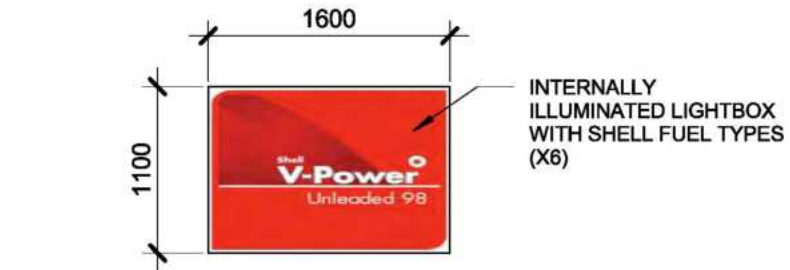
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1 SIGN 1 ELEVATION (S1)  
SCALE: 1 : 50 @A1



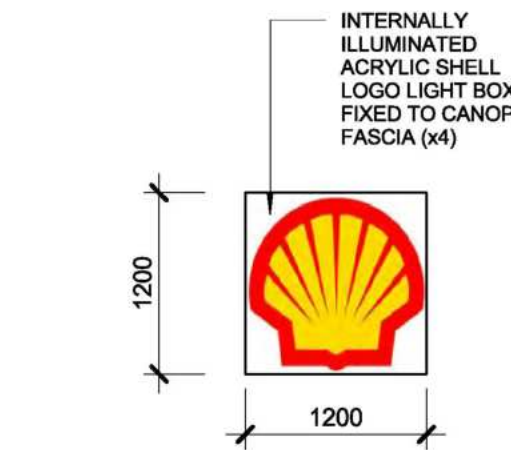
2 SIGN 2 ELEVATION (S2)  
SCALE: 1 : 50 @A1



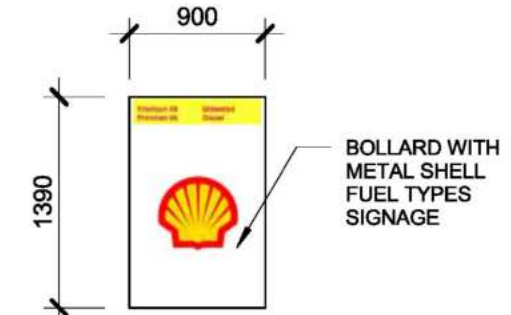
3 SIGN 3 ELEVATION (S3)  
SCALE: 1 : 50 @A1



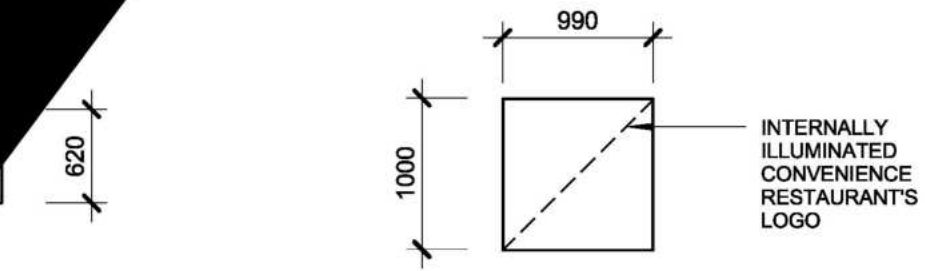
4 SIGN 4 ELEVATION (S4)  
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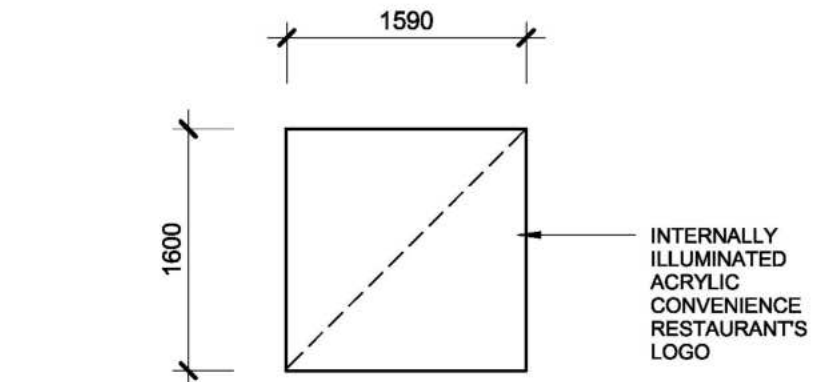
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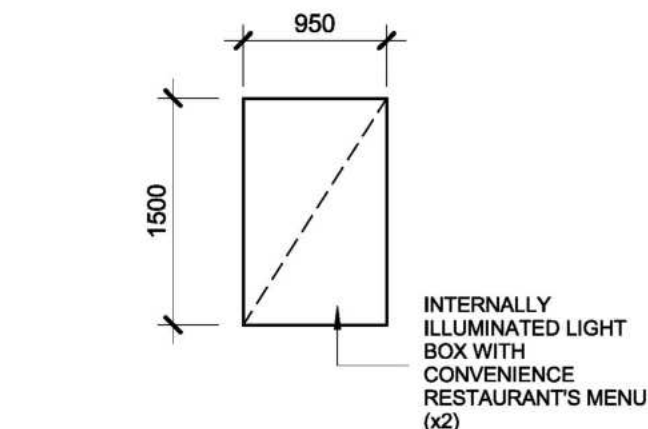
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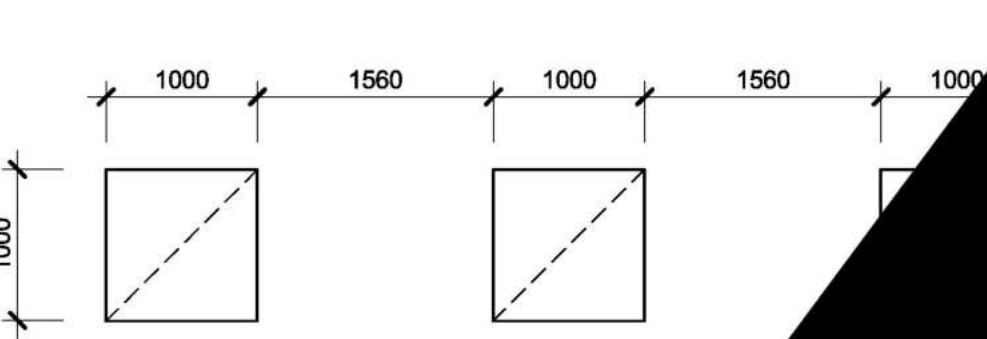
8 SIGN 8 ELEVATION (S8)  
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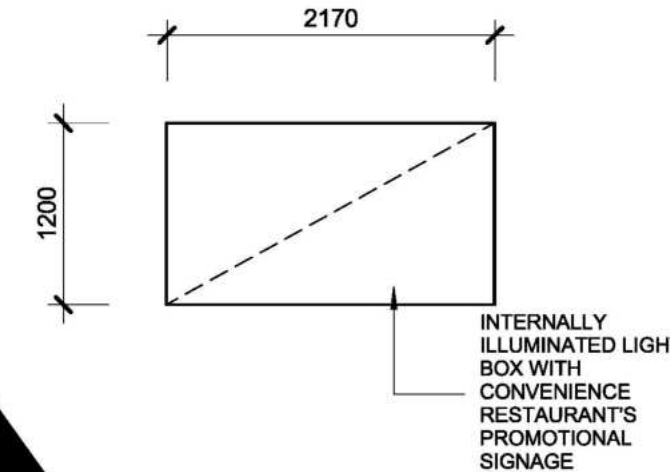
9 SIGN 9 ELEVATION (S9)  
SCALE: 1 : 50 @A1



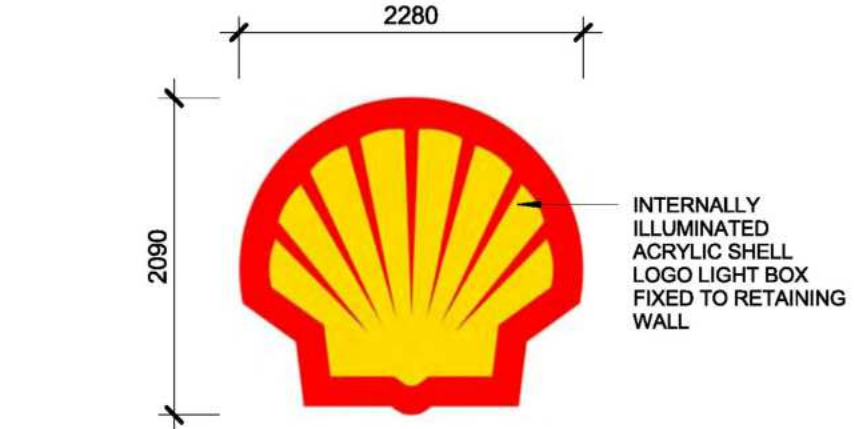
10 SIGN 10 ELEVATION (S10)  
SCALE: 1 : 50 @A1



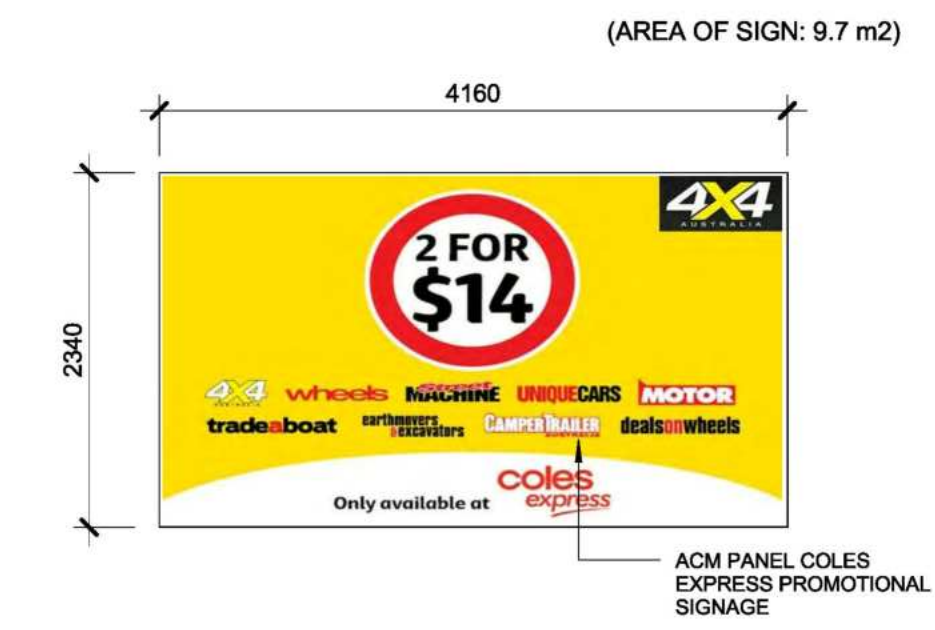
11 SIGN 11 ELEVATION (S11)  
SCALE: 1 : 50 @A1



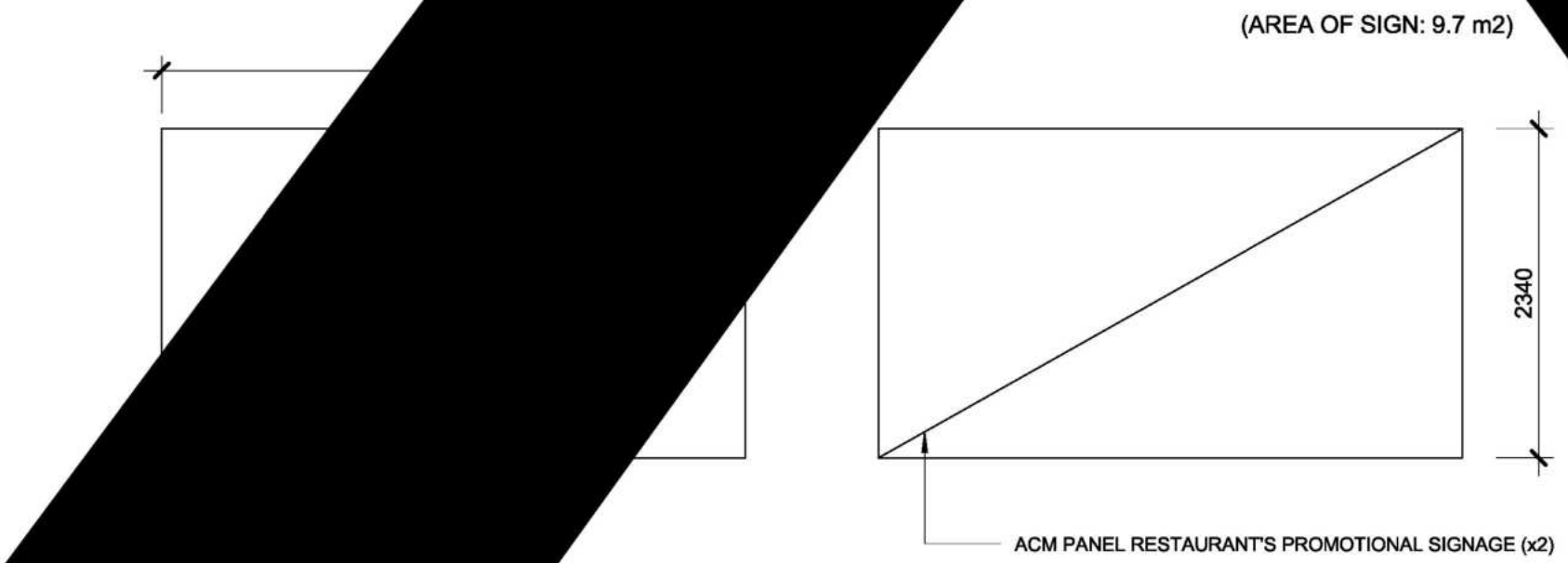
12 SIGN 12 ELEVATION (S12)  
SCALE: 1 : 50 @A1



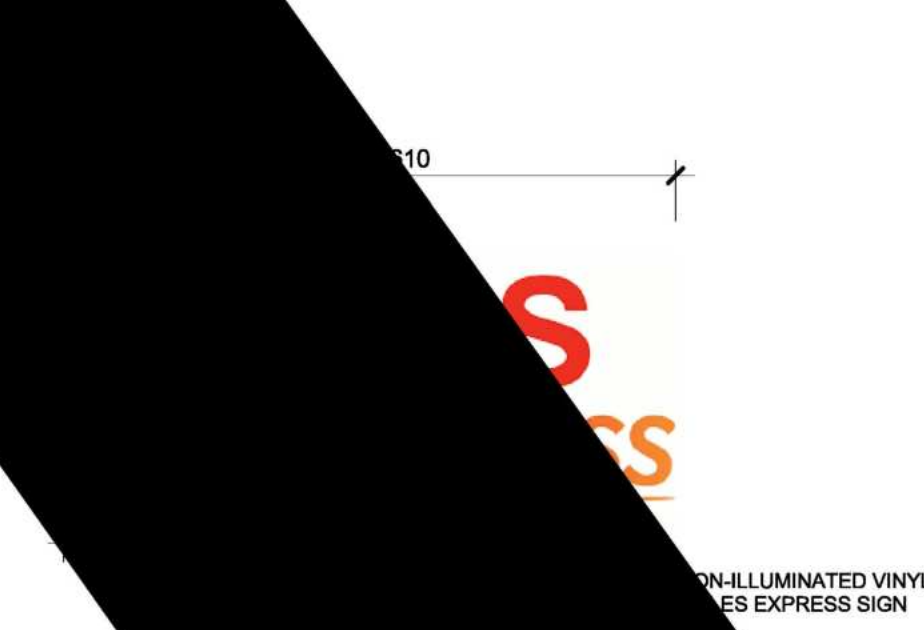
13 SIGN 13 ELEVATION (S13)  
SCALE: 1 : 50 @A1



14 SIGN 14 ELEVATION (S14)  
SCALE: 1 : 50 @A1



15 SIGN 15 ELEVATION (S15)  
SCALE: 1 : 50 @A1



16 SIGN 16 ELEVATION (S16)  
SCALE: 1 : 50 @A1

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

DATE:	REVISION:	BY:

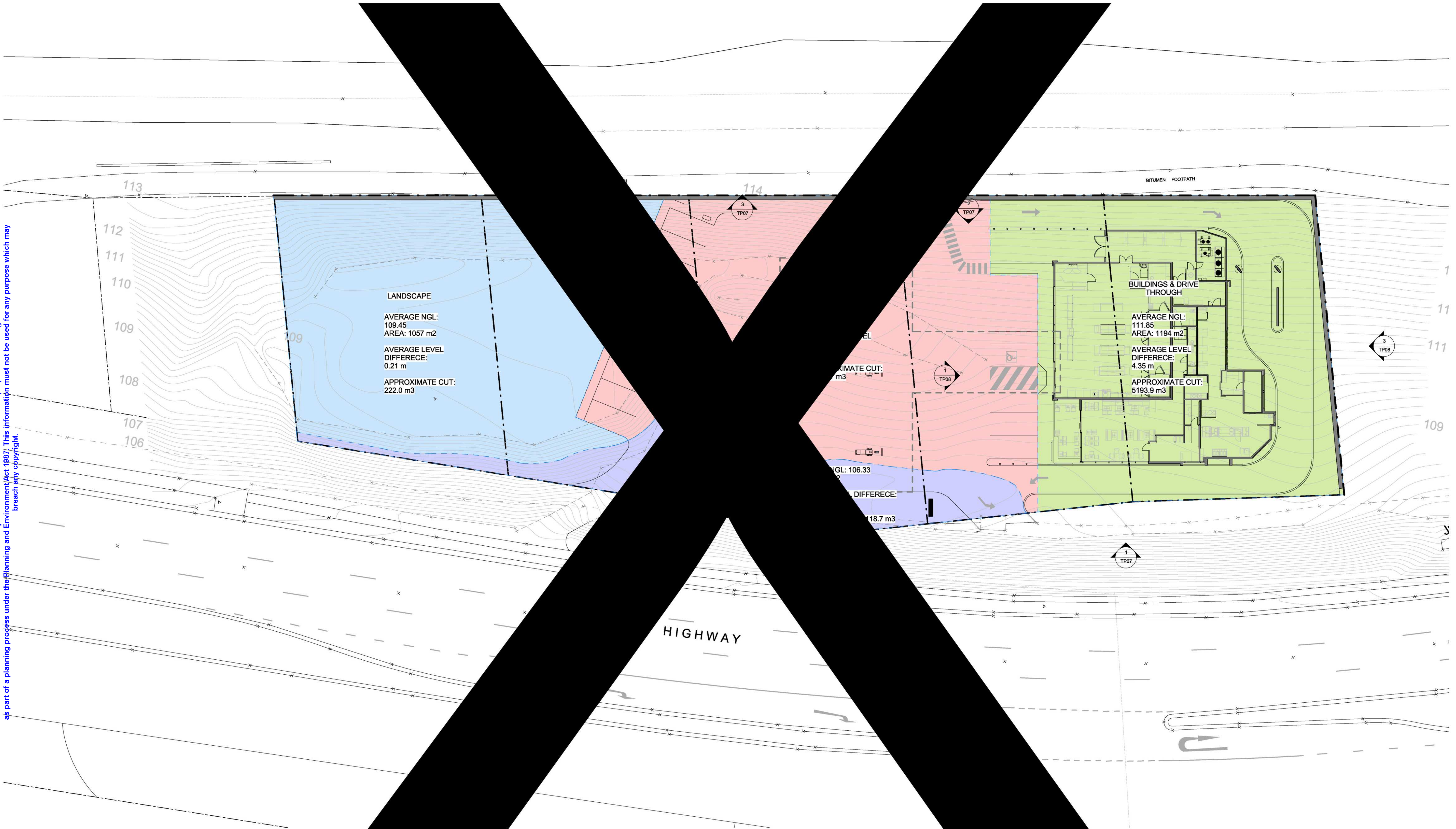
date: 26.07.2016	drawn: [redacted]	checked: [redacted]
PROPOSED SIGNAGE DETAIL		
project no: 1506.06		
drawing no: TP09		

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1 EARTHWORK ESTIMATION PLAN  
SCALE: 1:200 @A1

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

date:	01.09.2016
project no:	1506.06
drawing no:	TP10

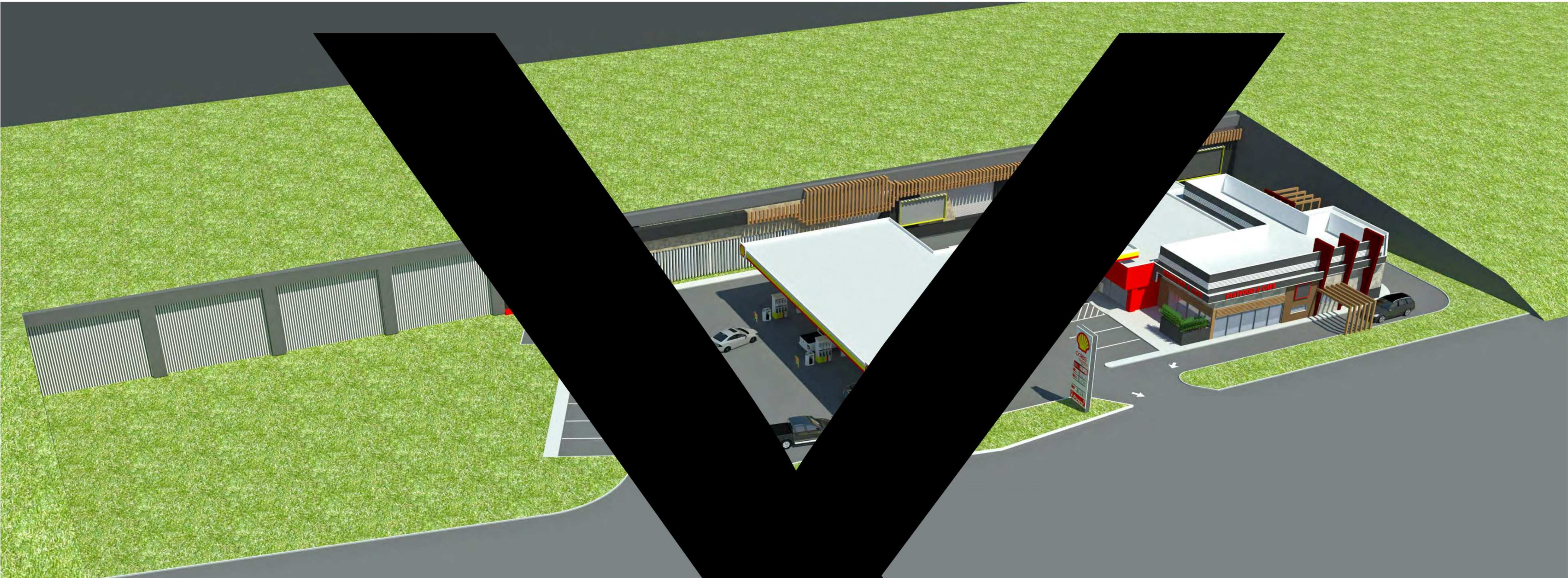
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PROPOSED BIRDSEYE VIEW



PROPOSED CONVENIENCE RESTAURANT VIEW



PROPOSED SERVICE STATION ENTRY VIEW

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

DATE:	REVISION:	BY:

date:	06.09.2016	drawn:		checked:	
PROPOSED PERSPECTIVE VIEW					
project no:	1506.06				
drawing no:	TP11				



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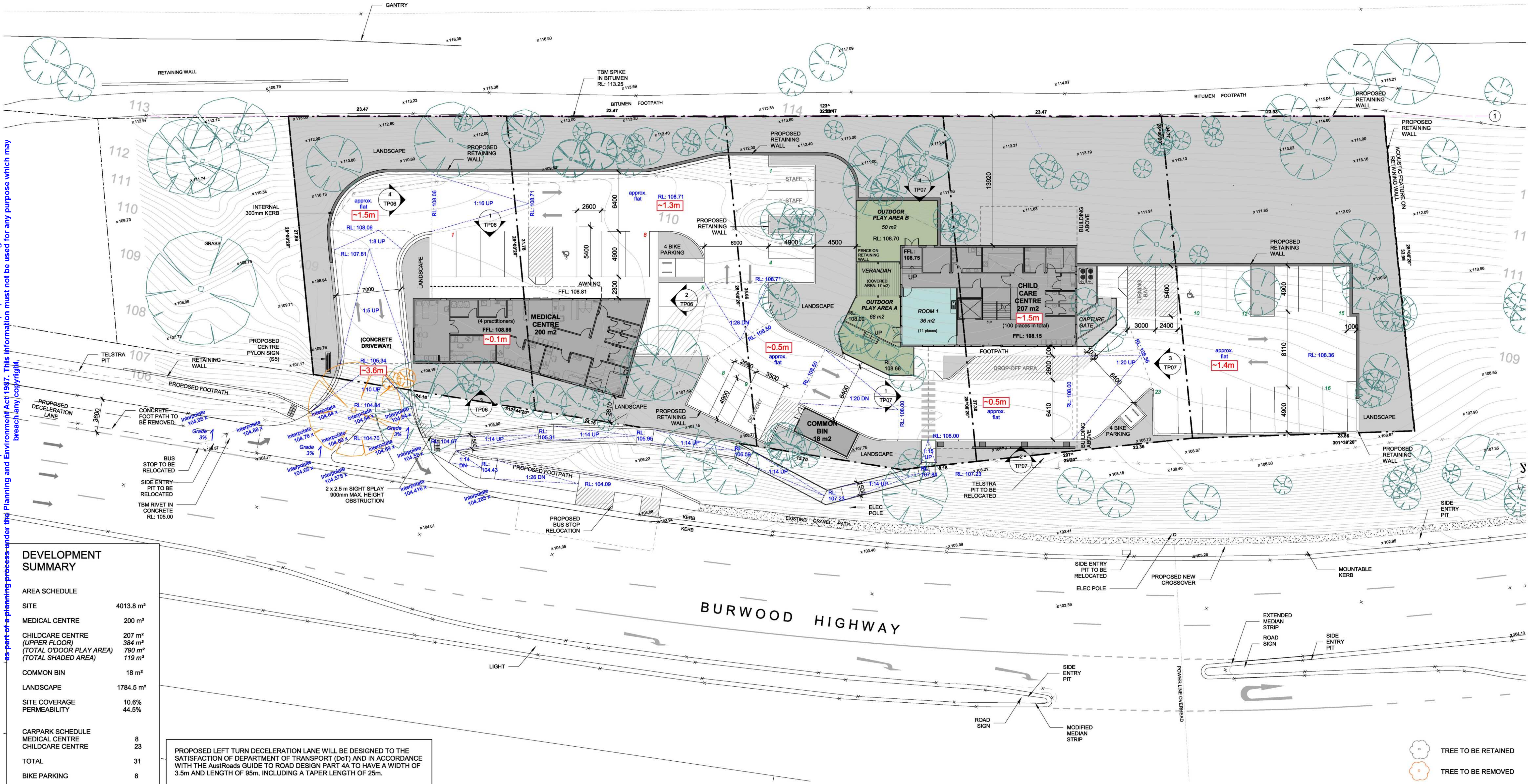
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## Appendix 2a Amended Activity plans

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1 PROPOSED SITE PLAN  
SCALE: 1: 200 @A1

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

TAG

client:  
  
date:  
05.07.2019  
PROPOSED  
project no:  
1506.06  
drawing no:  
TP03

TREE TO BE RETAINED  
TREE TO BE REMOVED

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SCALE: 1 : 500 @A1

[illegible]

## TOWN PLANNING

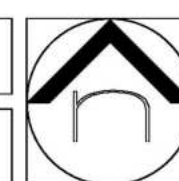
TAG

client:

date:	01.08.2017
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## SITE ANALYSIS PLAN

project no:  
**1506.06**

drawing no:  
**TP01**

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1 DESIGN RESPONSE PLAN  
SCALE: 1 : 500 @A1

[illegible]

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

client:

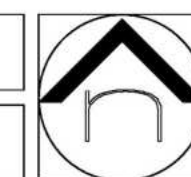
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date:

03.07.2019

## DESIGN RESPONSE PLAN


project no: 1506.06

drawing no:  
TP02

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DATE:	REVISION:
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DATE:	REVISION:
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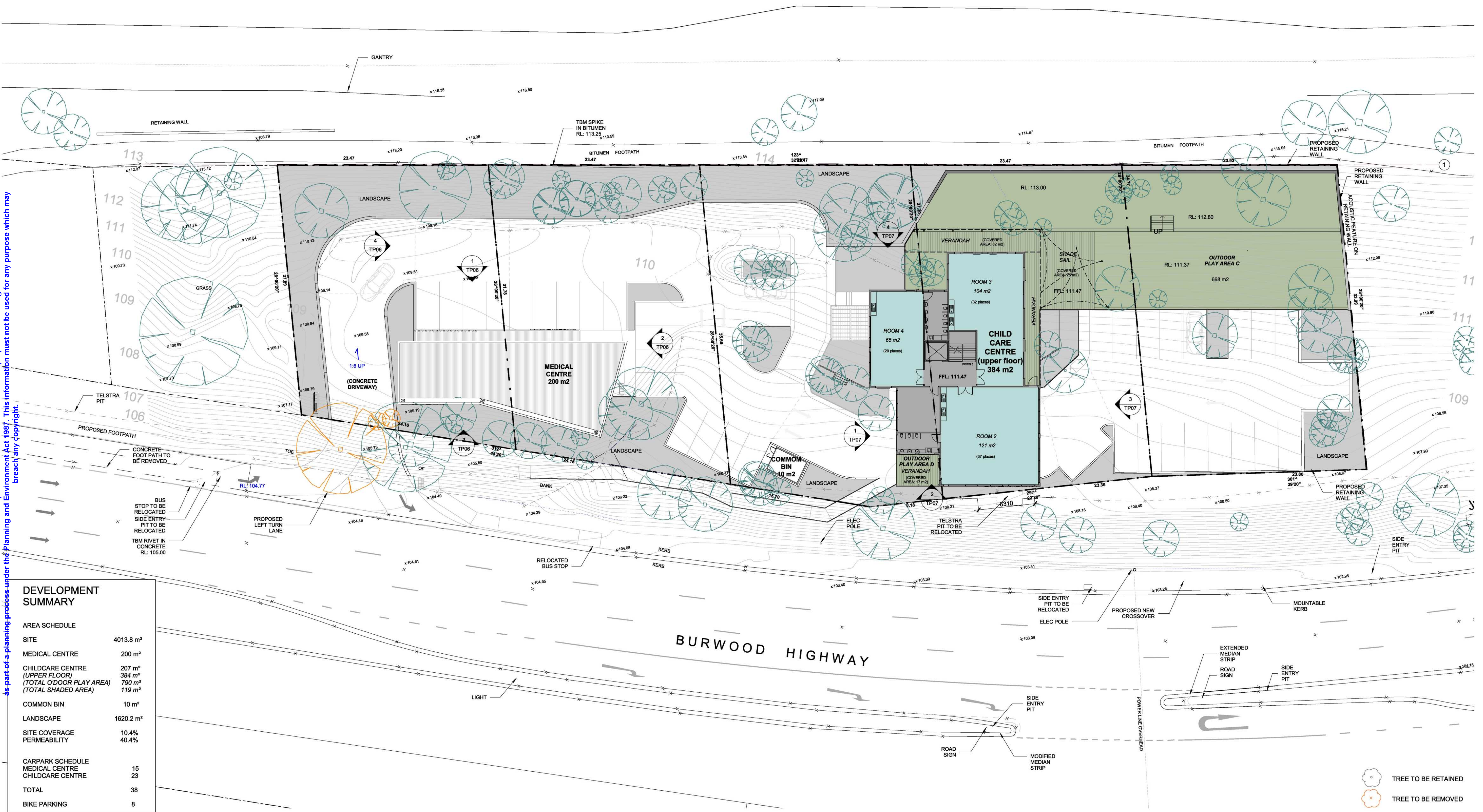
PROPOSED SITE PLAN



Architects



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DEVELOPMENT SUMMARY	
AREA SCHEDULE	
SITE	4013.8 m²
MEDICAL CENTRE	200 m²
CHILDCARE CENTRE (UPPER FLOOR)	207 m²
CHILDCARE CENTRE (TOTAL O'DOOR PLAY AREA)	384 m²
CHILDCARE CENTRE (TOTAL SHADED AREA)	790 m²
COMMON BIN	10 m²
LANDSCAPE	1620.2 m²
SITE COVERAGE	10.4%
PERMEABILITY	40.4%
CARPARK SCHEDULE	
MEDICAL CENTRE	15
CHILDCARE CENTRE	23
TOTAL	38
BIKE PARKING	8

1 PROPOSED UPPER FLOOR PLAN  
SCALE: 1 : 200

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

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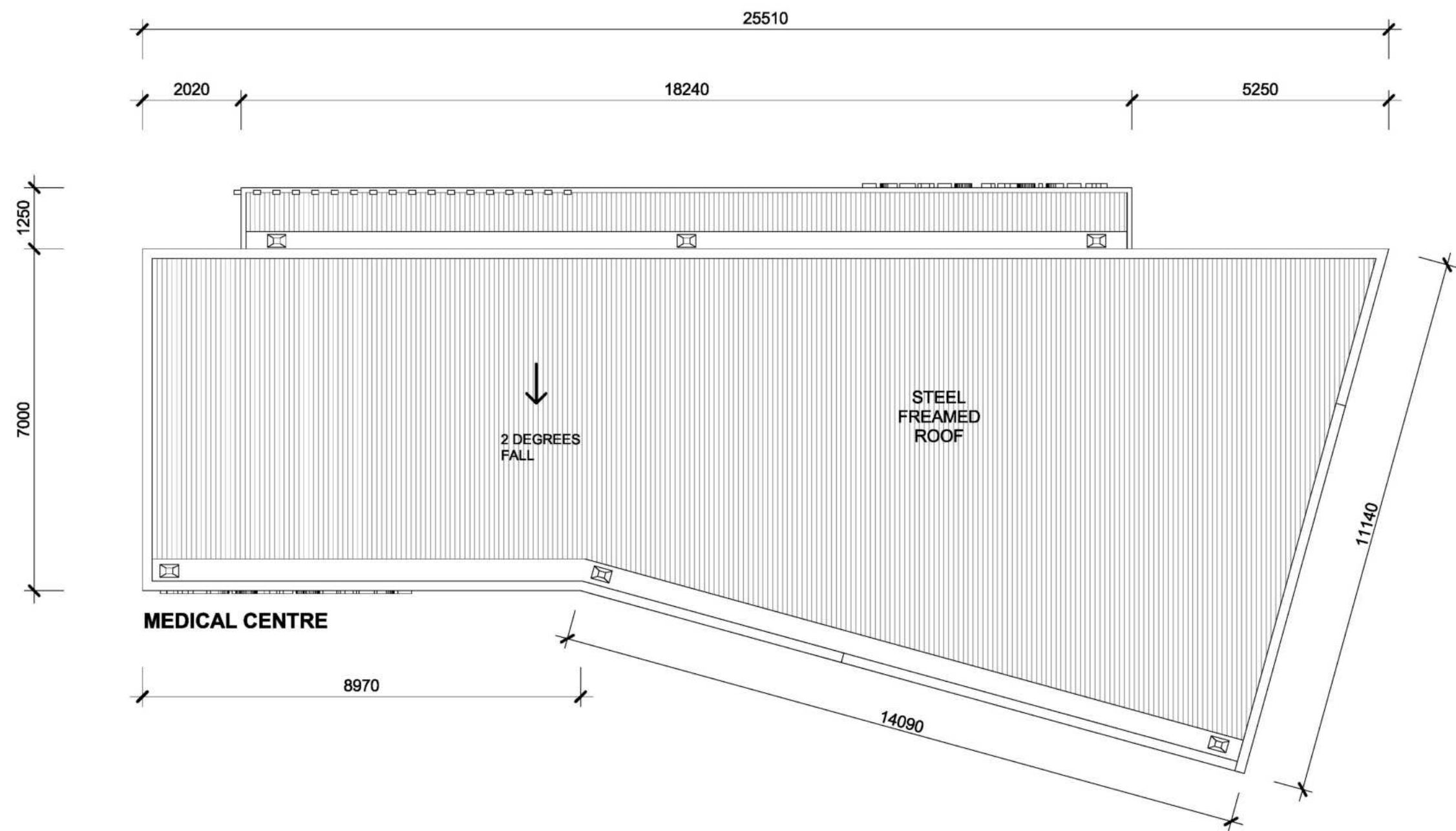
date:  
05.07.2019  
**PROPOSED CHILDCARE  
UPPER FLOOR PLAN**  
project no:  
**1506.06**  
drawing no:  
**TP04**

TOWN PLANNING

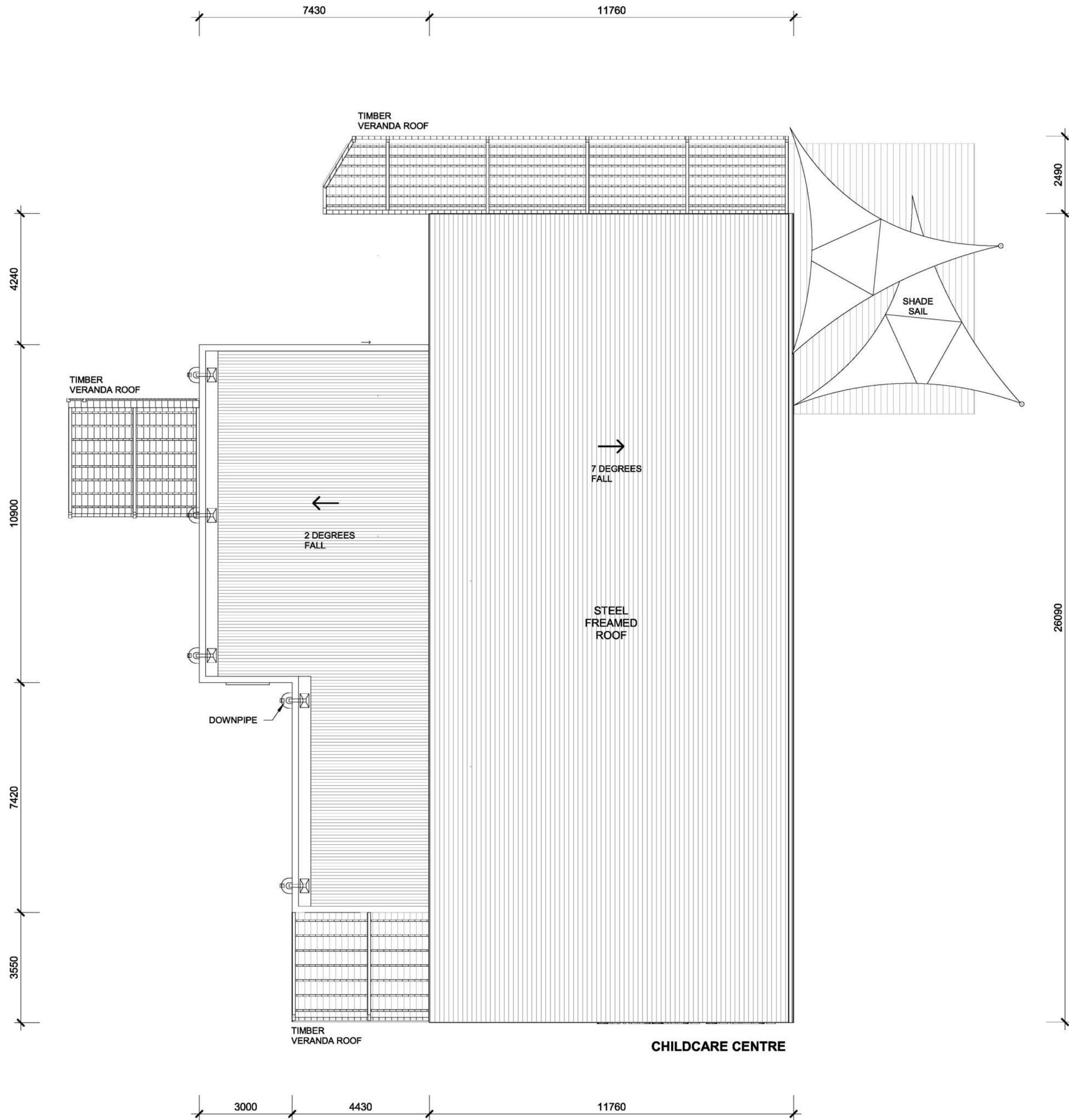
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1 PROPOSED MEDICAL CENTRE ROOF PLAN  
SCALE: 1 : 100 @A1



2 PROPOSED CHILDCARE ROOF PLAN  
SCALE: 1 : 100 @A1

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

client:

**TAG**

date:  
09.07.2019

PROPOSED ROOF  
PLANS

project no:  
**1506.06**

drawing no:  
**TP05**

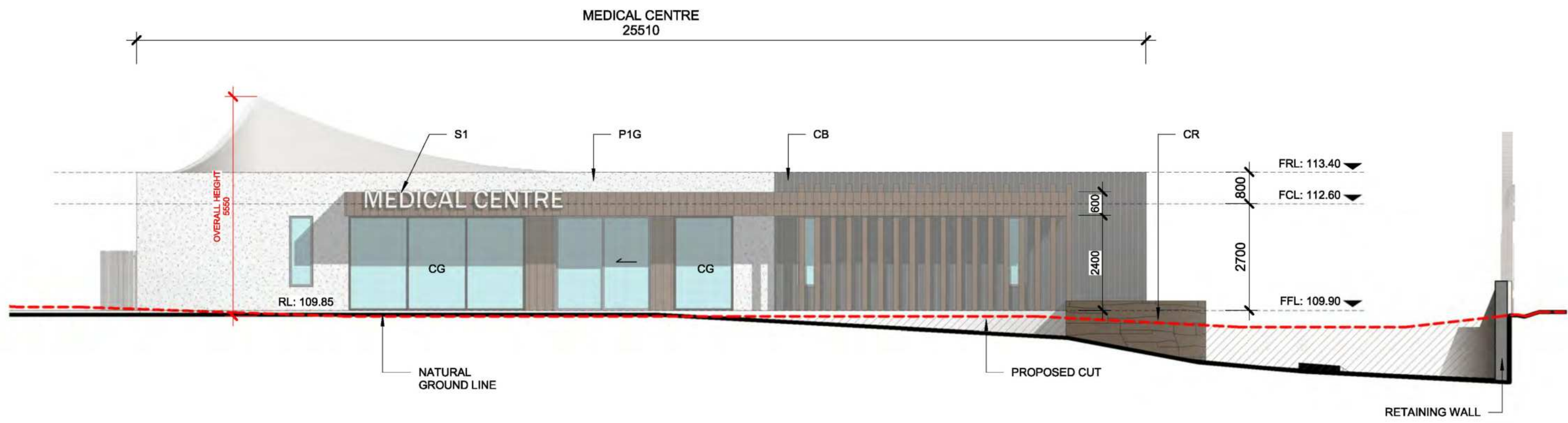
TOWN PLANNING

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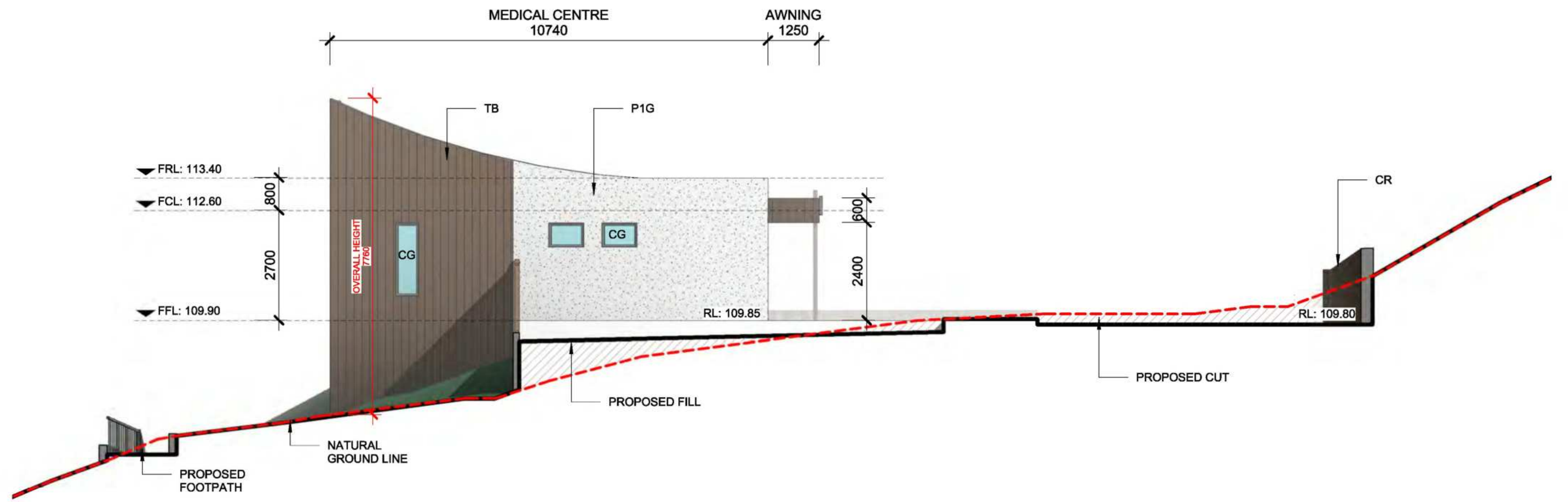
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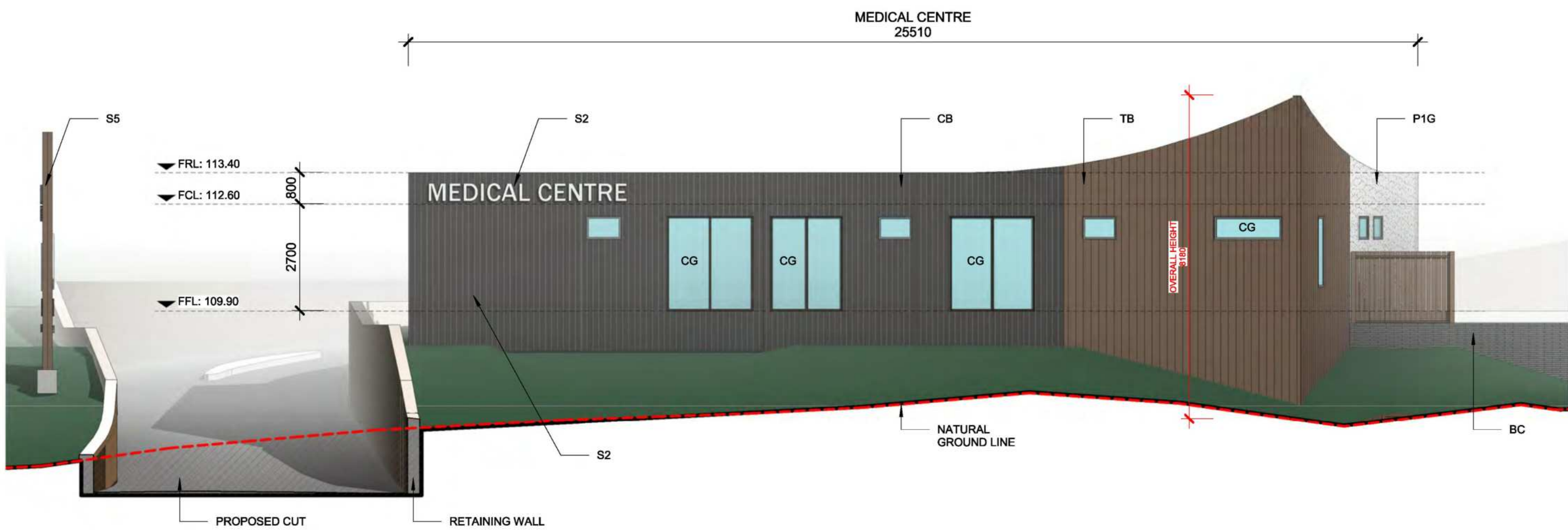
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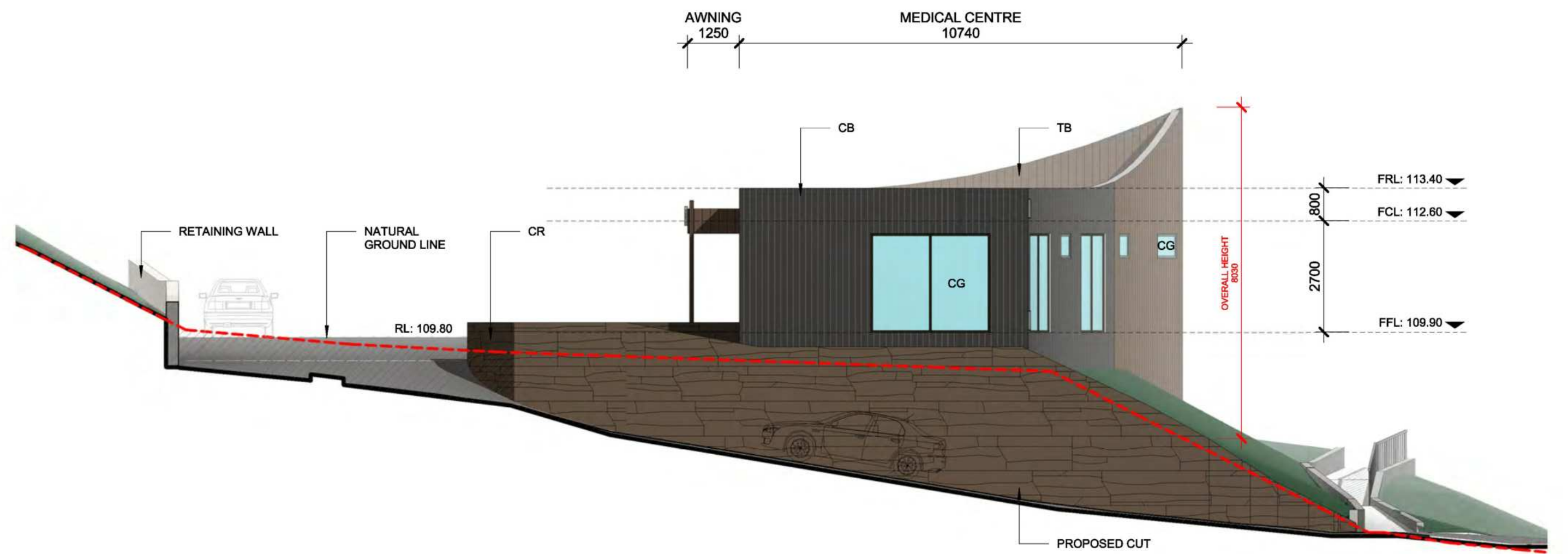
1 MEDICAL CENTRE NORTH ELEVATION  
SCALE: 1 : 100 @A1



2 MEDICAL CENTRE EAST ELEVATION  
SCALE: 1 : 100 @A1



3 MEDICAL CENTRE SOUTH ELEVATION  
SCALE: 1 : 100 @A1



4 MEDICAL CENTRE WEST ELEVATION  
SCALE: 1 : 100 @A1



5 PROPOSED STREETSCAPE  
SCALE: 1 : 200 @A1

#### MATERIAL & COLOUR SCHEDULE

BC		SELECTED GREY STONE WORK TO RETAINING WALL
CB		COLORBOND FACED INSULATED WALL CLADDING PANEL & ROOFING COLOUR: "MOUNTAIN"
CR		SELECTED STONE LIKE BROWN CONCRETE BLOCK SLEEPER REATINING WALL
TB		SELECTED TIMBER TO EXTERNAL SCREEN / DECKING / FEATURE WALL
YT		SELECTED YELLOW TILE
P1G		DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: MILTON MOON GREY PAINT FINISH TO RENDERED EXTERNAL PRECAST CONCRETE PANEL WALL
P2G		DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: RECKLESS GREY PAINT FINISH TO RENDERED EXTERNAL PRECAST CONCRETE PANEL WALL

DATE:	REVISION:	BY:

## PROPOSED MIXED-USE DEVELOPMENT 1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

client:  
**TAG**

date:  
05.07.2019

drawn:  
[signature]

checked:  
[signature]

project no:  
**1506.06**

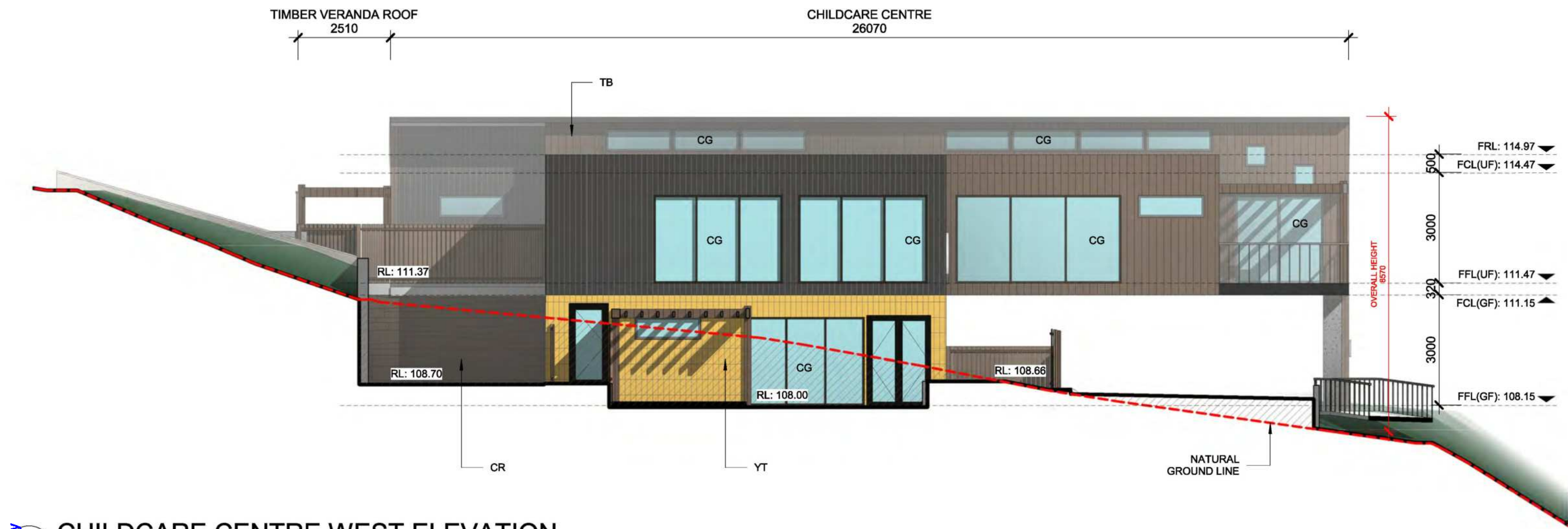
drawing no:  
**TP06**

**TOWN PLANNING**

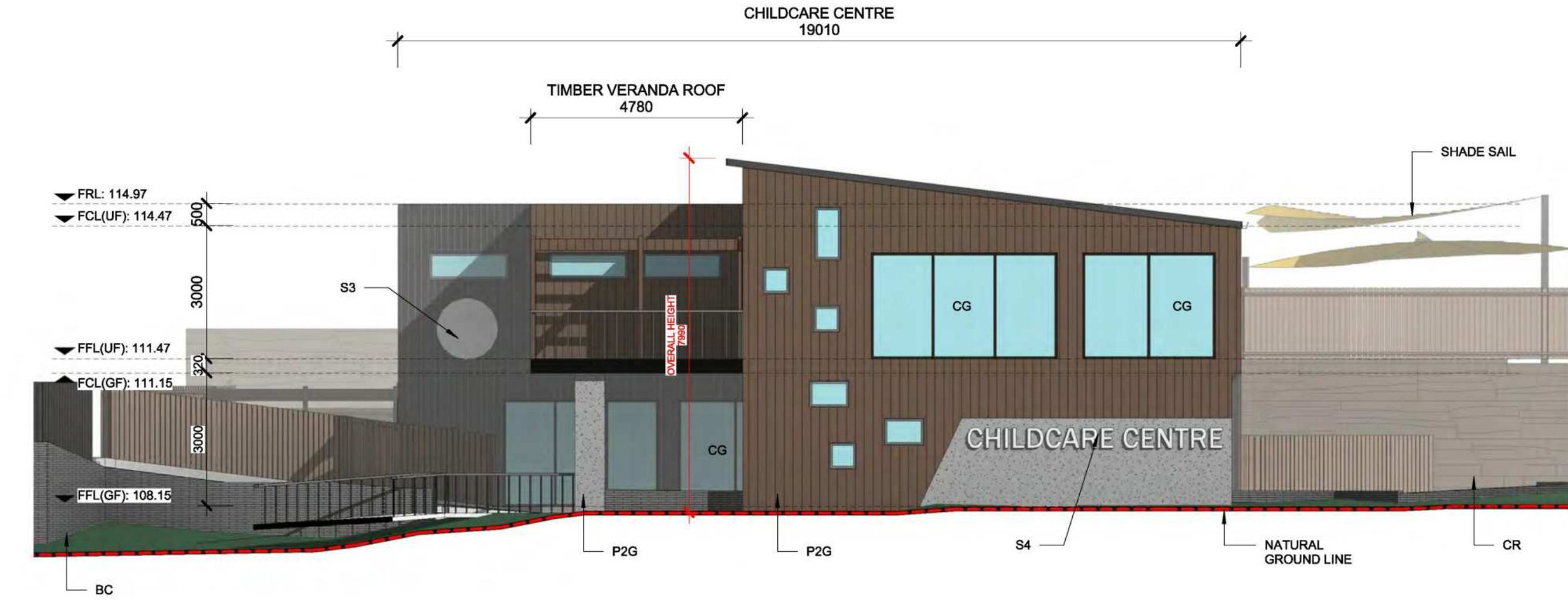
Fd Architects Pty. Ltd.  
T: (03) 9005 9598  
E: info@fdarchitects.com.au  
A: 5/752 Blackburn Road,  
Clayton, VIC, 3168



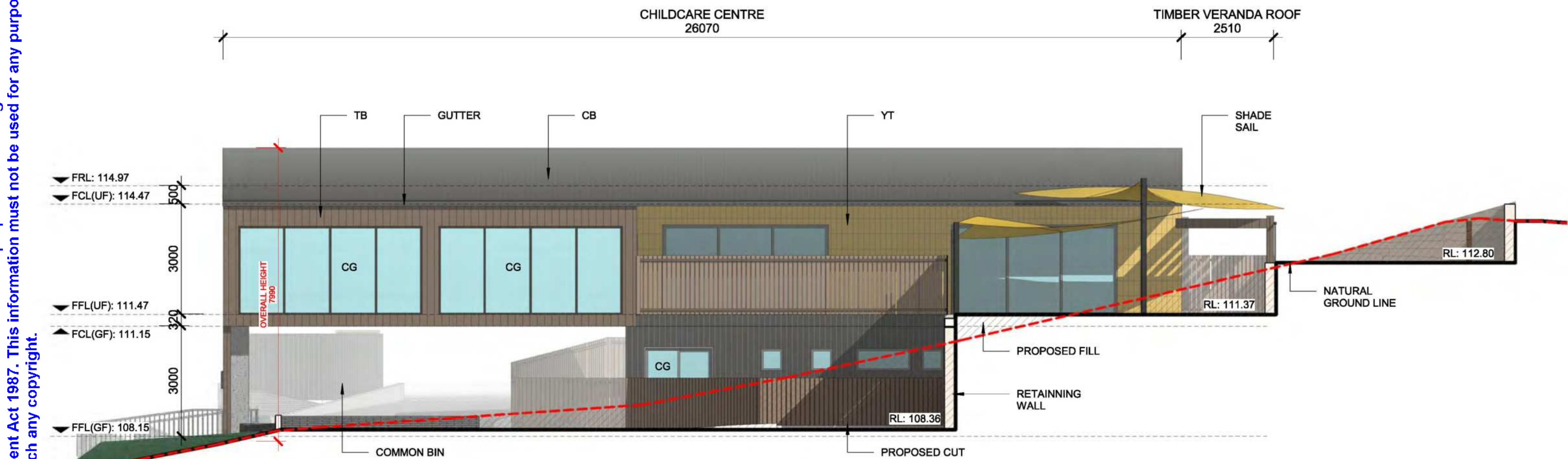
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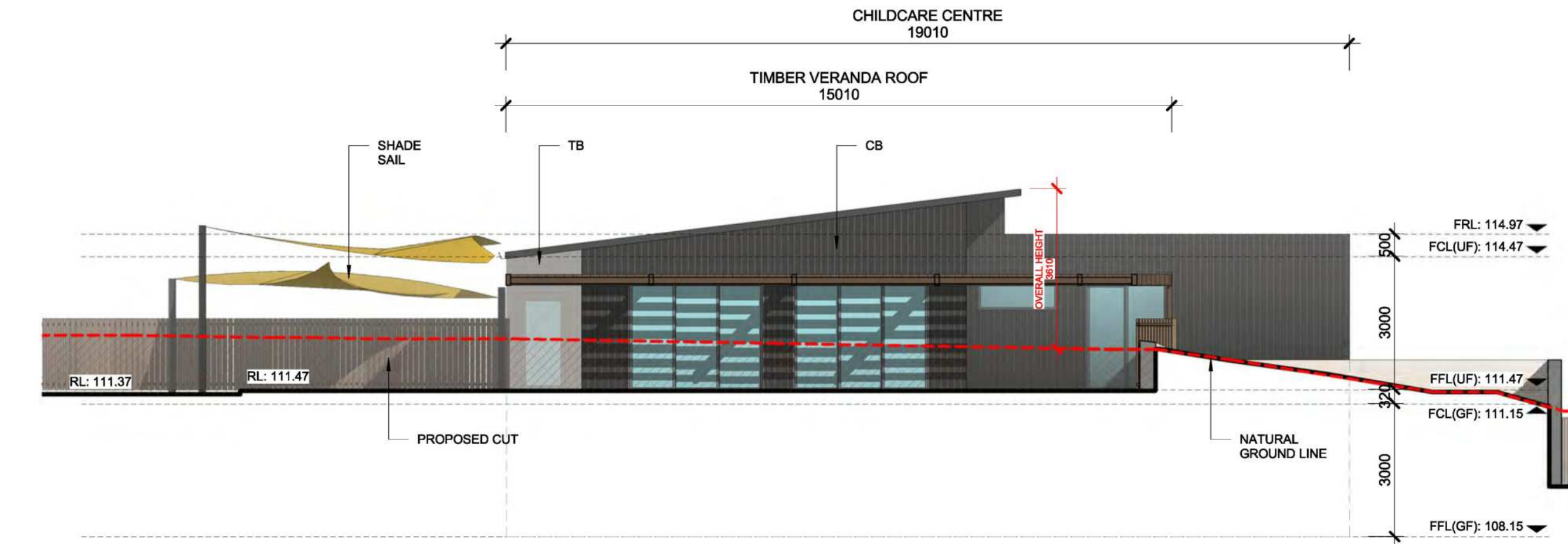
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SCALE: 1 : 100 @A1



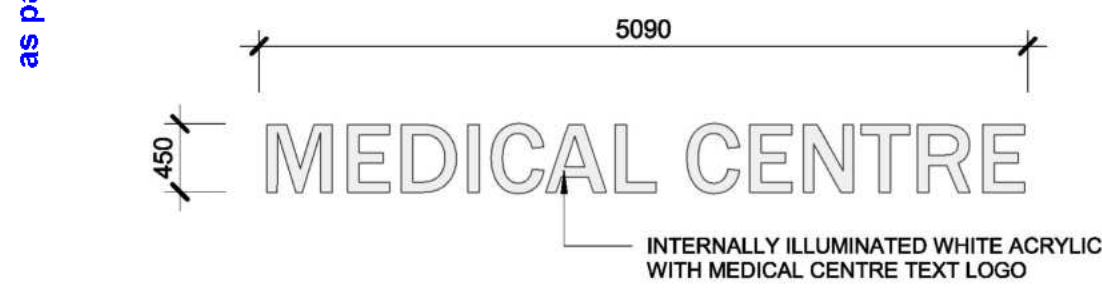
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SCALE: 1 : 100 @A1



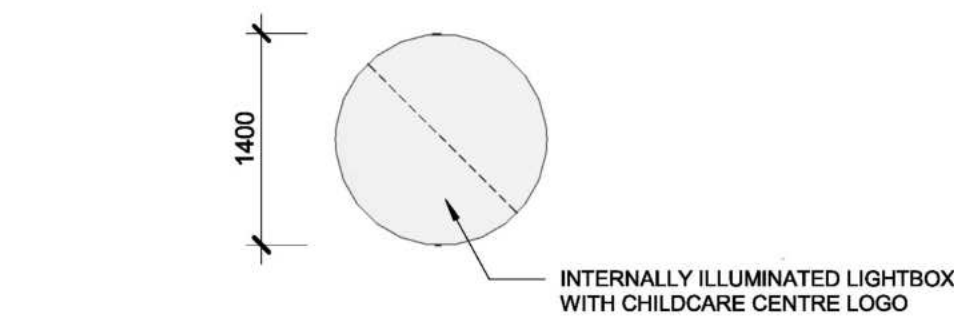
3 CHILDCARE CENTRE EAST ELEVATION  
SCALE: 1 : 100 @A1



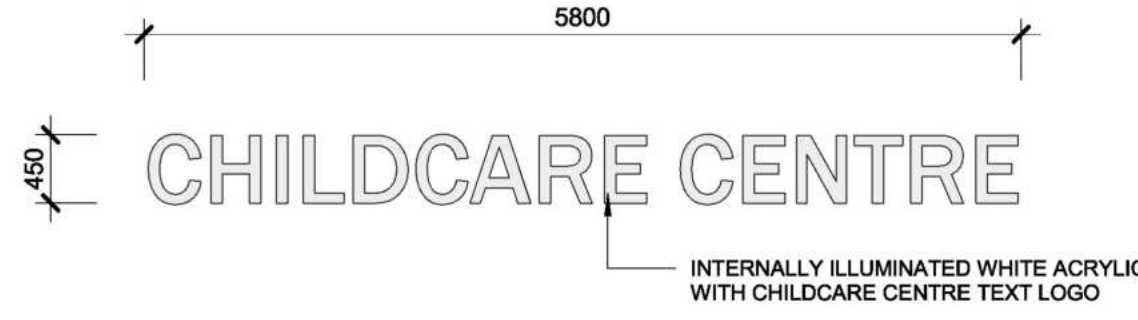
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SCALE: 1 : 100 @A1



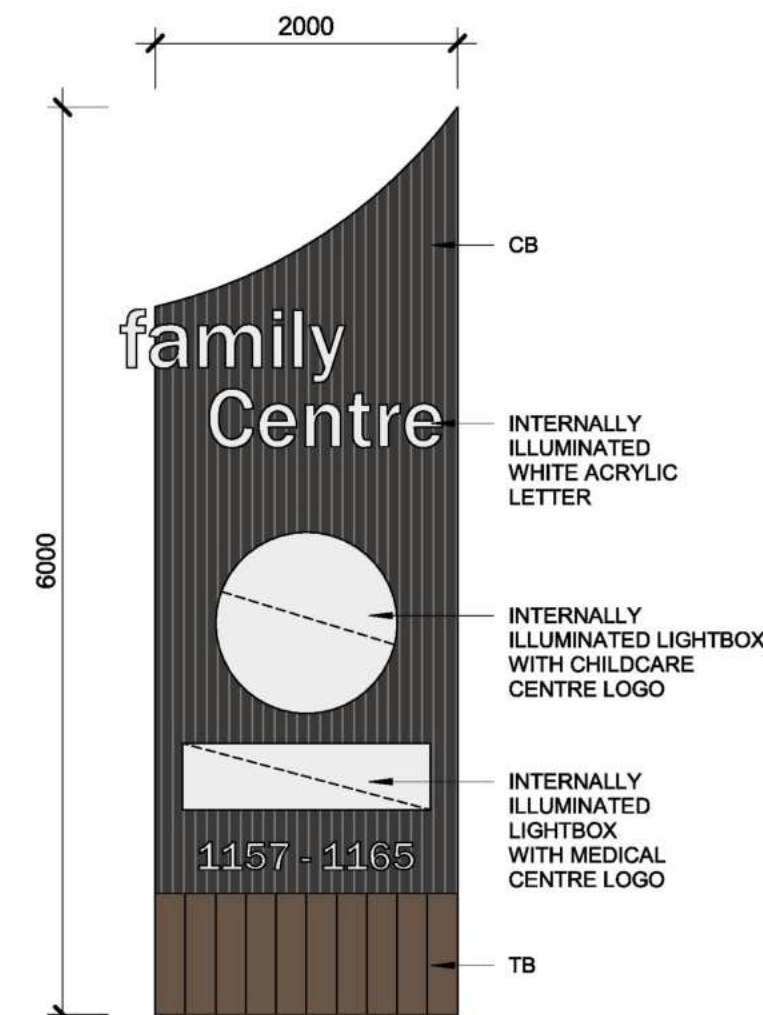
5 SIGN 1 & 2 ELEVATION (S1 & S2)  
SCALE: 1 : 50 @A1



6 SIGN 3 ELEVATION (S3)  
SCALE: 1 : 50 @A1



7 SIGN 4 ELEVATION (S4)  
SCALE: 1 : 50 @A1



8 SIGN 5 ELEVATION (S5)  
SCALE: 1 : 50

#### MATERIAL & COLOUR SCHEDULE

BC		SELECTED GREY STONE WORK TO RETAINING WALL
CB		COLORBOND FACED INSULATED WALL CLADDING PANEL & ROOFING PANEL COLOUR: "MOUNTAIN"
CR		SELECTED STONE LIKE BROWN CONCRETE BLOCK SLEEPER RETAINING WALL
TB		SELECTED TIMBER TO EXTERNAL SCREEN / DECKING / FEATURE WALL
YT		SELECTED YELLOW TILE
P1G		DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: MILTON MOON GREY PAINT FINISH TO RENDERED EXTERNAL PRECAST CONCRETE PANEL WALL
P2G		DULUX WEATHERSHIELD X10 GLOSS ACRYLIC COLOUR: RECKLESS GREY PAINT FINISH TO RENDERED EXTERNAL PRECAST CONCRETE PANEL WALL

DATE:	REVISION:	BY:

## PROPOSED MIXED-USE DEVELOPMENT 1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

client:	TAG
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date:	09.07.2019
project no:	1506.06
drawing no:	TP07

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THIRD EYE VIEW



VIEW FROM BURWOOD HIGHWAY



STREETSCAPE

DATE:	REVISION:	BY:

PROPOSED MIXED-USE DEVELOPMENT  
1157 - 1165 BURWOOD HIGHWAY, UPPER FERNTREE GULLY

client:  
  
TAG


date:  
09.07.2019

drawn:  
[redacted]

checked:  
[redacted]

project no:  
1506.06

drawing no:  
TP09

  
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TOWN PLANNING



## Appendix 3 Subsurface Testing Results

All excavation was supervised by Dr Tiffany James-Lee.

**Table 13 Test pit data log.**

No.	Location	Layer (mm)	Description	Inclusions	Munsell	pH	Artefacts
1	E350643.0319 N5804953.918	0-80	Dry, humic, coarse & medium grained sandy silt	Rootlets, gravel/ <b>road metal</b> , glass frags	10YR 3/2 VDGB	7.0	-
		80-200	Dry, compacted, hard sandy silt. Sondage 100-200mm in NW corner. Ceased at 200 mm due to <b>fill</b> /disturbed nature.	Lots of gravel/ <b>road metal</b>	2.5Y 4/1 dark grey	6.5	-
2	E350635.6757 N5804953.641	0-80	Dry, humic, coarse & medium grained sandy silt	Rootlets, glass frags	10YR 3/2 VDGB	7.0	-
		80-150	Dry, medium grained sandy silt	-	2.5Y 4/4 olive brown	6.0	-
		150-200	Dry, fine sandy silt	-	2.5Y 4/1 dark grey	6.5	-
		200-800	Dry, hard, weakly cemented but friable sandy silt	Charcoal; buckshot increasing with depth	2.5Y 3/1 VDG	6.5	-
		800	Mottled sandy clay	-	10YR 5/3 brown	6.5	-

**Table 14 Shovel test pit data log.**

No.	Location	Layer (mm)	Description	Inclusions	Munsell	pH	Artefacts
1	E350635.9846 N5804938.802	0-90	Humic, coarse to medium grained sandy silt	Rootlets	10YR 2/1 black	7.0	-
		90-350	Compacted, hard, medium-grained sandy silt	<b>Road metal</b>	10YR 5/3 brown	6.5	-



No.	Location	Layer (mm)	Description	Inclusions	Munsell	pH	Artefacts
		350-1000	Hard, weakly cemented, fine sandy silt. Ceased at 1000mm as sediment impossible to dig through	Occasional charcoal frags	10YR 6/2 light brownish grey	6.5	-
2	E350657.678 N5804924.799	0-70	Dry, coarse to medium grained sandy silt	Rootlets	10YR 2/1 black	7.0	-
		70-270	Dry, hard, cemented, medium grained sandy silt	<b>Road metal</b>	10YR 4/3 brown	6.5	-
		270-650	Damp, sandy clayey silt	-	10YR 4/2 DGB	6.5	-
		650-900	Moist, mottled silty clay		10YR 5/2 GB	6.5	-
3	E350603.7949 N5804969.195	0-50	Dry, coarse to medium grained sandy silt	Rootlets	10YR 2/1 black	7.0	-
		50-430	<b>Fill</b> – coarse sandy silt	Large cobbles & small boulders	10YR 4/2 DGB	6.5	-
		430-500	Mottled silty clay	-	10YR 6/4 light yellow brown	7.0	-
4	E350590.8589 N5804980.302	0-50	Dry, coarse to medium grained sandy silt	Rootlets	10YR 2/1 black	7.0	-
		50-400	<b>Fill</b> – silty clay	Cobbles, chunks of clay	10YR 5/4 & 10YR 6/2 yellowish brown & light brownish grey	6.5	-
		400-550	Silty sandy clay	Buckshot, charcoal	10YR 5/3 brown	6.5	-
5	E350650.1748 N5804952.877	0-40	Dry, coarse to medium grained sandy silt	Rootlets	10YR 4/3 brown	7.0	-
		40-750	<b>Fill</b> – dry, compact, hard, weakly cemented sandy silt. Ceased at 750mm as unable to excavate through sediment.	Cobbles, pebbles, buckshot	10YR 5/2 GB	6.5	-
6	E350668.9755 N5804910.9	0-50	<b>Fill</b> – dry, compact, hard, weakly cemented sandy silt. Ceased at 50mm due to fill on unnatural terrace – team discussion.	Cobbles, pebbles, buckshot	10YR 5/2 GB	6.5	-



No.	Location	Layer (mm)	Description	Inclusions	Munsell	pH	Artefacts
7	E350682.179 N5804925.053	0-50	Dry, coarse to medium grained sandy silt	Rootlets	10YR 4/3 brown	7.0	-
		50-600	<b>Fill</b> – dry, compact, hard, weakly cemented sandy silt	Buckshot, charcoal	10YR 5/2 GB	6.5	-
		600-630	Dry, moderately cemented, sandy silty clay	Buckshot			-
8	E350665.279 N5804931.671	0-150	Dry, coarse to medium grained sandy silt	Rootlets	10YR 4/3 brown	7.0	Dry, coarse to medium grained sandy silt
		150-500	<b>Fill</b> – sandy silt	cobbles	10YR 5/1		-
		500-700	Sandy clayey	iron/buckshot	2.5Y 6/1 grey		-
		700-780	Hard, weakly cemented, silty sandy clay	iron/buckshot	2.5Y 6/1 grey		-



## Appendix 4 Glossary

The glossary provides definitions of various terms used in this CHMP. There is often a degree of confusion about the use of terms such as *heritage place*, *historical place*, *archaeological place*. The definitions of these terms, as used in this report, have been included in the glossary. The term used most consistently is *heritage place*. For the purpose of discussion in this plan 'heritage place' can be subdivided into Aboriginal place and Historic place.

**Heritage place:** A place that has aesthetic, historic, scientific or social values for past, present or future generations – '...this definition encompasses all cultural places with any potential present or future value as defined above' ( [REDACTED] 1995, p. 7).

**Aboriginal place:** Aboriginal place is defined under Section 5 of the *Aboriginal Heritage Act 2006* as follows:

### 5 What is an Aboriginal place?

- (1) For the purposes of this Act, an Aboriginal place is an area in Victoria or the coastal waters of Victoria that is of cultural heritage significance to the Aboriginal people of Victoria.
- (2) For the purposes of subsection (1), *area* includes any one or more of the following—
  - (a) an area of land;
  - (b) an expanse of water;
  - (c) a natural feature, formation or landscape;
  - (d) an archaeological place, feature or deposit;
  - (e) the area immediately surrounding any thing referred to in paragraphs (c) and (d), to the extent that it cannot be separated from the thing without diminishing or destroying the cultural heritage significance attached to the thing by Aboriginal people;
  - (f) land set aside for the purpose of enabling Aboriginal human remains to be re-interred or otherwise deposited on a permanent basis;
  - (g) a building or structure.

**Alluvial terrace:** a platform created from deposits of alluvial material along river banks.

**Angular fragment:** a piece of stone that is blocky or angular, not flake-like.

**Archaeology:** the study of the remains of past human activity.

**Artefact scatter:** a surface scatter of cultural material. Aboriginal artefact scatters are defined as being the occurrence of five or more items of cultural material within an area of about 100 square metres. Artefact scatters are often the only physical remains of places where people have lived camped, prepared and eaten meals and worked.

**Backed piece:** a flake or blade that has been abruptly retouched along one or more margins opposite an acute (sharp) edge. Backed pieces include backed blades and geometric microliths. They are thought to have been hafted onto wooden handles to produce composite cutting tools. Backed



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pieces are a feature of the 'Australian small tool tradition', dating from between 5,000 and 1,000 BP in southern Australia (Holdaway & Stern, 2004).

**Blade:** a flake at least twice as long as it is wide.

**Burial place:** usually a sub-surface pit containing human remains and sometimes associated artefacts.

**Contact place:** see 'Aboriginal historical archaeological place'.

**Core:** an artefact from which flakes have been detached using a hammerstone. Core types include single platform, multi-platform and bipolar forms.

**Cortex:** original or natural (unflaked) surface of a stone.

**Cortical:** refers to the cortex.

**Flake:** a stone piece removed from a core by percussion (striking it) or pressure. It is identified by the presence of a striking platform and bulb of percussion, not usually found on a naturally shattered stone.

**Flaked piece:** a piece of stone with definite flake surfaces, which cannot be classified as a flake or core.

**Formal tool:** an artefact that has been shaped by flaking, including retouch, or grinding to a predetermined form for use as a tool. Formal tools include scrapers, backed pieces and axes.

**Geocentric Datum of Australia 1994 (GDA94):** a system of latitudes and longitudes, or east and north coordinates, centred at the centre of the earth's mass. GDA94 is compatible with modern positioning techniques such as the Global Positioning System (GPS). It supersedes older coordinate systems (AGD66, AGD84). GDA94 is based on a global framework, the IERS Terrestrial Reference Frame (ITRF), but is fixed to a number of reference points in Australia. GDA94 is the Victorian Government Standard and spatial coordinates for excavations, transects and places in CHMP documents.

**Geometric microlith:** a small tool that has been fashioned from breaking apart a microblade. The piece is then retouched or backed and a small tool formed.

**Grindstones:** upper (handstone) and lower (basal) stones used to grind plants for food and medicine and/or ochre for painting. A handstone sometimes doubles as a hammerstone and/or anvil.

**Hearth:** usually a sub-surface feature found eroding from a river or creek bank or a sand dune - it indicates a place where Aboriginal people cooked food. The remains of a hearth are usually identifiable by the presence of charcoal and sometimes clay balls (like brick fragments) and hearth stones. Remains of burnt bone or shell are sometimes preserved within a hearth.

**Isolated artefact:** the occurrence of less than five items of cultural material within an area of about 100 square metres. It/they can be evidence of a short-lived (or one-off) activity location, the result of an artefact being lost or discarded during travel, or evidence of an artefact scatter that is otherwise obscured by poor ground visibility.

**Manuport:** foreign fragment, chunk or lump of stone that shows no clear signs of flaking but is out of geological context and must have been transported to the place by people.

**Map Grid of Australia (MGA):** The official coordinate projection for use with the Geocentric Datum of Australia 1994 (GDA94).

**Mound:** these places, often appearing as raised areas of darker soil, are found most commonly in the volcanic plains of western Victoria or on higher ground near bodies of water. The majority were



probably formed by a slow build-up of debris resulting from earth-oven cooking; although some may have been formed by the collapse of sod or turf structures.

**Percussion:** the act of hitting a core with a hammerstone to strike off flakes.

**Platform preparation:** removal of small flake scars on the dorsal edge of a flake, opposite the bulb of percussion. These overhang removal scars are produced to prevent a platform from shattering.

**Pre-contact:** before contact with non-Aboriginal people.

**Post-contact:** after contact with non-Aboriginal people.

**Quarry (stone/ochre source):** a place where stone or ochre is exposed and has been extracted by Aboriginal people. The rock types most commonly quarried for artefact manufacture in Victoria include silcrete, quartz, quartzite, chert and fine-grained volcanics such as greenstone.

**Rejuvenation flake:** a flake that has been knapped from a core solely for the purpose of preparing a new platform and making it easier to get flakes off a core, as it reduces the angle between platform and core surface.

**Retouch:** a flake, flaked piece or core with intentional secondary flaking along one or more edges.

**Rock art:** 'paintings, engravings and shallow relief work on natural rock surfaces' (Rosenfeld, 1988, p. 1). Paintings were often produced by mineral pigments, such as ochre, combined with clay and usually mixed with water to form a paste or liquid that was applied to an unprepared rock surface. Rock engravings were made by incising, pounding, pecking or chiselling a design into a rock surface. Rare examples of carved trees occasionally survive.

**Rock shelter:** may contain the physical remains of camping places where people prepared meals, flaked stone, etc. They are often classed as a different type of place due to their fixed boundaries and greater likelihood of containing sub-surface deposits. Rock shelters may also contain rock art.

**Scarred tree:** scars on trees may be the result of removal of strips of bark by Aborigines e.g. for the manufacture of utensils, canoes or for shelter; or resulting from small notches chopped into the bark to provide hand and toe holds for hunting possums and koalas. Some scars may be the result of non-Aboriginal activity, such as surveyors' marks.

**Scraper:** a flake, flaked piece or core with systematic retouch on one or more margins.

**Shell midden:** a surface scatter and/or deposit comprised mainly of shell, sometimes containing stone artefacts, charcoal, bone and manuports. These place types are normally found in association with coastlines, rivers, creeks and swamps – wherever coastal, riverine or estuarine shellfish resources were accessed and exploited.

**Significance:** the importance of a heritage place or place for aesthetic, historic, scientific or social values for past, present or future generations.

**Striking platform:** the surface of a core, which is struck by a hammerstone to remove flakes.

**Structures (Aboriginal):** can refer to a number of different place types, grouped here only because of their relative rarity and their status as built structures. Most structures tend to be made of locally available rock, such as rock arrangements (ceremonial and domestic), fishtraps, dams and cairns, or of earth, such as mounds or some fishtraps.

**Stratified deposit:** material that has been laid down, over time, in distinguishable layers.

**Transect:** A fixed path along which one records archaeological remains.



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**Utilised artefact:** a flake, flaked piece or core that has irregular small flake scarring along one or more margins that does not represent platform preparation.



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## Appendix 5 Gazetteer

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*No new Aboriginal places were recorded as part of this CHMP.*



## Appendix 6 Significance assessment criteria

Assessing the heritage significance of an Aboriginal place is undertaken to make decisions about the best way to protect and manage the place. The assessment of significance can be complex and include a range of heritage values. The heritage values are broadly defined in the Burra Charter, the set of guidelines on cultural heritage management and practice prepared by the Australia International Council on Monuments and Places, as the 'aesthetic, historic, scientific or social values for past, present or future generations' (ICOMOS 1992, p. 21). Many Aboriginal places also have significance to a specific Aboriginal community.

Although there are no formal guidelines for the assessment of significance of Aboriginal archaeological places in Victoria, the definition of 'cultural heritage significance' under Section 4 of the *Aboriginal Heritage Act 2006* includes:

- Archaeological, anthropological, contemporary, historical, scientific, social or spiritual significance; and
- Significance in accordance with Aboriginal tradition.

Scientific significance is based on the capacity of Aboriginal places to provide us with historical, cultural or social information. The following evaluation will assess the scientific significance of the Aboriginal places recorded during this CHMP. The scientific significance assessment methodology outlined below is based on scores for research potential (divided into place contents and place condition) and for representativeness. This system is derived from Bowdler (1981).

Place contents refer to all cultural materials and organic remains associated with human activity at a place. Place condition refers to the degree of disturbance to the contents of a place at the time it was recorded. The representativeness of an Aboriginal place is assessed by whether the place is common, occasional, or rare in a given region. It is noted that assessments of representativeness are subjectively biased by current knowledge of the distribution and number of Aboriginal places and varies from place to place depending on the extent of archaeological research.

The determination of cultural significance for an Aboriginal place is expressed as a statement of significance. Nomination of the level of value—high, moderate, low or not applicable—for each relevant category is presented in Table 15.

The scientific significance assessment for scarred trees varies from the significance assessment outlined above because a scarred tree has no place contents rating (a tree either is, or is not, a scarred tree). The place condition and representativeness ratings used for scarred trees are indicated in Table 16 and overall scientific significance ratings for scarred tree places are based on a cumulative score for place condition and representativeness.

Representativeness refers to the regional distribution of scarred trees and is assessed on whether the place is common, occasional or rare in a given region. Representativeness should take into account the type and condition of the scar(s)/tree and the tree species involved. Scarred tree criteria are presented in Table 16.



**Table 15 Scientific significance assessment criteria**

Place Contents	Place Condition	Representativeness	Overall Significance
<b>0</b> - No cultural material remaining.	<b>0</b> - Place destroyed.		
<b>1</b> - Place contains a small number (e.g. 0–10 artefacts) or limited range of cultural materials with no evident stratification.	<b>1</b> - Place in a deteriorated condition with a high degree of disturbance; some cultural materials remaining.	<b>1</b> - Common occurrence	<b>1 - 3</b> - Low
<b>2</b> - Place contains a larger number, but limited range of cultural materials; and/or some intact stratified deposit remains; and/or rare or unusual example(s) of a particular artefact type.	<b>2</b> - Place in a fair to good condition, but with some disturbance.	<b>2</b> - Occasional occurrence	<b>4 - 6</b> - Moderate
<b>3</b> - Place contains a large number and diverse range of cultural materials; and/or largely intact stratified deposit; and/or surface spatial patterning of cultural materials that still reflect the way in which the cultural materials were deposited.	<b>3</b> - Place in an excellent condition with little or no disturbance. For surface artefact scatters this may mean that the spatial patterning of cultural materials still reflects the way in which the cultural materials were deposited.	<b>3</b> - Rare occurrence	<b>7 - 9</b> - High

**Table 16 Scarred tree scientific significance assessment criteria**

Place Condition	Representativeness	Overall Significance
<b>1</b> - Poorly preserved tree scar	<b>1</b> - Common occurrence	<b>1 - 2</b> - Low
<b>2</b> - Partly preserved tree scar	<b>2</b> - Occasional occurrence	<b>3 - 4</b> - Moderate
<b>3</b> - Well preserved example of a scarred tree	<b>3</b> - Rare occurrence	<b>5 - 6</b> - High



## Appendix 7 Compliance checklist

**Table 17 Compliance checklist**

Compliance Review Checklist		Yes	No
<i>Prior to the commencement of the activity</i>			
Has the CHMP been approved?			
Have all personnel been inducted or trained with regard to the requirements contained within the CHMP, particularly the contingency plans?			
<i>Discovery of Aboriginal cultural heritage during the activity</i>			
Has any Aboriginal cultural heritage been discovered during the activity? If yes, have the following been undertaken:			
	Have all works ceased within 20 metres of the discovery location(s)?		
	If required, has the exposed Aboriginal cultural heritage been protected by a suitable barrier (e.g. fencing)?		
	Has a heritage advisor been notified within 24 hours of the discovery?		
	Has the heritage advisor notified the Secretary, DPC of the discovery?		
	Has the heritage advisor completed new or updated Aboriginal place record(s) for the VAHR?		
	Has an appropriate mitigation or salvage strategy been developed and implemented?		
<i>Discovery of human remains during the activity</i>			
Have any actual or suspected human remains been discovered during the activity? If yes, have the following been taken:			
	Has all works ceased within vicinity of the discovery location?		
	If required, have the human remains been protected by a suitable barrier (e.g. fencing)?		
	Have Victoria Police and the Coroner's Office been notified?		
	If there are reasonable grounds to believe that the remains may be Aboriginal Ancestral Remains, have the Coronial Admissions and Enquiries hotline been contacted?		
	If it is confirmed by these authorities that the remains are Aboriginal Ancestral Remains, has the Victorian Aboriginal Heritage Council been contacted?		
	Has an appropriate mitigation or salvage strategy been developed and implemented?		