# Consideration of combined Amendment C184knox and Planning Permit Application P/2020/6049

Following are the attachments circulated under separate cover in relation to the Item 6.5 of the Council Meeting agenda, entitled Consideration of combined Amendment C184knox and Planning Permit Application P/2020/6049

#### **ATTACHMENTS**

- 1. Attachment 1- Panel report [**6.5.1** 134 pages]
- 2. Attachment 2 Amendment documents for Adoption [6.5.2 20 pages]
- 3. Attachment 3 Officers recommended version of the draft planning permit post exhibition [6.5.3 22 pages]
- 4. Attachment 4 Application documents for adoption [6.5.4 626 pages]
- 5. Attachment 5 Contextual documents for noting [**6.5.5** 70 pages]
- 6. Attachment 6 Draft S173 Agreement [6.5.6 15 pages]
- 7. Attachment 7 Officers preferred final version of the draft planning permit and NRZ7 submitted during panel process [6.5.7 27 pages]

# Planning Panels Victoria

Knox Planning Scheme Amendment C184knox and Permit Application P/2020/6049 Former Norvel Road Quarry, Ferntree Gully

**Panel Report** 

Planning and Environment Act 1987

14 May 2024



#### How will this report be used?

This is a brief description of how this report will be used for the benefit of people unfamiliar with the planning system. If you have concerns about a specific issue you should seek independent advice.

The planning authority must consider this report before deciding whether to adopt the Amendment. [section 27(1) of the *Planning and Environment Act 1987* (the PE Act)]

For the Amendment to proceed, it must be adopted by the planning authority and then sent to the Minister for Planning for approval.

The planning authority may also recommend to the Minister that a permit that applies to the adopted Amendment be granted. The Minister may grant or refuse the permit subject to certain restrictions. [sections 96G and 96I of the PE Act]

The planning authority is not obliged to follow the recommendations of the Panel, but it must give its reasons if it does not follow the recommendations. [section 31 (1) of the PE Act, and section 9 of the *Planning and Environment Regulations 2015*]

If approved by the Minister for Planning a formal change will be made to the planning scheme. Notice of approval of the Amendment will be published in the Government Gazette. [section 37 of the PE Act]

Planning Panels Victoria acknowledges the Wurundjeri Woi Wurrung People as the traditional custodians of the land on which our office is located. We pay our respects to their Elders past and present.

Planning and Environment Act 1987

Panel Report pursuant to section 25 of the PE Act

fine Kell 1500

Knox Planning Scheme Amendment C184knox and Permit Application P/2020/6049 and Permit Application P/2020/6049

Former Norvel Road Quarry, Ferntree Gully

14 May 2024

Lisa Kendal, Chair

Peter Bettess, Member

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## **Glossary and abbreviations**

2020 vegetation assessment	Vegetation assessment prepared in June 2020 included in the Biodiversity Assessment (September 2023)
Amendment	Knox Planning Scheme Amendment C184knox
Arborist Report	Arboricultural Assessment and Report - Norvel Estate, Ferntree Gully, Treemap Arboriculture, April 2023
Biodiversity Assessment	Biodiversity Assessment - 29Q Northville Rd, Ferntree Gully, Ecolink Consulting, December 2020
CFA	Country Fire Authority
CHMP	Cultural Heritage Management Plan
Council	Knox City Council

**DEECA** Department of Environment, Energy and Climate Action **DELWP** Department of Environment, Land, Water and Planning

**Environmental Audit** Environmental Audit Report, Australian Environmental Auditors,

20 April 2016

ESO<sub>2</sub> Environmental Significance Overlay Schedule 2 – Sites of

biological significance

**Geotechnical Assessment** Geotechnical Assessment, Civil Test Pty Ltd, 11 March 2015

Knox Housing Strategy 2015 **Knox Housing Strategy** 

Landscape Plan Guidelines

Knox Landscape Plan Guidelines, Knox City Council, 2019

Landscape Report Norvel Estate, Ferntree Gully - Landscape Report, Urbis, March

2023

**Lorimer Report** Norvel Estate Plant Regeneration, Dr Lorimer, October 2021

Minister Minister for Planning

Ministerial Direction 1 Ministerial Direction 1 Potentially Contaminated Land

Ministerial Direction 19 Ministerial Direction 19 Amendments that may result in impacts

on the environment, amenity and human health

Ministerial Direction on

Form and Content

Ministerial Direction 7(5) Form and Content of Planning Schemes

**Native Vegetation** 

Guidelines

Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and

Planning 2017)

NRZ7 Neighbourhood Residential Zone, Schedule 7 – Norvel Estate

**PCRZ** Public Conservation and Resource Zone PE Act Planning and Environment Act 1987

**Permit Application** Planning Permit Application P/2020/6049

**Planning Report** Norvel Estate, Norvel Road, Ferntree Gully – Town Planning

Report, Urbis, March 2023

Planning Scheme Knox Planning Scheme

Planning Practice Note 30: Potentially Contaminated Land PPN30

**PPRZ** Public Park and Recreation Zone

Proponent Norvel Estate Pty Ltd

Stormwater Management

Site 34 Site 34: Blind Creek Billabong and Quarry

Stormwater Management Plan – proposed Residential

Plan Development, Norvel Road, Ferntree Gully, Cardno, May 2021

Knox Planning Scheme Amendment C184knox and Permit Application P/2020/6049 | Panel Report | 14 May 2024

SBS Study Sites of Biological Significance in Knox – 2nd Edition

SUZ2 Special Use Zone, Schedule 2 - Earth and Energy Resources

Industry

Traffic and Transport Assessment – Norvel Estate Residential

Assessment Development, Cardno, March 2023

TPZ Tree Protection Zone

Urban Context and Design Norvel Estate, Ferntree Gully – Urban Context Report and Design

Report Response, Urbis, February 2023

Urban Design Guidelines Urban Design Guidelines – Revision D 30 May 2021

Urban Stormwater: BPEM Urban Stormwater: Best Practice Environmental Management

Guidelines, CSIRO 1999

#### **Overview**

Amendment summary	
The Amendment and Permit Application	Knox Planning Scheme Amendment C184knox and Permit Application P/2020/6049
Common name	Former Norvel Road Quarry, Ferntree Gully
Brief description	The proposal seeks to rezone land to facilitate a residential development, recognise open space and conserve the natural environment
Subject land	The former Norvel Road Quarry site, Ferntree Gully, and land at the Seecal Road, Castricum Place, Norvel Road Reserves and adjoining bushland in Ferntree Gully (see Figure 1)
The Proponent	Norvel Estate Pty Ltd
Planning Authority	Knox City Council
Authorisation	4 April 2022, with conditions
Exhibition	14 June to 21 July 2023
Submissions	Number of Submissions: 31 Opposed or raising issues: 25

Panel process		
The Panel	Lisa Kendal (Chair) and Peter Bettess	
Supported by	Georgia Brodrick, Project Officer, Planning Panels Victoria	
Directions Hearing	By video, 25 January 2024	
Panel Hearing	In person at the PPV Hearing Room 2, 1 Spring Street, Melbourne and online – 12 and 13 March 2024	
Site inspections	Unaccompanied, 4 March 2024	
Parties to the Hearing	Knox City Council, represented by Matthew Gilbertston of Glossop Town Planning	
	Norvel Estate Pty Ltd, represented by John Cicero of Best Hooper Lawyers, who called the following expert evidence:	
	- Biodiversity from Dr Stuart Cooney of Ecolink Consulting	
	- Drainage from Nick Glasson of Stantec	
	- Traffic from Brett Young of Ratio Consultants	
	- Planning from David Crowder of Ratio Consultants	
	Geoff Spillane	
	Leonara and Stuart Minican	
Citation Knox PSA C184knox [2024] PPV		
Date of this report	14 May 2024	

## **Executive summary**

Combined Knox Planning Scheme Amendment C184knox and Permit Application P/2020/6049 (the Amendment) and Planning Permit Application P/2020/6049 (Permit Application) seeks to facilitate development of Norvell Estate in Ferntree Gully.

Norvell Estate is a proposed 138 lot residential development on the site of the former Norvel Road Quarry which was used for clay extraction and closed in around 2009.

The Knox Planning Scheme identifies the:

- site as Strategic Investigation Site 6, suitable for residential development at a range of densities
- northern part of the site which contains bushland abutting the Blind Creek corridor as a site of biological significance in the municipality of Knox
- surrounding land as Knox Neighbourhood Area with detached houses and dual occupancy as preferred housing types.

#### The Amendment seeks to:

- rezone the land from Special Use Zone Schedule 2 Earth and Energy Resources Industry (SUZ2) to Neighbourhood Residential Zone Schedule 7 – Norvel Estate (NRZ7)
- rezone the existing bushland from SUZ2 to Public Conservation and Resource Zone
- rezone the abutting linear reserve from part SUZ2 and part Neighbourhood Residential
   Zone Schedule 4 to Public Park and Recreation Zone
- rezone part of the Castricum Place, Seecal Road, and Norvel Road reserves from SUZ2 to NRZ7
- amend Clause 22.07 Development in Residential Areas and Neighbourhood Character to exempt the NRZ7 from Clause 22.07.

The Permit Application seeks a permit for the staged subdivision of residential lots, development of pathways, removal of native vegetation and associated works. Knox City Council and Norvel Estate Pty Ltd (the Proponent) have entered into section 173 agreements relating to transfer of bushland to Council, requiring urban design outcomes and securing eight lots for social housing.

In response to exhibition of the Amendment and Permit Application 31 submissions were received. There were several supporting submissions and one submission supporting the proposed social housing.

No authorities objected to the proposal, however some requested changes to planning permit conditions. The Proponent did not make a submission during exhibition of the proposal, however it sought a number of changes to permit conditions through the Hearing process.

Key issues raised in submissions included:

- · land contamination and stability
- biodiversity and native vegetation
- traffic and transport
- stormwater and flooding.

The Panel considers the site is ideally located for residential development. The Amendment and Planning Permit will provide for additional housing and housing choice in an established well-serviced residential area on a large, generally unconstrained site.

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Subject to its recommendations, the Panel concludes:

- The rehabilitated quarry land is adequately stable following quarry closure and site rehabilitation and is suitable for residential development.
- The Biodiversity Assessment is adequate to inform native vegetation offsets.
- The biodiversity impacts of the new proposed bushland/pathway and educational signage have not been adequately considered and should be considered as part of a separate process.
- Traffic and transport impacts are acceptable.
- The proposed management of stormwater is appropriate.
- The proposal will improve outcomes related to existing flooding on surrounding land.
- The proposal is acceptable with regard to other issues including housing density, landscaping, fencing, amenity impacts, sustainable development, open space provision, specific lot requirements and service authority requirements are appropriate.

The proposal will result in net community benefit with:

- provision of housing, including social housing, close to jobs, services and transport
- protection of a designated site of biological significance
- provision of open space with connectivity to an existing open space/bushland corridor along Blind Creek.

The Panel concludes Amendment is well founded and strategically justified and makes proper use of the Victoria Planning Provisions. The Planning Permit should be issued subject to changes to the planning permit recommended by the Panel.

#### Recommendations

Based on the reasons set out in this Report, the Panel recommends:

- Adopt Knox Planning Scheme Amendment C184knox and Permit Application P/2020/6049 as exhibited, subject to amending the Neighbourhood Residential Zone Schedule 7, as shown in Appendix D of this Report.
- 2. Issue Planning Permit P/2020/6049 as exhibited, subject to the conditions as shown in Appendix E of this Report.

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# PART 1 – INTRODUCTION AND CONTEXT

## 1 Introduction

#### 1.1 The site and proposal

#### (i) The proposal

The proposal is to develop the Norvel Estate on the former Norvel Road Quarry land in Ferntree Gully (see Figure 1).

Norvel Estate Pty Ltd (Proponent) is the Proponent for the proposal, which includes combined Knox Planning Scheme Amendment C184knox (the Amendment) and Planning Permit Application P/2020/6049 (Permit Application).

Figure 1 Subject site



Source: Expert Witness Statement, David Crowder, page 13

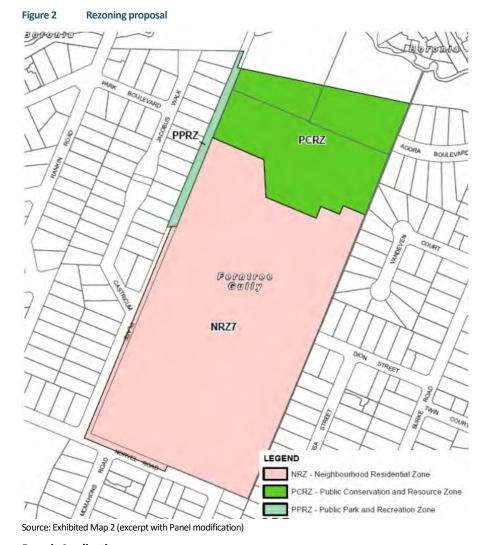
#### The Amendment

The Amendment proposes to amend the Knox Planning Scheme (Planning Scheme) to:

- rezone land from the Special Use Zone Schedule 2 Earth and Energy Resources Industry (SUZ2) to Neighbourhood Residential Zone Schedule 7 – Norvel Estate (NRZ7)
- rezone the existing bushland from SUZ2 to the Public Conservation and Resource Zone (PCRZ)
- rezone the abutting linear reserve from part SUZ2 and part Neighbourhood Residential
   Zone Schedule 4 to Public Park and Recreation Zone (PPRZ)
- rezone part of the Castricum Place, Seecal Road, and Norvel Road reserves from SUZ2 to NRZ7
- amend Clause 22.07 Development in Residential Areas and Neighbourhood Character to exempt the NRZ7 from Clause 22.07
- amend Planning Scheme Map 2 to reflect the rezoning.

The rezoning plan is shown in Figure 2.

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#### **Permit Application**

Details of the Permit Application and proposed subdivision include:

- Norvel Estate is proposed to be 9.2 hectares, consisting of 138 lots including eight residential lots for social housing
- lot sizes ranging from 116 square metres to 581 square metres
- three vehicle access connections to the external road network are proposed comprising:
  - a new connection to Norvel Road at the south of the site (located approximately in the same location as an existing crossover)
  - the extension of Norvel Road running north to south into the site at the southern boundary
  - the extension of Dion Street into the site at the eastern site boundary
- local roads servicing the new dwellings including:
  - Access Street 7.3 metre carriageway
  - Access Place 5.5 metre carriageway

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- pedestrian footpaths along all streets with a residential frontage
- construction of a wetland, heavily vegetated swale for stormwater purposes and several flood mitigation systems
- underground reticulated utility services
- removal of three trees, protection of 108 trees, 173 new street trees and landscaping
- 2.07 hectares of open space comprising the Bushland Reserve (Lot 139) and the Reserve (Lot 140)
- provision of a new shared path along the western site boundary connecting Castricum Place and the Blind Creek Trail.

The subdivision masterplan is shown in Figure 3.

Figure 3 Norvel Estate subdivision masterplan



Source: Context and Design Response Report, page 31

#### (ii) Site details

#### **Location and context**

The site is located in Ferntree Gully approximately 30 kilometres east of Melbourne CBD.

The land affected by the proposal includes the former Norvel Quarry, adjoining bushland and the road reserves for Seecal Road, Castricum Place and Norvel Road. Figure 4 shows the land parcels affected by the Amendment.

The former Norvel Quarry was used for clay extraction to manufacture bricks from the 1950s to around 2009, and has since been rehabilitated.

The approximately 9.2 hectare site is bound by Norvel Road to the south, Blind Creek to the north, Castricum Place to the west and residential properties to the east.

The site is undulating and gently sloping towards Blind Creek. The northern end of the site contains native vegetation/bushland, some of which is high quality remnant vegetation.

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Figure 4 Land affected by the Amendment

Source: Council Part A submissions

The following are within proximity of the site:

- three bus stops (between 836 940 metres) and Boronia Train Station (1.33 kilometres to the north)
- the Principle Bicycle Network along Blind Creek Trail
- three primary schools within 800 metres
- Boronia Junction approximately 800 metres away including library, basketball stadium and shops.

#### **Existing planning controls**

Current land use zone and overlay provisions are show in Figure 5. The Environmental Significance Overlay Schedule 2 – Sites of biological significance (ESO2) applies to part of the site. The surrounded residential land is zoned Neighbourhood Residential Zone Schedule 4 – Knox Neighbourhood Areas, and the bushland along Blind Creek to the north is zoned Urban Floodway Zone.

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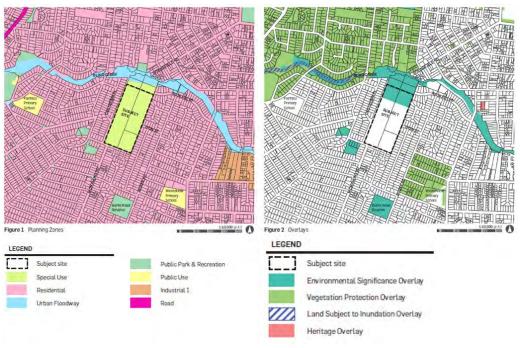


Figure 5 Current zone and overlay provisions

Source: Urban Context and Design Report, page 5

#### (iii) Supporting documents

The following supporting documents were exhibited with the proposal:

- Affordable Housing Strategy Norvel Estate, Ferntree Gully, Affordable Development Outcomes, February 2023
- Arboricultural Assessment and Repo-rt Norvel Estate, Ferntree Gully, Treemap Arboriculture, April 2023 (Arborist Report)
- Biodiversity Assessment 29Q Northville Rd, Ferntree Gully, Ecolink Consulting, December 2020 (Biodiversity Assessment)
- Bushfire Development Report, Terramatrix, January 2021 updated July 2022 and March 2023
- Cultural Heritage Management Plan, Andrew Long + Associates, February 2023
- Norvel Estate, Ferntree Gully Landscape Report, Urbis, March 2023 (Landscape Report)
- Social Impact Assessment Norvel Estate, publicplace, February 2021
- Stormwater Management Plan proposed Residential Development, Norvel Road, Ferntree Gully, Cardno, May 2021 (Stormwater Management Plan)
- Planning Report
- Traffic and Transport Assessment Norvel Estate Residential Development, Cardno, March 2023 (Traffic and Transport Assessment)
- Norvel Estate, Ferntree Gully Urban Context Report and Design Response, Urbis, February 2023 (Urban Design Report)
- Documents relating to the planning permit, including the application form, certificates of title including section 173 agreements and *Urban Design Guidelines* Revision D 30 May

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2021 (Urban Design Guidelines), metropolitan planning levy, draft planning permit, subdivision master plan and Clause 56 assessment.

Further application material provided by Knox City Council (Council) to the Panel included:

- Utility Services Infrastructure Report, Cardno, 9 January 2021
- Geotechnical Assessment, Civil Test Pty Ltd, 11 March 2015 (Geotechnical Assessment)
- Environmental Audit Report, Australian Environmental Auditors, 20 April 2016 (Environmental Audit).

#### 1.2 Background

#### (i) Chronology

Council and the Proponent provided details of the history of the site and Permit Application, which the Panel has summarised in Table 1.

Table 1 Site history and chronology of events

Timeline	Activity
Around 1955	Commencement of clay extraction from the Norvel Road Quarry for manufacture into bricks and other products
1980's	Rezoning of the quarry land from residential to extractive industry and:
	<ul> <li>progressive transfer of the quarry land to Council for use as landfill (never used for this purpose)</li> </ul>
	<ul> <li>transfer of the northern portion of land adjacent to Blind Creek to Council in exchange for additional extraction approvals</li> </ul>
	A section 173 agreement was placed on title to facilitate rehabilitation of the land and a land swap with Council
2006	Council resolved to prepare a planning scheme amendment to facilitate residential development of the site, subject to introducing a section 173 agreement to provide for a land exchange between Council and the previous site owner, Robertson Industries
Around 2009	Norvel quarry closure
2009	The 1980's section 173 agreement was removed and replaced with a new section 173 agreement (AG370823M) to facilitate a planning scheme amendment for residential development of the site. This included rezoning of the land to a residential zone, application of development plan and environmental audit overlays and urban design guidelines
2013 – 2015	Close and backfilling the quarry was undertaken in accordance with an Environmental Management Plan
April 2016	A certificate of environmental audit 1 was issued for the site
April 2018	The Proponent lodged an application with Council to proceed with a combined Amendment and Permit Application under section 96A of the <i>Planning and Environment Act 1987</i> (PE Act)

Council's Part A submission, Attachment B1

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Timeline	Activity		
25 October 2021	Council resolved to enter into a new section 173 agreement (AV502900K) with the Proponent to:		
	- secure reserves for bushland, drainage, fire buffer and other purposes		
	<ul> <li>ensure future development is in line with updated Urban Design Guidelines</li> </ul>		
22 November 2021	Council resolved to, among other things:		
	- endorse the draft Amendment and planning permit		
	<ul> <li>seek authorisation to prepare and exhibit the Amendment and planning permit</li> </ul>		
	<ul> <li>subject to receiving authorisation, to place the documentation on public exhibition, including supporting documents</li> </ul>		
	<ul> <li>authorise the Chief Executive Officer to make minor changes in response to any condition of authorisation</li> </ul>		
	<ul> <li>enter into a section 173 agreement with the Proponent to ensure provision of a minimum of eight social housing lots</li> </ul>		
4 April 2022	Council received authorisation from the Minister for Planning (Minister) to prepare and exhibit the Amendment, subject to conditions		
11 April 2022	The section 173 agreement (AV502820H) relating to social housing was registered on title		
	The 2009 section 173 agreement (AG370823M) was removed from title and the new section 173 agreement (AV502900K) was registered on title		
25 May 2022	Council received a revised authorisation letter which included a modification to condition 2		
14 June to 21 July 2023	Amendment and Permit Application were exhibited		
29 August 2023	The bushland reserve (1.698 hectares) was transferred to Council (see history of land transfers and swaps below)		
27 November 2023	Council resolved to:		
	- receive and note the submissions		
	- endorse the Council officer's response to submissions		
	<ul> <li>request the Minister appoint an independent Panel to consider all submissions</li> </ul>		
	<ul> <li>refer the Amendment, Permit Application and draft planning permit and all submissions to the Panel</li> </ul>		
	<ul> <li>authorise the Chief Executive Officer to undertake minor changes to the Amendment, Permit Application and draft permit which do not change the purpose or intent of the proposal.</li> </ul>		

#### (ii) History of land swaps and transfers

Council explained in its Part B submission the history of the land transfers and swaps between Council and the Proponent secured by section 173 agreements. The land affected by the land swap agreements is shown in Figure 6. Council said:

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- A land swap undertaken in 2017, whereby a 6,593 square metre triangular lot (shown
  in orange on the map below) was provided to the landowner in exchange for 7,922 to
  Council (as identified in the 2009 Section 173 agreement) [shown in green on the
  map below].
- The transfer of 4,980 square metres of land in lieu of a public open space contribution (as identified in the 2009 Section 173 agreement) [shown in green on the map below].
- An additional 4,078 square metres of land negotiated as part of Amendment C184knox [shown in yellow on the map below].

This land comprises a total area of approximately 1.698 hectares (or 16,980 square metres) and is collectively defined as the 'Bushland Reserve' in the 2021 Section 173 agreement (Instrument AV502900K).

As identified in the Part A submission for this Amendment, that agreement required that the land be vested in or transferred to Council. All of this land has been transferred to Council and now forms 29R Norvel Road.

Council explained the current 2021 section 173 agreement acknowledged the transfer of land to Council would "comprise and be treated as the public open space contribution required by the Planning Scheme or under the Subdivision Act for subdivision of the balance of the land notwithstanding that the contribution is made prior to the making of the requirement"<sup>2</sup>. Further the 2021 section 173 agreement requires the developer to set aside a reserve for drainage, fire buffer and other purposes.

CASTRICUT PLACE

See Effective before

CASTRICUT PLACE

See Effective before

RESERVE

RESERVE

Additional area negotiated (4078sqm)

Land swap to developer (6593sqm)

Figure 6 Land swap areas (Second section 173 agreement)

Source: Council meeting agenda 25 October 2021 (Document 11.3)

#### 1.3 Issues raised in submissions

Key issues raised in submissions related to:

land contamination and stability

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<sup>&</sup>lt;sup>2</sup> Council Part B submission, pages 23-24

- Seecal Road Reserve land use zone
- · biodiversity and native vegetation
- · traffic and road networks
- drainage and stormwater
- housing density
- landscaping
- open space and play equipment provision
- amenity and interface issues, including fencing and noise
- sustainable development and urban heat island effect
- property values.

There were several supporting submissions, including one supporting the proposed social housing.

Supporting submissions were also received from four referral authorities including AusNet, South East Water, Country Fire Authority (CFA) and Melbourne Water. AusNet and Melbourne Water requested changes to the draft planning permit, as discussed in other chapters of this Report. South East Water explained it had previously provided advice on the draft planning permit, and detailed the recommendations that had been required.

The Proponent did not make a submission during exhibition of the proposal, however it sought a number of changes to permit conditions through the Hearing process.

#### 1.4 Post exhibition changes

In response to submissions Council proposed to amend the:

- NRZ7 Schedule
- Explanatory Report
- draft planning permit.

Specific changes are addressed where relevant to issues throughout this Report.

The South East Water conditions were included in the exhibited draft planning permit.

Council explained the registered property address changed from 29Q Norvel Road, as exhibited, to 29 and 29R Norvel Road. This occurred as part of the subdivision and land transfer required by the section 173 agreement registered on the title of 29Q Norvel Road and actioned under section 35 of the Subdivision Act 1988. Council proposed to make minor changes to the Amendment documents and draft planning permit to reflect this change.<sup>3</sup>

The Panel accepts this and other minor administrative changes identified by Council, as shown in the Panel preferred version of the NRZ7 (see Appendix D) and planning permit (see Appendix E), unless otherwise recommended in this Report.

#### 1.5 Procedural issues

The Hearing was scheduled for 12, 13 and 15 March 2024. The full time allocated to the Proponent's case was not required, including the reserve morning on 15 March 2024. All parties agreed to timetable adjustments and the Hearing concluded on 13 March 2024.

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Council Part A submission, pages 6 and 7

As directed by the Panel, Council circulated to all parties its 'Day 1' versions of Amendment documentation and draft planning permit conditions before the Hearing (Document 11.1, Attachments A1 – A4).

On 13 March 2024 the Panel issued updated directions relating to comments on drafting of the Amendment and planning permit documents as follows:

- Council must file its final preferred version of the Amendment documentation and draft 'without prejudice' permit conditions by 12 noon on Friday 15 March 2024. The final preferred version must:
  - show changes proposed in response to evidence or submissions presented at the Hearing
  - b) be marked up against the Council 'Day 1' version
  - c) be in an editable format such as MS Word.
- A party seeking to provide drafting comments on Council final preferred version of the Amendment/permit must file them by 12 noon on Friday 22 March 2024. Drafting comments must only relate to drafting issues, not broader issues

In response to the updated directions:

- Council submitted its preferred versions of the NRZ7, planning permit and explanatory table (Documents 17a-c)
- the Proponent submitted comments on Council's preferred version of the planning permit and explanatory table (Documents 18a-b).

#### 1.6 The Panel's approach

The Panel has assessed the Amendment against the principles of net community benefit and sustainable development, as set out in Clause 71.02-3 (Integrated decision making) of the Planning Scheme.

The Panel considered all written submissions made in response to the exhibition of the proposal, observations from site visits, and submissions, evidence and other material presented to it during the Hearing. It has had to be selective in referring to the more relevant or determinative material in the Report. All submissions and materials have been considered by the Panel in reaching its conclusions, regardless of whether they are specifically mentioned in the Report.

This Report deals with the issues under the following headings:

- Part 1 Introduction and context
  - Introduction
  - Planning context
- Part 2 Knox Planning Scheme Amendment C184knox
  - Strategic justification
  - Land contamination and stability
  - Seecal Road Reserve proposed zone
  - Neighbourhood Residential Zone Schedule 7
- Part 3 Planning Permit Application P/2020/6049
  - Biodiversity and native vegetation
  - Traffic and transport
  - Stormwater and flooding
  - Other issues
  - The planning permit.

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#### 1.7 Limitations

Some issues raised by submitters are outside of the scope of the Panel's remit and are not addressed in this Report. The issues related to property values and concerns about anti-social behaviour and security.

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# 2 Planning context

### 2.1 Planning policies and provisions

Table 2 identifies relevant planning policies and provisions and Appendix C summarises key imperatives.

Table 2	Planr	nıng	con	text

	Relevant references
Victorian planning objectives	- section 4 of the PE Act
Planning Policy Framework	<ul> <li>Clauses 11 (Settlement), 11.01-1R (Settlement – Metropolitan Melbourne), 11.02-1S (Supply of urban land)</li> </ul>
	- Clauses 12 (Environmental and landscape values), 12.01 (Biodiversity)
	<ul> <li>Clauses 13 (Environmental risks), 13.02-1S (Bushfire planning), 13.03-1S (Floodplain management), 13.04-1S (Potentially contaminated land)</li> </ul>
	- Clauses 15 (Built environment and heritage), 15.01-3S (Subdivision design), 15.01-5S (Neighbourhood character)
	<ul> <li>Clauses 16 (Housing), 16.01-1S (Housing supply), 16.01-1R (Housing supply – Metropolitan Melbourne), 16.01-2S (Housing affordability)</li> </ul>
	<ul> <li>Clauses 21.02 (Strategic Framework Plan), 21.03 (Biodiversity and native vegetation), 21.04 (Environmental Risks), 21.05 (Potentially contaminated land) 21.06 (Housing)</li> </ul>
	- Clauses 22.01 (Title), 2202 (Title)
Other planning strategies and	- Plan Melbourne Direction 2.1, Policies 2.1.1 and 2.2.1
policies	- Knox Housing Strategy 2015
	- Knox Affordable Housing Action Plan 2015-2020
Planning provisions	- Clause 32.09 Neighbourhood Residential Zone (NRZ)
	- Clause 37.01 Special Use Zone Schedule 2 (Earth and Energy
	Resources Industry) – applies to the majority of the site
	<ul> <li>Clause 37.03 Urban Floodway Zone - Applies to a portion of the site north of 59R Rankin Road and 54 Agora Boulevard. No change is proposed to the Urban Floodway Zone</li> </ul>
	<ul> <li>Clause 42.01 Environmental Significance Overlay Schedule 2 (Sites of Biological Significance)</li> </ul>
	<ul> <li>Clause 44.05 Special Building Overlay – Applies to parts of 59R</li> <li>Rankin Road and 54 Agora Boulevard. No change is proposed to th</li> <li>Special Building Overlay</li> </ul>
	- Clause 52.02 (Easements, restrictions and reserves)
	- Clause 52.06 (Car parking)
	- Clause 52.17 (Native vegetation)
	- Clause 53.01 (Public open space contribution)
	- Clause 56 (Residential subdivision)

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	Relevant references
Ministerial directions	<ul> <li>Ministerial Direction 1 Potentially Contaminated Land (Ministerial Direction 1)</li> </ul>
	<ul> <li>Ministerial Direction 7(5) Form and Content of Planning Schemes (Ministerial Direction on Form and Content)</li> </ul>
	- Ministerial Direction 9 Metropolitan Planning Strategy
	- Ministerial Direction 11 Strategic Assessment of Amendments
	<ul> <li>Ministerial Direction 19 Amendments that may result in impacts on the environment, amenity and human health (Ministerial Direction 19)</li> </ul>
Planning practice notes	- Planning Practice Note 46: Strategic Assessment Guidelines, September 2022
	- Planning Practice Note 30: Potentially Contaminated Land (PPN30)
	- Planning Practice Note 91: Using the residential zones

#### 2.2 Relevant strategic documents

#### (i) Knox Housing Strategy 2015

The *Knox Housing Strategy 2015* (Knox Housing Strategy) is a background document in the Planning Scheme and its directions are expressed in Clause 21.06 (Housing). It applies a scaled approach to housing provision and identifies the role of different areas in Knox. The approach seeks to balance the need to provide housing for population growth while recognising and protecting areas of environmental and landscape significance.

It identifies the site as Strategic Investigation Site 6 with the following future directions:

The site is suitable for residential use only, with development at a range of densities. The northern portion of the site is environmentally significant and is recognised as a site of biological significance, indicated by the application of the Environmental Significance Overlay (ESO2). Future planning of the site must have regard to the following:

- Protect the most significant vegetation at the northern end of the site.
- Incorporates a central park linked to the creek corridor.
- Keeping housing densities consistent with the surrounding area on the interfaces, with increased densities located internally, toward the centre of the site (facing public open space).
- Housing facing the creek or any creek corridor frontage road, creating opportunities for passive surveillance of public areas.

The land surrounding the site is identified as Knox Neighbourhood Area with detached houses and dual occupancy as preferred housing types.

#### (ii) Knox Social and Affordable Housing Strategy and Action Plan 2023-2027

The Knox Social and Affordable Housing Strategy and Action Plan 2023-2027 outlines Council's response to increase the supply of social housing for low and very low income households. It notes that the area provides a below average number of social houses, at 2.3 per cent of all houses, compared with metropolitan Melbourne average of 2.6 per cent, and Australian average of 4.5 per cent.

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The plan includes a target of five percent social housing as voluntary development contributions, including for Strategic Investigation Sites where rezoning is required.

#### (iii) Housing Statement

The State government released Victoria's Housing Statement on 20 September 2023. As described in the Proponent's submission, the Housing Statement seeks to "introduce new policies and processes to boost housing supply and housing affordability across Victoria. The VHS aims to deliver 80,000 new homes each year across the state".

#### (iv) Other relevant strategic documents and plans

Council identified the following other relevant strategic documents and plans, which are discussed as relevant in other chapters of this Report:

- Knox Urban Design Framework 2020, City of Knox, 2003
- Sites of Biological Significance in Knox 2<sup>nd</sup> Edition, Biosphere Pty Ltd, June 2010
- Knox Open Space Plan 2012-2022, May 2012
- Knox City Council Play Space Plan 2013-2023, Jeavons Landscape Architects, 2013
- Knox Landscape Plan Guidelines, Knox City Council, 2019 (Landscape Plan Guidelines)
- Knox Bicycle Plan Review, City of Knox, July 2008
- Knox Green Streets Policy 2019
- Knox Liveable Streets Plan 2012-2022.

### 2.3 Other Planning Scheme Amendments

Council provided details of other relevant Planning Scheme Amendments in its Part A submission as follows:

- it has sought authorisation for Knox Planning Scheme Amendment C197knox to introduce elevated Environmentally Sustainable Development requirements for new buildings
- it is progressing a planning scheme amendment to translate the local policy framework into the new planning policy framework.

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# PART 2 – KNOX PLANNING SCHEME AMENDMENT C184KNOX

# 3 Strategic justification

#### (i) Evidence and submissions

David Crowder, giving evidence for the Proponent, explained the planning context for the site. He said there was strong strategic support for the proposal. He was of the opinion it would:

enhance the existing urban area of Ferntree Gully and result in additional housing supply / choice (including social housing) in an area proximate to jobs, services and public transport.

Mr Crowder noted the Housing Statement recently released by the State government increased the focus on housing provision, with an aspirational target of 70 per cent of new housing to be in established areas, and design standards to achieve high quality developments. He said the:

- rezoning was strategically justified
- proposed controls would appropriately guide residential development
- proposal would result in 'net community benefit'.

Mr Crowder was satisfied bushfire risk and environmental risk had been adequately considered and addressed.

Mr Crowder considered the Amendment made proper use of the Victoria Planning Provisions. He said the Strategic Investigation Site was suitable for residential expansion and NRZ was the appropriate zone in the context of the surrounding residential area which is zoned NRZ. Further, the area proposed to be rezoned from SUZ2 to PCRZ was acceptable as:

- the land had been transferred to Council
- application of the PCRZ would ensure the site's biological values are protected
- it would provide an appropriate buffer is provided between the proposed residential subdivision and adjoining Blind Creek and area zoned Urban Floodway Zone.

Mr Crowder considered application of the PPRZ to the existing reserve along the western boundary of the site was appropriate as this land would be used for public open space and construction of a bicycle trail.

The Proponent submitted there is no doubt the Amendment is strategically justified. It said the proposal would result in greater housing diversity and growth in an appropriate location, and the:

- site is in a location where planning policy encourages intensification of residential land
- designated Sategic Investigation Site is a rehabilitated quarry that is now ready for development as a residential estate
- proposal "will assist in delivering housing to benefit Victorian's for decades to come".

Council submitted the Amendment is broadly consistent with state, regional and local planning policy. It said the:

- site is a Strategic Investigation Site suitable for residential development, consistent with the Knox Housing Strategy and Clauses 21.02 (Vision) and 21.06 (Housing) of the Planning Scheme
- former quarry has been closed, filled and remediated, and the site is no longer suitable for extractive industries
- Amendment is required to facilitate redevelopment of the site and the proposal will
  provide for a diverse range of housing that will assist with accommodating population
  growth

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- Amendment is informed by an Urban Design Assessment which considers character of the surrounding area and bushfire risk
- proposal protects areas of biological significance.

Submissions from referral authorities supported the Amendment (see Chapter 1.3). The CFA submitted it was satisfied the proposal responded to previous correspondence and it did not provide any additional comments.

Some submitters raised issues concerned with:

- whether views of the relevant fire authority had been sought
- · higher density development and loss of bushland
- amenity and provision of community services.

#### (ii) Discussion

The Planning Scheme identifies the site as a Strategic Investigation Site – Residential and the land is ideally located for residential development. The Amendment will provide for additional housing and housing choice in an established well serviced residential area on a large, generally unconstrained site.

Subject to its recommendations, the Panel is satisfied the Amendment is justified and makes proper use of the Victoria Planning Provisions. The proposal will result in net community benefit with:

- provision of housing, including social housing, close to jobs, services and transport
- protection of a designated site of biological significance
- provision of open space and shared trails with connectivity to an existing open space /bushland corridor along Blind Creek.

The Proponent and Council have entered into section 173 agreements relating to transfer of bushland to Council, requiring urban design outcomes and securing eight lots for social housing.

No submitters raised issues with the selection of planning controls for the site. The drafting of the NRZ7 is discussed in Chapter 6.

The Panel accepts that the CFA, Mr Crowder, Council and the Proponent were all satisfied bushfire matters had been adequately considered and addressed. A Bushfire Development Report exhibited with the Amendment concluded the site was suitable for residential development in the context of planning policy and provisions and bushfire planning guidance.

The Panel has concluded in other chapters of this Report that the:

- rehabilitated quarry land is suitable for residential development (see Chapter 4)
- zoning of Seecal Road is appropriate (see Chapter 5).

The Panel has addressed issues relating to housing density, biodiversity and amenity in other chapters of this Report.

#### (iii) Conclusions

For the reasons set out in this report, the Panel concludes the proposal:

- Is supported by, and implements, the relevant sections of the Planning Policy Framework.
- Is consistent with the relevant Ministerial Directions and Practice Notes.
- Is well founded and strategically justified.

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• Should proceed subject to addressing the more specific issues raised in submissions as discussed in the following chapters.

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# 4 Land contamination and stability

#### (i) The issues

The issues are whether the site:

- has been adequately remediated and is suitable for residential use
- is adequately stable following quarry closure and site rehabilitation.

#### (ii) Background

#### Planning policy and guidance

Clause 13.04-1S (Contaminated and potentially contaminated land) seeks to:
ensure that contaminated and potentially contaminated land is used and developed safely.

Clause 13.04-2S (Erosion and landslip) seeks to:

protect areas prone to erosion, landslip or other land degradation processes.

Clause 21.04-5 (Potentially contaminated land) seeks to avoid harm to human health and the environment from contaminated land. It includes a strategy to:

Require applicants to provide an environmental site assessment, from a suitably qualified professional, where there is potential for contamination or the land use history is unclear, to determine if an environmental audit is necessary.

Ministerial Direction 1 applies to potentially contaminated land and seeks to ensure the land is suitable for the use proposed under a planning scheme amendment. It includes a definition of potentially contaminated land and requirements that must be met in preparing a planning scheme amendment on potentially contaminated land.

Ministerial Direction 19 requires planning authorities seek written views of the Environment Protection Authority Victoria (EPA) in preparing a planning scheme amendment that "could result in use or development of land that may result in significant impacts on the environment, amenity and human health due to pollution and waste". <sup>4</sup> It requires the views of EPA are addressed in the explanatory report.

PPN30 identifies the recommended assessment mechanism for a planning proposal and provides planning guidance on:

- how to identify potentially contaminated land
- the appropriate level of assessment of contamination in different circumstances
- appropriate provisions in planning scheme amendments
- appropriate conditions on planning permits.

PPN30 recommends proceeding directly to an environmental audit where sensitive uses are proposed on land where the previous land use has high potential for contamination. PPN30 identifies 'mining and extractive industries' as having high potential for contamination.

#### **Environmental Audit and Geotechnical Assessment**

Council attached to its Part A submission copies of the Environmental Audit (Document 5 Attachment 3.1) and Geotechnical Assessment (Document 5 Attachment 3.2). Council explained

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Council Part A submission, pages 6 and 7

the Environmental Audit concluded "the condition of the site is neither detrimental nor potentially detrimental to any beneficial use of the site".

Council noted the Environmental Audit said:

- Quarrying operations ceased in the mid-2000s.
- The rehabilitation of the quarry largely involved the importation of fill (comprising siltstone material) from the Eastland Shopping Centre redevelopment, Knox Hospital and Mitcham grade separation into the clay pit. The imported fill was capped with overburden material from the site that had been used to form screening bunds.
- The fill imported onto the site was subject to periodic testing, in accordance with the Environmental Management Plan for rehabilitation.
- Testing of the overburden material on the site identified it was considered suitable for the proposed residential use and to be placed as a final cap over the former quarry area.
- Naturally occurring levels of arsenic, copper and fluoride were reported in the imported siltstone fill in excess of the ecological investigation levels (EILs) and levels of arsenic were reported in excess of the health investigation levels (HILs).
- The concentrations of arsenic were determined to be not leachable and of low bioavailability. These concentrations were not considered to preclude an urban residential use of the site.
- The concentrations of fluoride and copper were not considered to impact the urban residential use of the site.
- There were elevated groundwater concentrations of iron and manganese that were
  considered to be naturally occurring and an artefact of the regional geology. Any use
  of groundwater is unlikely to be realised at the site given low aquifer yield and location
  of the site within an urban residential area with a reticulated water supply.

A certificate of environmental audit was issued on 20 April 2016.

Council provided copies of correspondence with the EPA and advised the EPA was satisfied the land was suitable for "any beneficial use". The EPA did not make a submission in response to exhibition of the proposal.

The Council report of 22 November 2021 explained the Geotechnical Assessment provided information on the property's soil to determine suitability for construction. The site was determined to be "Class M" "which as a general rule... can have generic foundations".

#### (iii) Evidence and submissions

Several submitters were concerned:

- the site may have contamination issues from its previous use as quarry
- about subsidence and houses moving and cracking due to the land not being stable/the clay pit sinking.

Mr Crowder was satisfied that remediation of the site had occurred and an environmental audit issued.

The Proponent submitted:

There should be no question regarding the suitability for residential use as following the cessation of the quarry use, the site was remediated and rehabilitated through filling and levelling works to original ground level and subject to an environmental audit. Geotechnical and compaction testing of the Subject Site was undertaken and certified by Civil Test Pty Ltd Soil Testing & Geotechnical Consultants in 2015. An environmental audit was undertaken by Australian Environmental Auditors Pty Ltd in April 2016, confirming that the Subject Site is

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suitable for sensitive uses. A copy of the Geotechnical Report and Environmental Audit documentation is provided in Council's Part A Submissions.

In response to issues raised in submissions the Proponent said:

The stability of the land given that it is an infilled quarry site has been considered in the Geotechnical Reports submitted with this application. The land has been tested against Section 8 of AS3798 "Guidelines on earthworks for commercial and residential developments". It is standard practice that when earthworks are undertaken for this development, the land will be tested to ensure stability.

Council explained how the proposal had been considered and submitted it was:

- consistent with Ministerial Directions 1 and 19 and PPN30
- satisfied the land was suitable for residential use and development as it had been assessed as part of the Environmental Audit process and a certificate of environmental audit had been issued.

#### Council submitted:

An environmental audit has been undertaken by Australian Environmental Auditors for the land, in accordance with the requirements of section 53X of the (then) *Environment Protection Act 1970.*<sup>5</sup>

#### (iv) Discussion

The Panel accepts the submissions of Council and the Proponent that issues relating to potentially contaminated land had been adequately considered.

The findings of the Environmental Audit and certificate of environmental audit find the land suitable for sensitive use such as residential development. The environmental audit is consistent with guidance in PPN30, and the EPA has indicated it is satisfied with the assessment and the proposal as it relates to potential land contamination.

The Panel accepts Council's submissions that the land has been assessed as having Class M soils, as shown in the Geotechnical Assessment, which are generally suitable for residential development.

The Panel was not provided with any information or evidence that issues of land contamination or stability had not been adequately assessed.

#### (v) Conclusion

The Panel concludes the rehabilitated quarry land is adequately stable following quarry closure and site rehabilitation and is suitable for residential development.

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Council Part A submission, paragraph 172

# 5 Seecal Road Reserve proposed zone

#### (i) The issue

The issue is whether all of the Seecal Road Reserve should be rezoned to PPRZ.

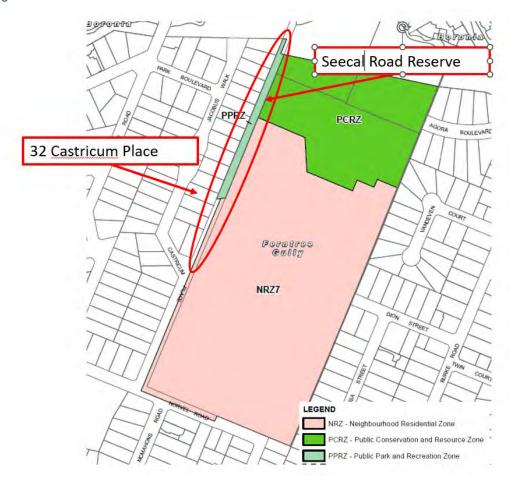
#### (ii) Background

Council explained:

The Amendment proposes to rezone part of the Seecal Road Reserve (approximately north of 32 Castricum Place) to the Public Park and Recreation Zone, while the remaining part of the land will be rezoned to the Neighbourhood Residential Zone – Schedule 7.

The Panel has prepared a figure showing the location of 32 Castricum Place and the approximately location of Seecal Road Reserve (Figure 7).

Figure 7 Seecal Road Reserve



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#### (iii) Submissions

Friends of Blind Creek Billabong questioned why part of Seecal Road would remain in residential zoning and why all of Seecal Road Reserve would not be rezoned PPRZ. It said:

We understand that Seecal Road South is to remain a road reserve. We feel that this is inconsistent with proposed rezoning and urge that this issue be resolved as soon as possible.

#### Council's Part A submission

Seecal Road is a discontinued road reserve that runs along the western boundary of 59R Rankins Road, 29R Norvel Road and 29 Norvel Road, north of Castricum Place.

Council explained Seecal Road is a discontinued road reserve and was formally a public road. It said:

Whilst the road has been discontinued (and is not on Council's Road Register), its closure has not been finalised or completed.

Council's Property Management Team has confirmed that the remainder of the road is proposed to be closed. However, the timing for the finalisation of this process has not been confirmed.

Council submits it would be inappropriate to rezone the land to the Public Park and Recreation Zone while it remains a discontinued but not closed road.

Once the road closure has been completed, Council will propose to rezone the land to Public Park and Recreation Zone as part of a 'tidy up' / anomaly amendment.

#### (iv) Discussion

The Panel accepts Council's approach to finalising the road closure process for the Seecal Road Reserve before rezoning the land.

The Panel notes Mr Crowder did not raise concerns with the application of PPRZ as proposed (see Chapter 3) and it did not receive any further submissions or evidence that its future rezoning would impact delivery of the proposal. If the Amendment and development proceeds the timing of road closure and rezoning this will not affect the delivery of the proposed landscaped shared user path along the reserve connecting the subdivision to Castricum Place and the Blind Creek Trail.

Further, the rezoning of the southern part of the Seecal Road Reserve to PPRZ was not exhibited with the Amendment, and would be subject to a separate planning scheme amendment process.

#### (v) Conclusion

The Panel concludes the rezoning of the Seecal Road Reserve to part PPRZ and part NRZ7 as exhibited is appropriate.

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# Neighbourhood Residential Zone Schedule7

#### (i) The issue

The issue is whether the form and content of the NRZ7 is appropriate.

#### (ii) Background

The Amendment proposes to exempt land zoned NRZ7 from local policy in Clause 22.07 (Development in residential areas and neighbourhood character). The Explanatory Report states:

It is proposed to rezone the site to the Neighbourhood Residential Zone (NRZ) and to develop the site in accordance with updated urban design guidelines registered under a S173 Agreement applying to the land.

...

By providing its own design guidelines, the amendment will be exempted from neighbourhood character provisions of Clause 22.07.

The Planning Report exhibited with the Amendment explains the current section 173 agreement allows for the urban design guidelines to be amended from time to time with consent of Council and the owner. The Panel notes the property titles, current section 173 agreements and Urban Design Guidelines - Revision D 30 May 2021 (Document 5, Attachment 2.8) were exhibited with the Amendment.

The exhibited NRZ7 Section 4.0 (Requirements of Clause 54 and 55) are shown in Table 3.

Table 3 NRZ7 Section 4.0 (Requirements of Clauses 54 and 55)

Standard		Requirement
Minimum street	A3 and B6	Context: The site is on a corner
setback		Minimum setback from a side street:
		Side walls of new development on a corner site should be setback the same distance as the setback of the front wall of any existing building on the abutting allotment facing the side street or 1.5 metres, whichever is the lesser.
Site coverage	A5 and B8	None specified.
Permeability	A6 and B9	None specified.
Landscaping	B13	Provision of a minimum of one canopy tree within the front setback per 5 metres of width of the site (excluding the width of one driveway).
		Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 3 metres. Up to 50 per cent of the permeable surface may be shared with another tree.

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Standard		Requirement
Walls on boundaries	A11 and B18	The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metres of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall.
Private open space	A17	None specified.
	B28	None specified.
Front fence height	A20 and B32	Streets in a Road Zone Category 1: 2 metres Other streets: 1.2 metres

## (iii) Evidence and submissions

Mr Crowder said the proposed NRZ7 complied with the Ministerial Direction on Form and Content. He was satisfied the:

- proposed objectives would not duplicate other objectives in the Planning Scheme
- proposal to vary the following ResCode standards would guide future development to ensure respectful character and amenity outcomes:
  - Street setback (A3/B6)
  - Landscaping (B13)
  - Walls on boundaries (A11/B18)
  - Front fence height (A20/B32).

## Mr Crowder said:

In combination with the accompanying Urban Design Guidelines prepared by the proponent (and implemented by way of a Section 173 Agreement), the variations to ResCode proposed under the NRZ7 will ensure development of the site will occur in a manner that will achieve respectful setback, landscaping and fencing outcomes.

Council proposed post exhibition changes to the NRZ7. The Proponent relied on the evidence of Mr Crowder, who provided comment on Council's post exhibition changes.

The Panel has summarised the changes proposed by Council in its Day 1 version of the NRZ7 and Mr Crowder's comments and recommendations in Table 4.

Table 4 Mr Crowder's comments on Council's proposed post exhibition changes to NRZ7 and

Council post exhibition proposed change	Mr Crowder's comments
Clarification of wording to Standard B13	The proposed change to Standard B13 (Landscaping) relates to drafting/wording only and does not change the intent of the exhibited schedule.
Deletion of the variation to Standard A11 and B18 'Walls on boundaries'	The exhibited Standard A11 / B18 sought to vary ResCode controls to allow for walls on boundaries to not exceed an average of 3.6 metres in height and maximum height of 4 metres. Council proposes to delete this variation to default to the standard controls (3.2 metres average, 3.6 metres maximum).

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Council post exhibition proposed change	Mr Crowder's comments
	The post exhibition change is acceptable given the compact nature of the proposed subdivision, and the sloping topography of the land.
Clarification of wording to reflect the Transport Zone in the variation to Standards A20 and B32 'Front fence height'	As the review site does not abut any roads in the Transport Zone 2 (TRZ) the variation relating to a front fence in a TRZ2 could be deleted. No concerns with the variation to "other streets".
Removal of the Sustainable Design Assessment application requirement, which is captured in Clause 22.04	The deletion this application requirement is appropriate as it duplicates local policy in Clause 22.04

In its final preferred version of NRZ7 (Documents 17a and 17c), Council:

- confirmed it no longer proposed to vary the ResCode standard relating to walls on boundaries (A11 and A18), stating:
  - The parent control within Clause 55 does not permit a schedule to vary the height of a
    wall on a boundary, as it states, "For a <u>length</u> of more than the distance specified in a
    schedule to the zone...".
  - The parent control does not provide flexibility seen in other controls such as Standard B13 which includes, "Development should meet any additional landscape requirements specifies in a schedule to the zone".
  - Planning Practice Note No. 91 explains that a variation must be drafted having regard to that part of the standard (e.g. value) that is able to be varied.
  - The practitioners guide relating to rules for writing a planning scheme provision states
    that a provision must not include a function that is not enabled by the relevant state
    standard provision.
  - Council reiterates it supports the intent of the variation. If it is achievable, Council
    supports the inclusion of a new condition on the planning permit (under Condition 28)
    to enable the variation and resolve the issue in relation to 'report and consent' under
    the Building Regulations.
- amended its position on the ResCode standard relating to front fence height (A20 and B32) to read:

Streets in a Road Zone Category 1: 2 metres

Other streets: 1.2 metres

A front fence within 3 metres of a street in a Transport Zone 2-should not exceed 2 metres in height, or 1.2 metres in for all 'other streets'.

No other submitters raised issues relating to the content or drafting of the NRZ7.

## (iv) Discussion

The Panel agrees with Mr Crowder that the form and content of the NRZ7 is generally consistent with the Ministerial Direction on Form and Content, subject to its assessment and recommendations.

## **Objectives**

Consistent with the Ministerial Direction on Form and Content the NRZ7 includes five Neighbourhood character objectives. While the Panel agrees with Mr Crowder the objectives do not repeat other objectives in the Planning Scheme, the Panel considers there may be some confusion with the first objective which says:

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 To ensure that new development reflect the preferred neighbourhood character of the surrounding area.

The preferred neighbourhood character of the surrounding area is described in Clause 22.07 (Development in residential areas and neighbourhood character). As the Amendment proposes to exempt land in the NRZ7 from consideration of Clause 22.07, it is not clear how a decision maker would assess performance against this proposed objective.

Further, the Urban Design Report exhibited with the Amendment states:

At present the surrounding area is largely made up of low density detached dwellings, typically of single or double storeys often with generously sized yards.

However much has changed since the area was first developed as detached dwellings on single allotments. The Knox Municipal Strategic Statement outlines a demand for different types of housing as well as an undersupply of affordable housing. Housing composition in the surrounding area is changing and becoming more diverse, with many existing blocks that once contained a single home now being subdivided into two or more smaller allotments.

...

Compared to the older subdivisions in surrounding areas, this design offers a higher density of residential lots to cater to present-day challenges and buyer expectations, while maintaining the green character that is so valued in Knox. It includes a mix of different lot depths and sizes, including some that are appropriate for affordable housing. This caters to the needs of a variety of potential buyers and allows for a variety of different building types and enough space for leafy front yards.<sup>6</sup>

It is clear the preferred character for the site is different from the preferred neighbourhood character of the surrounding Knox Neighbourhood Area (as described in Clause 22.07). As explained in the Explanatory Report:

By providing its own design guidelines, the amendment will be exempted from neighbourhood character provisions of Clause 22.07

It is the Panel's view that the purpose and operation of the first objective is unclear and this should be deleted from the NRZ7. Assessment of any proposal will include consideration of the other objectives of NRZ7 which define elements of the character relating to housing typology, landscaping, front interface treatments and setbacks and permeable surfaces. This combined with the ResCode provisions and the Urban Design Guidelines required by the section 173 agreement provides comprehensive guidance on neighbourhood character.

## Requirements of Clauses 54 and 55

The Panel's preferred version of the NRZ7 at Appendix C includes its recommended wording of variations to the requirements of Clauses 54 and 55.

## Standard B13 (Landscaping)

The post exhibition change to drafting of Standard 13 (Landscaping) proposed by Council and supported by the Proponent and Mr Crowder is appropriate. The proposed change improves clarity of wording and the intent is consistent with the exhibited standard.

#### Standards A11 and B18 (Walls on boundaries)

The parent Clauses 54 and 55 provide for a schedule to vary the length of a wall on or within 200 millimetres of a side or rear boundary of a lot or a carport constructed on or within one metre of a

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side or rear boundary of a lot. The provision does not allow for the wall height be varied in the schedule to the zone.

The exhibited provision sought to alter the height of a new wall on boundary, which cannot be required through the schedule to the zone. The Panel supports Council's proposed post exhibition change to not vary this provision and state "None specified".

The Panel discusses the option of a walls on boundaries condition in Chapter 10.8.

#### Standards A20 and B32 (Front fence height)

#### The Panel observes:

- Clause 22.07 includes a design guideline for the surrounding Knox Neighbourhood Area to "provide no, low or transparent front fencing"
- the Urban Design Guidelines includes an objective and guideline as follows:
  - Objective To maximise informal surveillance to the street and public spaces
  - Guidelines
    - Avoid the use of fences along front property boundaries
    - Full property side boundaries abutting a street or public space, front yards should ideally have no fencing, or otherwise use fencing types that are of a low height and or are visually permeable.

The parent Clauses 54 and 55 include standards A20 and B32 as follows:

A front fence within 3 metres of a street should not exceed:

- The maximum height specified in a schedule to the zone, or
- If no maximum height is specified in a schedule to the zone, the maximum height specified in Table A2.



The proposed height of front fences was not in dispute, nor was the fact that the site did not have interfaces with land in a Transport Zone 2.

It is not necessary to specify a height for front fences in a Transport Zone 2 as this is not relevant.

The parent clause already identifies the requirement relates to a front fence within 3 metres of a street. The schedule only needs to state the height the front fence should not exceed, in this case 1.2 metres. The Panel supports this on the basis the height was exhibited and supported by Council, the Proponent and its expert.

## **Application requirements**

It is appropriate to delete the application requirement relating to a Sustainable Design Assessment as this duplicates local policy in Clause 22.04 (Environmentally Sustainable Development), as agreed by Council, the Proponent and Mr Crowder.

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The Panel turned its mind to whether, in the context of drafting guidance, it is appropriate to include the proposed application requirement which states:

For developments of five or more dwellings and for residential buildings, a report
which demonstrates how the proposal will be accessible to people with limited
mobility.

The *Practitioner's Guide to Victorian Planning Schemes* provides guidance on drafting a schedule. It states a schedule should be technically accurate, easy to interpret and easy to apply, with a clear understanding of the objective being sought. Further it says the local content in a schedule should help to implement a planning objective and should be strategically justified. Regarding application requirements it says:

These requirements should be proportionate to the planning risks associated with an activity and derive from the objectives, standards or decision guidelines relevant to the discretion being exercised.

The purposes of the Neighbourhood Residential Zone Clause 32.09 include:

To recognise areas of predominantly single and double storey residential development.

To manage and ensure that development respects the identified neighbourhood character, heritage, environmental or landscape characteristics.

To allow educational, recreational, religious, community and a limited range of other nonresidential uses to serve local community needs in appropriate locations.

The parent Clause 32.09 states under neighbourhood character objectives that:

A schedule to this zone must contain the neighbourhood, heritage, environment or landscape character objectives to be achieved for the area.

There is no clear nexus between the objectives, standards or decision guidelines of the NRZ7 with the proposed application requirement. From a drafting perspective it is not appropriate to include the application requirement as exhibited. The application requirement relating to accessibility should be deleted from the NRZ7.

### The Panel notes:

- While consideration of accessibility may be derived from local policy, specifically policy relating to accessible design (Clause 22.07-7) and housing for aged persons (Clause 22.07-9), this does not apply to land affected by the Amendment, which exempts the NRZ7 land from Clause 22.07.
- Clause 55, relating to two more dwellings on a lot and residential buildings, includes an
  objective and standard relating to accessibility (Clause 55.05-1). The objective is "To
  encourage the consideration of the needs of people with limited mobility in the design of
  developments".

If Council wishes to apply additional planning provisions to the site relating to accessibility this should be progressed through a separate planning scheme amendment process.

#### (v) Conclusion and recommendations

The Panel concludes that subject to its recommendations the form and content of the NRZ7 is appropriate.

The Panel recommends:

Amend Schedule 7 to Clause 32.09 Neighbourhood Residential Zone, as shown in Appendix D, to:

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- a) Delete the objective which relates to preferred neighbourhood character of the surrounding area.
- b) Amend the wording of standards B13 and A20/B32.
- c) Replace the variation to standards A11 and B18 (Walls on boundaries) with "None specified".
- d) Delete the application requirements relating to a Sustainable Design Assessment and accessibility and replace with "None specified".

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# 7 Biodiversity and native vegetation

## 7.1 Background

#### The proposal

The proposal includes extending and protecting the bushland reserve along Blind Creek Corridor by transferring bushland land from the site to Council for conservation purposes.

The draft planning permit included, among other things:

- removal of the minimum area of native vegetation necessary to provide for development, provision of infrastructure and bushfire defendable space
- development of a maintenance track and cycling/walking trail connecting Agora Boulevard with the Blind Creek trail
- native vegetation offsets to compensate for removal of 0.391 hectares of native vegetation
- a Site and Environmental Management Plan to manage construction activities, including to avoid and minimise impacts to biodiversity.

## **Planning Scheme**

State planning policy seeks to:

- protect and enhance Victoria's biodiversity
- ensure there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

Local planning policy seeks to:

- retain and enhance native vegetation in Knox, in extent and ecological condition.
- protect and enhance the natural values of Sites of Biological Significance
- maintain the diversity and genetic integrity of indigenous flora and fauna within Knox to prevent species from becoming locally extinct.

Planning policy requires consideration of:

- Policy guidelines:
  - State biodiversity information maintained by the Department of Energy, Environment and Climate Action
- · Policy documents, including:
  - Applicable biodiversity strategies, including Protecting Victoria's Environment Biodiversity 2037 (DELWP<sup>7</sup>, 2017)
  - Guidelines for the removal, destruction or lopping of native vegetation (DELWP, 2017)
     (Native Vegetation Guidelines)
  - Assessor's Handbook applications to remove, destroy or lop native vegetation (DELWP, 2017).

The ESO2 applies to land in Knox with the most significant areas of remnant and revegetated native vegetation. Specifically, it applies to sites of biological significance identified in *Sites of Biological Significance in Knox* –  $2_{nd}$  *Edition* (SBS Study).

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Department of Environment, Land, Water and Planning (predecessor to DEECA)

The ESO2 seeks to ensure development is compatible with identified environmental values and applies to part of the site – see Figure 5.

The Panel has summarised the statement of environmental significance and environmental objective of ESO2 in

Table 5.

## Table 5 ESO2 summary of statement of environmental significance and environmental objective

## ESO2 statement of environmental significance

- The protection and appropriate management of sites of biological significance is important for maintaining biodiversity in Knox and for Victoria, and for liveability and health and wellbeing of the community.
- The indigenous vegetation along the waterways form important riparian and wildlife corridors, providing protection to waterways and water quality.
- Significant attributes include:
  - some of the best examples of natural environments in Knox
  - remnant vegetation that belongs to Ecological Vegetation Classes (EVCs) that are regional endangered or vulnerable
  - plant species that are threated in Knox or more widely
  - native fauna that are uncommon, rare or threatened in the Melbourne or wider area
  - habitat, streams, wetlands and riparian vegetation
  - large old indigenous trees.
- Providing a buffer, management access or inhibiting the ingress of nutrients, soil and pest plant and animals.

## ESO2 environmental objective

- To protect sites of biological significance from, for example, removal of indigenous vegetation that would be detrimental to its condition and viability, environmental weeds, fragmentation and loss of habitat and changes that would have a detrimental impact.
- To reduce the threat of local extinction of flora or fauna species in Knox.
- To enhance the condition and viability of biodiversity.
- To maintain connectivity.
- To achieve a net increase in the extent of habitat and improve its ecological condition.
- To ensure buildings and works are compatible with the long term protection and management of sites of biological significance.
- To ensure offsets are located as close as practicable to the area impacted by vegetation loss, with a preference for them to be located in
- To provide adequate bushfire protection measures that minimise adverse environmental effects.

The purposes of Clause 52.17 (Native vegetation) are to:

- ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation, by applying the Native Vegetation Guidelines
- manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.

An application must comply with the requirements of the Native Vegetation Guidelines, and the Responsible Authority must consider the decision guidelines Native Vegetation Guidelines, as appropriate.

## Sites of Biological Significance - 2<sup>nd</sup> Edition

Relevant to the proposal is Site 34: Blind Creek Billabong and Quarry (Site 34) is identified as being of State significance (see Figures 7 and 8) in the SBS Study.

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Figure 8 Study area and ESO2



Source: Excerpt of Figure 1 from Biodiversity Assessment, page 24  $\,$ 

Figure 9 Site 34 – Blind Creek Billabong and Quarry - Sites of Biological Significance



Source: Sites of Biological Significance Vol. 2, excerpt of image at page 179

## The main purposes of the SBS Study are:

- To gain a broad overview of native vegetation and wildlife in Knox, including the biological significance, threats and opportunities for improvements.
- To identify, carefully assess and document all sites in Knox that are so important to native flora and fauna that they warrant special recognition and protection.
- To recommend ways of looking after, enhancing and monitoring Knox's natural vegetation and other habitat, including through amendments to the Knox Planning Scheme.

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The SBS Study includes a detailed assessment of:

- indigenous flora and fauna species, plant communities and habitat sites
- threats to Sites of Biological Significance
- options to manage, enhance and monitor these assets, including through the Planning Scheme.

The SBS Study identified there is less than five per cent of native vegetation or areas with indigenous tree cover remaining in Knox, and less than one per cent with good or excellent biodiversity.

The SBS Study says Site 34 is separate from the adjoining Site 33 along Blind Creek "only because its vegetation stands out for its breadth, ecological condition, abundance of uncommon species and separate management regime". The SBS Study says that Site 34:

- Contains vegetation belonging to four regionally Endangered vegetation types (Wetland, Swampy, Riparian Woodland, Swampy Woodland and Valley Heathy Forest), some of which is in good ecological condition.
- The Swampy Woodland is particularly rich in plant species.
- Six plant species recorded from the site are Critically Endangered in Knox, and another eleven are either Endangered or Vulnerable in Knox.
- The bird fauna is rich for metropolitan Melbourne, and a statewide-vulnerable Grey Goshawk was observed.

## **Biodiversity Assessment**

The exhibited Biodiversity Assessment (December 2020) was prepared to:

- assess and map the ecological constraints within the study area and the location, extent and quality of native vegetation
- support an application to remove native vegetation under Clause 52.17 of the Planning Scheme.

The Biodiversity Assessment included:

- a review of previous assessments for the study area
- an assessment of current ecological values of the study area
- an evaluation of likely impacts to ecological values as a result of potential vegetation loss
- an evaluation of the extent and quality of native vegetation in accordance with the Native Vegetation Guidelines
- recommendations to minimise or mitigate impacts, in the context of legislation and policies.

The report described limitations and qualifications of the assessment's findings. These related to the accuracy of data used in the desktop assessment, limitations of the time or season the assessment was undertaken and the likelihood that further survey effort would yield additional records. It noted that despite these limitations the results were adequate for the purposes of the report.

The Biodiversity Assessment described the native vegetation of the study area, stating:

- the northern portion of the study area supports relatively high quality remnant vegetation, with a range of overstorey Eucalyptus species
- weeds are dominant in some locations
- ten fauna species were recorded in the study area including a range of common native and introduced birds and reptile species

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while 18 threatened flora and fauna species had been previously recorded within three
kilometres of the study area within the last 30 years, only one was recorded during the
current assessment, namely Green Scentbark which is 'rare' on the Advisory List of Rare
and Threatened Plants in Victoria (Department of Environment and Primary Industries,
2014).

The Biodiversity Assessment included a plan showing the patches of remnant vegetation and impacted vegetation (see Figure 10 showing the 2023 version with pedestrian trail included). The Biodiversity Assessment concluded:

Only a relatively small proportion of RP1 [Remnant Patch 1] and RP2 [Remnant Patch 2], within the study area, will require vegetation removal for the proposed development. Three scattered indigenous trees were also recorded in an area that may support a trail to connect the development to Blind Creek and a sewer, but these trees are unlikely to require removal through sensitive design of these elements.

Figure 10 Impacted native vegetation



Source: Excerpt of Figure 2 from Biodiversity Assessment (2023), page 25

The 2023 Biodiversity Assessment avoidance and minimisation statement says:

- the development plan has undergone a number of iterations to avoid and minimise native vegetation, and retain highest quality native vegetation
- the master plan includes buffers between lots and retained vegetation for fire and habitat protection
- the vegetation (including trees) that may be impacted by changes to hydrology in the
  north west of the site and creation of the maintenance track and bushfire defendable
  space are considered lost for the purposes of calculating offsets but in practical terms will
  not be entirely removed or impacted
- no native vegetation removal or offsets are required for the proposed pedestrian link as impacts to vegetation are restricted to exotic understorey and the trail will be made from pervious materials at existing grade.

The Biodiversity Assessment made recommendations including:

- · minimising the amount of native vegetation removal
- preparing a Land Management Plan that includes managing the ecological values of the study area

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- preparing a Construction Management Plan with consideration of ecological values
- offset requirements as shown in Table 6.

Table 6 Native vegetation offset requirements in the Biodiversity Assessment

Location Risk	Location 2
Risk Based Pathway	Intermediate
Total Extent Removed	0.083ha
Remnant Patches	• 0.391ha
Scattered Trees	Nil
General Offset Requirements	0.126 General Habitat Units
	Two Large Trees
Specific Offset Requirements	Nil
Minimum Strategic Biodiversity Score	0.202
Offset Location	Port Phillip and Western Port CMA or within the Knox City Council municipality

## **Lorimer Report**

Council provided the *Norvel Estate Plant Regeneration*, Dr Lorimer, October 2021 (Lorimer Report) attached to its Part B submission. The Lorimer Report was referred to in several submissions.

Council explained it had engaged Dr Lorimer, with the consent of the landowner, to undertake a limited ecological assessment of the site. This was in response to community feedback that potentially significant vegetation was present on the site in the former locations of the clay pit and earthen bunds following rehabilitation of the land.

The report identified some locally critically endangered, endangered, and vulnerable species, and noted Dr Lorimer did not conclude whether the species originated from the overburden used to cap the site (likely) or from imported fill (less likely). Among other things, Dr Lorimer made recommendations relating to the rescue of 12 species for replanting on along Blind Creek.

## 7.2 Bushland boardwalk/pathway and educational signage

## (i) Draft planning permit

The exhibited draft planning permit included conditions for design and funding for a bushland boardwalk but did not specify the location or design details. Post exhibition Council sought to include new conditions relating to a bushland boardwalk/pathway and educational signage including location, design requirements, a financial contribution to Council and native vegetation offsets required to compensate for any additional native vegetation removal required.

The exhibited draft planning permit included conditions for:

- engineering construction plans which show:
   Detail bushland boardwalk location and construction design including the location of existing vegetation.
- the owner/developer to pay Council a financial contribution towards construction of the bushland boardwalk.

Council proposed new post exhibition conditions as follows (Panel emphasis):

9) Prior to the issue of a Statement of Compliance for Stage 1, concurrently with the submission of plans for endorsement under Condition 1, a plan must be prepared to the satisfaction of the Responsible Authority and be generally in accordance with the landscape masterplan drawings 01 and 02 prepared by Urbis dated 17/02/21 (Job No. ND1757)

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showing the location of the bushland boardwalk/pathway and associated educational signage, and the following details:

- a. The boardwalk/pathway to be a minimum 1.2 metres wide.
- Compliance with Australian Standards AS 1428 Design for access and mobility (series) and AS2156.2 Infrastructure design (or as amended) unless otherwise approved by the Responsible Authority.
- c. Impact on existing vegetation minimised.
- d. A schedule of construction materials including swatch samples.
- e. Hardwood timber replaced with another material.
- f. Dimensions.
- 10) Once the plan required by Condition 9 has been approved, the owner of the land shall submit to the Responsible Authority for its approval the cost of constructing the bushland boardwalk/pathway and associated educational signage in accordance with the approved plan for the approval of the Responsible Authority.
- 11) Prior to the issue of a Statement of Compliance for Stage 1, the amount for the construction of the boardwalk/pathway and associated educational signage must be paid.

The Proponent proposed an additional final day new condition as follows:

Concurrently with the submission of a plan pursuant to condition 9, an updated biodiversity assessment generally in accordance with the assessment prepared by Ecolink dated September 2023 must be submitted to the Responsible Authority for its approval which shall include an assessment of any additional native vegetation (if any) required to be removed to accommodate the boardwalk/pathway and any consequent revision to the offset requirement as set out in condition 15 (if any).

#### (ii) The issues

The issues are whether the:

- biodiversity impacts of the bushland boardwalk/pathway have been adequately considered
- · relevant permit conditions are appropriate.

## (iii) Submissions

Council proposed changes to the exhibited draft planning permit conditions to:

- separate requirements for the bushland boardwalk and stormwater contributions
- include new requirements for the provision of and contributions towards a bushland boardwalk and educational signage.

It provided an explanation for the proposed new conditions, submitting:

- it intended to provide for some flexibility on the design specifications for the boardwalk/pathway, to enable a contribution to be determined
- the plan referred to in the condition was tabled at the Council meeting on 22 November 2021 (see Figure 11)
- importantly the indicative location of the boardwalk/pathway had previously been contemplated but was removed prior to exhibition as it was not captured in the Cultural Heritage Management Plan (CHMP)
- the intent of the condition is to capture the design and location of both the boardwalk/pathway and signage.

The Proponent generally agreed with Council's conditions, however in commenting on the final day version of the planning permit it proposed a new condition to update the Biodiversity

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Assessment to assess additional native vegetation for removal (if any) to accommodate the bushland boardwalk/pathway and to assess native vegetation offsets.

Figure 11 Boardwalk/pathway - Landscape Masterplan drawings 01 and 02 (17/02/21)



Source: Council report 22 November 2021, excerpt with Panel notations

## (iv) Discussion

The Panel has a number of concerns with the proposed new conditions relating to the bushland boardwalk/pathway, including:

- the proposed boardwalk/pathway was not included in the documents exhibited with the proposal, including the exhibited Landscape Master Plan (dated 2 March 2023)
- · impacts were not assessed through the CHMP
- impacts were not assessed in the Biodiversity Assessment.

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Council and the Proponent have sought to introduce the proposal through amended permit conditions, and the Proponent has sought to ensure the Biodiversity Assessment is updated to assess any native vegetation impacts.

The Panel does not support introducing the bushland boardwalk/pathway at this stage of the process. While the exhibited draft planning permit made reference to bushland boardwalk as a concept subject to detailed design and intends to secure funds for its delivery, the impacts have not been assessed and potential submitters have not had an opportunity to consider the proposal. If Council and the Proponent wish to pursue the proposal it will need to progress through a separate process that takes into consideration all of the relevant assessment requirements.

While the Panel can see merit in installing educational signage on the bushland reserve, this should also be progressed through the separate process.

Further issues relating to the CHMP are discussed in Chapter 10.8(ii).

## (v) Conclusions and recommendation

The Panel concludes:

- Biodiversity impacts of the bushland boardwalk/pathway have not been adequately considered.
- The exhibited and amended new permit conditions relating to the bushland boardwalk/pathway are not appropriate.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

a) Remove conditions relating to the proposed bushland boardwalk/pathway.

## 7.3 Biodiversity assessment

## (i) The issues

The issues are whether the Biodiversity Assessment:

- is adequately current and acceptable for assessing the proposal
- adequately takes into account threatened and endangered species
- is inconsistent with the Lorimer Report, and if so, whether that is of concern.

## (ii) Evidence and submissions

## **Submissions**

Some submitters, including the Friends of Blind Creek Billabong, submitted the Biodiversity Assessment was not adequate. Submitters raised concerns the Biodiversity Assessment:

- · was out of date and is not based on current data
- was not consistent with Dr Lorimer's observations and report from 2021
- did not include many native plants and animals that have been observed, including frogs, marsupials and owls
- did not adequately take into account threatened and endangered species.

The Friends of Blind Creek Billabong submitted its members had observed flora and fauna species not identified in the Biodiversity Assessment.

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Knox Environment Society submitted the bushland area is extremely important in the City of Knox and it contained significant vegetation with regional endangered vegetation. Specifically "the Swampy Woodland is particularly rich in plant species. Six plant species recorded from the site are Critically Endangered in Knox, and another eleven are either Endangered or Vulnerable in Knox".

One submitter said the Biodiversity Assessment incorrectly assessed the likelihood of the presence of the Powerful Owl. While the assessment stated the Likelihood of Presence is 'Low' and the last sighting was in 2000, the submitter had made two verified observations in 2021. The submitter said:

- these had been recorded and verified on the Naturalist platform and incorporated into the Atlas of Living Australia database
- it is likely the owls are using the habitat on the northern side of the development site.

#### **Evidence**

Dr Cooney, giving biodiversity evidence for the Proponent, provided an updated copy of the Biodiversity Assessment (September 2023) as an attachment to his expert witness statement. Dr Cooney explained:

- the initial assessment was undertaken in February 2017
- since then Ecolink Consulting (authors of the Biodiversity Assessment, including Dr Cooney) had worked with the Proponent to minimise impacts to ecological values as required by legislation and policy
- the Assessment had been updated five times in response to changes to the proposal and questions from regulators
- the final Assessment had made no new findings or changes to the offset requirements.

The updated Biodiversity Assessment (September 2023) included an additional vegetation assessment prepared in June 2020 (2020 vegetation assessment) relating to the implications of the proposed bushfire defendable space area. The additional vegetation assessment was not a flora survey but focused on relative quality of the understorey and midstorey vegetation and concluded:

- it is not possible to entirely avoid native vegetation and deliver the proposed development
- the stormwater treatment is in a practical location given it is a low lying area, the size of the billabong required and that it is located within the defendable space for nearby lots
- the areas proposed as defendable space would not have a significant impact on biodiversity values of the study area because they are currently slashed and regularly managed or dominated by exotic species.

The 2020 vegetation assessment said:

We consider that the current development plan reaches a balance between the practical avoidance, minimisation requirements and offsetting, as per the [Native Vegetation Guidelines] ... Further removal of native vegetation may be difficult to support if Ecolink Consulting was asked to demonstrate this three-step approach to regulators, or at a Panel.

Dr Cooney reviewed the 2021 Lorimer Report and said he did not dispute the findings but noted the identified regrowth was included in the Biodiversity Assessment in 2017 when it was approximately one year old and which at that time was dominated by exotic grass species with relatively few native species.

In response to issues raised in submissions, Dr Cooney said the Biodiversity Assessment:

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- assessed only the southern part of the remnant bushland
- is not a complete inventory of all species in the landscape, and this is not required for an adequate assessment of the likely impacts on ecological values
- it is unlikely any species recorded in the SBS Study would be directly impacted
- noted a limitation that further field survey would likely yield more species with frogs specifically mentioned as likely to be present.

Regarding threatened species, he noted Green Scentbark is the only threatened species observed in the study area, and the proposal will not impact more than 0.005 percent of habitat for any threatened flora species modelled by the Department of Environment, Energy and Climate Action (DEECA).

In response to concerns about impacts on Powerful Owl habitat, Dr Cooney said:

- Powerful Owls inhabit a range of woodland forest types in large territories that provide suitable breeding hollows and appropriate prey
- they nest in large hollows in trees, like those that may be found north of the study area along Blind Creek
- it is likely a pair of Powerful Owl includes the study area within its home range territory, however no suitable hollow bearing trees were identified in the assessment and none will be impacted by the proposal, and connectivity remains unchanged.

In response to a question from the Panel, Dr Cooney was not concerned with the timeframe that has passed since completion of the Biodiversity Assessment, noting an updated assessment was likely to result in reduced offset requirements due to change in condition of the vegetation.

#### **Proponent**

The Proponent clarified during the Hearing that the updated 2023 Biodiversity Assessment included the pedestrian track connecting Agora Boulevard with the creek trail. The Proponent advised it was happy to proceed with the assessment as it is, noting any reassessment of the remnant areas is likely to result in a lower habitat hectare score.

The Proponent proposed a new planning permit condition to require an update to the biodiversity assessment to assess the impacts of the proposed bushland boardwalk/pathway (see Chapter 7.2).

#### Council

Council submitted:

- biodiversity values in the municipality are best achieved by the protection of the recognised sites of biological significance
- the Planning Scheme places a strong emphasis on the need to protect biodiversity and habitat.

While not disputing the fauna sightings of submitters, Council said it did not share the concerns of submitters about the accuracy of the Biodiversity Assessment. It considered the consultants had reviewed appropriate records and undertaken site observations consistent with proper practice. It said:

The sightings of the Powerful Owl and frog species are noted to have occurred in proximity to, but not on, land affected by the Amendment.

Further, the bushland reserve will continue to provide habitat for the species identified by submitters and within the Sites of Biological Significance.

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In response to submissions that the Biodiversity Assessment did not identify species identified in the Lorimer Report, Council said:

- both assessments identify areas of regrowth
- it is to be expected that differences in species identified given the field assessments were undertaken at different times (2017 and 2021) and the nature of the regrowth.

Council said the majority of the regrowth identified was outside of the protected ESO2 area, and no permit is required to remove regrowth under Clause 52.17. It said:

In this respect, the proactive and facilitative approach to seed preservation exceeds the requirements expected by the planning scheme. This intervention, undertaken with the support of the proponent, will deliver improved biodiversity outcomes.

## (iii) Discussion

### Is the Biodiversity Assessment adequately current and acceptable for assessing the proposal?

In considering whether the Biodiversity Assessment is adequate or needs to be updated the Panel has turned its mind to:

- · any change to the condition of biodiversity in the study area
- whether the assessment meets the requirements of the Planning Scheme.

## Change to the condition of biodiversity

The Panel acknowledges the concerns of submitters that the Biodiversity Assessment was not adequately current and did not accurately reflect the extent of flora and fauna present on the site.

The condition of the native vegetation proposed to be removed is likely to have changed since the 2017 assessment. According to Dr Cooney, an updated assessment would likely result in reduced offset requirements under Clause 52.17, meaning the vegetation extent and/or condition is likely to have declined.

It is also likely there will be more mature regrowth, which may need to be considered under ESO2. Issues related to regrowth and ESO2 are discussed further below.

There are no strict guidelines about when a biodiversity assessment must be prepared under the Intermediate Assessment Pathway (relevant to this proposal). Planning guidance includes some reference to timeframes, including:

- Applications must include recent photographs, within the last two to three years.
- All applications require details of any other native vegetation approved to be removed, or removed without approvals, on the same property during the five years before the application was lodged.
- An assessment under the Detailed Assessment Pathway must be completed within three or five years (depending on the type of vegetation).<sup>8</sup>

By way of comparison and context, the second edition of the SBS Study, currently a background document in the Planning Scheme, was prepared in 2010 to account for six years of change since the first edition in 2004, noting:

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For the Detailed Assessment Pathway a site assessment report must be completed within the last three years for grassy, heathland, shrubland ecosystems including grassy woodlands, and five years for forest ecosystems. If the assessment is older than this an accredited native vegetation assessor must verify the condition of the native vegetation or complete a new assessment.

There have been substantial changes in Knox's native vegetation and fauna, as well as in the Victorian Department of Sustainability & Environment's assessment of the significance of many species of indigenous flora and fauna.

While a more recent Biodiversity Assessment would better reflect current planning guidance and changes to biodiversity values of the site, in this instance the Panel is satisfied the Biodiversity Assessment is acceptable for assessing the extent and condition of native vegetation proposed for removal and associated offsets. This is because:

- the Biodiversity Assessment (as exhibited and as updated in 2023) more accurately reflects the condition of the asset at the time the quarry closed and the time that planning commenced for the proposal
- the original assessment more accurately reflects the impact on native vegetation
- an updated assessment is likely to result in a reduced offset requirement.

A reduced offset resulting from decline in the extent and/or condition of the native vegetation would result in a perverse outcome; a poor biodiversity outcome and contrary to the intent of the control.

The Panel agrees with Council and the Proponent that the Biodiversity Assessment is adequately current for assessing native vegetation offset requirements.

#### **Planning Scheme requirements**

It is important to consider whether the Biodiversity Assessment contains the information required to assess the proposal against Planning Scheme provisions. This includes the offset requirements under Clause 52.17 and the ESO2 (Sites of Biological Significance) requirements.

The Panel has assessed these separately.

Firstly, the Panel has considered whether the Biodiversity Assessment adequately satisfies the application requirements 52.17 (Native vegetation).

The Biodiversity Assessment applies the Native Vegetation Guidelines' three step approach to avoid, minimise, and offset removal of native vegetation. It satisfies the following application requirements detailed in the Native Vegetation Guidelines:

- the assessment pathway was determined and documented
- the native vegetation to be removed was described, including extent, strategic biodiversity value score, condition score
- maps showing the location and context of the native vegetation and the property
- the offset requirement was determined
- an avoid and minimise statement was provided, including a description of efforts to avoid
  the removal of native vegetation and minimise impacts on biodiversity and how the
  proposal protects the most important native vegetation
- a statement describing the need to create defendable space was provided
- a native vegetation removal report was provided.

However, the Biodiversity Assessment does not satisfy all of the information requirements for Clause 52.17, such as:

- it refers to some outdated documents, such as Advisory Lists from 2014
- it does not include recent, dated photographs of the vegetation to be removed

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 while it contains a native vegetation removal report that details the calculated offset, it does not provide evidence that the required offset has been identified and can be secured.

With regard to outdated documents, the Panel does not expect there to be any major implications for the assessment. This is in the context of guidance on the DEECA website<sup>9</sup> which explains the new Flora and Fauna Guarantee Act Threatened List which replaces the Advisory Lists came into effect on 1 June 2020 and:

There are likely to be only minor implications for regulation...

The Guidelines for the removal, destruction or lopping of native vegetation are incorporated into all planning schemes in Victoria and refer to the Advisory Lists. These will continue to apply for the purposes of regulating native vegetation clearing in Victoria during a transition period.

The Panel is satisfied these information requirements for Clause 52.17 can be addressed through planning permit conditions, including:

- Council's proposed amended permit condition for the Proponent to provide an offset in accordance with the 2023 Biodiversity Assessment and the Native Vegetation Guidelines.
   This is an acceptable approach to ensure the offset is assessed in accordance with current planning guidance.
- Recent, dated photographs of the vegetation can be included in a Land Management
  Plan prepared for the bushland reserve. The Panel recommends this as a new condition,
  as discussed below.
- Evidence of the secured offset is required as a condition which states:

Prior to the removal of any native vegetation and the issue of a Statement of Compliance, evidence that the required offset for the project has been secured must be provided to the satisfaction of the Responsible Authority.

On this basis the Panel is satisfied that combined, the permit conditions and the Biodiversity Assessment, adequately respond to the requirements of Clause 52.17. The specific native vegetation removal and offset proposed is discussed in further detail in Chapter 7.4.

Secondly, the Panel considered the Biodiversity Assessment against the requirements of ESO2.

The Biodiversity Assessment satisfies the following application requirements of ESO2:

- a site plan showing the location of affected and surrounding remnant vegetation, trees and watercourses
- an assessment of threatened species and communities in the context of State and Federal legislation and biodiversity information
- an explanation of how native vegetation loss has been avoided, minimised and proposed offsets
- bushfire protection measures, specifically defendable space.

The Biodiversity Assessment does not:

- include details of the population size of any indigenous plant species that are vulnerable, endangered or critically endangered in Knox
- assess impacts of the proposal on environmental values over a ten year period.

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<sup>9</sup> https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list

While the Biodiversity Assessment says the response to ESO2 is addressed in the recommendations, it does not provide an explicit response to the ESO2. The recommendations include minimising native vegetation removal and retaining the bushland and reserve areas, and preparation of:

- a Land Management Plan that includes managing the ecological values of the study area
- a Construction Environmental Management Plan that includes the following management actions prior, during and post construction:
  - Appropriately fence and manage retained native vegetation;
  - Soil containment, sediment and erosion measures;
  - Weed management prescriptions, targeting noxious weeds.

While it would have been helpful if the Biodiversity Assessment provided a detailed response to ESO2, the Panel is satisfied the ESO2 requirements can be addressed through new and amended planning permit conditions as discussed below.

A new condition should be added to prepare a Land Management Plan, as recommended by the Biodiversity Assessment to improve and manage ecological values of the bushland reserve for the next ten years. This plan should be:

- informed by survey work undertaken at an appropriate time of year, including an assessment of indigenous plant species that are vulnerable, endangered or critically endangered in Knox
- respond to State and local policy to protect and enhance Victoria's biodiversity
- respond to the environmental objective and decision guidelines in ESO2.

Further survey work is particularly important to understand the biodiversity asset in the context of the ESO2 which includes:

- a statement of environmental significance which seeks to:
  - · reduce the threat of local extinction to flora and fauna species in Knox
  - achieve a net increase in the extent of habitat and improve its ecological condition in the sites of biological significance, recognising the key role that those sites play in conserving Knox's natural environment and associated community benefit.
- permit triggers that require assessment of regrowth that is more than three years old at the time of the survey in 2017 the regrowth was only approximately one year old, so will now be approximately eight years old
- decision guidelines which state:

The results of any survey/assessment of the biological values (flora or fauna), taking into consideration when the survey/assessment was undertaken, seasonal conditions and whether it was undertaken by a suitably qualified person.

The condition relating to the Site and Environmental Management Plan includes soil and erosion management measures, however it does not include other elements recommended in the Biodiversity Assessment. The condition should be amended to address:

- appropriate fencing and managing retained native vegetation
- weed management prescriptions, targeting noxious weeds.

ESO2 includes an environmental objective to ensure offsets are located as close as practicable to the area impacted by vegetation loss, with a preference for them to be located in Knox. The offset condition should be amended to state:

The general offset must:

• ...

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 Be located in Knox municipal district, if available, or within the Port Phillip and Westernport Catchment Management Authority boundary or Knox municipal district

• ..

The Panel is satisfied that with the amended and new conditions the requirements of ESO2 can be met.

#### Threatened and endangered species

Combined the Planning Scheme provisions require assessment of locally threatened and endangered species and communities as well as State and National. The ESO2 says a significant attribute of the area is "plant species that are threatened in Knox or more widely", and includes:

- an environmental objective to reduce the threat of local extinction to flora or fauna species in Knox
- decision guidelines requiring consideration of extant indigenous vegetation, flora and fauna survey results and the conservation requirements of threatened species or communities.

The Panel accepts Dr Cooney's evidence that:

- the Biodiversity Assessment contains an appropriate assessment of State and Nationally listed threatened species
- only one State listed threatened species was identified in the study area, namely four Green Scentbark (Eucalyptus fulgens) trees
- it is likely the Powerful Owl home range territory includes the study area, however there
  are no suitable hollow bearing trees on the site and habitat connectivity for the species
  remains unchanged.

The Biodiversity Assessment does not specifically address impacts on local species. In contrast, the Lorimer Report includes a list of plant species identified in the SBS Study as significant in Knox, and records if these have been found. For example, the SBS Study identifies Broad-leaf Rush (*Juncus planifolius*) as a locally endangered species, the Lorimer Report recorded 6 plants and the Biodiversity Assessment did not identify or record this species.

The Panel understands the Lorimer Report focused on regrowth and did not map the locations of identified species, however the findings are indicative that locally significant plants are likely to be present and identified if further field survey is undertaken.

While Dr Cooney advised it was unlikely any species recorded in the SBS Study would be directly impacted, it is not possible to know this in the absence of an updated flora survey undertaken at an appropriate time of year.

The Panel recommended condition for a Land Management Plan includes consideration of locally threatened and significant species.

#### **Lorimer Report**

The Lorimer Report was prepared in 2021 for a distinct purpose and represents a more recent assessment of the regrowth across the site. While areas of regrowth were identified in the Biodiversity Assessment, it is not surprising that four years later the Lorimer Report identified a greater range of species.

The Panel agrees with Dr Cooney and Council that the Lorimer Report and associated seed collection and plant translocation program is likely to result in a positive contribution to local

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biodiversity. In the context of ESO2 which seeks to improve ecological condition of sites of biological significance, the opportunity for seed collection and plant translocation should be considered in the Land Management Plan recommended by the Panel.

#### (iv) Conclusions and recommendations

The Panel concludes, subject to its recommendations:

- The Biodiversity Assessment, in combination with recommended new and amended conditions, is adequately current and acceptable for assessing the proposal.
- The Biodiversity Assessment adequately takes into account State and Federal threatened and endangered species, and the recommended Land Management Plan should involve further survey and assessment of species important to Knox.
- The Lorimer Report was prepared for a distinct purpose and does not conflict with the Biodiversity Assessment, however its findings indicate that updated survey work is likely to identify additional plant species.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

- Add a new condition requiring a Land Management Plan for the bushland reserve.
- b) Amend the condition relating to the Site and Environmental Management Plan.
- Amend the condition relating to where the native vegetation offset should be provided.

## 7.4 Native vegetation and offsets

### (i) The issues

The issues are whether the:

- extent and location of proposed native vegetation removal is appropriate
- proposed offsets are appropriate.

## (ii) Evidence and submissions

## Submissions

Several submitters said all of the native vegetation should be retained and not encroached by any part of the development.

Several submitters including Friends of Blind Creek Billabong and Knox Environment Society said the:

- new path from Agora Boulevard to Blind Creek should be removed from the plan as it unnecessarily impacts native vegetation, and there is alternative access on the Castricum/Seecal Road Reserve
- proposed stormwater treatment area/wetland/drainage reserve should be relocated onto the development area to avoid impacting native vegetation.

Several submitters raised concerns with specific lots (Lots 136, 137 and 138) and requested these be removed from the plan to have less of an impact on native vegetation. Concerns included the need to provide a defendable space area to manage bushfire risk to these properties. Submitters were mostly concerned with development of Lot 138 stating:

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- development of the lot is inconsistent with the Explanatory Statement which says the proposal ensures remnant vegetation is unaffected by the proposal
- · will have a negative impact on wildlife.

One submitter sought to have the whole site retained as a nature reserve for wildlife.

One submitter queried the exact number of trees proposed for removal, and submitted retention of mature trees should be prioritised over planting new deciduous trees.

Friends of Blind Creek Billabong requested "the reserve where the understory has to be removed is marked so that the Friends of Blind Creek can participate in the removal of undergrowth without harming threatened plants. We are concerned that contractors will just scalp the area as has been done in other developments".

Knox Environment Society was concerned the proposal did not adequately value regrowth of indigenous species on the site.

#### **Evidence**

Dr Cooney gave evidence the proposal minimises impacts to the highest ecological values identified in the study area, specifically the native vegetation contiguous with Blind Creek and covered by the ESO2. He said:

On the basis of this development plan, the Biodiversity Assessment proposed protection measures for retained ecological values within the study area and calculated offsets for the residual impacts to those values. This approach is consistent with Clause 12.01-1S (Protection of biodiversity), Clause 12.01-2S (Native vegetation management)and the ESO2 that is applicable to the northern part of the study area.

Dr Cooney said the location of the drainage reserve and unformed potential maintenance track had been refined to minimise impacts on ecological values and were appropriately sited. He explained the area of the proposed maintenance track contained native overstorey but was dominated by an exotic understorey and "a path could be established with relatively minor negative impacts to the ecological values of this area".

In response to a question from the Panel, Dr Cooney advised the tree protection zone (TPZ) is based on the Australian Standard and is conservative.

Mr Crowder noted the draft planning permit included conditions to ensure any removal of native vegetation complied with guidelines.

Mr Crowder gave evidence he was satisfied the Arborist Report had assessed the proposed building envelope of Lot 138 resulted in less than 10 per cent encroachment into the TPZ of proximate trees and in his capacity as a town planner this was an acceptable outcome.

#### **Proponent**

The Proponent relied on the evidence of Dr Cooney. It said the evidence confirmed the locations of the infrastructure will not result in unacceptable impacts on the ecological values of the area. It said:

The location of Lots 136-138 have been considered in conjunction with the Biodiversity Report and designed to sit outside the RP1 and RP2 patches of native vegetation identified within Figure 2 of the Report. Lot 138 has also been specifically considered within the Bushfire Development Plan with fire management controls recommended to project this property. This controls are reflected in the draft Planning Permit. It is noted that the CFA have also reviewed the lot layout and have raised no objection subject to conditions on permit to address bushfire concerns (draft Conditions 42-49).

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In response to the Council's final preferred position on the permit, the Proponent suggested an amendment to the native vegetation offset condition to cross reference the updated Biodiversity Assessment.

#### Council

## Council submitted:

The biodiversity assessment identifies that approximately 1.129 hectares of native vegetation will be directly impacted by clearing for the proposed development. However, 0.738 hectares of the vegetation (identified in the report as 'regrowth' and 'Remnant Patch 3') is exempt from planning permission and offsets for removal, because it is classified as regeneration less than ten years old.

The remaining 0.391 hectares of native vegetation in areas identified as 'Remnant Patch 1' and 'Remnant Patch 2' are proposed to be removed. Offsets for the removal of the vegetation have been calculated in accordance with the requirements of Clause 52.17 and include a general offset amount of 0.126 general habitat units and 2 large trees.

Council was satisfied the proposal provided an appropriate outcome for biodiversity and native vegetation, explaining it:

- protects the most biologically significant party of the land to Council that will allow for continued and proactive conservation of a site of State-level significance
- limits the extent of native vegetation removal, consistent with policy at Clause 12.01-2S
- includes offsetting native vegetation removal in accordance with the requirements of Clause 52.17
- satisfactorily addresses the environmental objectives and decision guidelines of ESO2.

Council supported Dr Cooney's evidence that the proposal appropriately responds to the relevant direction in the Planning Scheme.

Council clarified three existing street trees were proposed for removal, two deciduous and one native tree, none of which were in the ESO2 area or affected by Clause 52.17.

## Council proposed:

- four new permit conditions related to management of the TPZ
- an amendment to the exhibited permit condition relating to offsetting native vegetation to refer to the Biodiversity Assessment and Native Vegetation Guidelines.

## (iii) Discussion

The Panel is generally satisfied the development plan design has been prepared with an intent to balance development potential and biodiversity values. This includes avoiding important areas of biodiversity and minimising native vegetation loss by:

- protecting the bushland area and ensuring its ongoing ownership and management by Council
- locating the majority of residential lots and infrastructure in areas with no or minimal native vegetation and outside of the ESO2 area
- establishing a buffer between the bushland and urban environment
- on the north west of the site, positioning drainage infrastructure in proximity of the
  existing billabong and in lower quality bushland, with bushfire buffer and habitat benefits
- on the north east of the site, aligning bushfire defendable space requirements with vegetation quality

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 locating the proposed maintenance track and pedestrian link to Blind Creek to have minimal impact to native vegetation.

The Panel accepts Dr Cooney's evidence that the assessment of offset calculations is conservative noting it includes native vegetation and trees that will be retained, but that may be affected by the proposal such as changes to hydrology around the drainage infrastructure.

The Panel accepts the proposed defendable areas are appropriate as proposed, with regard to impacts on native vegetation. The 2020 vegetation assessment said the areas proposed for defendable space in the north east of the site are suitable as they are of lower quality native vegetation and management requirements would have minimal impact on the ecological values of the patch, given the composition and condition of mid and understorey plants, and current management. The CFA was satisfied with the proposal from a bushfire perspective.

No trees are proposed to be removed to accommodate Lots 136, 137 and 138. According to the Arborist Report:

- the building envelope of Lot 138 is within the TPZ for two existing trees (Trees 3 and 4) (see Figure 12)
- Trees 3 and 4 are suitable to be retained and should be retained
- the encroachment from the building footprint for each tree is less than 10 per cent of the TPZ, which is minor and acceptable.

PROPOSED RESERVE BOUNDARY BUSHLAND BOUNDARY AS PER CURRENT SECTION 173 AGREEMENT UNDER STOREY TO BE MANAGED AS THE DEFENDABLE AREA MANAGEMENT LINE OF THE DEFENDABLE AREA IN MAGENTA EXISTING GRASS AND UNDER STOREY VEGETATION TO BE MANAGED AS THE DEFENDABLE Tree 4 SRZ UNFORMED POTENTIAL MAINTENANCE TRAIL TP7 MANAGEMENT LINE OF THE 137 138 DEFENDABLE AREA 39M OFFSET FROM THE MANAGEMENT LINE OF THE Tree 3 DEFENDABLE SPACE BUILDING ENVELOPE TO ENCROACH LESS THAN 10% OF TPZ AND TO ENSURE THE TREES-MUST/NOT OVERHANG THE BUILDING

Figure 12 Subdivision Master Plan (exhibited) – Lot 138 and TPZ

Source: Document 2.11, excerpt with Panel notations

With regard to the Arborist Report and evidence of Dr Cooney, the Panel accepts the location and building envelope of Lot 138 affects less than 10 per cent of the TPZ for Trees 3 and 4.

Importantly the planning permit contains conditions:

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- for all works in the TPZ to be undertaken under the supervision of a qualified Arborist and to the satisfaction of the Responsible Authority
- that no building or works, other than fencing, are allowed in the TPZ of any tree
- an Arborist report will be required for any tree encroaching into Lot 138
- tree protection fencing must be installed before any works commence on Lot 138.

The Panel supports including reference to the Landscape Plan Guidelines in the planning permit, which contains guidance on the establishment and management of TPZs (see Chapter 10.2).

The Panel supports the changes to the offset permit condition proposed by Council and the Proponent. The Panel notes the draft planning permit appropriately includes a condition requiring evidence that the required offset has been secured prior to removal of any native vegetation.

The Panel supports Council's proposed new conditions relating to management of the TPZ, and the changes to the offset condition.

In relation to other issues raised in submissions:

- The matter of involvement of the Friends of Blind Creek Billabong in plant salvage is a matter for Council.
- The Panel agrees with the Friends of Blind Creek Billabong that the following statement in the Explanatory Report should be amended to more accurately reflect the impact on native vegetation:
  - It maintains a pleasant environment and protect the ecological significance of the Blind Creek Corridor by ensuring the remnant bushland is unaffected by the proposal and retained as a reserve with the part already in Council's ownership recognised for conservation.

## (iv) Conclusions and recommendations

The Panel concludes:

- The extent and location of native vegetation proposed for removal is generally appropriate.
- The proposed offsets are appropriate, subject to the Panel's recommendations.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

- a) Add new conditions relating to management of Tree Protection Zones.
- b) Amend the native vegetation offset condition to refer to the Biodiversity Assessment and Native Vegetation Guidelines.

The Panel informally recommends amending the Explanatory Report to accurately reflect the impact on native vegetation.

## 7.5 Bushland reserve

## (i) The issues

The issues are whether:

- public access to the bushland reserve should be restricted with fencing
- the proposed maintenance track and pathways from Agora Boulevard are appropriate.

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## (ii) Evidence and submissions

Several submitters sought further protection for the bushland reserve, including requesting the area be fenced to prevent public access. Submitters said this would deter inappropriate access such as from motorbikes and mountain bikes, and existing fencing is one of the reasons the bushland reserve is in good condition. One submitter said the bushland reserve should not be changed in anyway, including no rezoning, modifications or changes. Several submitters supported the trail proposed on the west side along the Seecal Road Reserve as it would not encroach onto the conservation reserve.

One submitter was concerned about opening access from Agora Boulevard into the bushland area, considering:

- there would be large number of people and pets moving through the area including dogs off leash
- people using this area would have a negative impact on the quiet neighbourhood.

The submitter was of the understanding there was no direct connection to Blind Creek from this new trail.

Some submitters objected to the proposed maintenance trail, submitting maintenance access could be achieved in other ways such as walking with mobile equipment.

Some submitters, including Friends of Blind Creek Billabong, said the proposed wetland and vegetated swale were not an adequate buffer between the development and the bushland reserve.

Dr Cooney gave evidence the proposed maintenance trail and drainage reserve were positioned to minimise impacts to ecological values.

In response to a question from the Panel, Dr Cooney said he agreed with Council that fencing the bushland reserve would not be a good option as it may disenfranchise people from the park.

The Proponent said:

- The 'unformed potential maintenance trail' will not encourage unnecessary traffic
  through the site as the fence is to remain at Agora Boulevard and within the subject
  site, there is no crossover proposed to access this track. Rather it is for access for
  Council vehicles for example to maintain the defendable space within the bushland.
- Requests to fence the bushland are at the discretion of Council. It is our position that
  opening the bushland will create a space for the community to access and enjoy
  however as the bushland is to be vested to Council, they may decide that fencing the
  area is the preferred outcome.

Council said while many submissions seeking to protect the bushland reserve were on the basis of biodiversity protection, there were specific design and access issues that required consideration. It said the:

- eastern path is proposed to be a shared trail for maintenance and access
- proposed pathway to Agora Boulevard would provide good connection and permeability to the Blind Creek Trail.

Council did not support restricting access to the reserve through fencing, noting it generally does not restrict public access to the bushland reserves it manages. It did not consider fencing would lead to improved conservation outcomes and access is likely to be a positive deterrent to activities that may harm the bushland or create safety concern for users. Council advised it was open to the

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Panel making a recommendation on whether a "low impact and permeable fence may be appropriate, without impeding access to and through the bushland reserve".

## (iii) Discussion

Potential fencing of the bushland reserve is a management decision for Council. Council has advised it does not generally restrict public access, however if use or access to the reserve is doing harm to biodiversity values or creating other amenity concerns for residents, Council may assess its options to ensure appropriate management of the bushland reserve.

The Panel accepts the proposed maintenance track and pedestrian trail connecting Agora Boulevard and the Blink Creek trail will result in minimal native vegetation loss (see Chapter 7.4) and accepts the benefits of access for maintenance and public engagement and informal recreation within the conservation area.

## (iv) Conclusions

The Panel concludes:

- It is for Council to decide whether fencing is required to manage access to the bushland reserve.
- The proposed maintenance track and pathway from Agora Boulevard to the Blind Creek trail are appropriate.

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# 8 Traffic and transport

## 8.1 Traffic Assessment, access and road network

## (i) The issues

The issues are whether:

- traffic impact has been adequately assessed
- impact on local roads leading to the arterial road network is acceptable
- amenity impacts of additional traffic are acceptable
- the location of access points into the Estate are appropriate
- conditions relating to internal road network treatments are appropriate.

#### (ii) Evidence and submissions

Some submitters were concerned the traffic assessment was flawed as it doesn't address:

- a more realistic increase in traffic volumes generated by the development on local roads leading to the arterial road network, particularly to the north-west of the site
- the overlap of 'work' and 'education' peak traffic volumes.

Submitters raised issues including:

- Traffic volumes and congestion:
  - traffic generated by the development will exacerbate existing traffic congestion on local roads
  - the number of houses proposed will result in a traffic impact on local streets which are narrow and already congested with residents parking on the street
  - a redesign of Rankin Road and McMahons Road was needed to cope with the extra traffic generated by the development
  - Norvel Road is not of adequate width from McMahons Road to Road H/60 Norvel Road to cater for increased traffic movements
- Amenity and safety:
  - a significant increase in traffic volumes will have a negative impact on amenity, including noise, and safety of local roads
  - the new road adjacent to 60 Norvel Road will result in increased traffic and noise
- Access and entry points:
  - several entry points were requested for traffic into the development to reduce noise, traffic congestion and accidents
  - Dion Road should not be the main access road more access points should be provided or Agora Boulevard should be the main access.

Mr Young gave evidence for the Proponent. Mr Young endorsed the findings of the Traffic and Transport Assessment and explained he had commissioned a traffic count to support his evidence. He said:

- The development will generate up to 124 vehicle movements during the AM and PM peak hours and 1,242 vehicle movements per day
- The surrounding road network is highly permeable, with multiple options to access the external arterial road network.

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- The external local road network is designed to readily cater for the additional traffic generated by the proposal, with the post development traffic volumes being well within their environmental design capacities as per Clause 56.06-6 of the Knox Planning Scheme.
- The development will have a negligible impact on the surrounding external road network, with increases in traffic corresponding to approximately one additional movement per traffic signal cycle. This is a low level of traffic in traffic engineering terms.
- From a traffic engineering perspective, there is no need for additional access from Castricum Place.
- There are no traffic engineering reasons why the rezoning and permit application should not proceed, subject to conditions.

Responding to questions of cross examination, Mr Young explaining the model and assessment had appropriately included a variety of data for trip types including for work, education and recreation.

Mr Young generally agreed with proposed permit conditions, but recommended the proposed permit condition specifying mid-block speed humps for Roads A and H should be reworded to remove specific reference to speed humps and to instead refer to the more general term of traffic calming devices. He said:

- Road A warrants a form of traffic calming due its length exceeding 240 metres as set out in Clause 56 of the Planning Scheme
- Road H is only approximately 200 metres long and does not require any form of traffic calming
- There are a number of ways to calm traffic, and it is recommended to amend the condition to remove the explicit reference to speed humps and to instead refer to the more general term of traffic calming devices.

Mr Crowder deferred to traffic experts but noted:

- The subdivision will utilise an access from Norvel Road (south) and provide a connection/extension of Dion Street to the existing subdivision to the east.
- The proposed subdivision will not adversely impact operation of the existing road network
- All roads within the proposed subdivision will be designed and constructed as Access Streets (7.3 m) or Access Place (5.5 m). The internal roads can be designed so as to ensure safe traffic movements.
- Sealed footpaths are able to be accommodated within the proposed subdivision, on one (Access Place) or both sides (Access Streets) of the proposed road networks.
- Only three allotments to the north-east corner of the site (Lots 136, 137 and 138) will
  obtain access via a short Access Lane which is considered acceptable given the low
  anticipated traffic movements of approximately 30 vehicle movements per day.

The Proponent submitted the proposal will result in acceptable traffic impacts, and additional traffic will be distributed on local roads to the arterial road network, particularly to the north-west of the site.

Council considered the proposal was appropriate from a traffic and transport perspective, noting:

- the Amendment was supported by a Traffic and Transport Assessment that showed the surrounding road network and proposed internal roads are capable of accommodating the expected traffic volumes generated by the subdivision
- it supported Mr Young's view that the proposal is sound from a transport engineering perspective.

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Council and the Proponent agreed with Mr Young's proposed change to the permit condition relating to traffic calming devices, submitting the condition should be amended as follows:

Proposed traffic <u>calming treatment mid-block</u> devices and speed humps, including speed humps in the detailed design for Road A and H.

## (iii) Discussion

The Panel is satisfied the Traffic and Transport Assessment adequately assesses existing and anticipated traffic volumes, including work and education related traffic volumes, and the proposed road network has been designed with consideration of relevant traffic design standards.

The Amendment was supported by a Traffic and Transport Assessment which was reviewed by Council's Traffic and Transport Team, confirming that the internal and local road network can accommodate the expected daily traffic volumes generated by the development. Mr Young supported the methodology used for the Traffic and Transport Assessment and independently verified the traffic count data.

The Panel is satisfied the proposal:

- is consistent with local planning policy Clause 18.02-4S (Roads) as it facilitates an efficient and safe road network and makes the best of existing infrastructure
- meets the neighbourhood street network objectives at Clauses 56.06-4 and 56.06-7 as it provides for direct, safe and easy movement to and through the subdivision.

The development will result in increased traffic on local roads, however the increase together with existing traffic is well within the environmental design capacities of these local roads. The surrounding road network is highly permeable with good access to and from the arterial road network. Any traffic related amenity impacts are consistent with amenity expectations of a residential neighbourhood.

Additional access to the site is not required from a traffic engineering perspective. The proposed access and road network is appropriate because it distributes traffic efficiently and safely to the existing road network. Using Agora Boulevard as an alternative access to Dion Road would unnecessarily impact the bushland area.

The proposed amendment to the permit condition relating to traffic calming devices suggested by Mr Young is supported.

## (iv) Conclusions and recommendation

The Panel concludes:

- The traffic impact assessment is appropriate.
- The traffic generated is within the design and functional limits of local roads.
- Traffic related amenity impacts are acceptable.
- The access points to the site are appropriate.
- Subject to its recommendations, the conditions relating to the internal road network are appropriate.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

a) Amend the condition relating to traffic calming treatments along Road A

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## 8.2 McMahons Road/Norvel Road intersection

## (i) The issue

The issue is whether the T-intersection at the corner of McMahons Road and Norvel Road is appropriate.

## (ii) Evidence and submissions

Submitters were concerned:

- the current intersection provided poor visibility which creates a hazardous situation for north-bound traffic in McMahons Road turning right into Norvel Road
- oncoming vehicles from the east-bound direction on Norvel Road have limited visibility of vehicles approaching from McMahons Road
- a roundabout is needed to improve visibility, improve traffic flow and provide greater safety.

The Proponent relied on the evidence of Mr Young who said:

- vehicles can observe a sufficiently safe gap to turn right at the intersection and no modifications are necessary
- the intersection design in its current form provides for safe vehicle movements and does not require an alternative treatment, such as a roundabout control
- the proposed addition of a mountable splitter island will improve operation of the intersection to the benefit of both existing and future road users

## Council submitted:

- a mountable splitter island at the McMahons/Norvel intersection is an acceptable solution to address concerns regarding safety and traffic flows
- analysis of the CrashStats database shows that there have been no casualty accidents at the intersection within the past 5 years
- a roundabout at the intersection may have potential to further regulate traffic movement
  and improve safety but would require significant modification to the intersection and the
  potential acquisition of part of nearby properties, noting Mr Young's expert evidence is
  that a roundabout is not required at this intersection
- a roundabout is likely to require some acquisition of adjoining properties.

## (iii) Discussion and conclusion

The proposed road layout for the development retains a T-intersection at the intersection of McMahons Road and Norvel Road.

A roundabout is not required from a traffic engineering perspective. The proposed introduction of a mountable splitter island to improve the approach to the intersection is appropriate. The appropriateness of the T-intersection was adequately addressed in the expert evidence. Consistent with the Austroads Guide to Road Design the intersection provides adequate sight distances for safe vehicle movements.

The planning permit appropriately contains a condition for detailed construction plans to include a fully mountable splitter island at the intersection of McMahons Road and Norvel Road, to the satisfaction of the Responsible Authority.

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The Panel concludes the T-intersection as proposed at the corner of McMahons Road and Norvel Road is appropriate and safety will be enhanced with the introduction of the mountable splitter island.

## 8.3 Rankin Road/Norvel Road/Johnson Drive

#### (i) The issue

The issue is whether the safety impacts on Rankin/Norvel Road due to a double sharp bend at the end of Johnson Drive have been adequately considered.

## (ii) Evidence and submissions

One submitter requested the double sharp bend in Rankin/Norvel Road at the end of Johnson Drive be redesigned. The submitter considered it a dangerous part of the road due to Rankin Road being a "rat-run" between Boronia Road and the Burwood Highway.

Mr Young gave evidence:

The level of traffic using the local roads will remain within their environmental capacity. Further there is extensive [local area traffic measures] LATM measures along the full length of Rankin Road / Norvel Road / McMahons Road to discourage it being used as a rat run.

Both Council and the Proponent submitted the local road network has adequate capacity to cater for the additional traffic generated by the development.

## (iii) Discussion and conclusion

The Rankin Road/Norvel Road bends at the end of Johnson Drive are some distance from the development and are not proposed to change because of the proposal. Council and the Proponent agreed the local road network has adequate capacity to cater for the additional traffic generated by the development. Increased traffic from the development is well within the design capacity of Rankin Road/Norvel Roads. Any safety issue with the bends at the end of Johnson Drive is a matter for the Council as the responsible road authority.

The Panel concludes the safety impacts on Rankin and Norvel Roads have been adequately considered.

## 8.4 Parking and emergency vehicle access

#### (i) The issue

The issue is whether the proposal has adequately provided for parking and emergency vehicle access.

#### (ii) Evidence and submissions

Some submitters were concerned that:

- allowing on-street parking on both sides of the roads in the development could impede access by emergency vehicles
- provision should be made for adequate parking within the allotments so that on-street parking is reduced

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 existing streets will become clogged due to the traffic generated from the development and parking on each side of existing roads would make it difficult for emergency vehicle access.

The CFA did not object to the proposal and said its comments had been incorporated into the exhibited material.

## Mr Young said:

- it will be unnecessary to install on-street parking restrictions as there will be parking
  within lots in the development and a further 139 on-street parking spaces within the
  internal roads which will be more than sufficient for any on-street parking demand
- it is not necessary to restrict parking to one side of the street as the roads meet the CFA guidelines that roads with parking on both sides be at least 7.3 metres.

Mr Young considered that provision for parking within the development would be adequate even if residents use their garages for purposes other than for parking vehicles.

#### The Proponent submitted:

On-street car parking has been provided within the development. This is in line with the current car parking demands expected from a development of this size and has been reviewed and agreed by Council's Traffic Engineers. Car parking can also be provided for within each lot. Council will have the option to review the number of car parking spaces provided as part of any proposed development 10.

Council submitted that while the Traffic and Transport Assessment estimated 150 on-street car parking spaces would be available, the subdivision master plan included a total of 139 on-street car parking spaces. Council accepts, based on the evidence of Mr Young, that 139 spaces is achievable. It notes future dwellings will be required to comply with relevant car parking requirements in the Planning Scheme and Building Regulations.

Council was satisfied the proposal adequately provided for safe access for emergency vehicles.

## (iii) Discussion and conclusion

The Panel is satisfied the provision for car parking on lots together with on-street parking appropriately allows for emergency vehicle access.

The roads are designed with a road width to meet the CFA guidelines for emergency vehicle access with allowance for on-street parking on both sides of the roads. There were no objections from the CFA or other emergency service organisations to the proposal.

The draft planning permit appropriately requires detailed engineering construction plans to show car parking and emergency access requirements including:

- Swept path diagrams for junctions, bends, and hammerhead turning areas to ensure suitable access for all vehicles, including emergency vehicles, to turn and remain free of encroachment or obstructions, including on-street car parking.
- An on-street parking plan which meets CFA requirements, parking restrictions limiting onstreet parking to only one side on the narrower 'Access Place' type roads with preference of the 'no parking' to be located on the residential side.

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<sup>&</sup>lt;sup>10</sup> Proponent submission, Document 12a

The Panel concludes the proposal has adequately provided for parking and emergency vehicle access.

# 8.5 Public transport

#### (i) The issue

The issue is whether the area is adequately serviced by public transport to cater for the proposed development.

# (ii) Evidence and submissions

One submitter said there are no buses coming into the area because the streets are too narrow and the nearest public transport is about 1.5 kilometres or more away.

Mr Young's gave evidence:

- there are a number of bus routes within a 10-15 minute walk from the subject land
- the small size of the proposed subdivision and the design of the internal access roads as a no-through route means that the site cannot reasonably be expected to allow future public transport network improvements.

Mr Young provided an area plan showing public transport routes operating nearby (see Figure 13).

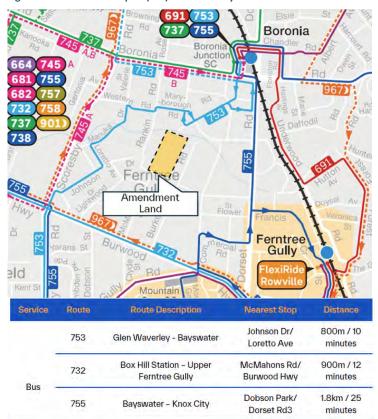


Figure 13 Public Transport (Bus) Routes nearby

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#### The Council submitted:

- Bus Route 753 (Glen Waverley to Bayswater) is approximately 600 metres to the north the subject land and provides connections to Boronia and Bayswater Railway Stations.
- Boronia and Ferntree Gully Railway Stations are 2 kilometres and 3 kilometres respectively from the site.

## (iii) Discussion and conclusion

The Panel accepts Mr Young's evidence that the site cannot reasonably be expected to allow for future public transport network improvements due to the relatively small size of the subdivision and the design of the internal access roads as a no-through route.

There are a number of bus routes within a 10-15 minute walk from the subject land to satisfy the public transport network objective in Clause 56.06-3 that most dwellings are a short and safe walk to a public transport stop.

The Panel concludes that the area is adequately served by public transport.

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# 9 Stormwater and flooding

# 9.1 Background

#### **Stormwater Management Plan**

The Stormwater Management Plan exhibited with the proposal addressed:

- mitigation of post development flooding downstream
- · water quality of stormwater runoff.

The Stormwater Management Plan detailed flood impact and mitigation assessments and noted the final flood mitigation assessment was approved by Council.

The Stormwater Management Plan included water quality objectives for the site based on *Urban Stormwater: Best Practice Environmental Management Guidelines*, CSIRO<sup>11</sup> 1999 (Urban Stormwater: BPEM) and Council's Stormwater Management Strategy 2010 (see Figure 14).

Figure 14 Stormwater Management Plan water quality objectives

Pollutant	Target Reduction	
Total Suspended Solids (TSS)	80%	
Total Nitrogen (TN)	45%	
Total Phosphorus (TP)	45%	
Gross Pollutants (GP)	70%	

The plan includes a concept design which aims to achieve best practice water quality objectives in the context of site constraints and Council's preferences, including for a low maintenance treatment system. The design includes three gross pollutant traps, a raingarden and ephemeral wetland.

Stormwater quality modelling showed the treatment measures will meet Gross Pollutants ,Total Suspended Solids and Total Phosphorous water quality objectives, but will not meet the water quality objectives set out for Total Nitrogen.

The plan concluded that flooding would decrease on all neighbouring residential properties as a result of the development.

## **Draft planning permit**

Melbourne Water provided advice on the proposal in 2020 and its conditions were included in the exhibited draft planning permit.

The exhibited draft planning permit contains the following:

- under the heading 'Engineering Plans Required', detailed engineering plans are required generally in accordance with the Stormwater Management Plan
- Melbourne Water conditions:

#### Melbourne Water Certification

35) Prior to Certification of any stage of this subdivision, Melbourne Water requires that the applicant submit a detailed Drainage and Stormwater Management Strategy for approval, which demonstrates how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters

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 $<sup>^{11}</sup>$  CSIRO – Commonwealth Scientific and Industrial Research Organisation

- of Victoria) objectives for environmental management of stormwater. The strategy should also include information regarding the future ownership and maintenance requirements of any proposed assets.
- 36) Unless otherwise agreed in writing by the relevant drainage authority, the subdivision must retard stormwater back to pre-development levels before entering the downstream drainage system/waterway and/or retard stormwater back to the sufficient capacity of the downstream drainage system.
- 37) Stormwater runoff from the subdivision must achieve State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater as set out in the 'Urban Stormwater Best Practice Environmental Management Guidelines (CSIRO) 1999'.

#### Melbourne Water - stormwater connection

38) Prior to the commencement of works, a separate application direct to Melbourne Water must be made for approval of any new or modified stormwater connection to Melbourne Water's drains or watercourses, works near or over a Melbourne Water asset and/or waterway crossing.

#### Melbourne Water - Statement of Compliance

- 39) Prior to the issue of a Statement of Compliance, engineering plans of the subdivision (in electronic format) must be forwarded to Melbourne Water.
- condition relating to a financial contribution for stormwater management:
  - 7) Prior to Statement of Compliance for Stage 1, the owner/developer must pay to the Council a financial contribution towards stormwater management and construction of the bushland boardwalk to the satisfaction of the Responsible Authority.

# 9.2 Stormwater management and quality

#### (i) The issues

The issues are whether the:

- proposed management of stormwater is appropriate
- stormwater quality will be acceptable
- conditions relating to stormwater are appropriate.

#### (ii) Evidence and submissions

Melbourne Water submitted the site will not be flooded by flow from Blind Creek for a one per cent Annual Exceedance Probability event and Blind Creek can provide for flood conveyance and storage for stormwater from the development. It submitted alternative wording of the permit conditions relating to:

- the Drainage and Stormwater Management Strategy, and for this condition to be "prior to the commencement of works" rather than "prior to certification of any stage of subdivision"
- stormwater connection to Melbourne Water's drains or watercourses.

The Proponent relied on the evidence of Mr Glasson of Stantec, who advised his evidence was primarily based on the Stormwater Management Plan prepared by Cardno, now Stantec.

Mr Glasson explained:

- There is a Stormwater Management Strategy approved by Melbourne Water and Council that assesses:
  - mitigation of post development flooding downstream of the site
  - water quality treatment of stormwater runoff from the development.

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- The approved Stormwater Management Strategy satisfies Melbourne Water's conditions 39 and 43 in the exhibited draft planning permit for submission of a detailed Drainage and Stormwater Management Strategy.
- Detailed civil engineering design of the subdivision will model the surface and design the proposed mitigation works to confirm there will be no adverse flooding impacts downstream of the development.
- Council wished to maintain the hydrology of the billabong post development, and Council
  required stormwater discharges from the development be directed towards the
  billabong as dispersed overland flows.
- Providing water quality treatment as proposed with an end of line facility is typically more
  effective than using smaller measures dispersed through the development.
- The Urban Stormwater: BPEM targets for reduction in gross pollutants, suspended solids and phosphorous will be met but there is a shortfall in the reduction of nitrogen.
- A permit condition specifies a one-off payment to the Council to address the shortfall in reduction of nitrogen.

In response to questions from the Panel, Mr Glasson explained the nitrogen levels do not meet the Urban Stormwater: BPEM target due to the catchment area specified for the development. If the catchment is expanded to include the Council owned Blind Creek billabong the nitrogen levels are likely meet the Urban Stormwater: BPEM target. He said it was for Council to decide how the condition relating to the payment would be worded and how the funds would be used.

Mr Glasson was generally satisfied with Council's Day 1 version of permit conditions. He commented that two of the notes in the draft planning permit proposed by Melbourne Water were redundant as:

- The first item regarding the over estimation of pre-developed flows has been addressed in the approved Stormwater Management Plan and is redundant.
- The third item requiring submission of an updated strategy addressing the above requirements has also been addressed and is redundant.

Council submitted the exhibited draft planning permit contained conditions requiring:

- the preparation of detailed engineering plans to give effect to the Stormwater Management Plan's mitigation measures
- stormwater to be retarded on site to pre-development levels
- submission of a detailed Drainage and Stormwater Management Strategy to the satisfaction of Melbourne Water.

Council advised its requirements had been incorporated into the Stormwater Management Plan, and Melbourne Water "accepted the proposed drainage and stormwater treatments, subject to resubmission after further detailed design".<sup>12</sup>

Council accepted the alternative wording of the permit condition proposed by Melbourne Water relating to the Drainage and Stormwater Management Strategy, but did not accept the suggested changes to the permit condition relating to stormwater connections.

Council and the Proponent generally agreed on proposed changes to the draft planning permit relating to the financial contribution for stormwater management as follows:

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<sup>&</sup>lt;sup>12</sup> Council Part B submission, page 29

Prior to the issue of a Statement of Compliance for Stage 1, the owner developer of the land must pay to the Responsible Authority Council a financial contribution towards the stormwater management which shall be to the satisfaction of the Responsible Authority and construction of the bushland boardwalk to the satisfaction of the Responsible Authority.

The contribution required to be paid in accordance with Condition 7 is the difference between the cost of a typical stormwater management treatment solution which meets BPEM targets and the cost of the approved stormwater management treatments as approved by the Responsible Authority. The owner of the land shall submit the cost to the Responsible Authority for its approval.

# (iii) Discussion

There is some inconsistency in the name of stormwater reports. The Panel has used Stormwater Management Plan (May 2021) to refer to the report exhibited with the Amendment, and for consistency with Melbourne Water's it has referred to the Drainage and Stormwater Management Strategy in the relevant permit conditions. Council may wish to confirm the names of documents referred to in the draft planning permit with Melbourne Water.

The Stormwater Management Plan has been approved by the Council and Melbourne Water and satisfactorily addresses the stormwater impacts and mitigation measures resulting from the proposed development.

The permit condition requiring a payment to the Council for not meeting the nitrogen levels required under the Urban Stormwater: BPEM, although unusual, is considered appropriate given that Council land is to be used to meet the nitrogen targets under the BPEM.

The size of the subdivision and the external catchment means that the Council is the drainage authority responsible for internal drainage and stormwater management. The Council is satisfied that the drainage and stormwater management meets its requirements. In the event that stormwater is to be directed to Melbourne Water's drainage system a permit condition requires the consent of Melbourne Water and meeting Melbourne Water's requirements.

The Panel has reviewed the draft permit conditions and:

- accepts the amended wording of the condition relating to the Drainage and Stormwater
   Management Strategy as proposed by Melbourne Water and accepted by Council
- prefers the exhibited wording of the condition relating to stormwater connections as its achieves the intent of the Melbourne Water proposed condition and more clearly states the requirements
- accepts the proposed changes to the condition to relating to financial contribution for stormwater management proposed by Council.

The last dot point in the notes in the draft planning permit relating to Melbourne Water's requirements is unnecessary in the context of the permit conditions, and has been removed by the Panel in its preferred version of the planning permit.

### (iv) Conclusions and recommendation

The Panel concludes:

- The proposed stormwater management is appropriate.
- Subject to its recommendations, the planning permit conditions are acceptable.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

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### a) Delete the last dot point under the Melbourne Water notes.

# 9.3 Existing flooding

## (i) The issue

The issue is whether the impacts on existing flooding to the north west of the site for properties along Jacobus Walk, and in the vicinity of Dion Street are acceptable.

#### (ii) Evidence and submissions

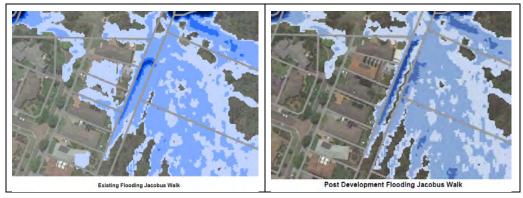
#### East side of Jacobus Walk

One submitter said:

Drainage works along the north-south reserve/bike path on the west side of the development site will be required, as there have been long-standing issues concerning water run-off entering the rear of properties on the east side of Jacobus Walk. This needs a more substantial response than has been the case to date, as the addition of a bike path will not improve runoff unless effective drainage is incorporated in the modifications to the reserve.

Mr Glasson relied on the Cardno flood modelling to show the flooding affecting the Jacobus Walk properties. A submitter said the flooding extends further south from that shown in the modelling. Mr Glasson said the development of the site in accordance with the Stormwater Management Plan will alleviate any existing flooding on properties adjacent to the site, as shown in the pre and post development flood depth maps (see Figure 15 below).

Figure 15 Flood levels – Jacobus Walk



Council was satisfied that the development will improve flood impacts along the Seecal Road Reserve and properties to Jacobus Walk, noting that permit conditions require approval of further detailed design of the proposed drainage and stormwater treatments. It submitted that the Stormwater Management Plan recommends that this flooding can be reduced by:

- raising part of the shared user path by more than 300 millimetres
- upgrading an existing swale along the rear boundary of some properties to Jacobus Walk
- introduction of a culvert under part of the footpath
- introduction of a bund to the localised high point, adjacent to the proposed wetland.

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#### **Dion Street**

One submitter was concerned about flooding risk to the property at 13 Dion Street and proposed Lot 127, stating the Development Master Plan does not show infrastructure to this area which is prone to flooding.

Mr Glasson explained the development is downhill from 13 Dion Street however the existing swale and ridgeline along the site's western boundary may cause some flooding. He said the potential for flooding of 13 Dion Street will be reduced following development. Specifically:

As part of the development of the site the new lots along the western boundary of the site will be graded to fall to the west to the new internal road and underground drainage system. The existing swale and ridge line along the sites western boundary will be removed.

As a result any overland flows from the upstream properties in Nerissa Street to the west will no longer be captured and concentrated and directed along the sites western boundary towards 13 Dion Street. Post development these flows will discharge overland as sheet flows into the development, in accordance with standard practice in subdivisional development.

The Proponent relied on the evidence of Mr Glasson.

Council supported Mr Glasson's opinion that the development will remove the berm to facilitate the continuation of Dion Street into Road G and Road F in the subdivision resulting in a continuous flow path for stormwater to the north along Road F through the bushland reserve to Blind Creek.

#### (iii) Discussion and conclusion

The Panel is satisfied that the Council and Melbourne Water have approved a Stormwater Management Plan that will reduce flooding on adjacent properties along Jacobus Walk and at 13 Dion Street if the drainage works and mitigation measures are in accordance with the Stormwater Management Plan. The permit conditions appropriately require detailed designs of the drainage works proposed in the Stormwater Management Plan be approved.

The Panel is satisfied that stormwater from the site can be managed to meet the requirements of Standard C5 in Clause 56.07-4 of the Planning Scheme.

The Panel concludes the proposal will improve outcomes related to existing flooding to the north west of the site, for properties along Jacobus Walk, and in the vicinity of Dion Street.

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# 10 Other issues

# 10.1 Housing density

#### (i) The issue

The issue is whether proposed housing density is appropriate.

#### (ii) Evidence and submissions

Some submitters were concerned the proposal included too many dwellings, raising issues related to:

- housing density/intensity and associated impacts related to traffic, open space provision and views
- the impact of specific Lots (Lots 136, 137 and 138) on biodiversity and loss of bushland
- concern that large two storey homes would be built with little garden space.

One submitter said the development should have fewer dwellings and more amenities, such as open space and recreational areas, and commercial land use on the site.

Some submitters supported the proposal on the basis it would provide for more housing, including affordable housing, which was needed in Victoria.

In addition to the evidence of Mr Crowder in relation to strategic justification of the proposal and the need for increased housing supply (see Chapter 3), he explained:

- lots sizes in the surrounding residential area are typically more than 700 square metres, and a unit development includes lot sizes between 400 – 450 square metres
- the proposed lot sizes range from 325 to 474 square metres abutting existing external streets, and from 404 to 581 square metres abutting the eastern boundary.

He was satisfied the lot sizes provided an appropriate response with consideration of abutting residential properties and road interfaces. He said the proposed building envelopes, Urban Design Guidelines and proposed permit conditions would ensure future appropriate built form outcomes.

The Proponent and Council supported the evidence of Mr Crowder.

The Proponent submitted that planning policy encourages intensification of residential land. It referred to the description of Strategic investigation area, Site 6, in the Housing Strategy which says:

- the site is suitable for housing development at a range of densities
- housing densities should be consistent with the surrounding area on the interfaces "with increased densities located internally, toward the centre of the site (facing public open space)".

The Proponent submitted:

- while the density of the site is proposed to be greater than the surrounding area, this should be encouraged on the site strategically positioned to accommodate growth
- lot sizes generally allow dwellings to meet standard ResCode requirements
- ResCode standards relating to site permeability and site coverage have not been altered
  and a minimum garden area for lots under 400 square metres of 25 per cent is set by the
  planning permit.

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In response to the submission regarding loss of views, the Proponent said the submitter did not identify the scenic views that would be threatened by the development. Given the low scale of proposed housing (maximum two storeys) the development will not be readily seen, will not impact views and will not impact important qualities of the surrounding neighbourhood.

#### (iii) Discussion

The Panel has:

- concluded the proposed residential zone is appropriate (see Chapter 3)
- addressed issues relating to traffic, biodiversity, open space and stormwater in other chapters of this Report.

The area is not identified in the Planning Scheme as having significant views, and there are no planning controls that apply to the site requiring protection of views. The Panel is satisfied there will not be an unreasonable impact on views due to development of the site as proposed.

The Knox Housing Strategy says the site is suitable for residential use only, and at a range of densities. While the Knox Housing Strategy indicates higher density housing should be located internally and facing public open space, this document was prepared in 2015: In the context of the release of the Victoria's Housing Statement in 2023, there is greater awareness of the urgency to provide more housing in well suited locations. The Panel is satisfied with the distribution of higher density housing as proposed in the draft subdivision master plan (see Figure 3), noting:

- design broadly responds to site values and constraints
- larger lots are generally located along the eastern boundary with direct interface to existing residential lost
- while no central area of open space is proposed, there are good linkages across the development to surrounding and abutting open space
- the Panel has concluded the public open space provision is appropriate (see Chapter 10.6).

The proposal facilitates delivery of housing at a higher density than the surrounding neighbourhood, however this is consistent with the policy settings and strategic expectations for the site.

Of note, the proposal includes gifting of eight affordable houses to a social housing provider, which will contribute to Council's *Social and Affordable Housing Strategy and Action Plan 2023-2027* aspiration of five per cent affordable housing.

#### (iv) Conclusion

The Panel concludes the proposed housing density is appropriate, subject to its recommendations on specific issues discussed in this Report.

# 10.2 Landscaping Plan and planting

## (i) The issue

The issue is whether the Landscaping Plan and plant selection are appropriate.

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### (ii) Submissions

Several submitters, including Friends of Blind Creek Billabong, said street trees should be native and indigenous to the area to support wildlife. They said this would also avoid maintenance issues such as build up leaf litter or blocked drains as can occur with deciduous trees. One submitter said the planting guide was misguided.

One submitter advised the large tree immediately south west of the Road C/Road D corner between the proposed bike path and the fence line along the back of Jacobus Walk properties no longer existed. The submitter requested more planting along the fenceline/proposed bike path.

Some submitters commented on species selection and location, including:

- more tall native trees, ideally Yellow Box, should be planted to strengthen the habitat corridor along the proposed bike path and to connect Norvel Reserve to the existing habitat in the north
- there are many native trees that would be more appropriate
- the proposed Red Box is not tall enough to support diverse wildlife between areas of habitat
- *Pandorea pandorana* (Wonga Wonga Vine) on the planting list was not appropriate as it can become a weed.

The Proponent submitted that if native trees are preferred through the development it was happy to accept a condition requiring this. Regarding the tree that is no longer near Road C/Road D corner, the Proponent said the Arborist Report notes it no longer exists (Tree 145). It said:

Should Council require additional tree planting along the shared path, this can be sought via a condition of permit. We note that this tree sat next to another large canopy tree and its loss will not result in a large gap along this interface. Furthermore, whilst this application removes 3 trees, 173 new trees are proposed, significant increasing the canopy cover within this area. The landscape plan provides for rows of canopy trees that will run north-south and east-west through the site, particularly the corridor along Castricum Place and the shared path. This will assist with connecting Norvel Reserve to the habitat corridor of Blind Creek.

In response to submitters seeking more indigenous planting through the site, Council said it supported provision of more native species and the draft planning permit included conditions to replace the Norwegian Sunset plantings with *Eucalyptus melliodora* (Yellow Box).

Council submitted changes to the Landscaping Plan condition to:

- include Knox's Landscape Plan Guidelines, as a standard document referred to in planning permits
- include a requirement to ensure detailed landscaping plans are consistent with the Arborist Report, noting the Landscape Plan exhibited with proposal contains incorrect information regarding some trees (for example tree 145 has been removed)
- require alternative plant species.

The Proponent did not object to these proposed changes.

#### (iii) Discussion

The changes to the Landscaping Plan conditions proposed by Council are appropriate. This includes:

 Requiring the plan be generally in accordance with the Landscape Plan Guidelines and 2023 Arborist Report. Consistency with the Arborist Report will address the issue of Tree 145 no longer existing.

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 Amending the plant species to ensure they are suitable for the site. The changes include replacement of deciduous trees with appropriate native trees, such as Yellow Box as suggested by submitters. The Panel notes *Pandorea pandorana* is identified in the Landscape Plan Guidelines as an indigenous creeper and is suitable for use on the site.

The Landscape Report appropriately shows native/indigenous street trees running north-south connecting the existing bushland area along Blind Creek to areas of open space, including Norvel Reserve to the south.

In response to submissions Council proposed to change some of the proposed plant species.

#### (iv) Conclusion and recommendation

The Panel concludes it is appropriate to amend the Landscaping Plan condition as proposed by Council.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

a) Amend the condition relating to the Landscaping Plan and tree species.

## 10.3 Eastern fencing

#### (i) The issue

The issue is whether conditions relating to the eastern boundary fence are appropriate.

# (ii) Evidence and submissions

Some submitters requested a solid, possibly colourbond, fence to maximum height be installed at the interface of the site and existing properties to the east. Submitters asked for the fence to be constructed prior to development, for the developer to cover the cost of the new fence, and for clear communication with affected property owners.

Mr Crowder was satisfied with Council's proposed post exhibition changes relating to the boundary fence.

The Proponent said:

This application is not for development and at present, mesh fencing is not proposed between existing and new dwellings. If Colourbond fencing is sought, this can be required by Council at the development application stage or added as a condition on permit.

Council proposed post exhibition changes to:

- require a new condition in permit condition 6 for the Landscaping Plan to show:
  - A minimum 1.8 metre high paling or steel fence [or similar] along the eastern boundary where the proposed residential lots adjoin existing residential lots.
- Amend and add permit conditions as follows:
  - Prior to the issue of a Statement of Compliance, any fencing along the common boundary between a lot and a reserve or walkway or existing lot as shown on the subdivision and detailed endorsed plan must be designed and erected to the satisfaction of the Responsible Authority.
  - All costs associated with the provision of the fencing are to be borne by the owner/developer under this permit.

The Proponent did not object to the new and amended conditions.

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#### (iii) Discussion and conclusion

The changes to the planning permit proposed by Council are appropriate, including:

- requiring a minimum 1.8 metre high solid fence along the eastern boundary, to be designed and erected before the issue of Statement of Compliance
- for the owner/developer to cover the costs.

This fence will be on the shared boundary with existing properties to the east.

The Panel concludes that post exhibition conditions proposed by Council relating to the eastern boundary fence are appropriate.

# 10.4 Construction amenity impacts

#### (i) The issue

The issue is whether impacts during construction are acceptable.

#### (ii) Submissions

Some submitters were concerned about construction hours, noise and traffic management.

The Proponent said the Site and Environmental Management Plan endorsed by Council will need to be adhered to, to ensure no unreasonable amenity impacts.

Council submitted the *Environment Protection Act* 2017 and associated regulations, including the General Environmental Duty, applies to residential construction and sets out management of construction sites including hours of operation and noise emissions. The draft planning permit also requires a Site and Environmental Management Plan to manage impacts of construction.

#### (iii) Discussion and conclusion

The draft planning permit includes a condition for a Site and Environmental Management Plan to address and manage construction activities to the satisfaction and approved by the Responsible Authority, which includes requirements relating to traffic management and amenity. The Panel is satisfied that construction amenity impacts are appropriately addressed.

The Panel concludes that impacts during construction will be appropriately managed through *Environment Protection Act* 2017 obligations and the Site and Environmental Management Plan.

# 10.5 Sustainable development and urban heat island effect

## (i) The issue

The issue is whether the proposal has adequately addressed sustainable development.

#### (ii) Submissions

Some submitters were concerned about climate impacts and urban heat island effect, and one submitter requested a full environmental study considering these matters.

The Proponent submitted the proposal had been carefully designed to minimise impacts of natural hazards and adapt to impacts of climate change. It said:

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- the proposal includes a large area of bushland and significant tree planting (removal of three trees and planting of 173 trees)
- the impact of urban heat island effect is not required to be assessed at this stage of the
  process and may be assessed when undertaking development applications when
  Sustainable Design Assessments or Sustainability Management Plans may be required.

Council submitted the City of Knox generally has low to moderate vulnerability to heat, with some limited areas experiencing very high heat vulnerability. The provision of open space and tree canopy can significantly reduce heat island effect. Council regularly monitors the impact of residential development on tree canopy loss. The Planning Scheme provides a strong focus on increasing canopy tree planting. The proposed street tree planting will be a net improvement in canopy tree cover.

#### (iii) Discussion and conclusion

The proposal includes the planting of a significant number of street trees and protection of bushland that will be beneficial for managing urban heat island effect. Natural hazards such as potential flooding and bushfire have been assessed and have informed the subdivision design.

Clause 22.04 (Environmentally sustainable development) requires that an application for development (as specified) in Knox must be accompanied be a sustainability assessment.

The Panel concludes the proposal has adequately addressed sustainable development at this stage of the process.

# 10.6 Open space and playground provision

### (i) The issues

The issues are whether the:

- proposed open space provision is acceptable
- provision of a playground is required.

#### (ii) Submissions

Several submitters raised issues relating to open space including:

- requests for addition open space
- requests for play equipment and other facilities
- whether the bushland reserve was appropriate as an open space contribution.

Council submitted it was satisfied the bushland reserve constituted an appropriate open space contribution and no further open space is required. Council said:

- its position was supported by the Knox Play Space Plan 2013-2023
- it was satisfied there is sufficient playground equipment within proximity to the subdivision
- a substantial open space contribution is proposed as part of the proposal, consistent with the Knox Open Space Plan.

Council explained the history of land swaps and land transfer that have been negotiated by section 173 agreements. It advised that the 2021 section 173 agreement included a clause stating:

The transfer or vesting of the Bushland Reserve to or in Council in accordance with the terms of this Agreement by the Owner will comprise and be treated as the public open space

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contribution required by the Planning Scheme or under the Subdivision Act for the subdivision of the balance of the Land notwithstanding that the contribution is made prior to the making of the requirement.

#### Further:

- 134. In addition, the 2021 section 173 agreement requires the developer to set aside a reserve of approximately 0.3676 hectares for drainage, fire buffer and other purposes. This is shown on the subdivision master plan as the wetland and associated vegetated swale.
- 135. Accounting for the land transferred to the developer by Council as part of the land swap, a net total of 1.406 hectares of land has been transferred to Council or set aside as a reserve, which is approximately 15.2 per cent of the land.
- 136. This significantly exceeds the 8.5 per cent minimum requirement set out in the schedule to Clause 53.01.

The Proponent said it was Council's preference to take ownership of the bushland reserve, and providing this to Council satisfied the requirements of the Planning Scheme.

The Proponent and Council both supported deleting the public open space condition from the planning permit.

## (iii) Discussion

The Urban Design Report exhibited with the proposal confirmed the site has excellent access to existing playgrounds and open space (see Figure 16).

LEGEND

Subject site
Playground
S00m radius from
playground
Watercourse (Blind Creek)
Public open space

Build Creek

Subject

Reference

Boronia RD

Figure 16 Open space and playground provision

Source: Urban Context Report

The Panel is satisfied the land swap arrangement with Council provides an adequate open space contribution, and the area is well serviced by open space and playground facilities.

It is appropriate to delete the permit condition requiring a public open space contribution.

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#### (iv) Conclusion and recommendation

The Panel concludes the open space provision is acceptable and the area is well serviced with playgrounds.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

a) Delete the condition and permit note requiring a public open space contribution.

#### 10.7 AusNet substation reserve

#### (i) The issue

The issue is whether the draft planning permit adequately responds to the AusNet issue of substation location.

## (ii) Submissions

AusNet submitted it required a 5.2 metre x 8 metre kiosk substation reserve, noting the position needs to be near Lots 17 and 18.

The Proponent said consultation had been undertaken with AusNet and the required substation could be provided within Lot 17 and can be incorporated in an updated Master Plan as a condition of permit.

Council submitted:

- the location of the substation is shown on Lot 33
- relevant permit conditions allow for a substation to be located in accordance with AusNet requirements, while providing flexibility about the location.

Council proposed changes to the draft planning permit to:

- add a condition under 'Amended Plans' to meet the "Requirements of Ausnet as per Condition 41"
- remove a duplicated condition under the 'AusNet Services Conditions' heading.

## (iii) Discussion

The exhibited draft planning permit included 'AusNet Services Conditions' which include provision for easements satisfactory to AusNet for power lines and any other easements required to service the lots. The conditions also require land be set aside on the plan of subdivision for the use of AusNet for electricity substations.

The Panel supports Council's proposed:

- addition of the condition under 'Amended Plans' to meet AusNet requirements
- deletion of the duplicated condition.

Further, to ensure the land set aside for the electricity substation meetings AusNet's requirement, the Panel prefers the following wording of the service condition:

Set aside on the plan of subdivision Reserves for the use of AUSNET ELECTRICITY SERVICES PTY LTD for electric substations, to the satisfaction of AUSNET ELECTRICITY SERVICES PTY LTD.

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#### (iv) Conclusion and recommendations

Subject to its recommendations, the Panel concludes the draft planning permit conditions adequately responds to the AusNet issue of substation location.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

- a) Add a condition under 'Amended Plans' to meet AusNet requirements
- b) Under 'AusNet Services Conditions':
  - delete the duplicated condition
  - amend the condition related to setting aside land for electricity substations.

# 10.8 Proponent's proposed changes

The Proponent suggested a number of additional changes to Council's Day 1 version of the planning permit.

# (i) Lot 52 build envelope, rear setback and landscaping - exhibited conditions 1)a)i), 20)d) and 20)k)

Figure 17 shows the location and context of Lot 52, including the boundary of defendable area for bushfire management purposes. Figure 18 shows an indicative floor plan for Lot 52 submitted by the Proponent.

49 39000 OFFSET FROM THE MANAGEMENT LINE 46 47 50 RESERVE 51 Lot 52 PONO 55 54 53 PROPOSED COUNCIL RESERVE BOUNDARY Boundary of defendable area

Figure 17 Lot 52 location and context

Source: Excerpt from the Subdivision Master Plan, with Panel notations  $\label{eq:source} \begin{tabular}{ll} \end{tabular}$ 

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Figure 18 Lot 52 – indicative floor plan

Source: Proponent submission (document 10b)

### **Building envelope and rear setback**

Lot 52 is proposed to be a 514 square metre lot. The exhibited permit specified a 10 metre by 15 metre building envelope that is setback 3 metres from the western boundary, and if this could not be achieved then Lots 51 and 52 should be consolidated, realigned or the size of Lot 52 increased.

The Proponent submitted that the condition should just specify a 150 square metre envelope rather than specific dimensions, and should not include the requirement for a three metre setback.

The Proponent relied on the evidence of Mr Crowder who said a minimum 150 square metre building envelope will satisfy the intent of Clause 56, will be able to accommodate a three bedroom dwelling and provide suitable secluded private open space and sufficient land for landscaping within the frontage. He supported deletion of the three metre western setback.

Council and the Proponent agreed to the following changes to condition 1)a)i):

A building envelope on lot 52 with a <u>minimum</u> size of 10 metres by 15 metres, <u>unless</u> otherwise agreed to by the Responsible Authority. The building envelope <u>must also</u> demonstrate compliance with the relevant setback requirements of Condition 27 that is setback 3 metres from the western boundary. If this cannot be achieved, then lots 51 and 52 may have to consolidated, realigned or the size of lot 52 increased;

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Council and the Proponent did not agree on the three metre western setback.

The Panel supports the drafting of conditions:

- 1)a)i) as agreed by Council and the Proponent
- 20)d) to include an exemption to Lot 52 requiring the three metre western setback.

Lot 52 can adequately accommodate a dwelling, provide sufficient secluded public open space and, given its location across the road from the bushland reserve, it will have a well landscaped outlook.

#### Landscaping

The Proponent sought an exemption from the landscaping requirement for the rear/western setback for Lot 52. It suggested the lot can provide a large feature shrub at the front or side and recommended a stand-alone condition to require management of defendable space.

Consistent with is recommendation to remove the three metre western setback, the Panel supports providing an exemption from this condition for Lot 52. The Panel agrees with the Proponent that flexibility in the design response is required for this lot. It also supports the Proponent's suggestion to include a stand-alone defendable space condition.

The Panel accepts the other Council proposed changes to the condition to modify the permeable surface area and radius and to include reference to the Landscape Plan Guidelines.

#### Conclusions and recommendation

The Panel concludes that, subject to its recommendations for Lot 52:

- The building envelope and rear setback conditions are appropriate
- · Landscaping conditions are appropriate.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

a) Amend the building envelope, rear setback and landscaping conditions for Lot
 52.

#### (ii) Cultural Heritage Management Plan - exhibited condition 19

The draft planning permit included:

# **Cultural Heritage Management Plan Conditions**

- 18) Works must be conducted in accordance with the requirements of the approved Cultural Heritage Management Plan (approved CHMP No. 18338).
- Except with the prior written consent of the Responsible Authority, the Cultural Heritage Management Plan must not be modified.

The Proponent submitted condition 19 should be deleted as Council does not have power to approve a modified CHMP.

Council submitted it understood the Proponent's position and that it could not approve the modified CHMP and recommended deleting the condition. It said:

Council's intent was to allow a secondary consent mechanism under the permit should the CHMP need to be amended if required as a result of the construction of the boardwalk/pathway, as there will be a suite of endorsed plans and documents.

Council is open to feedback on this matter as upon further review, the "Responsible Authority" could be interpreted as the Registered Aboriginal Party.

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As discussed above in Chapter 7.2, the Panel considers it is not appropriate to include the boardwalk/pathway in the current permit approval. If the Proponent wishes to pursue this, it will need to progress a separate planning approval process that includes the required cultural heritage and native vegetation assessment.

The Panel notes the pedestrian trail connecting Agora Boulevard with the Blind Creek trail was included in the 2023 Biodiversity Assessment following exhibition but may not have been captured in the CHMP.

#### **Conclusion and recommendation**

The Panel concludes that exhibited condition relating to modification of the CHMP should be deleted.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

a) Delete the condition relating to modification of the CHMP.

#### (iii) Lots 33 – 40 front setbacks and landscaping - exhibited condition 20)a)ii and 20)j)

#### Front setbacks

The Proponent submitted the front setback condition for Lots 33 – 40 should not prohibit encroachment, and the encroachment should be no more than 1.0 metre instead of 0.5 metres, as follows:

Front walls of a building must be setback a minimum of:

. . .

ii. 4 metres from a street frontage for lots on the northern side of "Road B" shown as Lots 33 to 40 on the attached plan. No encreachment within the front setbacks are allowed for these lots.

Any encroachment into the front street setback of point (i.), (ii.) and (iv.) above must be limited to the following structure provided it encroaches no more than 0.5 1.0 metres into the specified setback distances unless any other or greater encroachment does not preclude the planting of a canopy tree as required under Condition 270):

The Proponent sought greater flexibility for the future design response, saying that Council's proposed condition unreasonably goes beyond ResCode requirements. Further, these lots will need to meet Liveable Housing Standards and/or the relevant housing agency's requirements.

Mr Crowder gave evidence that a 1.0 metre encroachment was acceptable and would provide articulation and visual interest while not unreasonably limiting landscaping. He explained he had been advised there would be sufficient area to accommodate 12 square metres of permeable surface with a minimum radius of 1.5 metres surrounding each tree.

Council submitted there should be a four metre setback from Road B for Lots 33 to 40 with no encroachment. It said it was trying to balance the provision of social and affordable housing with requirements to achieve landscaping on the land, and the lots already had a reduced setback. It said to achieve a deeper porch, parts of a dwelling could be slightly recessed, which may also improve built form outcomes. Council said it had not imposed a similar condition on any issued planning permit.

The Panel accepts the Proponent's proposed condition. The proposal includes street tree landscaping across the front of these dwellings, and critically, to meet the housing needs of the

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community innovation in built form is required and allowance for encroachment of up to 1.0 metre into the 4 metres setback should be provided.

#### Landscaping

Council proposed the following Day 1 changes to exhibited condition 20)j):

Each lote must be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 5-8 metres, and be located within the front setback. Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 32 metres. This requirement does not apply to lots 52, 87-91 inclusive, 137, and 138 subject to bushfire management.

The Proponent proposed to amend the condition to include an exemption for Lots 33-40, and to add a new condition stating:

For lots 33-44, the Responsible Authority may approve a lesser area of permeable surface and lesser radius that would otherwise be required under Condition 27o).

Council did not support the Proponent's proposed change, stating that with consideration of the minimum setback requirements it supported the reduction in minimum radius from 3 metres to 2 metres but further reduction for Lots 33 – 40 is not supported.

Consistent with the Panel's recommendation relating to front setbacks, the Panel accepts the Proponent's position. The permit also includes a condition for lots less than 400 square metres to provide a minimum 25 per cent garden area. The reduced front setback with encroachment allowed will provide some flexibility in how built form and landscaping are approached.

The Panel supports inclusion of the Landscape Plan Guidelines, and notes that small trees with a radius of 3 metres are included in the plant lists. The Panel recommends a modification to the wording of the Proponent's new condition, to ensure a small canopy tree is provided for Lots 33-40 despite the exemption, and with a permeable surface area and radius to the satisfaction of the Responsible Authority.

#### **Conclusions and recommendation**

The Panel concludes that, subject to its recommendations for Lots 33 – 40:

- Front setback conditions should be amended as proposed by the Proponent.
- Landscaping conditions should be amended.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

- a) Amend the front setback condition for Lots 33-40.
- b) Amend the landscaping condition requiring a canopy tree in the front setback to exempt Lots 33-40.
- c) Add a new condition requiring appropriate canopy tree planting for Lots 33-40.

# (iv) Section 173 agreement – exhibited condition 20)

Council and the Proponent agreed on the intent behind a walls on boundary requirement, as exhibited in the NRZ7. As the requirement cannot be included in the NRZ7 (see Chapter 6), the Proponent proposed a new condition to form part of the section 173 agreement, as follows:

The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metres of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall.

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The Panel supports the inclusion of this new condition.

The Proponent proposed to amend the condition relating to the section 173 agreement as follows:

The section 173 agreement will end 10 years after the completion of the development of the last lot that is permitted to be developed under the planning permit.

This matter was not aired during the Panel Hearing, and considers it is a matter for Council to determine if the condition is appropriate. The Panel has not included this in its preferred version of the planning permit in Appendix E.

The Panel recommends:

Amend the draft planning permit as shown in Appendix E, to:

a) Add a new walls on boundary requirement as part of the section 173 agreement.

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# 11 The planning permit

# 11.1 Drafting and minor changes

The Panel has used the exhibited version of the planning permit as the base for its recommendations (see Appendix E). Some condition numbers in the Panel preferred version of the planning permit differ from those exhibited to accommodate changes to the number of conditions. Changes to condition numbers are not shown in tracked changes.

Council's final day version of the planning permit included a number of minor drafting changes to improve clarity or correct errors that were accepted by the Proponent and were not challenged by any party during the Hearing process. The Panel has accepted these changes which include:

- · minor corrections
- · consistency with style, expression and punctuation
- removal of duplicated text
- removal of the number of residential lots from the description of what the permit allows
- minor changes to ensure the design reflects other requirements.

The Panel has also reviewed the draft planning permit with regard to *Writing Planning Permits* (Department of Transport and Planning, May 2023) and makes some drafting suggestions. Consistent with the guiding principle to use plain English, these changes include:

- · replacing 'prior to' with 'before'
- replacing 'shall' with 'must'
- removing unnecessary punctuation.

Council may wish to review the draft planning permit with consistency with the guidance in *Writing Planning Permits*.

# 11.2 Relevant considerations

Clause 71.02-3 of the Planning Scheme requires a responsible authority considering a permit application to take an integrated approach, and to balance competing objectives in favour of net community benefit and sustainable development.

Clause 65 of the Planning Scheme states:

Because a permit can be granted does not imply that a permit should or will be granted. The Responsible Authority must decide whether the proposal will produce acceptable outcomes in terms of the decision guidelines of this clause.

Clause 65.01 requires the Responsible Authority to consider, as appropriate:

- the Planning Policy Framework
- the purpose of the zone, overlay or other provision
- the orderly planning of the area
- the effect on the amenity of the area
- factors likely to cause or contribute to land degradation
- the extent and character of native vegetation, the likelihood of its destruction, and whether it can be protected, planted or allowed to regenerate
- the degree of flooding hazard associated with the location of the land and the use, development or management of the land so as to minimise any such hazard.

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The issues and impacts required to be considered in the decision guidelines have been discussed at length in the issue-specific chapters of this Report. In essence the Panel considers, subject to its recommendations:

- the proposal will achieve net community benefit and sustainable development
- the proposal is consistent with planning policy, represents orderly planning and facilitates much needed housing in a location designated as a strategic investigation site for this use
- the proposal complies with relevant zone and overlay provisions
- there will be no unreasonable amenity effect on the area for the existing and future residents
- the proposal will protect and enhance an important site of biological significance, and provides substantial landscaping opportunities
- flooding will be appropriately managed.

On balance, the Panel considers that a permit should be granted.

## (i) Conclusion and recommendation

The Panel concludes Planning Permit should be issued for the proposal.

The Panel recommends:

Issue planning permit P/2020/6049 subject to the permit conditions contained in Appendix E.

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# Appendix A Submitters to the Amendment

No	Submitter
1	Warren Saunders
2	Jim Good
3	Knox Environment Society
4	Ross Meyer
5	Graham Hooker
6	Mui Kim Ang
7	AusNet
8	Geoff Spilane
9	James Bothroyd
10	Julie Dalen
11	Michael Rizk
12	South East Water
13	Women's Property Initiatives
14	Christine Harwood
15	Rosemary Selton
16	Rowan Jennion
17	Friends of Blind Creek Billabong
18	George Irving
19	Andrew Wilson
20	Maryanne Wilson
21	Diana Van Vuren
22	Christopher and Tanya Scott
23	Michelle DeLacy
24	Leonora and Stuart Minican
25	Melanie Rowland
26	Marianna and Michael Gysberts
27	Jennifer Rowe and others (group submission)
28	Fay and David Allan Rimmer
29	June and Richard Wibberley
30	Country Fire Authority
31	Melbourne Water

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# Appendix B Document list

No	Date	Description	Presented by
1	20 Dec 2023	Directions Hearing notification letter	Planning Panels
			Victoria (PPV)
2024	1		
2	25 Jan	Panel Directions and Hearing Timetable	PPV
3	1 Feb	Confirmation of experts	Norvel Estate Pty
			Ltd (Proponent)
4	5 Feb	Hearing Timetable (version 2)	PPV
5	26 Feb	Council Part A Submission and attachments:	Knox City Council
		Attachment A1 Chronology of the Amendment	(Council)
		Attachment A2 Exhibited Amendment Material:	

- Att 2.0 Indexed list of Exhibited Materials
- Att 2.1 Explanatory Report
- Att 2.2 Instruction sheet
- Att 2.3 Clause 22.07
- Att 2.4 Schedule 7 to the Neighbourhood Residential Zone
- Att 2.5 Clause 22.07 amendments in track changes
- Att 2.6 Zoning Map 02ZN
- Att 2.7 Application for Planning Permit Form
- Att 2.8 Certificates of Title
- Att 2.9 Metropolitan Planning levy
- Att 2.10 Draft Planning Permit No. P/2020/6049
- Att 2.11 Subdivision Master Plan
- Att 2.12 Affordable Housing Strategy
- Att 2.13 Arborist Report
- Att 2.14 Biodiversity Report
- Att 2.15 Bushfire Report
- Att 2.16 Clause 56 Assessment
- Att 2.17 Cultural Heritage Management Plan
- Att 2.18 Landscape Report
- Att 2.19 Social Impact Assessment
- Att 2.20 Stormwater Management Plan
- Att 2.21 Town Planning Report
- Att 2.22 Traffic Report
- Att 2.23 Urban Context Report

Attachment A3 Further application material not exhibited:

- Att 3.1 Utility Service Infrastructure Report
- Att 3.2 Geotechnical Assessment

Attachment B Quarry Environmental Audit (response to Direction 5(c)):

- Att B1a Environmental Audit Report Part A
- Att B1b Environmental Audit Report Part B Appendices
- Att B1c Environmental Audit Report Executive Summary

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- Att B2a Environmental Protection Authority Correspondence 16 March 2021
- Att B2b Environmental Protection Authority Correspondence 10 March 2020

#### Attachment C Relevant Local Policies:

- Att C1 Clause 21.01 Municipal Profile
- Att C2 Clause 21.02 Vision
- Att C3 Clause 21.03 Environmental and Landscape Values
- Att C4 Clause 21.04 Environmental Risks
- Att C5 Clause 21.05 Built environment and Heritage
- Att C6 Clause 21.06 Housing
- Att C7 Clause 21.08 Community Development
- Att C8 Clause 21.09 Transport and Infrastructure

#### Attachment D Relevant Strategic Documents and Plans:

- Att D1a Knox Housing Strategy 2015
- Att D1b Knox Residential Design Guidelines
- Att D2 Knox Social and Affordable Housing Strategy and Action Plan
- Att D3 Knox Urban Design Framework 2020
- Att D4a Sites of Biological Significant in Knox Volume 1
- Att D4b Sites of Biological Significance in Knox Volume 2
- Att D5 Knox Open Space Plan
- Att D6 Knox Play Space Plan
- Att D7 Knox Landscape Plan Guidelines
- Att D8 Knox Bicycle Plan Review
- Att D9 Knox Green Street Policy
- Att D10 Knox Liveable Streets Plan

#### Attachment E Responses from Referral authorities:

- Att E1 Melbourne Water
- Att E2a CFA email April 2020
- Att E2b CFA conditions 6 August 2021
- Att E2c CFA advise re condition 4 23 August 2021
- Att E2d CFA email 23 August 2021
- Att E3 South East Water
- Att E4 Multinet Gas response
- Att E5a Department of Transport
- Att E5b Department of Transport

					-			
Att I	E5c [	Depar	tme	nt	of 1	rar	spor	t

6	28 Feb	Expert statement - Dr Stuart Cooney of Ecolink Consulting in relation to biodiversity	n Proponent
7	28 Feb	Expert statement - Nick Glasson of Stantec in relation to drainage	Proponent
8	28 Feb	Expert statement - Brett Young of Ratio Consultants in relation to traffic	Proponent
9	28 Feb	Expert statement - David Crowder of Ratio Consultants in relation to planning	Proponent
10	4 Feb	Context and Background Submission, enclosing:	Proponent

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		<ul> <li>a) Master Landscape Plan by Urbis</li> <li>b) Indicative Floor Plan for Lot 52</li> </ul>	
11	7 March	Part B submission, enclosing:  1. Attachment A, Day 1 Documents:  - Att A1 Clause 22.07 Day 1  - Att A2 Clause 32.09s7 Day 1  - Att A3 Drafting Planning Permit Day 1  - Att A4 Explanatory Report Day 1  2. Attachment B - Norvel Estate Plant Regeneration —  Dr Graeme Lorimer, October 2021  3. Attachment C - Extract of Ordinary Council Meeting  Agenda 25 October 2021  4. Attachment D - Flood Depths	Council
 2	8 March	Main submission, enclosing:  a) Urbis Submission response	Proponent
13	13 March	Draft Planning Permit Day 1	Proponent
L4	13 March	Council final position on proposed amendments to conditions	Council
15	13 March	Panel further directions	PPV
16	15 March	Council's response to further directions, enclosing:  a) Council's final version of NRZ7  b) Council's final position on draft permit  c) Council explanatory table on its final position  d) Melbourne Water response 1 March 2020	Council
17	22 March	Proponent's track changes on:  a) Council's final preferred position on draft permit b) Council explanatory table on its final preferred position	Proponent

# Appendix C Planning context

# C:1 Planning policy framework

## Victorian planning objectives

The Explanatory Report explained the Amendment will assist in implementing State policy objectives set out in (a)(b)(c)(d)(f) and (fa) in section 4(1) of the PE Act by:

- facilitating a fair, economic, sustainable, and orderly subdivision of the land to allow the residential use and development of an underutilised land strategically located within an established residential suburb.
- maintaining a pleasant environment and protect the ecological significance of the Blind Creek Corridor by ensuring the remnant bushland is unaffected by the proposal and retained as a reserve with the part already in Council's ownership recognised for conservation.
- providing and delivering affordable housing in Victoria.

## Planning policy provisions

Table 7 includes the objectives of relevant State and Local planning policy provisions.

Table 7 State and Local Planning Policy Framework

Clause	Key relevant objective
State Planning Policy	
Clause 11.01-1S (Settlement)	To facilitate the sustainable growth and development of Victoria and delive choice and opportunity for all Victorians through a network of settlements.
Clause 11.02.1S (Supply of Urban Land)	To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses.
Clause 12.01-1S (Protection of Biodiversity)	To protect and enhance Victoria's biodiversity.
Clause 12.01-2S (Native vegetation management)	To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.
Clause 12.05-2S Landscapes	To protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments.
Clause 13.01-15 Natural hazards and climate change	To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.
Clause 13.02 Bushfire	To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.
Clause 13.04-1S Contaminated and potentially contaminated land	To ensure that contaminated and potentially contaminated land is used and developed safely.

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Clause	Key relevant objective
Clause 15.01-1S Urban Design	To create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity.
Clause 15.01-1R Urban Design – Metropolitan Melbourne	To create a distinctive and liveable city with quality design and amenity.
Clause 15.01-3S Subdivision Design	To ensure the design of subdivisions achieves attractive, safe, accessible, diverse and sustainable neighbourhoods.
Clause 15.01-4S Healthy neighbourhoods	To achieve neighbourhoods that foster healthy and active living and community wellbeing.
Clause 15.01-5S Neighbourhood Character	To recognise, support and protect neighbourhood character, cultural identity, and sense of place.
Clause 16.01-1S Housing Supply	To facilitate well-located, integrated and diverse housing that meets community needs.
Clause 16.01-2S Housing affordability	To deliver more affordable housing closer to jobs, transport and services.
Clause 18.01-1S Land Use and Transport Integration	To facilitate access to social, cultural and economic opportunities by effectively integrating land use and transport.
Clause 18-01-2S Transport System	To facilitate the efficient, coordinated and reliable movement of people and goods by developing an integrated and efficient transport system.
Clause 19.03-2S Infrastructure design and provision	To provide timely, efficient and cost-effective development infrastructure that meets the needs of the community.
Clause 19.03-3S Integrated Water Management	To sustainably manage water supply and demand, water resources, wastewater, drainage and stormwater through an integrated water management approach.
Municipal Strategic Statement	
Clause 21.01 Municipal Profile	Clause 21.01-1 Snapshot of Knox, includes: With an increase in population and demographic diversity, the City of Knox will continue to play an important role in housing provision and diversity. Clause 21.01-2 Key issues and influences: - Environment and landscape values - Environmental risk - Built environment and heritage - Housing - Transport and infrastructure

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Clause	Key relevant objective
Clause 21.02 Vision	Clause 21.02-1 Strategic Framework Plan - Identifies Strategic Investigation Sites as opportunities to potentially accommodate a range of future housing, retail and employment uses.
Clause 21.03 Environmental and landscape values	Clause 21.03-1 A treed city  - To protect and strengthen treed character and landscape value across all areas in Knox
	Clause 21.03-2 Biodiversity and native vegetation
	<ul> <li>To retain and enhance native vegetation in Knox, in extent and ecological condition.</li> </ul>
	<ul> <li>To protect and enhance the natural values of Sites of Biological Significance.</li> </ul>
	<ul> <li>To maintain the diversity and genetic integrity of indigenous flora and fauna within Knox to prevent species from becoming locally extinct.</li> </ul>
Clause 21.04	Clause 21.04-1 Bushfire
Environmental Risks	To ensure that new development responds to bushfire risk to life and property.
	Limit development in areas at high risk from bushfire where there is also significant vegetation of high biological and/or landscape value and where planned bushfire protection measures may be incompatible with the natural environment, landscape and biodiversity values.
	Clause 21.04-4 Climate change resilience
	To create an urban environment that is resilient to the impacts of climate change, in particular the urban heat island effect, heatwaves, droughts and storm events.
	Clause 21.04-5 Potentially contaminated land
	To avoid harm to human health and the environment from contaminated land.
Clause 21.05 Built	Clause 21.05-1 Local character, identity and sense of place
Environment and Heritage	To create vibrant local areas with a strong character, identity and sense of place.
	Clause 21.05-2 Urban design
	To create high quality, well-designed places that respect and strengthen the local context and landscape qualities of Knox.
	To create places that are accessible and adaptable to changing community needs.
	Clause 21.05-4 Design for safety
	To create places that increase personal safety and perceptions of safety, and reduce opportunities for crime and antisocial behaviours.
	To require all new development to make a positive contribution to fire safety in Knox.

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# Clause Key relevant objective Clause 21.06 Housing Clause 21.06-1 Scaled approach to residential development This clause describes Strategic Investigation Sites as: - sites generally not currently used for residential purposes, such as quarries, schools and golf courses - sites where the land use is likely to change in a short to mid-term timeframe, and could be suitable for future residential development (either entirely or in part), including a component of social housing. Strategic guidance for these sites is provided in the Knox Housing Strategy 2015 and the Knox Affordable Housing Action Plan 2015-2020 and the Knox Land for Business Directions Plan (2018), applied by Clause 21.07. Where sites have already been subject to investigation processes and have been rezoned to facilitate future residential development, additional strategic guidance may also be found in the relevant zone and overlay schedules which apply to the land. Objectives: - To support a scaled approach to residential development in accordance with the Knox Housing Strategy 2015. - To support a diversity of housing choices (styles, types, forms and sizes) to cater for the Knox community's current and future needs, in appropriate - To provide residential development that allows people to 'age-in-place'.

residential areas and have a sense of spaciousness within the public and private realm. These areas will continue to be low scale neighbourhoods, characterised by detached dwellings with large backyards which contribute

Describes Knox Neighbourhood Areas as representing the majority of Knox's

# to the area's green and leafy character. Objectives:

Clause 21.06-3 Design and character

- To support high quality housing design that responds to the City's 'green and leafy' character, local character and creates a strong sense of place.
- To protect and enhance the landscape and environmental values of natural areas of significance within the municipality.

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Clause	Key relevant objective
21.09 Transport and	Clause 21.09-1 Integrated and sustainable transport
infrastructure	<ul> <li>To provide for the transport needs of existing and future populations in an integrated and sustainable manner.</li> </ul>
	<ul> <li>To encourage development that contributes towards an active, safe and accessible transport network.</li> </ul>
	Clause 21.09-2 Providing and maintaining infrastructure
	<ul> <li>To ensure that infrastructure is able to accommodate existing and new development and contributes positively to urban amenity</li> </ul>
	Clause 21.09-3 Integrated water management
	<ul> <li>To support the efficient and sustainable use of water by requiring development to adopt an integrated approach to water management and infrastructure provision.</li> </ul>
	<ul> <li>To minimise the risk to people, property and the environment as a result of flooding.</li> </ul>
	<ul> <li>To protect the ecological health of waterways and wetlands from the impact of development.</li> </ul>
Local policy	
Clause 22.07 Development in	<ul> <li>To facilitate development that is responsive to the unifying 'green and leafy' character of Knox.</li> </ul>
Residential Areas and Neighbourhood	<ul> <li>To facilitate development that is responsive to the desired future character of the area.</li> </ul>
Character	<ul> <li>To support sustainable urban growth by directing housing to preferred locations.</li> </ul>
	<ul> <li>To support a range of housing types and forms to meet the needs of the existing and future community.</li> </ul>
	<ul> <li>To support more intensive development in areas where there is access to frequent and reliable public transport services, shopping, employment and community facilities.</li> </ul>
	<ul> <li>To support smaller dwellings (one and two bedrooms) in appropriate locations (Local Living and Activity Areas).</li> </ul>
	<ul> <li>To recognise that the environment significance of the Dandenong Foothills and Sites of Biological Significance (Bush Suburban areas) outweighs the need for urban consolidation within these areas.</li> </ul>
	<ul> <li>To facilitate the design and scale of new development makes a positive contribution to the area's built form.</li> </ul>
	This clause describes the 'Knox Neighbourhood' area including:
	- preferred future character
	- preferred dwelling typologies
	- design objectives and guidelines

# Plan Melbourne

*Plan Melbourne 2017-2050* sets out strategic directions to guide Melbourne's development to 2050, to ensure it becomes more sustainable, productive and liveable as its population approaches

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8 million. It is accompanied by a separate implementation plan that is regularly updated and refreshed every five years.

Plan Melbourne is structured around seven Outcomes, which set out the aims of the plan. The Outcomes are supported by Directions and Policies, which outline how the Outcomes will be achieved.

Table 8 Relevant parts of Plan Melbourne

Outcome	Directions	Policies
Outcome 2: Melbourne provides housing choice in locations close to jobs and services	Direction 2.1: Manage the supply of new housing in the right locations to meet population growth and create a sustainable city	Policy 2.1.1: Maintain a permanent urban growth boundary around Melbourne to create a more consolidated, sustainable city
		Policy 2.2.1: Facilitate well- designed, high density residential developments that support a vibrant public realm in Melbourne's central city

# C:2 Planning Scheme provisions

# Zone and overlay provisions

A common zone and overlay purpose is to implement the Municipal Planning Strategy and the Planning Policy Framework.

Table 9 includes the relevant zone and overlay provisions.

Table 9 Planning zones and overlays

Clause	Key relevant provisions
Special Use Zone Schedule 2 (Earth and	Purposes
Energy Resources	SUZ:
Industry)	To recognise or provide for the use and development of land for specific purposes as identified in a schedule to this zone.
	SUZ2:
	To recognise or provide for the use and development of land for earth and energy resources industry.
	To encourage interim use of the land compatible with the use and development of nearby land.
	To encourage land management practice and rehabilitation that minimises adverse impact on the use and development of nearby land.

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Clause	Key relevant provisions
Neighbourhood Residential Zone	Purposes
	To implement the Municipal Planning Strategy and the Planning Policy Framework.
	To recognise areas of predominantly single and double storey residential development.
	To manage and ensure that development respects the identified neighbourhood character, heritage, environmental or landscape characteristics.
	To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.
Environmental Significance Overlay Schedule 2 (Sites of Biological Significance)	Purposes
	ESO:
	<ul> <li>To identify areas where the development of land may be affected by environmental constraints.</li> </ul>
	- To ensure that development is compatible with identified environmental values.
	ESO2, Environmental Objective:
	- To protect sites of biological significance
	- To reduce the threat of local extinction to flora or fauna species in Knox.
	<ul> <li>To enhance the condition and viability of habitats, ecological communities, flora and fauna, genetic diversity and aquatic systems of sites, including both biological and physical components.</li> </ul>
	<ul> <li>To maintain connectivity between sites of biological significance and indigenous vegetation.</li> </ul>
	<ul> <li>To recognise the role that sites of biological significance play in contributing to Knox's liveability and the health and wellbeing of the community.</li> </ul>
	<ul> <li>To achieve a net increase in the extent of habitat and improve its ecological condition in the sites of biological significance, recognising the key role that those sites play in conserving Knox's natural environment and associated community benefits.</li> </ul>
	<ul> <li>To ensure buildings, works or subdivisions are compatible with the long term protection and enhancement of biological significance.</li> </ul>
	<ul> <li>To ensure offsets are located as close as practicable to the local catchment and plant/animal population areas impacted by vegetation loss.</li> <li>Preference is to be given to any reasonable option to locate offsets within Knox.</li> </ul>
	<ul> <li>To provide for adequate bushfire protection measures that minimise adverse environmental impacts.</li> </ul>
	<ul> <li>To provide appropriate fencing (temporary or permanent) to protect retained vegetation or aquatic environments from movements of machinery, vehicles or heavy foot traffic.</li> </ul>

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# **Particular provisions**

Table 10 includes the relevant particular provisions.

Table 10 Relevant particular provisions

Clause	Relevant purposes
Clause 52.06 (Car parking)	To ensure that car parking is provided in accordance with the Municipal Planning Strategy and Planning Policy Framework.
	To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.
	To support sustainable transport alternatives to the motor car.
	To promote the efficient use of car parking spaces through the consolidation of car parking facilities.
	To ensure that car parking does not adversely affect the amenity of the locality.
	To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.
Clause 52.17 (Native vegetation)	To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the following three step approach in accordance with the <i>Guidelines for the removal, destruction or lopping of native vegetation</i> (Department of Environment, Land, Water and Planning, 2017) (Native Vegetation Guidelines):
	1. Avoid the removal, destruction or lopping of native vegetation.
	<ol><li>Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.</li></ol>
	3. Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.
	To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.
Clause 53.01 (Public open space contribution)	A person who proposes to subdivide land must make a contribution to the council for public open space in an amount specified in the schedule to this clause (being a percentage of the land intended to be used for residential, industrial or commercial purposes, or a percentage of the site value of such land, or a combination of both). If no amount is specified, a contribution for public open space may still be required under section 18 of the <i>Subdivision Act 1988</i> .

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Clause	Relevant purposes
Clause 56 (residential subdivision)	To implement the Municipal Planning Strategy and the Planning Policy Framework.
	To create liveable and sustainable neighbourhoods and urban places with character and identity.
	To achieve residential subdivision outcomes that appropriately respond to the site and its context for:
	- Metropolitan Melbourne growth areas
	- Infill sites within established residential areas
	- Regional cities and towns
	To ensure residential subdivision design appropriately provides for:
	- Policy implementation
	- Liveable and sustainable communities
	- Residential lot design
	- Urban landscape
	- Access and mobility management
	- Integrated water management
	- Site management
	- Utilities

# C:3 Ministerial Directions, Planning Practice Notes and guides

#### **Ministerial Directions**

The Explanatory Report discusses how the Amendment meets the relevant requirements of Ministerial Direction 11 (Strategic Assessment of Amendments) and *Planning Practice Note 46: Strategic Assessment Guidelines*, August 2018 (PPN46). That discussion is not repeated here.

## Ministerial Direction on the Form and Content of Planning Schemes, under Section 7(5) of the Planning and Environment Act 1987

This Direction sets out the layout and mandatory information that must be included in a planning scheme and also applies to amendments to planning schemes.

#### ii) Ministerial Direction 1: Potentially Contaminated Land

This Direction requires the responsible authority to ensure that potentially contaminated land is suitable for a use which is proposed to be allowed under an amendment to a planning scheme and which could be significant adversely affected by contamination.

#### iii) Ministerial Direction 9: Metropolitan Planning Strategy

This Direction requires the responsible authority to ensure that planning scheme amendments have regard to the Metropolitan Planning Strategy by setting out necessary requirements.

## iv) Ministerial Direction 11: Strategic Assessment of Amendments

This Direction requires the responsible authority to ensure a comprehensive strategic evaluation of a planning scheme amendment and the outcomes it produces.

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#### Ministerial Direction 19: Amendments that may result in impacts of the environment, amenity and human health

Direction 19 recognises the preventative value of EPA's early involvement in strategic land use planning and requires planning authorities to seek the views of the EPA in the preparation of planning scheme reviews and amendments that could results in use of development of land that may result in significant impacts on the environment, amenity and human health due to pollution and waste.

#### **Planning Practice Notes**

#### i) Planning Practice Note 46: Strategic Assessment Guidelines, September 2022

Provides a consistent framework for preparing and evaluating a proposed planning scheme amendment.

#### ii) Planning Practice Note 30: Potentially Contaminated Land

Provides guidance for planners and applicants on:

- how to identity potentially contaminated land
- the appropriate level of assessment of contamination in difference circumstances
- appropriate provisions in planning scheme amendments
- appropriate conditions on planning permits.

#### iii) Planning Practice Note 91: Using the residential zones

Provides information and guidance about how to use:

- the residential zones to implement strategic work for housing and neighbourhood character
- use local policies and overlays to complement the residential zones
- make use of key features in the residential zones.

#### Practitioner's Guide

A Practitioner's Guide to Victorian Planning Schemes Version 1.5, April 2022 (Practitioner's Guide) sets out key guidance to assist practitioners when preparing planning scheme provisions. The guidance seeks to ensure:

- the intended outcome is within scope of the objectives and power of the PE Act and has a sound basis in strategic planning policy
- a provision is necessary and proportional to the intended outcome and applies the Victorian Planning Provisions (VPP) in a proper manner
- a provision is clear, unambiguous and effective in achieving the intended outcome.

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# Appendix D Panel preferred version of the NRZ7

#### **Tracked Added**

**Tracked Deleted** 

#### SCHEDULE 7 TO CLAUSE 32.09 NEIGHBOURHOOD RESIDENTIAL ZONE

Shown on the planning scheme map as NRZ7.

#### **NORVEL ESTATE**

#### 1.0 Neighbourhood character objectives

- To ensure that new development reflect the preferred neighbourhood character of the surrounding area
- To support a diversity of housing stock typology consisting of detached dwellings, villa units and townhouses.
- To ensure a green and leafy identity through visual dominance of landscaping along street alignment.
- To provide vegetated front setbacks with no front fencing or the use of low, visually
  permeable front boundary treatments which enhance the spaciousness and strong
  avenue planting of the streetscapes.
- To maximise the opportunities to create high quality landscaping through minimal paving and the use of permeable ground surfaces.

#### 2.0 Minimum subdivision area

None specified.

# 3.0 Permit requirement for the construction or extension of one dwelling or a fence associated with a dwelling on a lot

	VPP table label
Permit requirement for the construction or extension of one dwelling on a lot	None specified.
Permit requirement to construct or extend a front fence within 3 metres of a street associated with a dwelling on a lot	None specified.

#### 4.0 Requirements of Clause 54 and 55

	Standard	Requirement
Minimum street setback	A3 and B6	Context: The site is on a corner Minimum setback from a side street: Side walls of new development on a corner site should be setback the same distance as the setback of the front wall of any existing building on the abutting allotment facing the side street or 1.5 metres, whichever is the lesser.
Site coverage	A5 and B8	None specified.
Permeability	A6 and B9	None specified.

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Landscaping	B13	Provision of a minimum of one canopy tree within the front setback per 5 metres of width of the site (excluding the width of one driveway).  A dwelling should have at least one canopy tree within the front setback for every 5 metres of the width of the street frontage (excluding the width of the driveway.  Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 23 metres. Up to 50 per cent of the permeable surface may be shared with another tree.
Side and rear setbacks	A10 and B17	None specified.
Walls on boundaries	A11 and B18	The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metres of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall.  None specified.
Private open space	A17	None specified.
	B28	None specified.
Front fence height	A20 and B32	Streets in a Road Zone Category 1: 2 metres Other streets: 1.2 metres

#### 5.0 Maximum building height requirement for a dwelling or residential building

None specified.

#### 6.0 Application requirements

The following application requirements apply to an application for a permit under Clause 32.09, in addition to those specified in Clause 32.09 and elsewhere in the scheme and must accompany an application, as appropriate, to the satisfaction of the responsible authority.

- For developments of five or more dwellings and for residential buildings, a report which demonstrates how the proposal will be accessible to people with limited mobility.
- For developments of three or more dwellings and for residential buildings, an application must be accompanied by a Sustainable Design Assessment.

None specified.

#### 7.0 Decision guidelines

The following decision guidelines apply to an application for a permit under Clause 32.09, in addition to those specified in Clause 32.09 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

- Whether the layout and appearance of areas set aside for car parking storage, including garages and carports are sensitively designed and sited to not dominate the streetscape by including the following features:
  - · Locate carports and garages behind the line of the dwellings or in the rear yard
- How vehicle crossovers are located and minimised in number to prevent traffic disruption, and preserve nature strips and street trees.
- Whether the built form and development complements the landscape setting by including the following features:

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- Minimises hard paving throughout the site by limiting driveway widths and lengths, providing landscaping on both sides of driveways, and restricting the extent of paving within open space areas.
- Maximises planting opportunities adjacent to the street by reducing the impact of hard paving and building encroachment within the front setback.
- Whether the development accommodates landscaping opportunities within front setbacks for the planting of small and medium indigenous canopy trees.

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# Appendix E Panel preferred version of the planning permit

#### Tracked Added

Tracked Deleted

#### ADDRESS OF THE LAND:

29<del>Q</del> and 29R Norvel Road, FERNTREE GULLY VIC 3156 (Lots 1 & RES12 on PS915838NTP963860L & Lot 1 on TP297137X)

#### THE PERMIT ALLOWS:

Staged subdivision (including 138 residential lots), development of pathways, removal of native vegetation, and associated works

in accordance with the endorsed Plan(s)

#### THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT:

#### **Amended Plans**

- 1. Before any stage of the plan of subdivision is certified Prior to certification of any stage of the plan of subdivision and before the commencement of any buildings and works start including removal of vegetation, amended plans must be submitted and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of the permit. The plans must be drawn to scale with dimensions and three copies must be provided. The plans must be generally in accordance with the submitted plans but modified to show:
  - a) Amended subdivision layout plan, consistent with the relevant requirements of Ceonditions 5, 6, and 2618 of this permit, which includes the following changes:
    - i. A building envelope on Lot 52 with a <u>minimum</u> size of 10 metres by 15 metres, <u>unless otherwise agreed to by the Responsible Authority. The building envelope must also demonstrate compliance with the relevant setback requirements of Condition 26 that is setback 3 metres from the western boundary. If this cannot be achieved, then lots 51 and 52 may have to consolidated, realigned or the size of lot 52 increased.</u>
    - Removal of on-street car parking bays affecting vehicle movements at intersections of Road E/F, A/E, B/A, Norvel Road and Road H, and the bend of Dion Street-Road G/F and Road B/C;
    - iii. The bend at Dion Street-Road G/F must have an outer radius rather than a sharp 90-degree angle;
    - iv. Crossovers to Lots 1, 31, and 32 to <u>demonstrate compliance with Condition 66</u> be relocated as much as practical to be clear of the intersection;
    - v. Building setbacks consistent with the requirements of condition 2618;

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- vi. Showing garden area calculation and demonstrating that minimum garden area can be achieved for lots less than 400sqm;.
- vii. Pram ramp footpath connection for pedestrian access across Norvel Road at the new intersection with Road H and the footpath on the eastern side of Road H to connect with the crossover of 60 Norvel Road;
- viii. Pram ramp footpath connection across Norvel Road at either side McMahons Road intersection on the eastern side and the western side;
- ix. The nature strip verge for Road H increased to 2.4 metres on both sides
- x. A crossover from Road C and Castricum Place to enable emergency vehicle to enter the removable bollard emergency access from these roads:
- xi. The location of Tree 132 corrected.
- xii. Requirements from AusNet as per Condition 40.
- xiii. Requirements from the CFA as per Condition 478.
- b) A subdivision staging plan.
- c) A plan showing vegetation removal.

#### Layout not altered

- The subdivision, buildings and works, and extent of native vegetation removal, as shown
  on the endorsed plans, must not be altered except with the prior written consent of the
  Responsible Authority.
- 3. Unless otherwise agreed to by the Responsible Authority, works associated with the approved subdivision must only commence when all detailed plans associated with the particular stage are approved by the Responsible Authority and once commenced, these works must be undertaken and completed in accordance with the endorsed detailed plans to the satisfaction of the Responsible Authority prior to the issue of a Statement of Compliance.

## Sequencing of staging

4. The subdivision must proceed in the order of stages as shown on the endorsed plan unless otherwise agreed in writing by the Responsible Authority.

#### **Engineering Plans Required**

- 5. Prior to the certification of a plan of subdivision Before the plan of subdivision is certified, detailed engineering construction plans prepared by a qualified Civil Engineering Consultant must be submitted for all works and approved by the Responsible Authority for each stage of the subdivision. Once approved, these plans become the endorsed plans of this permit. Construction plans must be clearly dimensioned and detail all roads, pathways, drainage works (including WSUD Water-Sensitive Urban Design) and computations (to AHD Australian Height Datum). Three copies and digital formal (AutoCAD and .pdf) must be provided. The detailed plans must be generally in accordance with the endorsed plan, including the Setormwater Mmanagement Pplan (Cardno V161919 dated 25 May 2021), and show:
  - a) Any changes required under Condition 1.

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- b) Tree protection zone for all trees being retained with annotation that services works within tree protection zone must be thrust bored.
- c) CFA requirements at Condition 4842, 5347, and 5448.

#### Drainage

- d) Details of stormwater management, including provision for all stormwater to be directed to the legal point of discharge for each lot as per Knox City Council's Civil Works and Stormwater Drainage Guidelines for subdivisions;
- e) Functional design of the sedimentation basin, retarding basin, wetlands and any other WSUD system in the subdivision.
- f) Stormwater directed into the Melbourne Water's drainage system must do so only with the consent of Melbourne Water and must meet their requirements:
- g) Water Sensitive Urban Design treatments.
- h) Maintenance regime for the stormwater treatment system that include activity description, frequency and ongoing maintenance, management responsibility and a checklist for handover to Council;
- i) A design and construction schedule of the stormwater treatment/detention system.
- j) All Council pipelines must be designed for 10% Annual Exceedance Probability (AEP) event.
- k) The minimum pipe diameter for the drainage system must be 300mm.

# Road and footpath

- Details including surface and underground drainage, intersections, pavement and footpath/shared path details, street lighting, fire hydrants, vehicle crossovers, line marking, street signage, concrete kerbs and channels and outfall drainage;
- m) Swept path diagrams for junctions, bends, and hammerhead turning areas to ensure suitable access for all vehicles, including emergency vehicles, to turn and remain free of encroachment or obstructions, including on-street car parking.
- The location and design depth and composition of pavement, including raised traffic islands and speed control devices;
- Proposed traffic calming <u>treatment mid-block</u> devices and speed humps, including speed humps in the detailed design for Road A and H;
- p) Right angle bends require a painted centre line and raised reflective markers to separate traffic travelling in opposite directions including give-way signage and surface treatment design to accentuate priority traffic along Road E/F and A/E at the junction of the northeast access cul-de-sac and Road D and support pedestrian movement across Road D<sub>7</sub>.
- q) A minimum 8 metres is required for kerb returns at bends. The kerb between the North-East access lane and Road E must be altered to show an 8 metre radius;
- r) The location of all services and cables to be underground and the annotation that all services works within Tree Protection Zone must be thrust bored.
- s) The location of all "no parking" and "Street name" and various traffic signage. No parking must be provided on the residential side of Road C and D. Street signage, such as

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- "No Through Road" along Norvel Road must be relocated to the satisfaction of the Responsible Authority;.
- t) A fully mountable splitter island must be constructed at the intersection of McMahons Road and Norvel Road to the satisfaction of the Responsible Authority.
- u) If construction is done in stage, turnaround provision for waste collection vehicles must be provided where roads are not yet completed;
- v) Cross sections for roads and access lanes to be provided; and.

#### On-street car parking plan

- w) Details of on-street car parking including CFA requirements at Condition 4942;
- x) Parking restrictions limiting on-street parking to only one side on the narrower Access Place type roads with preference of the no parking to be located on the residential side; and,.
- y) Waste bin collection points to be designated for each lots to show planned access for garbage collection.

#### Bicycle path, and trail, and bushland track

- Detail bushland boardwalk location and construction design including the location of existing vegetation;
- z) Detail of construction of bike path, and maintenance trail to Agora Blvd, including that paths and trails located within tree protection zone must be constructed above grade;
- aa) Removable bollard at either end of the trail to Agora Boulevard to limit vehicle access to maintenance and emergency vehicles only.

#### **Street Lighting**

- bb) Details of Street Lighting type and location, provided to the satisfaction of the relevant authority and in accordance with AS1158. This must include a lighting to all intersections, bends in the road and at the end of roads.
- cc) Street lighting to be incorporated at both end of the Pedestrian Link between Road A and H.
- dd) Lighting along the bushland reserve frontage (Road E, Road D, and the end of Road F) to consider measures that avoid any light spilling to the bushland reserve.

To the satisfaction of the Responsible Authority. Once approved, these plans become the endorsed plans of this permit.

## Landscapeing Plan Required

6. <u>Before Prior to the certification of a plan of subdivision for any stage, a detailed landscapeing plan prepared by a suitably qualified landscape architect or a suitably qualified landscape designer must be submitted to and approved by the Responsible Authority for all reserves, including road reserves and public spaces, relevant to that stage by Responsible Authority. Once approved, the plan will be endorsed and then form part of the Planning Permit. A digital format (.pdf) must be provided generally in accordance with the City of Knox Landscape Plan Guidelines, the Landscape Report Revision I 02/03/2023</u>

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prepared by Urbis <u>and the Arboricultural Report Revision April 2023 prepared by Treemap</u>
Arboriculture and modified to show:

- a) Any changes required under Condition 1.
- b) Streetscape and reserve designs detailing location of water sensitive urban design features, garden beds, location of street furniture, the position of street lighting, fire hydrants, side entry and service pits, pathways within reserves, electricity substations and planting of vegetation.
  - The species and planting size of trees must be selected to the satisfaction of the Responsible Authority.
- c) The planting species are to be modified as:
  - i. Tilia cordata to be changed to Nyssa Sylvatica 'Forum';.
  - ii.— Nyssa sylvatica is a more adaptable species to a warming climate;
  - iii. Acer platanoides 'Norwegian Sunset' to be changed to <u>Eucalyptus melliodora</u>
     <u>'Yellow Box'</u>. Acer truncatum x A. platanoides 'Warrenred' Pacific Sunset.
     Norwegian sunset cultivar is not available anymore.
  - iv. The Eucalyptus melliodora planting area have the following understorey species additions to add to diversity/beauty;:
    - a. Allocasuarina littoralis, Acacia pravissima, Kunzea ericoides, Leptospermum petersonii, Bursaria spinose;
  - v. Northern end planting (area that abuts bushland reserve) to be changed to the native tree species, Angohpora hispida (Dwarf Apple).
  - vi. Angophora hispida to be planted on the northern side of Road E and Road D, spaced at 12 metre centres to incorporate the 5 metre canopy separation when they reach maturity.
- d) Delineation of the bushfire defendable space area and proposed planting schedule and location within the defendable space area modified to accord with bushfire management requirements as per condition 5144.
- e) No street tree for lots 137 and 138 to meet bushfire defendable space requirement.
- f) The street trees on the south side of Road E and along Lot 52 moved to the north side of Road E and D to meet bushfire defendable space requirement.
- g) The opportunity for a second canopy tree to be located at the northern end of Road H to help frame the dead end to the road.
- h) A planting schedule of all proposed trees, shrubs and ground covers including botanical names, common names, pot sizes, sizes at maturity and quantities of each plant, to be planted within the nature strip and reserves.
- i) Details of the surface finishes of roads, pathways, tracks, and bike path.
- j) Annotation that all services works within Tree Protection Zone must be thrust bored and bike path within tree protection zone must be constructed above grade.
- k) Details and location of all services including above and below ground lines, cables, hydrants and pipes (including as cross-section) with annotation that all services to be located at a minimum depth of 600mm within road reserves;
- I) The location of Tree 132 corrected; and.
- m) Trees to be retained and their respective tree protection zones (reserves only).

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n) A minimum 1.8 metre high paling or steel fence (or similar) along the eastern boundary where the proposed residential lots adjoin existing residential lots.

To the satisfaction of the Responsible Authority. Once approved, these plans become the endorsed plans of this permit.

#### **General**

- Prior to Before a Statement of Compliance is issued for Stage 1-the issue of a Statement of
  Compliance for Stage 1, the owner/developer of the land must pay to the Responsible
  Authority Council a financial contribution towards stormwater management which must
  be to the satisfaction of the Responsible Authority and construction of the bushland
  boardwalk to the satisfaction of the Responsible Authority.
- 8. The contribution required to be paid in accordance with Condition 7 is the difference between the cost of a typical stormwater management treatment solution which meets Urban Stormwater: Best Practice Environmental Management Guidelines, CSIRO 1999 targets and the cost of the approved stormwater management treatments as approved by the Responsible Authority. The owner of the land must submit the cost to the Responsible Authority for its approval.

To determine the financial contribution amount, the owner/developer must provide the Responsible Authority with a cost estimate for the design and construction of stormwater management treatments and the bushland boardwalk including any associated sign.

- 9. Prior to the issue of Before a Statement of Compliance is issued for each stage, the following works must be completed or bonded in accordance with approved plans to the satisfaction of the Responsible Authority:
  - a) stormwater drainage;
  - b) roads and lighting;
  - c) traffic devices;
  - d) car parking and access ways must be drained, sealed and line marked;
  - e) footpaths, bike path, trails, and pram crossings; and
  - f) landscaping.
- 10. Prior to any works commencing Before the works start within Council Bushland reserve and Seecal reserve, Council's Biodiversity Officer must be contacted to arrange an inspection of the works area.

# **Native Vegetation**

- 11. <u>Before work starts, a Land Management Plan for the bushland reserve must be approved and endorsed by the Responsible Authority. The Land Management Plan must:</u>
  - a) be prepared to the satisfaction of the Responsible Authority
  - b) <u>include protection and management measures to improve the ecological condition of retained native vegetation</u>
  - a) respond to State and local policy to protect and enhance Victoria's biodiversity.
  - b) respond to the environmental objective and decision guidelines in Environmental Significance Overlay Schedule 2.

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- be informed by survey work undertaken at appropriate time of year, including an
   assessment of indigenous plant species that are vulnerable, endangered or critically
   endangered in Knox.
- d) <u>identify and include opportunities for seed collection and translocation of plants</u> <u>impacted by the proposal.</u>
- 12. Before the works start, the permit holder must advise all persons undertaking the vegetation removal and works on site of all relevant conditions of this permit.
- 13. In order to offset the removal of 0.391 hectares of native vegetation approved as part of this permit, the applicant must provide a native vegetation offset that meets the following requirements and is in accordance with the Biodiversity Assessment prepared by Ecolink Consulting dated September 2023 and the Guidelines for the removal, destruction or lopping of native vegetation. Permitted clearing of native vegetation Biodiversity assessment guidelines and the Native vegetation gain scoring manual:

#### The general offset must:

- €Contribute offset amount of 0.126 general habitat units.
- <u>bBe</u> located <u>in Knox municipal district</u>, <u>if available</u>, <u>or</u> within the Port Phillip and Westernport Catchment Management Authority boundary <u>or Knox municipal district</u>;
- heave a strategic biodiversity score of at least 0.202.
- 14. Prior to Before the removal of any native vegetation and the issue of a Statement of Compliance, evidence that the required offset for the project has been secured must be provided to the satisfaction of the Responsible Authority.

# **Tree Protection Conditions**

- 15. Prior to Before any buildings and works, subdivision works, and vegetation removal commencing, all trees and vegetation to be retained and the bushland reserve must be fenced off with barrier fencing to create a protection zone. The tree protection zone must be a minimum radius of 12x the diameter of the trunk, measured at a height of 1.4 metres from the ground as identified in the Australian Standard for the protection of trees (AS 4970-2009). The fence is to be maintained and clearly marked throughout the construction period and removed at the completion of all works.
- 16. All works, including excavation and fill, within the tree protection zone areas of the trees to be retained, within and adjacent to the site including reserves, must be undertaken under the supervision of a qualified Arborist to ensure that there is no unreasonable damage to the root system of trees to be retained and/or protected, to the satisfaction of the Responsible Authority.
- 17. The tree protection fence is to be chain link or wire mesh, comprise either wooden or steel posts set into the ground or on concrete pads, and be a minimum height of 1.8 metres.
- 18. <u>Signage is to be affixed to the fence advising that the area is a tree protection zone and a no-go development area.</u>
- 19. The tree protection fence and signage is to be maintained throughout the construction period and removed at the completion of all works.

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- 20. <u>No temporary removal of the tree protection fence, or encroachment into the protection</u> zone is permitted without the written consent of the responsible authority.
- 21. Trees are to be watered thoroughly prior to construction works commencing and throughout the period of construction works to the satisfaction of the Responsible Authority.
- 22. No materials, vehicle, equipment, waste, soil or other goods must be stored or placed within the tree protection zone.
- 23. Prior to Before any works start commencing on site, the Responsible Authority must be contacted to inspect the Tree Protection fencing.
- 24. Entry and exit pits for underground services must not be constructed within the tree protection zone of native tree.

#### **Cultural Heritage Management Plan Conditions**

- 25. Works must be conducted in accordance with the requirements of the approved Cultural Heritage Management Plan (approved CHMP No. 18338).
- 26. Except with the prior written consent of the Responsible Authority, the Cultural Heritage Management Plan must not be modified.

#### **Section 173 Agreement**

26. Prior to the issue of Before a Statement of Compliance is issued, the owner of the land must enter into an agreement with the Responsible Authority pursuant to Section 173

Agreement of the Planning and Environment Act 1987 and provide evidence to the Responsible Authority that the agreement has been registered on the certificate of title for the land. The agreement will stipulate the following building design requirements that applyies to the development of future dwellings on the land unless otherwise approved by the Responsible Authority, as follows:

#### **Front Setbacks**

- a) Front walls of a building must be setback a minimum of:
  - i. 5.5 metres from a street frontage for lots facing Castricum Place
  - ii. 4 metres from a street frontage for lots on the northern side of "Road B" shown as Lots 33 to 40 on the attached plan. No encroachment within the front setbacks are allowed for these lots.
  - iii. The distance set as defendable space for the lots affected by bushfire defendable space as shown on the endorsed plans and as a restriction on the plan of subdivision. No encroachment within the defendable space is are allowed for these lots.
  - iv. 4.5 metres from a street frontage for all other lots.
- b) Any encroachment into the front street setback of point (i.), (ii.) and (iv.) above must be limited to the following structure provided it encroaches no more than 0.5 1.0 metres into the specified setback distances:
  - i. porches, pergolas and verandahs that are less than 3.6 metres in height;

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 ii. decks, terraces, landings, stairways, ramps, eaves, window hoodings, sunblinds, fascias, gutters, masonry chimneys, flues, pipes, and domestic services normal to a dwelling.

#### Front Setbacks for garages or carports

- Front walls of a car parking structure (such as garages and carport) must be setback a minimum of:
  - i. 0.5 metres from the front wall of the building for lots facing Castricum Place-
  - ii. 5.4 metres from a street frontage and at least 0.5 metres behind the front wall of the building for all other lots.

#### **Side Setbacks**

d) Side walls of a building on a corner lot must be setback a minimum of 1.5m from a side street frontage. No encroachment within the side street setback is allowed.

#### **Rear Setbacks**

- e) Rear walls of a building must be setback a minimum of 3 metres from the rear boundary for all lots except for:
  - i. Lots 33-40 inclusive.
  - ii. Lot 52
  - iii. Lots 113-138 inclusive.
- f) Rear walls of a building for lots 113-138 inclusive must be setback a minimum of 5 metres from the rear boundary.
- g) Any encroachment into the rear setback of point d) and e) above must be limited to the following structure provided it does not encroach within the minimum radius of the large feature shrubs required under point rj):
  - porches, pergolas and verandahs that are less than 3.6 metres in height;
  - ii. terraces, patios, decks, landings that are less than 800mm in height, stairways, ramps, eaves, fascia or gutter, water tanks, and domestic services normal to a dwelling;
  - iii. outbuildings that does not exceed a gross floor area of 10 square metres.

#### Lot 138

- h) The dwelling on Lot 138 should be single storey. However, if a double storey building is proposed, the upper level must meet the following requirements:
  - i. setback by at least 3 metres behind the ground floor north and west wall façade to ensure a recessive second storey element.
  - ii. The upper level setback means the recess above the ground floor wall calculated as the shortest horizontal distance from the top of the ground floor wall. It does not include projection such as balconies. Any balconies located within this setback must be clear to the sky.
- i) The wall of a building must be setback a minimum of 3.8 metres from the northern boundary and 2 metres from the part of the western boundary that does not constitute part of a street frontage.

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- j) Regardless of point (ii-h) above, no building and works, other than fencing, are allowed in the tree protection zone of any tree. An arboricultural report will be required to determine the tree protection zone of any tree encroaching onto Lot 138 and tree protection fencing must be installed prior to any works commencing on this lot.
- k) The western boundary fence with the bushland reserve must be no more than 1.2 metres in height.
- I) The northern boundary fence with the bushland reserve must be no more than 1.2 metres in height for the first 12 metres from the western boundary.

#### **Front Boundary**

- m) Front fences are not allowed on a road frontage or within 3 metres of a road frontage (excludes side boundaries).
- n) No structures <u>are allowed</u> within 200 millimetres of a footpath in the road reserve.

#### One Crossover per Lot

Only one (1) crossover per lot is allowed. The crossover must not exceed a width of 3
metres but may be merged with that of an adjoining lot provided that it results in no
more than one (1) crossover per lot.

#### Landscaping

- p) Each lots (apart from for lots 33 44) must be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (as amended) with a mature height of 5-8 metres, and be located within the front setback. Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 32 metres. This requirement does not apply to lots 52, 87-91 inclusive, 137, and 138 subject to bushfire management.
- q) Each of lots 33-44 must be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (as amended) with a lesser area of permeable surface and lesser radius than would otherwise be required under Condition 26p), to the satisfaction of the Responsible Authority.
- r) Each lots must be provided with a minimum one (1) large feature shrubs in accordance with Knox's Landscape Plan Guidelines (as amended) with a mature height of 4-5 metres within the rear setback of each lot. Each large feature shrubs should be surrounded by 4512 square metres permeable surface with minimum radius of 21.5 metres. This requirement does not apply to Lots 52 and 138.
- s) The planted canopy trees and large feature shrubs must be maintained to the satisfaction of the Responsible Authority and must not be removed.

#### Lots less than 400 square metres in area

 A minimum garden area of 25 percent must be set aside in accordance with the Knox Planning Scheme.

#### Bushfire Management - Lots 52, 87 to 91, 137 to 138

 u) The development and management of defendable space on lots 52, 87 to 91 inclusive, and 137-138 must be in accordance with the endorsed Bushfire Management Plan.
 All costs associated with the preparation and registration of the agreement must be borne by the owner of the land.

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#### Walls on boundary

u) The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metres of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall.

All costs associated with the preparation and registration of the agreement must be borne by the owner of the land. The owner of the land must pay all of the Responsible Authority's reasonable legal costs and expenses of this agreement, including preparation, execution and registration on title.

#### **Defendable Space**

27. The defendable space on lots 52, 87 to 91 inclusive, and 136-138 must at all times be undertaken in accordance with the endorsed Bushfire Management Plan and the plan of subdivision must include a restriction to this effect.

#### **Telecommunications**

- 28. The owner of the land must enter into an agreement with:
  - a) A telecommunications network or service provider for the provision of telecommunication services to each lot shown on the endorsed plan in accordance with the provider's requirements and relevant legislation at the time; and.
  - b) A suitably qualified person for the provision of fibre ready telecommunication facilities to each lot shown on the endorsed plan in accordance with any industry specifications or any standards set by the Australian Communications and Media Authority, unless the applicant can demonstrate that the land is in an area where the National Broadband Network will not be provided by optical fibre.
- 29. Before the issue of a Statement of Compliance for any stage of the subdivision is issued under the Subdivision Act 1988, the owner of the land must provide written confirmation from:
  - A telecommunications network or service provider that all lots are connected to or are ready for connection to telecommunications services in accordance with the provider's requirements and relevant legislation at the time; and,.
  - b) A suitably qualified person that fibre ready telecommunication facilities have been provided in accordance with any industry specifications or any standards set by the Australian Communications and Media Authority, unless the applicant can demonstrate that the land is in an area where the National Broadband Network will not be provided by optical fibre.

### **Road naming**

30. Prior to the Before the certification of any stage, proposed naming for all new roads must be submitted to and approved by the Responsible Authority with the approved names to be then applied on the Plan of Subdivision for certification.

Names must be in accordance with the Naming rules for places in Victoria [2022] to the satisfaction of the Responsible Authority. Road G must be named as continuation of Dion Street.

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# **Public Open Space**

31. A contribution to the Council for public open space must be required pursuant to Section 18A of the Subdivision Act 1988 and Clause 52.01 of the Knox Planning Scheme.

#### Site and Environmental Management Plan

- 31. Prior to Before the commencement of any any works start for a relevant stage on the subject land, a Site and Environmental Management Plan to the satisfaction of the Responsible Authority must be submitted and approved by the Responsible Authority. The Site and Environmental Management Plan will be endorsed and form part of the permit. The Site and Environmental Management Plan must address and document as appropriate, the construction activities proposed on the land under the following heading:
  - a) Occupational health and safety and site induction, environmental controls, traffic management, amenity and safety of the public as well as site security, and cultural protection measures applicable to the site during construction.

The Site and Environmental Management Plan must include:

- b) Environmental Management:
  - Soil erosion and sediment control provisions to protect existing local stormwater infrastructure, Blind Creek and the bushland from erosion product and sediment transport by minimising erosion of lands during work;
  - ii. Measures to prevent construction fill encroaching on or being placed within the bushland.
  - iii. Measures to protect and manage retained native vegetation, including fencing where appropriate.
  - iv. Protection measures to ensure that disturbance to native flora and fauna habitat is avoided in the first instance, and minimised where avoidance is not possible.
  - Measures to avoid the introduction or spreading of pest and plant animals, including measures to target noxious weeds. with appropriate contingencies incorporated to prevent the potential for the introduction of exotic flora and fauna species is abated;
  - vi. Specific measures for any works related to the bushland reserve or Seecal Reserve must be included and must include the notification of Council's Biodiversity Officer prior to any works commencing:
  - vii. Hydraulics and hydrology provisions to manage water quality and quantity, and protect the habitat value of Blind Creek (measures used should include the installation of a perimeter fence to protect the waterway prior to the commencement of works);.
  - viii. Tree protection in accordance with Conditions 1315 to 1724.
  - ix. Any recommendations of any approved Cultural Heritage Management Plan (if applicable):
  - x. The plan must ensure that contractor working on the site are inducted to this Site and Environmental Management Plan prior to conduct any works around or within the bushland reserve.

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#### c) Site Management

- Identifying access and egress opportunities for emergency vehicles, workers, and early residents of approved stage in case of emergency;
- ii. Relevant Country Fire Authority requirements as per conditions 33 and 36;
- iii. All machinery wash-down area, personnel rest areas and parking.
- iv. Waste management measures during construction.
- v. Measures to reduce the impact of noise, dust and other emissions created during the construction process including measures to prevent dirt being tracked onto surrounding roads by vehicles;
- vi. If requested by the Responsible Authority at any stage, a contamination assessment for a site with suspected contamination must be provided for the relevant stage to the satisfaction of the Responsible Authority.
- vii. Traffic Management identifying the access and egress access point(s) for construction vehicles and detailing the measures to ensure amenity of the adjoining areas is not impacted by the movement of vehicles (cars, trucks and construction machinery) associated with construction activities on the site.
- 32. The endorsed Site and Environmental Management Plan must be implemented and maintained throughout the construction to the satisfaction of the Responsible Authority and all works must be carried out in accordance with the measures set out in the approved Site and Environmental Management Plan unless otherwise agreed in writing by the Responsible Authority.
- 33. Prior to Before the commencement of any works start on site, an inspection by Council's Environmental Officer must be carried out to determine compliance with the Site and Environmental Management Plan.

#### South East Water Conditions (reference: 35707694)

South East Water - Water and Sewer

- 34. The owner of the subject land must enter into an agreement with South East Water for the provision of drinking water supply and fulfil all requirements to its satisfaction.
- 35. The owner of the subject land must enter into an agreement with South East Water for the provision of sewerage and fulfil all requirements to its satisfaction.
- 36. All lots on the Pplan of Subdivision must be provided with separate connections to South East Water drinking water supply and sewerage systems.

#### South East Water - Certification

- 37. Prior to Before certification, the Pplan of Ssubdivision must be referred to South East Water, in accordance with Section 8 of the Subdivision Act 1988.
- 38. The certified Pplan of Ssubdivision will need to must show sewerage supply easements over all existing and/or proposed South East Water sewer mains located within the land, to be in favour of South East Water Corporation pursuant to Section 12(1) of the Subdivision Act.

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#### **AusNet Services Conditions**

- 39. The Pplan of Saubdivision submitted for certification must be referred to AUSNET ELECTRICITY SERVICES PTY LTD in accordance with Section 8 of the Subdivision Act 1988.
- 40. The applicant must:
  - a) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for supply of electricity to each lot on the endorsed plan.
  - b) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for the rearrangement of the existing electricity supply system.
  - c) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for rearrangement of the points of supply to any existing installations affected by any private electric power line which would cross a boundary created by the subdivision, or by such means as may be agreed by AUSNET ELECTRICITY SERVICES PTY LTD.
  - d) Provide easements satisfactory to AUSNET ELECTRICITY SERVICES PTY LTD for the purpose of "Power Line" in the favour of "AUSNET ELECTRICITY SERVICES PTY LTD" pursuant to Section 88 of the Electricity Industry Act 2000, where easements have not been otherwise provided, for all existing AUSNET ELECTRICITY SERVICES PTY LTD electric power lines and for any new power lines required to service the lots on the endorsed plan and/or abutting land.
  - Obtain for the use of AUSNET ELECTRICITY SERVICES PTY LTD any other easement required to service the lots.
  - f) Adjust the position of any existing AUSNET ELECTRICITY SERVICES PTY LTD easement to accord with the position of the electricity line(s) as determined by survey.
  - g)—Adjust the position of any existing AUSNET ELECTRICITY SERVICES PTY LTD easement to accord with the position of the electricity line(s) as determined by survey.
  - g) Set aside on the plan of subdivision Reserves for the use of AUSNET ELECTRICITY SERVICES PTY LTD for electric substations to the satisfaction of AUSNET ELECTRICITY SERVICES PTY LTD.
  - h) Provide survey plans for any electric substations required by AUSNET ELECTRICITY SERVICES PTY LTD and for associated power lines and cables and executes leases for a period of 30 years, at a nominal rental with a right to extend the lease for a further 30 years. AUSNET ELECTRICITY SERVICES PTY LTD requires that such leases are to be noted on the title by way of a caveat or a notification under Section 88 (2) of the Transfer of Land Act prior to the registration of the plan of subdivision.
  - i) Provide to AUSNET ELECTRICITY SERVICES PTY LTD a copy of the plan of subdivision submitted for certification that shows any amendments that have been required.
  - j) Agree to provide alternative electricity supply to lot owners and/or each lot until such time as permanent supply is available to the development by AUSNET ELECTRICITY SERVICES PTY LTD. Individual generators must be provided at each supply point. The generator for temporary supply must be installed in such a manner as to comply with the Electricity Safety Act 1998.
  - k) Ensure that all necessary auditing is completed to the satisfaction of AUSNET ELECTRICITY SERVICES PTY LTD to allow the new network assets to be safely connected to the distribution network.

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#### Melbourne Water Conditions (reference: MWA-1164280)

#### Melbourne Water Certification

- 41. Prior to Certification of any stage of this subdivision, Melbourne Water requires that the applicant submit a detailed Drainage and Stormwater Management Strategy for approval, which demonstrates how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater. The strategy should also include information regarding the future ownership and maintenance requirements of any proposed assets.
- 41. Unless otherwise agreed in writing by the relevant drainage authority, the subdivision must retard stormwater back to pre-development levels before entering the downstream drainage system/waterway and/or retard stormwater back to the sufficient capacity of the downstream drainage system.
- 42. Stormwater runoff from the subdivision must achieve State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater as set out in the 'Urban Stormwater Best Practice Environmental Management Guidelines (CSIRO) 1999'.

#### Melbourne Water – stormwater connection

43. Prior to the commencement of Before the works start, a separate application direct to Melbourne Water must be made for approval of any new or modified stormwater connection to Melbourne Water's drains or watercourses, works near or over a Melbourne Water asset and/or waterway crossing.

#### Melbourne Water – Drainage and Stormwater Management Strategy

44. Before the works start, a detailed Drainage and Stormwater Management Strategy to the satisfaction of Melbourne Water is to be submitted and approved by Melbourne Water. The strategy is to demonstrate how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters of Victoria) objectives for the environmental management of stormwater. The strategy must consider flows from external catchment areas when determining how the development will achieve flood protection standards. The strategy also include information regarding future ownership and maintenance requirements of any proposed stormwater assets.

# Melbourne Water - Statement of Compliance

45. Prior to the issue of Before a Statement of Compliance is issued, engineering plans of the subdivision (in electronic format) must be forwarded to Melbourne Water.

#### **Multinet Condition**

46. A Statement of Compliance must be obtained from Multinet Gas prior the plan of subdivision being released from the Titles Office.

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#### CFA Conditions (reference: 13000-68738-107873)

#### CFA - Amended plans

- 47. Prior to Before the certification of any stage of the plan of subdivision is certified, amended plans must be submitted and show:
  - a) All roads are designed to ensure the road width is constructed as specified in Table C1 of Clause 56.06-8 of the Knox Planning Scheme for an Access Lane and clear of encroachments, such as on-street parking.
  - b) Plans that show the design and location of on-street parking to ensure that the parking bays do not encroach onto the road and hinder the movement of emergency vehicles.
  - c) Plans that demonstrate the turning bays can accommodate emergency vehicles to manoeuvre in accordance with the requirements set out in CFA's Requirements for Water Supplies and Access for Subdivisions, 2006.
  - d) The provision of removable bollards between Road H and Road F for the purposes of access for emergency vehicles.

#### CFA – Fire management plan

- 48. A Fire Management Plan must be submitted and approved by the Responsible Authority prior to development starting that identifies how the bushfire risk will be managed during each Stage of the subdivision and what stage the various bushfire protection measures will be relied upon for the application.
- 49. Before the certification of the plan of subdivision is certified, a Bushfire Management Plan must be submitted to and endorsed by the Responsible Authority. The plan must show the following information, unless otherwise agreed in writing by the CFA and the Responsible Authority:
  - a) The design and layout of the subdivision, including lot layout, road design and access points, both pedestrian and vehicular.
  - b) The location of nearby hazards within 150m of the subdivision boundary.
  - c) The location of any bushfire hazards that will be retained or created on the land within the subdivision.
  - d) The location of any areas of vegetation within the subdivision not located on private land that will be managed to a low threat condition, including the reserves.
  - e) The setback distance of any development from the bushfire hazard for defendable space purposes where vegetation will be managed.
  - f) Notations of vegetation management standards and when vegetation management will occur i.e. annually, quarterly, during the fire danger period.
  - g) Vegetation must be managed within any area of defendable space to the following standard:
    - i. Grass must be short cropped and maintained during the declared fire danger period.
    - ii. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
    - iii. Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.

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- iv. Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
- v. Shrubs must not be located under the canopy of trees.
- vi. Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
- vii. Trees must not overhang or touch any elements of the building.
- viii. The canopy of trees must be separated by at least 5 metres.
- ix. There must be a clearance of at least 2 metres between the lowest tree branches and ground level.
- h) Details of any other bushfire protection measures that are to be adopted at the site.
- Nominate that any building on a new lot will be required to be designed and constructed to a minimum standard of Bushfire Attack Level (BAL) 12.5.

#### CFA - Building envelope

50. Any lot that contains defendable space must include a building envelop that ensures development will not be allowed within the area of defendable space.

#### CFA - Construction and site management plan

- 51. Before commencement of the works start, a Bushfire Site Management Plan that addresses bushfire risk during, and where necessary, after construction must be submitted and approved by the responsible authority. The plan must specify, at minimum:
  - a) The staging of development and the likely bushfire risks from surrounding hazards at each stage;
  - b) An area of land between the development edge and bushfire hazard consistent with the separation distances specified in AS3959-2018, where bushfire risk is managed to enable the development, on completion, to achieve a BAL-12.5 construction standard in accordance with AS3959-2018;
  - c) The land management measures to be undertaken by the developer to reduce the risk from fire within any surrounding rural or undeveloped landscape to protect residents and property from the threat of grassfire and bushfire; and.
  - d) Provision of adequate access and egress for Stage One subdivisions to minimise grass and bushfire risks to new residents prior to the full completion of the subdivision.

# CFA - Hydrants

- 52. Prior to the issue of Before a Statement of Compliance is issued under the Subdivision Act 1988 the following requirements must be met to the satisfaction of the CFA:
  - a) Above or below ground operable hydrants must be provided. The maximum distance between these hydrants and the rear of all building envelopes (or in the absence of building envelopes, the rear of the lots) must be 120 metres and the hydrants must be no more than 200 metres apart. These distances must be measured around lot boundaries.
  - b) The hydrants must be identified with marker posts and road reflectors as applicable to the satisfaction of the Country Fire Authority.

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Note –CFA's requirements for identification of hydrants are specified in 'Identification of Street Hydrants for Firefighting Purposes' available under publications on the CFA web site (www.cfa.vic.gov.au)

#### CFA - Roads

- 53. Roads must be constructed to a standard so that they are accessible in all weather conditions and capable of accommodating a vehicle of 15 tonnes for the trafficable road width.
  - a) The average grade must be no more than 1 in 7 (14.4%) (8.1 degrees) with a maximum of no more than 1 in 5 (20%) (11.3 degrees) for no more than 50 metres. Dips must have no more than a 1 in 8 (12%) (7.1 degree) entry and exit angle.
  - b) Curves must have a minimum inner radius of 10 metres.
  - c) Have a minimum trafficable width of 3.5 metres and be clear of encroachments for at least 0.5 metres on each side and 4 metres above the access way.
  - d) Roads more than 60m in length from the nearest intersection must have a turning circle with a minimum radius of 8m (including roll-over kerbs if they are provided) T or Y heads of dimensions specified by the CFA may be used as alternatives.

#### CFA – Maintenance of defendable space

54. Before the Statement of Compliance is issued under the Subdivision Act 1988, the defendable space on every lot in the subdivision must be implemented and maintained as specified on the endorsed Bushfire Management Plan, unless otherwise agreed in writing by the CFA and the Responsible Authority.

## **Drainage/Construction Conditions**

- 55. All stormwater drainage runoff from the site must be properly collected and discharged in a complete and effective system of drains within the subdivision and connected to the legal point of discharge as directed by the Responsible Authority. It must not cause a nuisance to abutting properties. The internal drains of the proposed lots are to be independent of the internal drains of other lots.
- 56. Prior to Before the issue of a Statement of Compliance is issued, any damage caused to the existing drainage system during the installation of the new property inlet must be repaired or replaced to the satisfaction of the Responsible Authority.

#### **Payments and Maintenance Bonds**

- 57. Prior to Before a the issue of a Statement of Compliance is issued, the owner/developer must pay to the Council a payment for supervision of works being 2.5% of the value of all works shown on the Engineering and Landscape Plans and a payment for checking of Engineering and Landscape Plans being 0.75% of all works shown on the engineering plan.
- 58. Prior to Before the issue of a Statement of Compliance is issued, the owner/developer must lodge with Council:
  - a) A refundable maintenance bond being 5% of the value of all works shown on the engineering plan; and \_.

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b) A refundable outstanding works bond being the value of all works to be completed plus 50%.

The Developer is responsible for the maintenance of the completed construction works and such works must be kept in good condition for a period of three months.

(A priced Bill of Quantities must be supplied to Council to validate the value of works as shown on the plan. This is used to determine the amount of the engineering fees and maintenance bond and provides a record of the value of Councils assets).

#### **Bond Return**

- 59. Prior to Before the issue of a Statement of Compliance is issued or the return of maintenance bonds in respect to the subdivision works whichever is the later, the owner or developer must submit to Council the following information (whichever are applicable) in an electronic format agreed by the Knox City Council:
  - a) Subdivision plans showing title boundaries, road reserves, municipal reserves and easements etc.
  - b) As constructed engineering plans in electronic format relating to roads, drains and other infrastructure constructed in conjunction with the subdivision.
  - c) Areas where fill exceeding 150 millimetres has been placed.

#### **Incomplete works Bond return**

60. Prior to Before the return of the incomplete works bond, Council will inspect the works and determine if these works have been constructed in accordance with the approved design and specifications to the satisfaction of the Responsible Authority. Should these works be satisfactory, the incomplete bond will be returned and a practical completion certificate will be issued by the Responsible Authority.

#### **Asset Protection**

61. Prior to Before the issue of a Statement of Compliance is issued for any stage of the development, the developer must be responsible for the reinstatement and repair of any damage, and costs of all alterations to the Knox City Council and any other Public Authority assets deemed necessary and required by such Authorities for the development/subdivision. Re-instatement or modification of assets as directed by the Responsible Authority will be required or compensation to the value of Council's loss must be paid.

#### Fencing<del>of reserves</del>

- 62. Prior to Before the issue of a Statement of Compliance is issued, any fencing along the common boundary between a lot and a reserve or walkway or existing lot as shown on the subdivision and detailed endorsed plan must be designed and erected to the satisfaction of the Responsible Authority.
  - Fencing between lot 138 and the bushland reserve must be in accordance with the requirement of Condition  $\frac{2618(f)}{f}$ .
- 63. All costs associated with the provision of the fencing are to be borne by the owner/developer under this permit.

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#### **Final Compliance Inspection**

- 64. Prior to Before the issue of a Statement of Compliance is issued a final inspection by Council's Surveillance Officer must be carried out to verify the completion of works in accordance with the Engineering Plans, to Council's standards and satisfaction.
- 65. Prior to Before the issue of a Statement of Compliance is issued a final inspection by Council's Enforcement Officer must be carried out to verify the completion of landscaping in accordance with the Landscape Plans, to Council's standards and satisfaction.

#### **Vehicle crossing**

66. Prior to Before the issue of a Statement of Compliance is issued, vehicle crossings must be constructed to service all lots and any vehicle crossing no longer required must be returned to nature strip to the satisfaction of the Responsible Authority. All crossovers must be 10 metres clear of an intersection, 3 metres clear of all street trees and 1 metres clear of all other assets in the road reserve.

#### **Public Space trees**

- 67. Nursery stock must be inspected and approved by a suitably qualified arborist or horticulturalist before planting and a report from this suitably qualified arborist or horticulturalist declaring that the nursery stock complies with the relevant Australian Standard, must be provided to the satisfaction of the Responsible Authority.
- 68. Following the planting of trees within the road reserves and open space reserves, an inspection must be arranged with representatives of the applicant, the landscape contractor appointed by the applicant and Knox City Council Parks Services and Landscape Officer who when satisfied will issue a Certificate of Practical Completion.
- 69. Trees and landscaping works within the road reserves, open space reserves and all landscaping within the development must be maintained at no cost to Knox City Council for a period of two years following the date of issue of the Certificate of Practical Completion. At the end of this period and following another inspection, Council will determine if the landscaping is satisfactory. Should the landscaping be satisfactory, the landscape bond will be returned if applicable, a Final Completion will be issued and at this point the maintenance responsibility will be assumed by Knox City Council.
- 70. The two-year maintenance of the trees must include formative pruning 12 months after planting to the satisfaction of the Responsible Authority.
- 71. Prior to Before the issue of a Statement of Compliance is issued, for the final stage, the Developer must pay to the Council a street tree maintenance bond fee of \$350.00 per tree within the final stage.
- 72. Protection of Council's street trees must be in accordance with the Australian Standard for the protection of trees (AS 4970-2009) to the satisfaction of the Responsible Authority.

#### **Street Lighting**

73. Prior to Before the issue of a Statement of Compliance is issued, street lighting must be provided to the satisfaction of the relevant authority and in accordance with AS 1158 and the endorsed plans. Non Standard street lighting will be accepted provided it is to the satisfaction of the Responsible Authority.

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#### Permit expiry

- 74. The permit will expire if any of the following circumstances applies:
  - a) The plan of subdivision for the first stage of the subdivision is not certified under the Subdivision Act 1988 within two (2) years of the date of this permit.
  - b) The plan of subdivision for the subsequent stage is not certified under the Subdivision Act 1988 within two (2) years of certification of the previous stage.
  - c) The registration of the plan of subdivision for each stage is not completed within five (5) years of the date of Certification under the Subdivision Act 1988 of that stage.
  - d) The buildings and works, including removal of vegetation, component haves not commenced within seven (7) years of the date of issue of the permit.
  - e) The buildings and works, including removal of vegetation, component haves not been completed within nine (9) years of the date of issue of the permit.

The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires or in accordance with Section 69 of the Planning and Environment Act 1987.

#### **NOTATIONS:**

#### Melbourne Water Notes (Stormwater Management Plan)

- Assessment of the <u>S</u>stormwater <u>M</u>management <u>Plan</u>strategy indicates that predeveloped flows have been overestimated as the storage of the current site has not been accounted for. Approximately 3.5-4 ha of water of the existing site will be held in storage due to the large depressions on the site, hence pre-developed 1% AEP flows have been overestimated. The <u>S</u>stormwater <u>Management Plan</u>strategy will need to account for the current storage on the site, update the pre-developed 1% AEP flow and update the detention volume required.
- Due to the size of the subdivision and the external catchment area, internal drainage and stormwater requirements will be to the satisfaction of Council as the relevant local drainage authority. It is advised to council that consideration be given to the following:
  - Flows from the external catchment should be conveyed through the new subdivision.
  - Properties finished floor levels should be set 300mm above the applicable 1% AEP flood level associated with any overland flow through the subdivision.
  - Safe access for the subdivided properties should be provided in accordance with the relevant standards in the *DELWP Guidelines for Development in Flood Affected Areas* (considering the roads running south-north will be used for 1% AEP flow conveyance).
- In order to receive further review/approval of the stormwater management strategy, please submit an updated strategy addressing the above requirements via the Melbourne Water website.

#### **Knox City Council Notes**

- All utility services (drainage, sewer) are to be verified onsite by the applicant/developer prior to the commencement of any works.
- No buildings are permitted to be constructed over Council easements.
- A road opening permit from Council is required for any works within the road reserve, including the nature strip.
- Vehicle crossing must be constructed in accordance with Council's standard drawings, specifications and vehicle crossing policy.

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Knox Planning Scheme Amendment C184knox and Permit Application P/2020/6049 | Panel Report | 14 May 2024

- This permit does not discharge an occupier from any liability relating to the construction, maintenance or the repair of a dividing fence, pursuant to the provisions of the Fences Act 1968 (as amended).
- A contribution to the Council for public open space must be required pursuant to Section 18A of the Subdivision Act 1988 and Clause 53.01 of the Knox Planning Scheme.

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Planning and Environment Act 1987

# **Knox Planning Scheme**

# **Amendment C184knox**

# Planning Permit Application P/2020/6049

# **Explanatory Report**

## Overview

The amendment proposes to rezone the former Norvel Road quarry in Ferntree Gully including adjoining Council land, to facilitate a residential development, recognise open space and conserve natural environment.

The planning permit application seeks approval for the subdivision of land and works, including the removal of native vegetation.

# Where you may inspect this amendment

The amendment can be inspected free of charge at:

- During office hours at Knox City Council, Civic Centre, 511 Burwood Highway, Wantirna South.
- Department of Transport and Planning website at
   <a href="http://www.planning.vic.gov.au/public-inspection">http://www.planning.vic.gov.au/public-inspection</a> or by contacting the office on 1800 789 386 to arrange a time to view the amendment documentation.

# **Details of the amendment**

## Who is the planning authority?

This amendment has been prepared by the Knox City Council, which is the planning authority for this amendment.

The amendment has been made at the request of Norvel Estate Pty Ltd C/- Urbis Pty Ltd.

## Land affected by the amendment

The amendment applies to the former Norvel Road Quarry site located at Lots 1 & RES12 on TP963860L and Lot 1 on TP297137XPS915838N (29 and 29RQ Norvel Road) in Ferntree Gully as shown in blue in Figure 1 below.

The amendment also applies to the Seecal Road, Castricum Place, and Norvel Road Reserves and the adjoining bushland site located immediately to the north of the Fformer Norvel Road Quarry site at Lot 1 on TP083661X (54 Agora Boulevard) and Lot 1 on TP110814D & Lot 1 on TP845832B (59R Rankin Road) in Ferntree Gully, specifically on the part that are currently affected by the Special Use Zone as shown as red in Figure 1 below.

Figure 1 - Map of subject site



The amendment is a combined planning permit application and planning scheme amendment under section 96A of the *Planning and Environment Act 1987* (the Act).

The planning permit application applies to the Norvel Estate at 29 and 29RQ Norvel Road, Ferntree Gully (Lots 1 & 2 on TP963860L and Lot 1 on TP297137X RES1 on PS915838N).

#### What the amendment does

The amendment proposes to rezone the subject site to facilitate a residential development, recognise open space, and conserve natural environment.

Specifically, the amendment makes the following changes:

#### Zoning maps

• Amends Planning Scheme Map No. 2 to, rezone part of the site from the Special Use Zone – Schedule 2 (SUZ2) to the Neighbourhood Residential Zone – Schedule 7 (NRZ7), rezone part of the site consisting of the bushland to be vested to Council from the Special Use Zone – Schedule 2 (SUZ2) to the Public Conservation and Resource Zone (PCRZ), rezone Council Bushland at 54 Agora Boulevard and 59R Rankin Road from the Special Use Zone – Schedule 2 (SUZ2) to the Public Conservation and Resource Zone (PCRZ), rezone part of the proposed bike trail to the north of the Seecal Road Reserve from the Neighbourhood Residential Zone – Schedule 4 (NRZ4) and Special Use Zone – Schedule 2 (SUZ2) to the Public Park and Recreation Zone (PPRZ), and rezone part of the Castricum Place, Seecal Road, and Norvel Road reserves from the Special Use Zone – Schedule 2 (SUZ2) to the Neighbourhood Residential Zone – Schedule 7 (NRZ7).

#### Planning scheme ordinance

- Amends Clause 22.07 (Development in Residential Areas and Neighbourhood Character) to exempt the NRZ7 from the provisions of Clause 22.07 (Development in Residential Areas and Neighbourhood Character).
- Inserts a new Schedule 7 to Clause 32.09 (Neighbourhood Residential Zone).

The planning permit application seeks approval for:

- Staged subdivision into 138 residential lots and additional reserves and associated works.
- Buildings and Works associated with the construction of pathways/bike trail.
- Vegetation removal.

The planning permit is attached as a separate document to this Explanatory Report.

# Strategic assessment of the amendment

# Why is the amendment required?

The amendment is informed by Clauses 21.02 (Vision) and 21.06 (Housing) of the Knox Planning Scheme which identify the subject site as a 'strategic investigation site' for potential residential uses in accordance with the Knox Housing Strategy. The amendment and proposed development have also been informed by an Urban Design Assessment that considered the surrounding character and bushfire risk.

The land is currently zoned SUZ2 which is intended for Earth and Energy Resources Industry. The former quarry on the site has been closed, filled and remediated. The purpose for Earth and Energy Resources Industry is no longer suitable for this site which is located within an established residential environment. Currently, dwellings

are prohibited under the SUZ2 applying to the site.

The amendment is required to facilitate the redevelopment of the site to infill residential and provide additional housing via a proposed 138 residential lots development. The amendment will also provide for open space and environmental outcome via the creation of a bushland reserve for conservation. The proposal will assist with accommodating the growing population within the municipality.

It is proposed to rezone the site to the Neighbourhood Residential Zone (NRZ) and to develop the site in accordance with updated urban design guidelines registered under a S173 Agreement applying to the land.

The existing Environmental Significance Overlay ESO is proposed to be retained as it applies to the Blind Creek corridor and the associated bushland to ensure this area of environmental significance is protected. As a result of the proposal, the core of the bushland is intended to be transferred to Council ownership, and rezoned to Public Conservation and Resources Zone (PCRZ), to safeguard it as a significant biological site.

# How does the amendment implement the objectives of planning in Victoria?

The proposal responds to the objectives of planning in Victoria specified in Section 4(1) of the *Planning and Environment Act 1987* as:

- It facilitates a fair, economic, sustainable, and orderly subdivision of the land to allow the residential use and development of an underutilised land strategically located within an established residential suburb.
- It maintains a pleasant environment and protects the ecological significance of the Blind Creek Corridor by minimising the impacts to ensuring the remnant bushland is unaffected by the proposal which will be retained as a reserve with the part already in Council's ownership recognised for conservation.
- It provides for and delivers affordable housing in Victoria.

This responds to objectives (a)(b)(c)(d)(f) and (fa) of Section 4(1) of the *Planning and Environment Act* 1987.

# How does the amendment address any environmental, social and economic effects?

## **Environmental effects**

The amendment will have a positive environmental benefit for the following reasons:

 Recognising, extending and protecting the bushland reserve under public ownership for conservation purposes.

- Managing fire risk while balancing the protection of biodiversity and landscaping treatment by avoiding and minimising removal of native vegetation and ensuring bushfire protection measures do not result in any unacceptable biodiversity impacts while prioritising the protection of human life.
- Improving the quality of water entering Blind Creek as well as the hydrology of the
  existing billabong located within the bushland through the adopted stormwater
  approach and construction of a wetland (sediment basin) in the north-west corner
  of the site.
- Applying a three step approach to 'avoid, minimise, and then offset' the loss of biodiversity in accordance with Clause 52.17. The proposal is supported by a biodiversity assessment and arborist report to ensure that no threatened flora or fauna species are impacted by the development and by providing high quality landscape treatments and vegetation offset to compensate for any native vegetation permitted for removal.
- Improving active transport connectivity to regional trail network, local bus and towards commercial areas.

#### Social effects

The proposal will have positive economic impacts by providing 138 proposed residential lots to support increased housing and the construction industry.

#### **Economic effects**

The proposal will enable the creation of <del>138</del> residential lots of varying sizes in an adequate location with access services and parkland.

The proposal will also provide for a minimum of 8 lots to be gifted to a registered housing provider/association for social housing providing a net community benefit in term of affordable housing.

## Does the amendment address relevant bushfire risk?

The subject land is located within a designated bushfire prone area and the proposal has considered bushfire risk.

The objective of Clause 13.02-1S Bushfire planning seeks to strengthen the resilience of settlements and communities to bushfire through risk based planning that prioritises the protection of human life. The policy applies to all planning and decision making under the *Planning and Environment Act 1987* relating to land within a designated bushfire prone area. The policy outlines that planning must give priority to the protection of human life over all other policy considerations, directing population growth and development to low risk locations and reduce the vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process.

Additionally, the operation of the Planning Policy Framework at Clause 71.02-3 Integrated decision making requires that:

Planning and responsible authorities should endeavour to integrate the range of
planning policies relevant to the issues to be determined and balance conflicting
objectives in favour of net community benefit and sustainable development for the
benefit of present and future generations. However, in bushfire affected areas,
planning and responsible authorities must prioritise the protection of human life over
all other policy considerations. The amendment will ensure that the imperative at
this clause, supporting the operation of the Clause 13.02-1S policy requirements,
will be complied with.

The proposed development will ensure that this objective is adhered to. meets bushfire policy in Clause 13.02 of the Planning Scheme because:

The views of the Country Fire Authority (CFA) were sought in addition to the provision of a Bushfire Development Report. In response to the local conditions, the design has implemented bushfire protection measures, defendable space management, and a buffer separation between the hazard and the proposed settlement. These measures, together with planning permit conditions, prioritise the protection of human life in the face of bushfire risk over all other considerations with the buffer ensuring the measures are implemented without unacceptable biodiversity impacts on the bushland. A small portion on the eastern part of the bushland will also be subject to vegetation management by Council, as supported by the CFA, to ensure appropriate defendable space is maintained. This management will be undertaken as standard operation and maintenance of bushland reserve by Council.

# Does the amendment comply with the requirements of any other Minister's Direction applicable to the amendment?

The amendment was prepared and presented in a manner consistent with the Ministerial Direction on the Form and Content of Planning Schemes under section 7(5) of the *Planning and Environment Act 1987*.

The proposal is also consistent with the relevant Ministerial Directions as follows:

Ministerial Direction 1 - Potentially Contaminated Land

- The site was used as a quarry and has been filled up to a depth of 10 metres.
- The proposal assumed that the rehabilitation of the site utilised clean fill and therefore has been successfully rehabilitated with respect to contamination. The proposal was referred to the Environment Protection Authority (EPA) for comments whom confirmed an Environment Audit Report was prepared by Australian Environmental Auditors on 20 April 2016 in accordance with the requirements of Section 53X of the Environment Protection Act 1970 and a Certificate of Environmental Audit was issued.
- Additionally, the geotechnical reports prepared by Civil Test Pty Ltd attached to supplied with this application provides additional details on this rehabilitation and confirmed the fill was placed in accordance with project specifications.

Ministerial Direction 9 – Metropolitan Planning Strategy

The proposal is consistent with the current Metropolitan Planning Strategy as it provides for 138 residential lots which will accommodate a diverse range of dwellings to cater for forecasted population growth within an established residential are proximate to jobs, services and transportation routes.

Ministerial Direction 11 – Strategic Assessment of Amendments

The requirements of this Direction have been followed in the course of preparing this amendment and are embodied within this explanatory report.

Ministerial Direction 15 – The Planning Scheme Amendment Process

This amendment and planning permit application under section 96A of the *Planning* and *Environment Act 1987* will follow the set times and steps specified for planning scheme amendments under this Direction.

# How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The amendment supports and implements the Planning Policy Framework as demonstrated below.

- It facilitates the rezoning of the site to a residential to support the consolidation, redevelopment and low scale intensification of existing urban areas and by providing new walking and cycling trails and links to the Blind Creek Corridor in accordance with Clauses 11.01-1S and 11.02-1S.
- It extends the bushland reserve to protect biodiversity while also avoiding and minimising native vegetation removal of the bushland in accordance with Clauses 12.01-1S and 12.01-2S.
- It prevents inappropriate future development within the bushland reserve and extending the bushland reserve and its buffer zone to address the resilience of settlements through risk-based bushfire planning in accordance with Clause 13.02-1S.
- It incorporates a sophisticated system that will retard the flow of stormwater, protect nearby waterways, and manage sediments in accordance with Clause 14.02-1S.
- It provides for an attractive design outcome that responds to its context including, landscape and built form consistent with the residential nature of the surrounding area and its environmental characteristics in accordance with Clauses 15.01-1S and 15.01-1R.
- It provides for a walkable and connected subdivision pattern in accordance with Clauses 15.01-3S and 15.01-4S.
- It provides 138 new proposed residential lots within a strategically advantageous location proximate to identified activity centres, providing access to jobs and services. Further, the proposal will increase the supply of housing in an existing urban area on an underutilised piece of land with several lot sizes to positively

contribute to residential diversity in accordance with Clauses 16.01-1S and 16.01-1R.

- It provides for the increase supply of well-located affordable housing in accordance with Clause 16.01-2S.
- It includes the creation of a new road as well as pedestrian and cycling networks to service the new residential area with linkages to the surrounding networks in accordance with Clause 18.02-1S.

# How does the amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?

The Strategic Framework Plan at Clause 21.02 includes the subject land identified as a Strategic Investigation Sites – Residential. This amendment effects and reinforces this vision for the site as a residential infill and also responds to estimated population forecasts by providing 138 new proposed residential lots within an established residential area with adequate access to jobs and services.

The Knox Housing Strategy (2015) at Clause 21.06 further identifies the site as suitable for residential use only with a range of density consistent with the surrounding area. The surrounding area is identified as Neighbourhood Residential Zone Knox Neighbourhood - minimal change area where development should respect the existing character The amendment respects this with its own Neighbourhood Residential Zone consistent with the surrounding.

Moreover, the proposal minimises vegetation removal and improves the interface with the Blind Creek Corridor and bushland by providing fire management buffer between the residential area and bushland and activating the interface through the alignment of lots facing the reserve. This bushland is identified as a site of biological significance and primary natural corridor at Clause 21.03, the amendment reinforces the conservation importance of the bushland.

The proposal will include measures to facilitate the vibrant and high quality redevelopment of the site to positively contribute to and respect the abutting residential and landscape character. Further, the proposal will achieve environmentally sustainable design outcomes for the site through stormwater management and landscaping. By providing its own design guidelines, the amendment will be exempted from neighbourhood character provisions of Clause 22.07.

For these reasons, it is considered that the proposed rezoning supports the relevant clauses of the LPPF.

# Does the amendment make proper use of the Victoria Planning Provisions?

The proposed rezoning of the land to the Neighbourhood Residential Zone, Public Park and Recreation Zone, and Public Conservation and Resource Zone, and retention of the Environmental Significance Overlay as it applies to the northern part of the site, is an appropriate use of the Victorian Planning Provisions given the surrounding zoning pattern and land use context.

# How does the amendment address the views of any relevant agency?

The proposal has stemmed from multiple discussions and consultations with Council.

Further consultation with relevant agencies was undertaken throughout the preparation and assessment of the proposed planning permit application and the amendment. Notably:

- Melbourne Water, SEWater, Comdain Infrastructure, Department of Transport and Plannning, Country Fire Authority, and Ausnet Services as Section 55 referrals in accordance with Clause 66 of the Knex Planning Scheme.
- Country Fire Authority was consulted with regard to bushfire risk.
- Environment Protection Authority was consulted with regard to potential land contamination in accordance with Ministerial Direction No. 19.

The views of relevant agencies were will further be sought during the public exhibition process.

# Does the amendment address relevant requirements of the Transport Integration Act 2010?

The proposal is considered to have minimal impact on the existing transport infrastructure and network, and therefore satisfactorily addresses the *Transport Integration Act 2010*.

# Resource and administrative costs

# What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?

The amendment is not expected to result in any unreasonable resource or administrative costs for the responsible authority.

Planning and Environment Act 1987

# **Knox Planning Scheme**

# **Amendment C184knox**

## Instruction sheet

The planning authority for this amendment is the Knox City Council.

The Knox Planning Scheme is amended as follows:

# **Planning Scheme Maps**

The Planning Scheme Maps are amended by a total of 1 attached map sheet.

## **Zoning Maps**

 Amend Planning Scheme Map No. 2 in the manner shown on the 1 attached map marked "Knox Planning Scheme, Amendment C184knox".

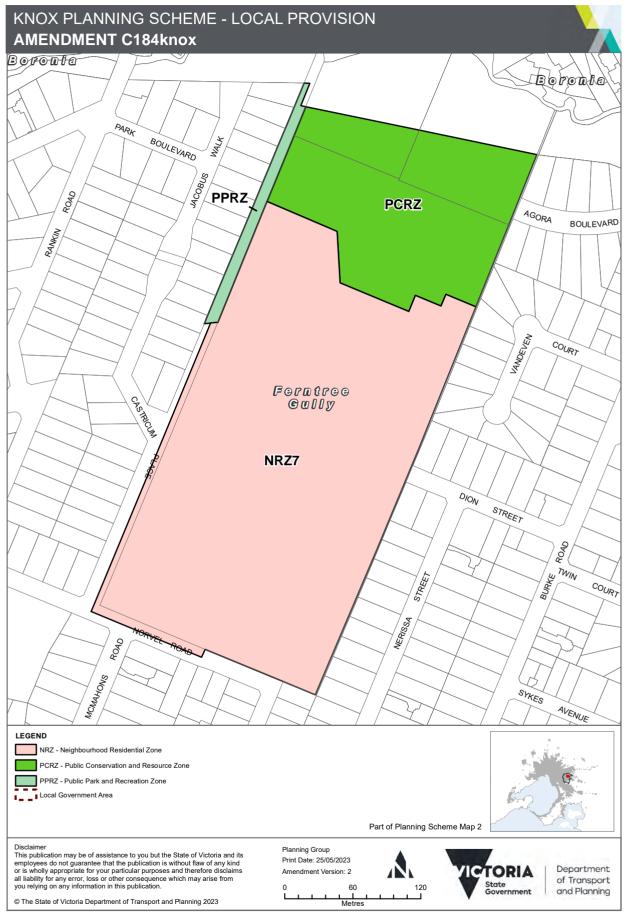
# **Planning Scheme Ordinance**

The Planning Scheme Ordinance is amended as follows:

- 2. In **Local Planning Policy Framework** replace Clause 22.07 with a new Clause 22.07 in the form of the attached document.
- 3. In **Zones** Clause 32.09, insert a new Schedule 7 in the form of the attached document.

## **End of document**

Unofficial



#### 22.07 DEVELOPMENT IN RESIDENTIAL AREAS AND NEIGHBOURHOOD CHARACTER

14/12/2017- July 2016 (C184knox This policy applies to development on residentially zoned land shown in Figure 1 - Housing Map at Clause 21.06 (Housing).

This policy does not apply to land in a Neighbourhood Residential Zone Schedule 7, Design and Development Overlay or Development Plan Overlay.

#### 22.07-1 14/12/2017 C150

#### Policy basis

This policy:

- Provides design guidance to facilitate development that contributes to the strong 'green and leafy' character of Knox and preferred future character of residential areas.
- Implements Clause 15 (Built Environment and Heritage) and Clause 16 (Housing) of the State Planning Policy Framework to take into account the particular needs of Knox.

Development in residential areas needs to respond to the particular built form and natural environment elements that make up the neighbourhood character of Knox. These elements include topography, vegetation, building form, scale, siting, materials and front fencing.

A balance is required to address the changing housing needs of the Knox community, while protecting the City's significant environmental and cultural elements. The *Knox Housing Strategy 2015* seeks to achieve this balance by adopting a scaled approach to residential development.

This approach to housing directs specific types of housing to areas with good access to a range services and infrastructure (Activity Areas and Local Living areas) and away from areas with special local character and significant environmental values (Bush Suburban and Knox Neighbourhood areas).

These outcomes will be achieved by providing housing that:

- has a diversity of housing types and forms in specified locations;
- meets the needs of and is accessible to all groups within the community;
- is well designed and responsive to the local character and environment; and
- recognises that in areas of environmental, biological and landscape significance, these values outweigh the need for urban consolidation.

## 22.07-2

## **Objectives**

14/12/2017 C150

To facilitate development that is responsive to the unifying 'green and leafy' character of Knox.

To facilitate development that is responsive to the desired future character of the area.

To support sustainable urban growth by directing housing to preferred locations.

To support a range of housing types and forms to meet the needs of the existing and future community.

To support more intensive development in areas where there is access to frequent and reliable public transport services, shopping, employment and community facilities.

To support smaller dwellings (one and two bedrooms) in appropriate locations (Local Living and Activity Areas).

To recognise that the environment significance of the Dandenong Foothills and Sites of Biological Significance (Bush Suburban areas) outweighs the need for urban consolidation within these areas.

To facilitate the design and scale of new development makes a positive contribution to the area's built form.

#### 22.07-3 14/12/2017 C150

#### **Bush Suburban**

Bush Suburban areas have distinctive and significant environmental and biological values.

#### **Preferred Future Character**

Bush Suburban areas will:

- Contribute to the protection and enhancement of Knox's distinctive environmental and biological values.
- Continue to be low-scale neighbourhoods where significant indigenous and native vegetation is retained and complemented.
- Require built form that is subservient to the area's landscape dominant character.

#### **Preferred Dwelling Typologies**

In Bush Suburban areas it is policy to support detached dwellings and dualoccupancies.

## **Design Objectives and Guidelines**

It is policy that the following Design Objectives and Guidelines are addressed when considering any application to develop land:

## **Design Objectives**

- To retain canopy trees and encourage the new planting of indigenous canopy trees.
- To maintain the continuity of vegetation and landscape character around and in front of dwellings.
- To avoid buildings being prominent from the street.
- To avoid the loss of front and rear garden space.
- To avoid the dominance of car storage facilities from the street.

#### **Design Guidelines**

- Design buildings to be nestled and tucked into the landscape.
- Design buildings to accommodate landscaping including canopy trees in front and rear gardens.
- Retain existing canopy trees and understorey planting, wherever possible.
- Plant indigenous and native canopy trees in accordance with the requirements of the applicable zone schedule.
- Locate carports and garages behind the line of the dwelling or in the rear yard.
- Provide single crossovers for driveways.
- Minimise the amount of paving in front yards and driveways.
- Design new buildings to incorporate pitched, hipped or gabled roof forms.
- Significantly setback first floor levels from the ground floor level.
- Provide no, low or transparent front fencing.

## 22.07-4

## **Knox Neighbourhood**

14/12/2017 C150

Knox Neighbourhood areas have the characteristics that many people value about living in Knox – a sense of open space, fresh air, trees and large backyards. In this sense, they are 'typical Knox' and represent the majority of Knox's residential areas. Some areas have access to bus services, but in many locations the car is the main way of getting around.

#### **Preferred Future Character**

Knox Neighbourhood areas will:

- Continue to be low-scale neighbourhoods, characterised by detached houses and dual occupancies; with some villa unit developments on larger blocks.
- Retain their green and leafy identity and character through the retention of front and back yards, and the establishment of a garden setting that includes canopy trees.

## **Preferred Dwelling Typologies**

 In Knox Neighbourhood areas, it is policy to support detached dwellings, dual occupancies and villa unit developments (more than two dwellings) on lots greater than 1,000 square metres.

#### **Design Objectives and Guidelines**

It is policy that the following Design Objectives and Guidelines are addressed when considering any application to develop land:

## **Design Objectives**

- To retain and enhance the streetscape by the planting of appropriate trees on private land.
- To avoid the dominance of buildings from the street.
- To avoid the loss of front and rear garden space.
- To avoid the dominance of car storage facilities from the street.
- To retain large backyards for landscaping and open space.
- To require buildings to reflect the prevailing scale of buildings in the street.

#### **Design Guidelines**

- Design buildings to accommodate landscaping including canopy trees in front and rear gardens.
- Retain existing canopy trees and understorey planting, wherever possible.
- Provide a landscaped front and rear yard and plant indigenous canopy trees in accordance with the requirements of the applicable zone schedule.
- In developments of three or more dwellings, require the rear dwelling to be single storey in height.
- Provide single crossovers for driveways.
- Locate carports and garages behind the line of the dwelling or in the rear yard.
- Minimise the amount of paving in front yards and driveways.
- Design new buildings to incorporate pitched, hipped or gabled roof forms.
- Significantly set back first floor levels from the ground floor level.
- Provide no, low or transparent front fencing.

# 22.07-5

#### **Local Living**

14/12/2017 C150

Local Living areas are focused around the Wantirna Mall, Scoresby Village, Mountain Gate and Studfield activity areas. These areas are within walking distance of local shops and have access to several transport options.

## **Preferred Future Character**

Local Living areas will:

- Contribute to creating quality designed detached houses, dual occupancies, villa units and townhouses.
- Contribute to and enhance the 'green and leafy' identity and character of the area.
- Improve the 'village feel' of local shopping areas, by providing medium density housing in the form of dual occupancies, villa units and townhouses.

## **Preferred Dwelling Typologies**

 In Local Living areas, it is policy to encourage detached dwellings, dual occupancies, villa units and townhouses.

### **Design Objectives and Guidelines**

It is policy that the following Design Objectives and Guidelines are addressed when considering any application to develop land:

#### **Design Objectives**

- To support high quality, innovative architectural design and a diversity of housing stock.
- To support quality, innovative architectural design.
- To support a diversity of housing stock, with an increase in smaller dwellings (one and two bedrooms).
- To integrate new styles of housing within existing streetscapes.

#### **Design Guidelines**

- Retain existing canopy trees and understorey planting, wherever possible.
- Provide a landscaped front yard, including the planting of canopy trees in accordance with the requirements of the applicable zone schedule.
- Locate carports and garages behind the line of the dwelling or in the rear yard.
- Provide single crossovers for driveways.
- Minimise the amount of paving in front yards and driveways.
- Significantly set back first floor levels from the ground floor level.
- In developments of three or more dwellings, ensure that the rear dwelling is single storey in height.
- Provide no, low or transparent front fencing.

#### 22.07-6 14/12/2017 C150

## **Activity Areas**

Activity Areas are located either on the SmartBus route or close to regional infrastructure such as train stations, bus interchanges, universities, large shopping centres, leisure facilities and employment opportunities.

#### **Preferred Future Character**

Activity Areas will:

- See the most substantial change in housing styles than other areas in Knox.
- Balance retaining the 'green and leafy' character when viewed from the street, whilst allowing more intensive residential development.
- Support new residential development that is well designed both architecturally and functionally.

#### **Preferred Dwelling Typologies**

• In Activity Areas, it is policy to encourage villa units, townhouses and apartments.

#### **Design Objectives and Guidelines**

It is policy that the following Design Objectives and Guidelines are addressed when considering any application to develop land:

#### **Design Objectives**

- To support high quality, innovative architectural design and a diversity of housing stock.
- To support a diversity of housing stock, with an increase in smaller dwellings (one and two bedrooms).
- To minimise the appearance of site services to adjoining public and private areas.
- To establish new styles of housing within existing streetscapes.
- To establish consistent street setbacks as part of the future character of the area.

## **Design Guidelines**

- Orient and design buildings to maximise key views to the Dandenong Ranges, other local landmarks and open space.
- Provide a landscaped front yard, including the planting of canopy trees in accordance with the requirements of the applicable zone schedule.
- Retain existing canopy trees, wherever possible.
- Plant canopy trees in accordance with the requirements of the applicable zone schedule.
- Locate carports and garages behind the line of or underneath the dwelling or in the rear yard.
- Provide single crossovers for driveways.
- Minimise the amount of paving in front yards and driveways.
- Significantly set back first and second floor levels from the ground floor level.
- Provide wide, upper floor balconies fronting the street and any adjoining public open space to maximise passive surveillance.
- In developments of three or more dwellings, provide a mix of dwelling sizes (number of bedrooms). At least one dwelling should contain a bedroom, kitchen, bath or shower, and a toilet and wash basin at ground floor level.
- Provide no, low or transparent front fencing.

#### 22.07-7 14/12/2017 C150

## Accessible Design

## **Design Objectives**

To require the design of new development to consider the needs of people with limited mobility.

## **Design Guidelines**

- Provide a clear and accessible path from the street to the front door.
- Require dwellings with ground floor level entrances to be visitable by people with limited mobility.
- Where possible, the entries of all dwellings should be visible from the street.
- Provide wide and sheltered step-free entries.

 In developments of three or more dwellings, provide at least one dwelling with a bedroom, kitchen, bath or shower, and a toilet and wash basin on the same level as the entrance to the dwelling.

#### 22.07-8 14/12/2017 C150

## **Architectural Design**

## **Design Objectives**

• To require the design and scale of new development to be consistent with the housing type(s) encouraged in each area and make a positive contribution to the built form of the area.

#### **Design Guidelines**

- Provide an appropriate degree of visual interest and articulation to present an appropriate scale and detail to the street frontage and adjoining sites.
- Design street facades with an appropriate scale, rhythm and proportion, which respond to the site's context.
- Support opportunities for social interaction at interfaces between the public and private areas, spaces and facilities within multi storey residential and mixed use developments.
- Design development along public spaces and creek corridors to front those public areas.
- Design development along main road corridors to:
  - emphasise views to the Dandenong Ranges;
  - provide opportunities for passive surveillance to the road frontage; and
  - incorporate landscaping that contributes to the 'Bush Boulevard' character.
- Avoid large blank walls and facades.
- Require site services and car parking areas are sensitively designed and sited so as to be as visually unobtrusive as possible, from the street and adjoining sites.
- Require an appropriate design response for signage, buildings and structures.
- Screen unattractive buildings and developments through planting.
- Integrate elements into the design of the building/s and facades, including: security grills/screens, ramps, carpark entry doors, shading and screening structures, drain pipes, air conditioning units, lift over-runs, plant and communication equipment and other building services.
- Provide large and useable open spaces to maximise solar access.
- Consider including green roofs and walls.

## 22.07-9 14/12/2017

## Housing for aged persons

## **Design Objective**

- To facilitate development of specialised housing for aged persons that provides a range of on-site services to residents, or can be adapted to do so over time.
- To require development of specialised housing for aged persons to minimise impacts on the surrounding area.

## **Design Guidelines**

- Provide a variety of communal public and private open spaces that:
  - link with open space networks in surrounding areas; and

Page 6 of 7

- are designed to support a variety of events and activities and facilitate informal social interaction.
- Include accessible paths on-site that link on-site facilities and services, and with networks in surrounding areas (particularly key destination points such as public transport stops, local shops etc).
- Integrate the development with the surrounding neighbourhood by providing, for example:
  - lower scale buildings fronting the street and other public spaces; and
  - paths on-site that link with networks in surrounding areas (particularly key destination points such as public transport stopsand local shops).
- Include accessible paths that link on-site facilities and services. Paths should be non-slip, wide
  enough to allow different users to safely use the path at different speeds and have dropped
  kerbs to road level.
- Provide seating and shade at regular intervals along paths.
- Provide some affordable housing options in the development, including social housing.
- Protect special views, such as to the Dandenong Ranges.

#### 22.07-10

#### **Policy references**

14/12/2017 C150

Knox Housing Strategy, Knox City Council, 2015

Knox Urban Design Framework 2020, Knox City Council, 2003

Knox Affordable Housing Action Plan 2015-2020, Knox City Council, 2015

--/---Proposed C184knox

## SCHEDULE 7 TO CLAUSE 32.09 NEIGHBOURHOOD RESIDENTIAL ZONE

Shown on the planning scheme map as NRZ7.

#### **NORVEL ESTATE**

#### 1.0

#### Neighbourhood character objectives

--/---Proposed C184knox

- To ensure that new development reflect the preferred neighbourhood character of the surroundingarea.
- To support a diversity of housing stock typology consisting of detached dwellings, villa units and townhouses.
- To ensure a green and leafy identity through visual dominance of landscaping along street alignment.
- To provide vegetated front setbacks with no front fencing or the use of low, visually permeable
  front boundary treatments which enhance the spaciousness and strong avenue planting of the
  streetscapes.
- To maximise the opportunities to create high quality landscaping through minimal paving and the use of permeable ground surfaces.

#### 2.0

## Minimum subdivision area

--/--/ Proposed C184knox

None specified.

#### 3.0 --/--/----Proposed C184knox

# Permit requirement for the construction or extension of one dwelling or a fence associated with a dwelling on a lot

	Requirement
Permit requirement for the construction or extension of one dwelling on a lot	None specified.
Permit requirement to construct or extend a front fence within 3 metres of a street associated with a dwelling on a lot	None specified.

## 4.0

#### --/---Proposed C184knox

## Requirements of Clause 54 and Clause 55

	Standard	Requirement
Minimum street	A3 and B6	Context: The site is on a corner
setback		Minimum setback from a side street:
		Side walls of new development on a corner site should be setback the same distance as the setback of the front wall of any existing building on the abutting allotment facing the side street or 1.5 metres, whichever is the lesser.
Site coverage	A5 and B8	None specified.
Permeability	A6 and B9	None specified.
Landscaping	B13	Provision of a minimum of A dwelling should have at least one canopy tree within the front setback per for every 5 metres of the width of the eite street frontage (excluding the width of one driveway).
		Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 32 metres. Up to 50 per cent of the permeable surface may be shared with another tree.
Side and rear setbacks	A10 and B17	None specified.

	Standard	Requirement
Walls on boundaries	A11 and B18	The height of a new wall constructed on or within 200mm of a- side or rear boundary or a carport constructed on or within 1- metres of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall. None specified.
Private open space	A17	None specified.
	B28	None specified.
Front fence height	A20 and B32	Streets in a Road Zone Category 1: 2 metres Other streets: 1.2 metres

#### 5.0

## Maximum building height requirement for a dwelling or residential building

--/--/ Proposed C184knox

None specified.

#### 6.0

## Application requirements

--/--/ Proposed C184knox

The following application requirements apply to an application for a permit under Clause 32.09, in addition to those specified in Clause 32.09 and elsewhere in the scheme and must accompany an application, as appropriate, to the satisfaction of the responsible authority:

- For developments of five or more dwellings and for residential buildings, a report which
  demonstrates how the proposal will be accessible to people with limited mobility.
- For developments of three or more dwellings and for residential buildings, an application mustbe accompanied by a Sustainable Design Assessment.

None specified.

## 7.0 Decision guidelines

--/--/---Proposed C184knox

The following decision guidelines apply to an application for a permit under Clause 32.09, in addition to those specified in Clause 32.09 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

- Whether the layout and appearance of areas set aside for car parking storage, including garages and carports are sensitively designed and sited to not dominate the streetscape by including the following features:
  - Locate carports and garages behind the line of the dwellings or in the rear yard.
- How vehicle crossovers are located and minimised in number to prevent traffic disruption, and preserve nature strips and street trees.
- Whether the built form and development complements the landscape setting by including the following features:
  - Minimises hard paving throughout the site by limiting driveway widths and lengths, providing landscaping on both sides of driveways, and restricting the extent of paving within open space areas.
  - Maximises planting opportunities adjacent to the street by reducing the impact of hard paving and building encroachment within the front setback.
- Whether the development accommodates landscaping opportunityies within front setbacks for the planting of small and medium indigenous canopy trees.

## **Tracked Added**

Tracked Deleted

#### ADDRESS OF THE LAND:

29<del>Q</del> and 29R Norvel Road, FERNTREE GULLY VIC 3156 (Lots 1 & RES12 on PS915838NTP963860L & Lot 1 on TP297137X)

#### THE PERMIT ALLOWS:

Staged subdivision (including 138 residential lots), development of pathways, removal of native vegetation, and associated works

in accordance with the endorsed Plan(s)

# THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT: Amended Plans

- Before any stage of the plan of subdivision is certified Prior to certification of any stage of the plan of subdivision and before the commencement of any buildings and works start including removal of vegetation, amended plans must be submitted and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of the permit. The plans must be drawn to scale with dimensions and three copies must be provided. The plans must be generally in accordance with the submitted plans but modified to show:
  - a) Amended subdivision layout plan, consistent with the relevant requirements of Ceonditions 5, 6, and 2618 of this permit, which includes the following changes:
    - i. A building envelope on Lot 52 with a <u>minimum</u> size of 10 metres by 15 metres, <u>unless otherwise agreed to by the Responsible Authority. The building envelope must also demonstrate compliance with the relevant setback requirements of Condition 26 that is setback 3 metres from the western boundary. If this cannot be achieved, then lots 51 and 52 may have to consolidated, realigned or the size of lot 52 increased.</u>
    - ii. Removal of on-street car parking bays affecting vehicle movements at intersections of Road E/F, A/E, B/A, Norvel Road and Road H, and the bend of Dion Street-Road G/F and Road B/C;.
    - iii. The bend at Dion Street-Road G/F must have an outer radius rather than a sharp 90-degree angle;.
    - iv. Crossovers to Lots 1, 31, and 32 to <u>demonstrate compliance with Condition 66</u> be relocated as much as practical to be clear of the intersection;
    - v. Building setbacks consistent with the requirements of Condition <u>2618</u>;.

- vi. Showing garden area calculation and demonstrating that minimum garden area can be achieved for lots less than 400sqm;.
- vii. Pram ramp footpath connection for pedestrian access across Norvel Road at the new intersection with Road H and the footpath on the eastern side of Road H to connect with the crossover of 60 Norvel Road;.
- viii. Pram ramp footpath connection across Norvel Road at either side McMahons Road intersection on the eastern side and the western side;.
- ix. The nature strip verge for Road H increased to 2.4 metres on both-sides;.
- x. A crossover from Road C and Castricum Place to enable emergency vehicle to enter the removable bollard emergency access from these roads;
- xi. The location of Tree 132 corrected.
- xii. Requirements from AusNet as per Condition 40.
- xiii. Requirements from the CFA as per Ceondition 478.
- xiv. The boardwalk notation deleted.
- b) A subdivision staging plan.
- c) A plan showing vegetation removal.

#### Layout not altered

- 2. The subdivision, buildings and works, and extent of native vegetation removal, as shown on the endorsed plans, must not be altered except with the prior written consent of the Responsible Authority.
- 3. Unless otherwise agreed to by the Responsible Authority, works associated with the approved subdivision must only commence when all detailed plans associated with the particular stage are approved by the Responsible Authority and once commenced, these works must be undertaken and completed in accordance with the endorsed detailed plans to the satisfaction of the Responsible Authority prior to the issue of a Statement of Compliance.

## Sequencing of staging

4. The subdivision must proceed in the order of stages as shown on the endorsed plan unless otherwise agreed in writing by the Responsible Authority.

## **Engineering Plans Required**

- 5. Prior to the certification of a plan of subdivision Before the plan of subdivision is certified, detailed engineering construction plans prepared by a qualified Civil Engineering Consultant must be submitted for all works and approved by the Responsible Authority for each stage of the subdivision. Once approved, these plans become the endorsed plans of this permit. Construction plans must be clearly dimensioned and detail all roads, pathways, drainage works (including WSUD Water-Sensitive Urban Design) and computations (to AHD Australian Height Datum). Three copies and digital formal (AutoCAD and .pdf) must be provided. The detailed plans must be generally in accordance with the endorsed plan, including the Setormwater Mmanagement Pplan (Cardno V161919 dated 25 May 2021), and show:
  - a) Any changes required under Condition 1.

- b) Tree protection zone for all trees being retained with annotation that services works within tree protection zone must be thrust bored.
- c) CFA requirements at Condition 4742, 5247, and 5348.

#### Drainage

- d) Details of stormwater management, including provision for all stormwater to be directed to the legal point of discharge for each lot as per Knox City Council's Civil Works and Stormwater Drainage Guidelines for subdivisions;
- e) Functional design of the sedimentation basin, retarding basin, wetlands and any other WSUD system in the subdivision:
- f) Stormwater directed into the Melbourne Water's drainage system must do so only with the consent of Melbourne Water and must meet their requirements;
- g) Water Sensitive Urban Design treatments.
- h) Maintenance regime for the stormwater treatment system that include activity description, frequency and ongoing maintenance, management responsibility and a checklist for handover to Council;
- i) A design and construction schedule of the stormwater treatment/detention system.
- j) All Council pipelines must be designed for 10% Annual Exceedance Probability (AEP) event.
- k) The minimum pipe diameter for the drainage system must be 300mm.

## Road and footpath

- Details including surface and underground drainage, intersections, pavement and footpath/shared path details, street lighting, fire hydrants, vehicle crossovers, line marking, street signage, concrete kerbs and channels and outfall drainage;.
- m) Swept path diagrams for junctions, bends, and hammerhead turning areas to ensure suitable access for all vehicles, including emergency vehicles, to turn and remain free of encroachment or obstructions, including on-street car parking;
- n) The location and design depth and composition of pavement, including raised traffic islands and speed control devices;
- o) Proposed traffic calming <u>treatment mid-block</u> devices and speed humps, including speed humps in the detailed design for Road A and H;.
- p) Right angle bends require a painted centre line and raised reflective markers to separate traffic travelling in opposite directions including give-way signage and surface treatment design to accentuate priority traffic along Road E/F and A/E at the junction of the northeast access cul-de-sac and Road D and support pedestrian movement across Road D;
- q) A minimum 8 metres is required for kerb returns at bends. The kerb between the North-East access lane and Road E must be altered to show an 8 metre radius;.
- r) The location of all services and cables to be underground and the annotation that all services works within Tree Protection Zone must be thrust bored;
- s) The location of all "no parking" and "Street name" and various traffic signage. No parking must be provided on the residential side of Road C and D. Street signage, such as

- "No Through Road" along Norvel Road must be relocated to the satisfaction of the Responsible Authority:
- t) A fully mountable splitter island must be constructed at the intersection of McMahons Road and Norvel Road to the satisfaction of the Responsible Authority;
- u) If construction is done in stage, turnaround provision for waste collection vehicles must be provided where roads are not yet completed;.
- v) Cross sections for roads and access lanes to be provided; and.

#### On-street car parking plan

- w) Details of on-street car parking including CFA requirements at Condition 4742;.
- x) Parking restrictions limiting on-street parking to only one side on the narrower Access Place type roads with preference of the no parking to be located on the residential side; and,
- y) Waste bin collection points to be designated for each lots to show planned access for garbage collection.

## Bicycle path, and trail, and bushland track

- z) Detail bushland boardwalk location and construction design including the location of existing vegetation;
- z) Detail of construction of bike path, and maintenance trail to Agora Blvd, including that paths and trails located within tree protection zone must be constructed above grade;
- aa) Removable bollard at either end of the trail to Agora Boulevard to limit vehicle access to maintenance and emergency vehicles only.

## **Street Lighting**

- bb) Details of Street Lighting type and location, provided to the satisfaction of the relevant authority and in accordance with AS1158. This must include a lighting to all intersections, bends in the road and at the end of roads.
- cc) Street lighting to be incorporated at both end of the Pedestrian Link between Road A and H.
- dd) Lighting along the bushland reserve frontage (Road E, Road D, and the end of Road F) to consider measures that avoid any light spilling to the bushland reserve.

To the satisfaction of the Responsible Authority. Once approved, these plans become the endorsed plans of this permit.

## Landscapeing Plan Required

6. <u>Before Prior to the certification of a plan of subdivision for any stage, a detailed landscapeing plan prepared by a suitably qualified landscape architect or a suitably qualified landscape designer must be submitted to and approved by the Responsible Authority for all reserves, including road reserves and public spaces, relevant to that stage by Responsible Authority. Once approved, the plan will be endorsed and then form part of the Planning Permit. A digital format (.pdf) must be provided generally in accordance with the City of Knox Landscape Plan Guidelines, the Landscape Report Revision I 02/03/2023</u>

prepared by Urbis <u>and the Arboricultural Report Revision April 2023 prepared by Treemap Arboriculture</u> and modified to show:

- a) Any changes required under Condition 1.
- b) Streetscape and reserve designs detailing location of water sensitive urban design features, garden beds, location of street furniture, the position of street lighting, fire hydrants, side entry and service pits, pathways within reserves, electricity substations and planting of vegetation.
  - The species and planting size of trees must be selected to the satisfaction of the Responsible Authority.
- c) The planting species are to be modified as:
  - i. Tilia cordata to be changed to Nyssa Sylvatica 'Forum'; .
  - ii. Nyssa sylvatica is a more adaptable species to a warming climate;
  - iii. Acer platanoides 'Norwegian Sunset' to be changed to <u>Eucalyptus melliodora</u> 'Yellow Box'. <u>Acer truncatum x A. platanoides 'Warrenred' Pacific Sunset.</u> Norwegian sunset cultivar is not available anymore.
  - iv. The Eucalyptus melliodora planting area have the following understorey species additions to add to diversity/beauty::
    - a. Allocasuarina littoralis, Acacia pravissima, Kunzea ericoides, Leptospermum petersonii, Bursaria spinose;
  - v. Northern end planting (area that abuts bushland reserve) to be changed to the native tree species, Angohpora hispida (Dwarf Apple);
  - vi. Angophora hispida to be planted on the northern side of Road E and Road D, spaced at 12 metre centres to incorporate the 5 metre canopy separation when they reach maturity.
- d) Delineation of the bushfire defendable space area and proposed planting schedule and location within the defendable space area modified to accord with bushfire management requirements as per condition <u>51</u>44.
- e) No street tree for lots 137 and 138 to meet bushfire defendable space requirement.
- f) The street trees on the south side of Road E and along Lot 52 moved to the north side of Road E and D to meet bushfire defendable space requirement.
- g) The opportunity for a second canopy tree to be located at the northern end of Road H to help frame the dead end to the road.
- h) A planting schedule of all proposed trees, shrubs and ground covers including botanical names, common names, pot sizes, sizes at maturity and quantities of each plant, to be planted within the nature strip and reserves.
- i) Details of the surface finishes of roads, pathways, tracks, and bike path.
- j) Annotation that all services works within Tree Protection Zone must be thrust bored and bike path within tree protection zone must be constructed above grade.
- k) Details and location of all services including above and below ground lines, cables, hydrants and pipes (including as cross-section) with annotation that all services to be located at a minimum depth of 600mm within road reserves;.
- I) The location of Tree 132 corrected; and.
- m) Trees to be retained and their respective tree protection zones (reserves only).

- n) A minimum 1.8 metre high paling or steel fence (or similar) along the eastern boundary where the proposed residential lots adjoin existing residential lots.
- o) The deletion of the pathway from Agora Boulevard to the Blind Creek trail.

To the satisfaction of the Responsible Authority. Once approved, these plans become the endorsed plans of this permit.

#### General

- Prior to Before a Statement of Compliance is issued for Stage 1 the issue of a Statement of Compliance for Stage 1, the owner/developer of the land must pay to the Responsible Authority Council a financial contribution towards stormwater management which must be to the satisfaction of the Responsible Authority and construction of the bushland boardwalk to the satisfaction of the Responsible Authority.
- 8. The contribution required to be paid in accordance with Condition 7 is the difference between the cost of a typical stormwater management treatment solution which meets Urban Stormwater: Best Practice Environmental Management Guidelines, CSIRO 1999 targets and the cost of the approved stormwater management treatments as approved by the Responsible Authority. The owner of the land must submit the cost to the Responsible Authority for its approval.
  - To determine the financial contribution amount, the owner/developer must provide the Responsible Authority with a cost estimate for the design and construction of stormwater management treatments and the bushland boardwalk including any associated sign.
- 9. Prior to the issue of <u>Before</u> a Statement of Compliance <u>is issued for</u> each stage, the following works must be completed or bonded in accordance with approved plans to the satisfaction of the Responsible Authority:
  - a) stormwater drainage;
  - b) roads and lighting;
  - c) traffic devices;
  - d) car parking and access ways must be drained, sealed and line marked;
  - e) footpaths, bike path, trails, and pram crossings; and
  - f) landscaping.
- 10. Prior to any works commencing Before the works start within Council Bushland reserve and Seecal reserve, Council's Biodiversity Officer must be contacted to arrange an inspection of the works area.

#### **Native Vegetation**

- 11. <u>Before work starts, a Land Management Plan for the bushland reserve must be approved and endorsed by the Responsible Authority. The Land Management Plan must:</u>
  - a) be prepared to the satisfaction of the Responsible Authority
  - b) <u>include protection and management measures to improve the ecological condition of</u> retained native vegetation
  - a) respond to State and local policy to protect and enhance Victoria's biodiversity.
  - b) respond to the environmental objective and decision guidelines in Environmental

- Significance Overlay Schedule 2.
- c) <u>be informed by survey work undertaken at appropriate time of year, including an assessment of indigenous plant species that are vulnerable, endangered or critically endangered in Knox.</u>
- d) <u>identify and include opportunities for seed collection and translocation of plants</u> impacted by the proposal.
- 12. Before the works start, the permit holder must advise all persons undertaking the vegetation removal and works on site of all relevant conditions of this permit.
- 13. In order to offset the removal of 0.391 hectares of native vegetation approved as part of this permit, the applicant must provide a native vegetation offset that meets the following requirements and is in accordance with the <u>Biodiversity Assessment prepared by Ecolink Consulting dated December 2020 and the Guidelines for the removal, destruction or lopping of native vegetation. Permitted clearing of native vegetation Biodiversity assessment guidelines and the Native vegetation gain scoring manual:</u>

## The general offset must:

- €Contribute offset amount of 0.126 general habitat units.
- <u>bBe</u> located <u>in Knox municipal district</u>, <u>if available</u>, <u>or</u> within the Port Phillip and
   Westernport Catchment Management Authority boundary <u>or Knox municipal district</u>;
- heave a strategic biodiversity score of at least 0.202.
- 14. Prior to Before the removal of any native vegetation and the issue of a Statement of Compliance, evidence that the required offset for the project has been secured must be provided to the satisfaction of the Responsible Authority.

#### **Tree Protection Conditions**

- 15. Prior to Before any buildings and works, subdivision works, and vegetation removal commencing, all trees and vegetation to be retained and the bushland reserve must be fenced off with barrier fencing to create a protection zone. The tree protection zone must be a minimum radius of 12x the diameter of the trunk, measured at a height of 1.4 metres from the ground as identified in the Australian Standard for the protection of trees (AS 4970-2009). The fence is to be maintained and clearly marked throughout the construction period and removed at the completion of all works.
- 16. All works, including excavation and fill, within the tree protection zone areas of the trees to be retained, within and adjacent to the site including reserves, must be undertaken under the supervision of a qualified Arborist to ensure that there is no unreasonable damage to the root system of trees to be retained and/or protected, to the satisfaction of the Responsible Authority.
- 17. The tree protection fence is to be chain link or wire mesh, comprise either wooden or steel posts set into the ground or on concrete pads, and be a minimum height of 1.8 metres.
- 18. Signage is to be affixed to the fence advising that the area is a tree protection zone and a no-go development area.
- 19. The tree protection fence and signage is to be maintained throughout the construction period and removed at the completion of all works.

- 20. No temporary removal of the tree protection fence, or encroachment into the protection zone is permitted without the written consent of the responsible authority.
- 21. Trees are to be watered thoroughly prior to construction works commencing and throughout the period of construction works to the satisfaction of the Responsible Authority.
- 22. No materials, vehicle, equipment, waste, soil or other goods must be stored or placed within the tree protection zone.
- 23. Prior to Before any works start commencing on site, the Responsible Authority must be contacted to inspect the Tree Protection fencing.
- 24. Entry and exit pits for underground services must not be constructed within the tree protection zone of native tree.

## **Cultural Heritage Management Plan Conditions**

- 25. Works must be conducted in accordance with the requirements of the approved Cultural Heritage Management Plan (approved CHMP No. 18338).
- 26. Except with the prior written consent of the Responsible Authority, the Cultural Heritage Management Plan must not be modified.

#### Section 173 Agreement

26. Prior to the issue of Before a Statement of Compliance is issued, the owner of the land must enter into an agreement with the Responsible Authority pursuant to Section 173 Agreement of the Planning and Environment Act 1987 and provide evidence to the Responsible Authority that the agreement has been registered on the certificate of title for the land. The agreement will stipulate the following building design requirements that applyies to the development of future dwellings on the land unless otherwise approved by the Responsible Authority, as follows.:

#### **Front Setbacks**

- a) Front walls of a building must be setback a minimum of:
  - i. 5.5 metres from a street frontage for lots facing Castricum Place
  - ii. 4 metres from a street frontage for lots on the northern side of "Road B" shown as Lots 33 to 40 on the attached plan. No encroachment within the front setbacks are allowed for these lots.
  - iii. The distance set as defendable space for the lots affected by bushfire defendable space as shown on the endorsed plans and as a restriction on the plan of subdivision. No encroachment within the defendable space is are allowed for these lots.
  - iv. 4.5 metres from a street frontage for all other lots.
- b) Any encroachment into the front street setback of point (i.) and (iv.) above must be limited to the following structure provided it encroaches no more than 1 metre 0.5 metres into the specified setback distances:
  - i. porches, pergolas and verandahs that are less than 3.6 metres in height.;

- ii. decks, terraces, landings, stairways, ramps, eaves, window hoodings, sunblinds, fascias, gutters, masonry chimneys, flues, pipes, and domestic services normal to a dwelling.
- c) Any encroachment into the front street setback of point (i.) and (iv.) above must be limited to the following structure provided it encroaches no more than 0.5 metres into the specified setback distances:
  - i. porches, pergolas and verandahs that are less than 3.6 metres in height.;
  - ii. <u>decks, terraces, landings, stairways, ramps, eaves, window hoodings, sunblinds, fascias, gutters, masonry chimneys, flues, pipes, and domestic services normal to a dwelling.</u>

#### Front Setbacks for garages or carports

- d) Front walls of a car parking structure (such as garages and carport) must be setback a minimum of:
  - i. 0.5 metres from the front wall of the building for lots facing Castricum Place.
  - ii. 5.4 metres from a street frontage and at least 0.5 metres behind the front wall of the building for all other lots.

#### **Side Setbacks**

e) Side walls of a building on a corner lot must be setback a minimum of 1.5m from a side street frontage. No encroachment within the side street setback is allowed.

#### **Rear Setbacks**

- f) Rear walls of a building must be setback a minimum of 3 metres from the rear boundary for all lots except for:
  - i. Lots 33-40 inclusive-
  - ii. Lots 113-138 inclusive.
- g) Rear walls of a building for lots 113-138 inclusive must be setback a minimum of 5 metres from the rear boundary.
- h) Any encroachment into the rear setback of point (f)d) and (g)e) above must be limited to the following structure provided it does not encroach within the minimum radius of the large feature shrubs required under point (r);):
  - i. porches, pergolas and verandahs that are less than 3.6 metres in height;
  - ii. terraces, patios, decks, landings that are less than 800mm in height, stairways, ramps, eaves, fascia or gutter, water tanks, and domestic services normal to a dwelling;
  - iii. outbuildings that does not exceed a gross floor area of 10 square metres.

## Lot 138

- i) The dwelling on Lot 138 should be single storey. However, if a double storey building is proposed, the upper level must meet the following requirements:
  - i. setback by at least 3 metres behind the ground floor north and west wall façade to ensure a recessive second storey element.
  - The upper level setback means the recess above the ground floor wall calculated as the shortest horizontal distance from the top of the ground floor wall. It does not include projection such as balconies. Any balconies located

within this setback must be clear to the sky.

- j) The wall of a building must be setback a minimum of 3.8 metres from the northern boundary and 2 metres from the part of the western boundary that does not constitute part of a street frontage.
- k) Regardless of point (ii-j) above, no building and works, other than fencing, are allowed in the tree protection zone of any tree. An arboricultural report will be required to determine the tree protection zone of any tree encroaching onto Lot 138 and tree protection fencing must be installed prior to any works commencing on this lot.
- The western boundary fence with the bushland reserve must be no more than 1.2 metres in height.
- m) The northern boundary fence with the bushland reserve must be no more than 1.2 metres in height for the first 12 metres from the western boundary.

#### **Front Boundary**

- n) Front fences are not allowed on a road frontage or within 3 metres of a road frontage (excludes side boundaries).
- o) No structures are allowed within 200 millimetres of a footpath in the road reserve.

#### One Crossover per Lot

p) Only one (1) crossover per lot is allowed. The crossover must not exceed a width of 3 metres but may be merged with that of an adjoining lot provided that it results in no more than one (1) crossover per lot.

#### Landscaping

- q) Each lots must provide be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (as amended) with a mature height of 5-8 metres, and be located within the front setback. Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 32 metres. This requirement does not apply to lots 52, 87-91 inclusive, 137, and 138 subject to bushfire management.
- r) Each lots must be provided with a minimum one (1) large feature shrubs in accordance with Knox's Landscape Plan Guidelines (as amended) with a mature height of 4-5 metres within the rear setback of each lot. Each large feature shrubs should be surrounded by 1512 square metres permeable surface with minimum radius of 21.5 metres. This requirement does not apply to Lot 138.
- s) The planted canopy trees and large feature shrubs must be maintained to the satisfaction of the Responsible Authority and must not be removed.

#### Lots less than 400 square metres in area

t) A minimum garden area of 25 percent must be set aside in accordance with the Knox Planning Scheme.

## Bushfire Management - Lots 52, 87 to 91, 137 to 138

u) The development and management of defendable space on lots 52, 87 to 91 inclusive, and 137-138 must be in accordance with the endorsed Bushfire Management Plan. All costs associated with the preparation and registration of the agreement must be borne by the owner of the land.

#### Walls on boundary

v) The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metre of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall.

The Section 173 Agreement will end 10 years after the completion of the development of the last residential lot that is created under the planning permit.

All costs associated with the preparation and registration of the agreement must be borne by the owner of the land. The owner of the land must pay all of the Responsible Authority's reasonable legal costs and expenses of this agreement, including preparation, execution and registration on title.

#### **Defendable Space**

- 27. Before a Statement of Compliance is issued, the owner of the land must enter into an agreement with the Responsible Authority pursuant to Section 173 of the Planning and Environment Act 1987 and provide evidence to the Responsible Authority that the agreement has been registered on the certificate of title for the land. The agreement will stipulate the following:
  - a) The defendable space on lots 52, 87 to 91 inclusive, and 136-138 must at all times be undertaken in accordance with the endorsed Bushfire Management Plan.

The owner of the land must pay all of the Responsible Authority's reasonable legal costs and expenses of this agreement, including preparation, execution and registration on title.

#### **Telecommunications**

- 28. The owner of the land must enter into an agreement with:
  - a) A telecommunications network or service provider for the provision of telecommunication services to each lot shown on the endorsed plan in accordance with the provider's requirements and relevant legislation at the time; and.
  - b) A suitably qualified person for the provision of fibre ready telecommunication facilities to each lot shown on the endorsed plan in accordance with any industry specifications or any standards set by the Australian Communications and Media Authority, unless the applicant can demonstrate that the land is in an area where the National Broadband Network will not be provided by optical fibre.
- 29. Before the issue of a Statement of Compliance for any stage of the subdivision is issued under the Subdivision Act 1988, the owner of the land must provide written confirmation from:
  - a) A telecommunications network or service provider that all lots are connected to or are ready for connection to telecommunications services in accordance with the provider's requirements and relevant legislation at the time; and,

b) A suitably qualified person that fibre ready telecommunication facilities have been provided in accordance with any industry specifications or any standards set by the Australian Communications and Media Authority, unless the applicant can demonstrate that the land is in an area where the National Broadband Network will not be provided by optical fibre.

## **Road naming**

30. Prior to the Before the certification of any stage, proposed naming for all new roads must be submitted to and approved by the Responsible Authority with the approved names to be then applied on the Plan of Subdivision for certification.

Names must be in accordance with the Naming rules for places in Victoria [2022] to the satisfaction of the Responsible Authority. Road G must be named as continuation of Dion Street.

#### **Public Open Space**

31. A contribution to the Council for public open space must be required pursuant to Section 18A of the Subdivision Act 1988 and Clause 52.01 of the Knox Planning Scheme.

#### Site and Environmental Management Plan

- 31. Prior to Before the commencement of any any works start for a relevant stage on the subject land, a Site and Environmental Management Plan to the satisfaction of the Responsible Authority must be submitted and approved by the Responsible Authority. The Site and Environmental Management Plan will be endorsed and form part of the permit. The Site and Environmental Management Plan must address and document as appropriate, the construction activities proposed on the land under the following heading:
  - a) Occupational health and safety and site induction, environmental controls, traffic management, amenity and safety of the public as well as site security, and cultural protection measures applicable to the site during construction.

The Site and Environmental Management Plan must include:

- b) Environmental Management:
  - i. Soil erosion and sediment control provisions to protect existing local stormwater infrastructure, Blind Creek and the bushland from erosion product and sediment transport by minimising erosion of lands during work;
  - ii. Measures to prevent construction fill encroaching on or being placed within the bushland;.
  - iii. Measures to protect and manage retained native vegetation, including fencing where appropriate.
  - iv. Protection measures to ensure that disturbance to native flora and fauna habitat is avoided in the first instance, and minimised where avoidance is not possible.
  - Measures to avoid the introduction or spreading of pest and plant animals, including measures to target noxious weeds. with appropriate contingencies incorporated to prevent the potential for the introduction of exotic flora and fauna species is abated;
  - vi. Specific measures for any works related to the bushland reserve or Seecal Reserve must be included and must include the notification of Council's

-

- Biodiversity Officer prior to any works commencing;.
- vii. Hydraulics and hydrology provisions to manage water quality and quantity, and protect the habitat value of Blind Creek (measures used should include the installation of a perimeter fence to protect the waterway prior to the commencement of works);
- viii. Tree protection in accordance with Conditions 1315 to 1724.
- ix. Any recommendations of any approved Cultural Heritage Management Plan (if applicable);.
- x. The plan must ensure that contractor working on the site are inducted to this Site and Environmental Management Plan prior to conduct any works around or within the bushland reserve.

## c) Site Management

- i. Identifying access and egress opportunities for emergency vehicles, workers, and early residents of approved stage in case of emergency;.
- ii. Relevant Country Fire Authority requirements as per conditions 33 and 36;.
- iii. All machinery wash-down area, personnel rest areas and parking;
- iv. Waste management measures during construction:
- v. Measures to reduce the impact of noise, dust and other emissions created during the construction process including measures to prevent dirt being tracked onto surrounding roads by vehicles;.
- vi. If requested by the Responsible Authority at any stage, a contamination assessment for a site with suspected contamination must be provided for the relevant stage to the satisfaction of the Responsible Authority;.
- vii. Traffic Management identifying the access and egress access point(s) for construction vehicles and detailing the measures to ensure amenity of the adjoining areas is not impacted by the movement of vehicles (cars, trucks and construction machinery) associated with construction activities on the site.
- 32. The endorsed Site and Environmental Management Plan must be implemented and maintained throughout the construction to the satisfaction of the Responsible Authority and all works must be carried out in accordance with the measures set out in the approved Site and Environmental Management Plan unless otherwise agreed in writing by the Responsible Authority.
- 33. Prior to Before the commencement of any works start on site, an inspection by Council's Environmental Officer must be carried out to determine compliance with the Site and Environmental Management Plan.

## South East Water Conditions (reference: 35707694)

South East Water – Water and Sewer

- 34. The owner of the subject land must enter into an agreement with South East Water for the provision of drinking water supply and fulfil all requirements to its satisfaction.
- 35. The owner of the subject land must enter into an agreement with South East Water for the provision of sewerage and fulfil all requirements to its satisfaction.
- 36. All lots on the Pplan of Ssubdivision must be provided with separate connections to South

East Water drinking water supply and sewerage systems.

#### South East Water - Certification

- 37. Prior to Before certification, the Pplan of Ssubdivision must be referred to South East Water, in accordance with Section 8 of the Subdivision Act 1988.
- 38. The certified Pplan of Ssubdivision will need to must show sewerage supply easements over all existing and/or proposed South East Water sewer mains located within the land, to be in favour of South East Water Corporation pursuant to Section 12(1) of the Subdivision Act.

#### **AusNet Services Conditions**

- 39. The Pplan of Ssubdivision submitted for certification must be referred to AUSNET ELECTRICITY SERVICES PTY LTD in accordance with Section 8 of the Subdivision Act 1988.
- 40. The applicant must:
  - a) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for supply of electricity to each lot on the endorsed plan.
  - b) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for the rearrangement of the existing electricity supply system.
  - c) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for rearrangement of the points of supply to any existing installations affected by any private electric power line which would cross a boundary created by the subdivision, or by such means as may be agreed by AUSNET ELECTRICITY SERVICES PTY LTD.
  - d) Provide easements satisfactory to AUSNET ELECTRICITY SERVICES PTY LTD for the purpose of "Power Line" in the favour of "AUSNET ELECTRICITY SERVICES PTY LTD" pursuant to Section 88 of the Electricity Industry Act 2000, where easements have not been otherwise provided, for all existing AUSNET ELECTRICITY SERVICES PTY LTD electric power lines and for any new power lines required to service the lots on the endorsed plan and/or abutting land.
  - e) Obtain for the use of AUSNET ELECTRICITY SERVICES PTY LTD any other easement required to service the lots.
  - f) Adjust the position of any existing AUSNET ELECTRICITY SERVICES PTY LTD easement to accord with the position of the electricity line(s) as determined by survey.
  - g)—Adjust the position of any existing AUSNET ELECTRICITY SERVICES PTY LTD easement to accord with the position of the electricity line(s) as determined by survey.
  - g) Set aside on the plan of subdivision Reserves for the use of AUSNET ELECTRICITY

    SERVICES PTY LTD for electric substations to the satisfaction of AUSNET ELECTRICITY

    SERVICES PTY LTD.
  - h) Provide survey plans for any electric substations required by AUSNET ELECTRICITY SERVICES PTY LTD and for associated power lines and cables and executes leases for a period of 30 years, at a nominal rental with a right to extend the lease for a further 30 years. AUSNET ELECTRICITY SERVICES PTY LTD requires that such leases are to be noted on the title by way of a caveat or a notification under Section 88 (2) of the Transfer of Land Act prior to the registration of the plan of subdivision.
  - Provide to AUSNET ELECTRICITY SERVICES PTY LTD a copy of the plan of subdivision submitted for certification that shows any amendments that have been required.

- j) Agree to provide alternative electricity supply to lot owners and/or each lot until such time as permanent supply is available to the development by AUSNET ELECTRICITY SERVICES PTY LTD. Individual generators must be provided at each supply point. The generator for temporary supply must be installed in such a manner as to comply with the Electricity Safety Act 1998.
- k) Ensure that all necessary auditing is completed to the satisfaction of AUSNET ELECTRICITY SERVICES PTY LTD to allow the new network assets to be safely connected to the distribution network.

## Melbourne Water Conditions (reference: MWA-1164280)

#### Melbourne Water Certification

- 41. Prior to Certification of any stage of this subdivision, Melbourne Water requires that the applicant submit a detailed Drainage and Stormwater Management Strategy for approval, which demonstrates how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater. The strategy should also include information regarding the future ownership and maintenance requirements of any proposed assets.
- 41. Unless otherwise agreed in writing by the relevant drainage authority, the subdivision must retard stormwater back to pre-development levels before entering the downstream drainage system/waterway and/or retard stormwater back to the sufficient capacity of the downstream drainage system.
- 42. Stormwater runoff from the subdivision must achieve State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater as set out in the 'Urban Stormwater Best Practice Environmental Management Guidelines (CSIRO) 1999'.

## Melbourne Water – stormwater connection

43. Prior to the commencement of Before the works start, a separate application direct to Melbourne Water must be made for approval of any new or modified stormwater connection to Melbourne Water's drains or watercourses, works near or over a Melbourne Water asset and/or waterway crossing.

#### Melbourne Water – Drainage and Stormwater Management Strategy

44. Before the works start, a detailed Drainage and Stormwater Management Strategy to the satisfaction of Melbourne Water is to be submitted and approved by Melbourne Water. The strategy is to demonstrate how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters of Victoria) objectives for the environmental management of stormwater. The strategy must consider flows from external catchment areas when determining how the development will achieve flood protection standards. The strategy also include information regarding future ownership and maintenance requirements of any proposed stormwater assets.

#### Melbourne Water - Statement of Compliance

45. Prior to the issue of Before a Statement of Compliance is issued, engineering plans of the subdivision (in electronic format) must be forwarded to Melbourne Water.

## **Multinet Condition**

46. A Statement of Compliance must be obtained from Multinet Gas prior the plan of subdivision being released from the Titles Office.

#### CFA Conditions (reference: 13000-68738-107873)

#### CFA – Amended plans

- 47. Prior to Before the certification of any stage of the plan of subdivision is certified, amended plans must be submitted and show:
  - a) All roads are designed to ensure the road width is constructed as specified in Table C1 of Clause 56.06-8 of the Knox Planning Scheme for an Access Lane and clear of encroachments, such as on-street parking.
  - b) Plans that show the design and location of on-street parking to ensure that the parking bays do not encroach onto the road and hinder the movement of emergency vehicles.
  - c) Plans that demonstrate the turning bays can accommodate emergency vehicles to manoeuvre in accordance with the requirements set out in CFA's Requirements for Water Supplies and Access for Subdivisions, 2006.
  - d) The provision of removable bollards between Road H and Road F for the purposes of access for emergency vehicles.

## CFA – Fire management plan

- 48. A Fire Management Plan must be submitted and approved by the Responsible Authority prior to development starting that identifies how the bushfire risk will be managed during each Stage of the subdivision and what stage the various bushfire protection measures will be relied upon for the application.
- 49. Before the certification of the plan of subdivision is certified, a Bushfire Management Plan must be submitted to and endorsed by the Responsible Authority. The plan must show the following information, unless otherwise agreed in writing by the CFA and the Responsible Authority:
  - a) The design and layout of the subdivision, including lot layout, road design and access points, both pedestrian and vehicular.
  - b) The location of nearby hazards within 150m of the subdivision boundary.
  - c) The location of any bushfire hazards that will be retained or created on the land within the subdivision.
  - d) The location of any areas of vegetation within the subdivision not located on private land that will be managed to a low threat condition, including the reserves.
  - e) The setback distance of any development from the bushfire hazard for defendable space purposes where vegetation will be managed.
  - f) Notations of vegetation management standards and when vegetation management will occur i.e. annually, quarterly, during the fire danger period.
  - g) Vegetation must be managed within any area of defendable space to the following standard:
    - i. Grass must be short cropped and maintained during the declared fire danger period.
    - ii. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.

- iii. Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- iv. Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
- v. Shrubs must not be located under the canopy of trees.
- vi. Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
- vii. Trees must not overhang or touch any elements of the building.
- viii. The canopy of trees must be separated by at least 5 metres.
- ix. There must be a clearance of at least 2 metres between the lowest tree branches and ground level.
- h) Details of any other bushfire protection measures that are to be adopted at the site.
- i) Nominate that any building on a new lot will be required to be designed and constructed to a minimum standard of Bushfire Attack Level (BAL) 12.5.

#### CFA - Building envelope

50. Any lot that contains defendable space must include a building envelop that ensures development will not be allowed within the area of defendable space.

#### CFA – Construction and site management plan

- 51. Before commencement of the works start, a Bushfire Site Management Plan that addresses bushfire risk during, and where necessary, after construction must be submitted and approved by the responsible authority. The plan must specify, at minimum:
  - a) The staging of development and the likely bushfire risks from surrounding hazards at each stage:
  - b) An area of land between the development edge and bushfire hazard consistent with the separation distances specified in AS3959-2018, where bushfire risk is managed to enable the development, on completion, to achieve a BAL-12.5 construction standard in accordance with AS3959-2018;.
  - c) The land management measures to be undertaken by the developer to reduce the risk from fire within any surrounding rural or undeveloped landscape to protect residents and property from the threat of grassfire and bushfire; and.
  - d) Provision of adequate access and egress for Stage One subdivisions to minimise grass and bushfire risks to new residents prior to the full completion of the subdivision.

## CFA - Hydrants

- 52. Prior to the issue of Before a Statement of Compliance is issued under the Subdivision Act 1988 the following requirements must be met to the satisfaction of the CFA:
  - a) Above or below ground operable hydrants must be provided. The maximum distance between these hydrants and the rear of all building envelopes (or in the absence of building envelopes, the rear of the lots) must be 120 metres and the hydrants must be no more than 200 metres apart. These distances must be measured around lot boundaries.
  - b) The hydrants must be identified with marker posts and road reflectors as applicable to

the satisfaction of the Country Fire Authority.

Note – CFA's requirements for identification of hydrants are specified in 'Identification of Street Hydrants for Firefighting Purposes' available under publications on the CFA web site (www.cfa.vic.gov.au)

#### CFA - Roads

- 53. Roads must be constructed to a standard so that they are accessible in all weather conditions and capable of accommodating a vehicle of 15 tonnes for the trafficable road width.
  - a) The average grade must be no more than 1 in 7 (14.4%) (8.1 degrees) with a maximum of no more than 1 in 5 (20%) (11.3 degrees) for no more than 50 metres. Dips must have no more than a 1 in 8 (12%) (7.1 degree) entry and exit angle.
  - b) Curves must have a minimum inner radius of 10 metres.
  - c) Have a minimum trafficable width of 3.5 metres and be clear of encroachments for at least 0.5 metres on each side and 4 metres above the access way.
  - d) Roads more than 60m in length from the nearest intersection must have a turning circle with a minimum radius of 8m (including roll-over kerbs if they are provided) T or Y heads of dimensions specified by the CFA may be used as alternatives.

#### CFA - Maintenance of defendable space

54. Before the Statement of Compliance is issued under the Subdivision Act 1988, the defendable space on every lot in the subdivision must be implemented and maintained as specified on the endorsed Bushfire Management Plan, unless otherwise agreed in writing by the CFA and the Responsible Authority.

#### **Drainage/Construction Conditions**

- 55. All stormwater drainage runoff from the site must be properly collected and discharged in a complete and effective system of drains within the subdivision and connected to the legal point of discharge as directed by the Responsible Authority. It must not cause a nuisance to abutting properties. The internal drains of the proposed lots are to be independent of the internal drains of other lots.
- 56. Prior to Before the issue of a Statement of Compliance is issued, any damage caused to the existing drainage system during the installation of the new property inlet must be repaired or replaced to the satisfaction of the Responsible Authority.

#### **Payments and Maintenance Bonds**

- 57. Prior to Before a the issue of a Statement of Compliance is issued, the owner/developer must pay to the Council a payment for supervision of works being 2.5% of the value of all works shown on the Engineering and Landscape Plans and a payment for checking of Engineering and Landscape Plans being 0.75% of all works shown on the engineering plan.
- 58. Prior to Before the issue of a Statement of Compliance is issued, the owner/developer must lodge with Council:
  - a) A refundable maintenance bond being 5% of the value of all works shown on the engineering plan; and.

b) A refundable outstanding works bond being the value of all works to be completed plus 50%.

The Developer is responsible for the maintenance of the completed construction works and such works must be kept in good condition for a period of three months.

(A priced Bill of Quantities must be supplied to Council to validate the value of works as shown on the plan. This is used to determine the amount of the engineering fees and maintenance bond and provides a record of the value of Councils assets).

#### **Bond Return**

- 59. Prior to Before the issue of a Statement of Compliance is issued or the return of maintenance bonds in respect to the subdivision works whichever is the later, the owner or developer must submit to Council the following information (whichever are applicable) in an electronic format agreed by the Knox City Council:
  - a) Subdivision plans showing title boundaries, road reserves, municipal reserves and easements etc.
  - b) As constructed engineering plans in electronic format relating to roads, drains and other infrastructure constructed in conjunction with the subdivision.
  - c) Areas where fill exceeding 150 millimetres has been placed.

#### **Incomplete works Bond return**

60. Prior to Before the return of the incomplete works bond, Council will inspect the works and determine if these works have been constructed in accordance with the approved design and specifications to the satisfaction of the Responsible Authority. Should these works be satisfactory, the incomplete bond will be returned and a practical completion certificate will be issued by the Responsible Authority.

#### **Asset Protection**

61. Prior to Before the issue of a Statement of Compliance is issued for any stage of the development, the developer must be responsible for the reinstatement and repair of any damage, and costs of all alterations to the Knox City Council and any other Public Authority assets deemed necessary and required by such Authorities for the development/subdivision. Re-instatement or modification of assets as directed by the Responsible Authority will be required or compensation to the value of Council's loss must be paid.

## Fencing<del>of reserves</del>

- 62. Prior to Before the issue of a Statement of Compliance is issued, any fencing along the common boundary between a lot and a reserve or walkway or existing lot as shown on the subdivision and detailed endorsed plan must be designed and erected to the satisfaction of the Responsible Authority.
  - Fencing between lot 138 and the bushland reserve must be in accordance with the requirement of Condition  $\frac{26}{18}$ .
- 63. All costs associated with the provision of the fencing are to be borne by the owner/developer under this permit.

#### **Final Compliance Inspection**

- 64. Prior to Before the issue of a Statement of Compliance is issued a final inspection by Council's Surveillance Officer must be carried out to verify the completion of works in accordance with the Engineering Plans, to Council's standards and satisfaction.
- 65. Prior to Before the issue of a Statement of Compliance is issued a final inspection by Council's Enforcement Officer must be carried out to verify the completion of landscaping in accordance with the Landscape Plans, to Council's standards and satisfaction.

#### Vehicle crossing

66. Prior to Before the issue of a Statement of Compliance is issued, vehicle crossings must be constructed to service all lots and any vehicle crossing no longer required must be returned to nature strip to the satisfaction of the Responsible Authority. All crossovers must be 10 metres clear of an intersection, 3 metres clear of all street trees and 1 metre clear of all other assets in the road reserve.

#### **Public Space trees**

- 67. Nursery stock must be inspected and approved by a suitably qualified arborist or horticulturalist before planting and a report from this suitably qualified arborist or horticulturalist declaring that the nursery stock complies with the relevant Australian Standard, must be provided to the satisfaction of the Responsible Authority.
- 68. Following the planting of trees within the road reserves and open space reserves, an inspection must be arranged with representatives of the applicant, the landscape contractor appointed by the applicant and Knox City Council Parks Services and Landscape Officer who when satisfied will issue a Certificate of Practical Completion.
- 69. Trees and landscaping works within the road reserves, open space reserves and all landscaping within the development must be maintained at no cost to Knox City Council for a period of two years following the date of issue of the Certificate of Practical Completion. At the end of this period and following another inspection, Council will determine if the landscaping is satisfactory. Should the landscaping be satisfactory, the landscape bond will be returned if applicable, a Final Completion will be issued and at this point the maintenance responsibility will be assumed by Knox City Council.
- 70. The two-year maintenance of the trees must include formative pruning 12 months after planting to the satisfaction of the Responsible Authority.
- 71. Prior to Before the issue of a Statement of Compliance is issued, for the final stage, the Developer must pay to the Council a street tree maintenance bond fee of \$350.00 per tree within the final stage.
- 72. Protection of Council's street trees must be in accordance with the Australian Standard for the protection of trees (AS 4970-2009) to the satisfaction of the Responsible Authority.

## **Street Lighting**

73. Prior to Before the issue of a Statement of Compliance is issued, street lighting must be provided to the satisfaction of the relevant authority and in accordance with AS 1158 and the endorsed plans. Non Standard street lighting will be accepted provided it is to the satisfaction of the Responsible Authority.

#### **Permit expiry**

- 74. The permit will expire if any of the following circumstances applies:
  - a) The plan of subdivision for the first stage of the subdivision is not certified under the Subdivision Act 1988 within two (2) years of the date of this permit.
  - b) The plan of subdivision for the subsequent stage is not certified under the Subdivision Act 1988 within two (2) years of certification of the previous stage.
  - c) The registration of the plan of subdivision for each stage is not completed within five (5) years of the date of Certification under the Subdivision Act 1988 of that stage.
  - d) The buildings and works, including removal of vegetation, component haves not commenced within seven (7) years of the date of issue of the permit.
  - e) The buildings and works, including removal of vegetation, component haves not been completed within nine (9) years of the date of issue of the permit.

The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires or in accordance with Section 69 of the Planning and Environment Act 1987.

#### **NOTATIONS:**

#### Melbourne Water Notes (Stormwater Management Plan)

- Assessment of the <u>Ss</u>tormwater <u>Mm</u>anagement <u>Planstrategy</u> indicates that predeveloped flows have been overestimated as the storage of the current site has not been accounted for. Approximately 3.5-4 ha of water of the existing site will be held in storage due to the large depressions on the site, hence pre-developed 1% AEP flows have been overestimated. The <u>Ss</u>tormwater <u>Management Planstrategy</u> will need to account for the current storage on the site, update the pre-developed 1% AEP flow and update the detention volume required.
- Due to the size of the subdivision and the external catchment area, internal drainage and stormwater requirements will be to the satisfaction of Council as the relevant local drainage authority. It is advised to council that consideration be given to the following:
  - Flows from the external catchment should be conveyed through the new subdivision.
  - Properties finished floor levels should be set 300mm above the applicable 1% AEP flood level associated with any overland flow through the subdivision.
  - Safe access for the subdivided properties should be provided in accordance with the relevant standards in the *DELWP Guidelines for Development in Flood Affected Areas* (considering the roads running south-north will be used for 1% AEP flow conveyance).
- In order to receive further review/approval of the stormwater management strategy, please submit an updated strategy addressing the above requirements via the Melbourne Water website.

## **Knox City Council Notes**

- All utility services (drainage, sewer) are to be verified onsite by the applicant/developer prior to the commencement of any works.
- No buildings are permitted to be constructed over Council easements.
- A road opening permit from Council is required for any works within the road reserve, including the nature strip.
- Vehicle crossing must be constructed in accordance with Council's standard drawings, specifications and vehicle crossing policy.

- This permit does not discharge an occupier from any liability relating to the construction, maintenance or the repair of a dividing fence, pursuant to the provisions of the Fences Act 1968 (as amended).
- A contribution to the Council for public open space must be required pursuant to Section 18A of the Subdivision Act 1988 and Clause 53.01 of the Knox Planning Scheme.

Date Lodged:



Application for

Office Use Only Application No.:

	Planr	ning Peri	mit	
lanning Enquiries	If you need help	to complete this form, read	How to Complete the Application for Pla	anning Permit form.
hone: (03) 9298 8000 /eb: http://www.knox.vic.gov.au	available for	public viewing, including e	ation, including plans and personal inforr lectronically, and copies may be made f and review as part of a planning process	or interested parties for
Clear Form	and Environ	and Environment Act 1987. If you have any concerns, please contact Council's planning depart Questions marked with an asterisk (*) are mandatory and must be completed.		
he Land				
Address of the land. Complete	the Street Address	and one of the Formal La	and Descriptions.	
Street Address *	Unit No.:	St. No.: 29Q & 41Q	St. Name: Norvel Road, and 1	8a Dion Street
	Suburb/Locality:	Ferntree Gully	Postco	ode: 3156
Formal Land Description * Complete either A or B.	A Lot No.:	Lodged Plan	Title Plan OPlan of Subdivision No.	o.:
This information can be	()R	TP 963860	A PROPERTY AND IN	
found on the certificate of title.	B Crown Allotme	nt No.:	Section No.:	
	Parish/Townsh	ip Name:		
You must give full details of your detail or an adequate description  For what use, development or other matter do you require a permit? *  If you need help about the proposal, read: How to Complete the Application for Planning Permit Form	Subdivides (ocial dwelling puth)	will be asked for more information into 2 the sted with the gs, and the brail and the onal information providing disquired by the planning sche	assess the application. If you do not give mation. This may delay your application  I lot S, building! are a construction of 24 construction of 24 construction of 24 construction of 4 construc	nd works  I His  icy cle  etation  elevations; any
Estimated cost of development for which the	Cost \$ 50 million	A	You may be required to verify this estir	nate.
permit is required *	Insert '0' if no deve	lopment is proposed (eg. ch	ange of use, subdivision, removal of coven	ant, liquor licence)
			100/110	
xistingConditions 💵				
Describe how the land is used and developed now *	The site is curren	itly vacant		
eg. vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.				
33.	Provide a plan	n of the existing conditions. F	rhotos are also helpful.	

Application for Planning Permit 2007 VIC. Aus

Does the proposal breach, in any way, an encumbrance on title such as a restrictrive covenant, section 173 agreement or other obligation such as an easement or building envelope?  Yes. (If 'yes' contact Council for advice on how to proceed before continuing with this application.)  No  Not applicable (no such encumbrance applies).  Provide a full, current copy of the title for each individual parcel of land forming the subject site. (The title includes: the covering 'register search statement', the title diagram and the associated title documents, known as 'instruments', eg. restrictive covenants.)					
				Details	
and the owner of the land.					
Name:					
Title: First Name:	Sumame:				
Organisation (if applicable):	C/- Urbis Pty Ltd				
Postal Address	If it is a P.O. Box, enter the details here:				
Unit No.: L12 St. No.: 120 Collins	St. Name: Collins Street				
Suburb/Locality: Melbourne	State: VIC Postcode: 3000				
Contact person's details "Same as applicant (if so, go to 'contact information')  Name:					
Title: First Name	Surname:				
	St. Name: Collins Street				
Suburb/Locality: Melbourne	State: VIC Postcode: 3000				
Contact Information	Contact Information				
Business Phone: (03) 8663 4888	Emaît:				
Mahila Dhana:	Fax:				
Modile Priorie.	rdA.				
Name:	Same as applicant				
Title: First Name:	Surname;				
Operation (If applicable)					
CONTRACTOR PROGRAMME	If it is a P.O. Box, enter the details here:				
Annual Control of the	St. Name				
Suburb/Locality:	State: Postcode:				
Owner's Signature (Optional):	Date:				
	day / month / year				
	section 173 agreement or other obligation s  Yes. (If 'yes' contact Council for advice on  No  Not applicable (no such encumbrance app  Provide a full, current copy of the title for each (The title includes: the covering 'register sea documents, known as 'instruments', eg. rest  Details  Ind the owner of the land.  Name:  Title:  First Name:  Organisation (if applicable):  Postal Address:  Unit No.: L12  St. No.: 120 Collins  Suburb/Locality: Melbourne  Contact person's details '  Name:  Title:  First Name  Organisation (if applicable): Urbis Pty Ltd  Postal Address:  Unit No.: L12  St. No.: 120  Suburb/Locality: Melbourne  Contact information  Business Phone: (03) 8663 4888  Mobile Phone:  Name:  Title:  First Name:  Organisation (if applicable):  Postal Address:  Unit No.:  St. No.:  Suburb/Locality:  Suburb/Locality:  Suburb/Locality:  Suburb/Locality:  Suburb/Locality:  Suburb/Locality:				

Need help with the	Application?	
	orm, read How to complete the Application for Planning Permit Form or contact Council's planning department, ning process is available at http://www.dse.vic.gov.au/planning	
Contact Council's planning departr or unclear information may delay y	ment to discuss the specific requirements for this application and obtain a planning permit checklist, insufficient our application.	
Has there been a pre-application meeting with a Council planning officer?	○ No	
Checklist II		
9 Have you:	Filled in the form completely?	
	Paid or included the application fee?  Most applications require a fee to be paid. Contact Council to determine the appropriate fee.	
	Provided all necessary supporting information and documents?	
	A Full, current copy of title information for each individual parcel of land, forming the subject site.  A plan of the existing conditions.  Plans showing the layout and details of the proposal.  Any information required by the planning scheme, requested by council or outlined in a council planning permit check list.  If required, a description of the likely effect of the proposal (eg. traffic, noise, environmental impacts).  Completed the relevant Council planning permit checklist?  Signed the declaration (section 7)?	
Lodgement II		
Lodge the completed and signed form and all documents	Knox City Council DX 18210 Knox VIC	
with:	511 Burwood Highway, Wantirna South VIC 3152	
	Contact information:	
	Telephone: (03) 9298 8000	
	Fax: 03 9800 3096 Email: knoxcc@knox,vic.gov,au	
	TTY: (03) 9298 8521 DX: 18210	
	Deliver application in person, by fax, or by post:	
	Make sure you deliver any required supporting information and necessary paymen when you deliver this form to Council.	
	Save Form:	
	Save Form To You can save this application form to your computer to complete or review later	
	Your Computer or email it to others to complete relevant sections.	



### Is this the right form for me?

This form is for making amendments to an application for planning permit that has already been lodged with Council, but which has not yet been decided. This form can be used both for amendments made before the advertising of the application (Section 50 of the Planning & Environment Act) or afterwards (Section 57A of the Act). If you wish to modify a previously issued permit, or make a new application for planning permit, you will need a different form.

The prescribed fee in accordance with the Planning Fee Guidelines is required to be paid at the time of this application being submitted to Council.

It is strongly recommended that before lodging this form, you discuss the proposed amendment of your application with the Council Officer processing the application.

Details of the Planning Application yo Application Number: C184knox	ou wish to A	mend:
Address of subject land: 29Q & 41Q Norvel Road and 18Q Dion Street, Fer	ntree Gully 315	5
The Proposal: what changes are to be made to the applination of the use or development is to change development, and make clear what changes are to be resets out the changes.	ge, include the fu	" [ - 12 ] - 12 ] 전 1 - 12 [ 12 ] - 12 [ 12 ] - 12 [ 12 ] - 12 [ 12 ] - 12 [ 12 ] - 12 [ 12 ] - 12 [ 12 ]
Please refer to the Cover Letter prepared by Urbis	that accompan	es this application
Has advertising been undertaken for this application?	Yes	X No
Encumbrances on Title  Does the amended proposal breach, in any way, a regis  Yes No Not Applicable (no such cov  If yes, you should contact Council for advice on how to	venant, Section 1	73 Agreement or restriction applies)
The Cost of the Development Changes to the type of proposal or the estimated cost case, then you will need to pay the difference between proposal.	The state of the s	게임하다. 사용하는 경기를 하는 하면 가게 되었다면 그것을 바람들이 이 이번 생각이 하는 이번 어때를 하다니?
State the estimated cost of the proposed development	. This is the tota	cost of the proposal, including the amendments.
Unchanged from the initial Application		

Your Details:  Name (& Company, if applicable):	C/o	- Urbis Pty Ltd	
Postal Address: Level 10, 477 Collins Street, Melbourne		Postcode:	3000
Phone No:	Mobile No:		
Email Address:			

### Declaration to be Completed:

This form must be signed. Please complete Section A, B or C

A	I declare that I am the Applicant and the Owner of the land and that all information given is true and correct.	Owner/Applicant Signature  Date: 17/02/2021
В	I am the Owner of the land. I have seen this application.	Owner Signature: Date:
	I/We the Applicant declare that all information given is true and correct.	Applicant Signature  Date:
С	I/We the Applicant declare that I/We have notified the owner about this application and that all information given is true and correct.	Applicant Signature: Date:

### How to Submit an Amendment to a Planning Application

Amendments can be lodged by emailing the officer assessing your application. They will arrange an invoice for any additional fees. The fees can then be paid online or over the phone. Your application will not be processed if the fees have not been paid.

#### Privacy Statement

The personal information requested on this form is being collected by Knox City Council (Council) for the purpose of assessing your application under the Planning and Environment Act 1987. Any material submitted with this application, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the Planning and Environment Act 1987. The personal information will be used by Council for that primary purpose or directly related secondary purposes. The information may also be used to update Council databases to assist Council in discharging its functions or providing services. If the information is not collected, your application can not be processed. Requests for access to and/or amendment of personal information should be made to Council's Chief Privacy Officer.



### LEVEL 10 477 COLLINS STREET MELBOURNE VIC 3000

URBIS.COM.AU Urbis Pty Ltd ABN 50 105 256 228

12 February 2021



Dear Patrick,

# NORVEL ESTATE, FERNTREE GULLY COMBINED SECTION 96A AND PLANNING PERMIT APPLICATION

Urbis continues to act on behalf of in relation to the former Norvel Road Quarry in Ferntree Gully ('Norvel Estate') and write to lodge amended documentation to the current application currently before Council.

The amended documentation seeks to amend the current application for subdivision and development of the site to be a subdivision only application into 140 lots. The amendment still seeks to rezone the land to a more suitable residential zone. The main aspects of the proposal are as follows:

- Subdivision of the land into 140 lots, including:
  - 138 residential lots.
  - A bushland reserve lot.
  - A public park reserve lot.
- Of the 138 residential lots there will be 8 residential lots (5.8%) provided for social housing.
- Rezoning the land from Special Use Zone (Schedule 2) to the following:
  - Neighbourhood Residential Zone (Schedule 7).
  - Public Conservation and Resource Zone.
  - Public Park and Resource Zone.
- Removal of four (4) trees.
- The application no longer proposes the development of houses on the residential lots.
- The urban design guidelines contained within the existing Section 173 Agreement associated with the site have been updated.

Cover Letter - Urbis

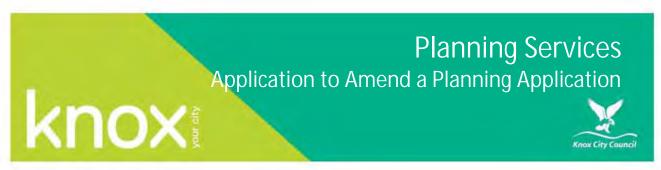


We trust the enclosed is sufficient for your purposes however, should you require anything further please do not hesitate to contact me on

Kind regards,



Cover Letter - Urbis 2



### Is this the right form for me?

This form is for making amendments to an application for planning permit that has already been lodged with Council, **but which has not yet been decided**. This form can be used both for amendments made before the advertising of the application (Section 50 of the Planning & Environment Act) or afterwards (Section 57A of the Act). If you wish to modify a previously issued permit, or make a new application for planning permit, you will need a different form.

The prescribed fee in accordance with the Planning Fee Guidelines is required to be paid at the time of this application being submitted to Council.

It is strongly recommended that before lodging this form, you discuss the proposed amendment of your application with the Council Officer processing the application.

Details of the Planning Application you wish to Amend:  Application Number:  C184knox
Address of subject land: 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X)
The Proposal: what changes are to be made to the application? If the description of the use or development is to change, include the full amended description of the proposed use or development, and make clear what changes are to be made. If you need more space, attach correspondence that clearly sets out the changes.
Please refer to the Cover Letter prepared by Urbis dated 4 April 2023
Has advertising been undertaken for this application? Yes Vo
Encumbrances on Title  Does the amended proposal breach, in any way, a registered covenant, Section 173 Agreement or restriction on title?
Yes No Not Applicable (no such covenant, Section 173 Agreement or restriction applies)
If yes, you should contact Council for advice on how to proceed with the application.
The Cost of the Development Changes to the type of proposal or the estimated cost of works may alter the fee payable for the application. If this is the case, then you will need to pay the difference between the fee originally paid and the fee payable for the amended proposal.
State the estimated cost of the proposed development. This is the total cost of the proposal, including the amendments.
Unchanged from the initial Application OR: \$

Your Details:		
Name (& Company, if applicable):	Urbis Pty Ltd	
Postal Address: Level 10, 477 Collins Street, Melbourne	Postcode:	3000
Phone No: Mobile No:		
Email Address:		

### Declaration to be Completed:

This form must be signed. Please complete Section A, B or C

Α	I declare that I am the Applicant and the Owner of the land	Owner/Applicant Signatu
	and that all information given is true and correct.	Date: 4 April 2023
В	I am the Owner of the land. I have seen this application.	Owner Signature:
		Date:
	I/We the Applicant declare that all information given is true and correct.	Applicant Signature
		Date:
С	I/We the Applicant declare that I/We have notified the owner	Applicant Signature:
	about this application and that all information given is true and	Data
	correct.	Date:

## How to Submit an Amendment to a Planning Application

Amendments can be lodged by emailing the officer assessing your application. They will arrange an invoice for any additional fees. The fees can then be paid online or over the phone. Your application will not be processed if the fees have not been paid.

#### **Privacy Statement**

The personal information requested on this form is being collected by Knox City Council (Council) for the purpose of assessing your application under the Planning and Environment Act 1987. Any material submitted with this application, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the Planning and Environment Act 1987. The personal information will be used by Council for that primary purpose or directly related secondary purposes. The information may also be used to update Council databases to assist Council in discharging its functions or providing services. If the information is not collected, your application can not be processed. Requests for access to and/or amendment of personal information should be made to Council's Chief Privacy Officer.



### LEVEL 10 477 COLLINS STREET MELBOURNE VIC 3000

URBIS.COM.AU Urbis Pty Ltd ABN 50 105 256 228

4 April 2023

Georgia Stensness Senior Strategic Planner 511 Burwood Highway Wantirna South, VIC, 3152

Dear Georgia,

# NORVEL ESTATE - 290 NORVEL ROAD, FERNTREE GULLY

Urbis continues to act on behalf of in relation to the former Norvel Road Quarry in Ferntree Gully ('Norvel Estate') and write to lodge amended documentation in line with recent discussions on changes made to align with the CHMP. These amendments include the updated site address and updated subdivision master plan. Specifically, the changes include:

- Retention of Tree 141
- Removal of the board walk from the plan
- Notation regarding board walk to be undertaken at a later date
- Notation of updated site address to reference 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X)

The table below outlines the documentation lodged with this package and any updates to the report / plan.

Document	Updates
Urban Context Report	Updated figure 31 to align with the updated subdivision master plan
Affordable Housing Strategy	<ul> <li>Updated figure 3 to align with the updated subdivision master plan</li> <li>Updated site address</li> </ul>
Arborist Report	Updated site address

1. Cover Letter



Document	Updates
	Updated figures (including updated tree protection plan) to align with the updated subdivision master plan
	Update to note removal of only three (3) trees
Biodiversity Report	Updated site address
Bushfire Development Report	<ul> <li>Updated figures 13 &amp; 15 to align with the updated subdivision master plan</li> <li>Updated site address</li> </ul>
Landscape Report	Updated Section 4.0 to align with the updated subdivision master plan and correct legend images
	<ul><li>Landscape Master Plan</li><li>Bushland Reserve Interface</li><li>Feature Pavement Areas</li></ul>
Utility Services Infrastructure Report	No updates
Social Impact Assessment	No updates
Stormwater Management Plan	No updates
Subdivision Master Plan	Updated notations in the reserve and removal of the boardwalk.
Town Planning Report (incl. Clause 56 Assessment)	Updates to align with the updated subdivision master plan
	Updates to note removal of three (3) trees only
Traffic Report	Updated Appendix A to align with the updated subdivision master plan
	Updated site address

1. Cover Letter 2





189 of 915

STATE REVENUE OFFICE
PLANNING AND ENVIRONMENT ACT 1987

# Metropolitan Planning Levy (MPL) Certificate (Revised)

STATE

REVENUE

OFFICE

VICTORIA
ABN76775 195 331

www.sro.vic.gov.au

C/- Urbis Pty Ltd

L 12 120 Collins Street

Issue Date: 17 April 2018

assue Date. 17 April 201

Certificate Number: MPLCERTR9219

**Knox City Council** 

RECEIVED

2 3 APR 2018

PLANNING DEPARTMENT

Melbourne AUSTRALIA

Expiry Date: 16 July 2018

PART 1 - APPLICANT DETAILS

Details of person who applied for this Certificate:

Name:

- Urbis Pty Ltd

Address:

L 12 120 Collins Street

Melbourne AUSTRALIA

**PART 2 - LEVIABLE LAND DETAILS** 

Address of land to which the Metropolitan Planning Levy applies:

Street Address:

29Q Norvel Road

Ferntree Gully VIC 3156

Formal Land Description:

Vol/Folio: 9381 / 87

Lot/Plan: 1 / TP297137X

Block/Subdivision:

Crown Reference:

There are two other properties that form part of the site as follows:

Other:

- Lot 1 and 2 on TP 963860L (Vo.11909, Fol. 762 and 763)

Municipality: Knox City Council

Estimated Cost of Development: \$ 50,000,000.00

**PART 3 - MPL PAYMENT DETAILS** 

Original MPL Application ID: MPL8659

Revised MPL Application ID: MPL9219

MPL Adjustment Paid (if applicable): \$22,750.00

Total MPL Paid to Date: \$65,000.00

MPL Payment Date: 16 April 2018

**PART 4 - CERTIFICATION** 

The Commissioner of State Revenue confirms that the whole of the amount of the MPL has been paid in respect of the estimated cost of development.

Paul Broderick

Commissioner of State Revenue

#### PART 5 - EXPLANATORY NOTES

#### General

- The Metropolitan Planning Levy (MPL) is imposed for the privilege of making a leviable planning permit application.
- A leviable planning permit application is an application made to a responsible authority or planning authority under sections 47 and 96A of the Planning and Environment Act 1987 (PEA) for a permit required for the development of land in metropolitan Melbourne, where the estimated cost of the development for which the permit is required exceeds the threshold amount (see MPL threshold amount).
- As a statutory requirement of making a leviable planning permit application, the applicant must give the responsible authority or planning authority a current MPL Certificate. The estimated cost of development stated in the MPL Certificate must be equal to or greater than the estimated cost of the development stated in the leviable planning permit application. If an applicant fails to comply with this requirement, the application for the leviable planning permit is void.
- The applicant for the leviable planning permit application is liable for the MPL.
- The Commissioner of State Revenue (Commissioner) has the general administration of the MPL.

#### MPL threshold amount

- . The threshold amount is \$1 million for the 2015-2016 financial year.
- For the financial year beginning on 1 July 2016 and each subsequent financial year, the Consumer Price Indexed (CPI) adjusted threshold amount will be calculated in accordance with section 96R of the PEA.
- On or before 31 May each year, the Commissioner must publish the CPI adjusted threshold amount for the following financial year on the SRO website.

#### How MPL is calculated

- The amount of MPL is \$1.30 for every \$1000 of the estimated cost of the development for which the leviable planning permit is required.
- If the estimated cost of the development for which the leviable planning permit is required is not a multiple of \$1000, the estimated cost is to be rounded up or down to the nearest \$1000 (and, if the amount by which it is to be rounded is \$500, it is to be rounded up).

#### Notification and Payment of MPL to the Commissioner

- Before making a leviable planning permit application, the applicant must submit a completed Application for Metropolitan Planning Levy (MPL) Certificate and pay the whole MPL amount to the Commissioner. This Application must state the estimated cost of the development and any other information required by the Commissioner.
- If, after the Commissioner has issued a MPL Certificate which has not expired (see MPL Certificate), and the estimated cost of the development increases before the leviable planning permit application is made, the applicant must submit an Application for Metropolitan Planning Levy (MPL) Certificate (Revised) and pay the whole additional MPL amount to the Commissioner. This revised Application must state the increased estimated cost of the development and any other information required by the Commissioner.

#### **MPL** Certificate

- The Commissioner must issue a MPL Certificate if he is satisfied that the whole amount of the MPL has been paid in respect of the estimated cost of the development.
- Subject to section 96U(3) of the PEA, a MPL Certificate expires 90 days after the day on which it is issued.

#### Revised MPL Certificate

- . The Commissioner must issue a revised MPL Certificate if:
  - the Commissioner has issued a MPL Certificate, which has not expired;
  - the estimated cost of the development increases before the application for a leviable planning permit is made; and
  - he is satisfied that the whole amount of the MPL has been paid in respect of the increased estimated cost of the development.
- · The Commissioner may also issue a revised MPL Certificate to:
  - Correct any error in the information listed in the MPL Certificate (except the estimated cost of development as explained below), or
  - the estimated cost of the development stated in the MPL Certificate is different from the estimated cost of the development stated in the Application for Metropolitan Planning Levy (MPL) Certificate lodged by the applicant.
- A revised MPL Certificate expires 90 days after the day on which it is issued.

#### Refund of MPL

The only circumstance under which a person who has paid a MPL is entitled to a refund is where there has been a mathematical error in calculating the amount of the MPL by reference to the estimated cost of the development stated in the original or revised Application for Metropolitan Planning Levy (MPL) Certificate. Other than that, a person who has paid a MPL is not entitled to a refund of the whole or any part of the MPL.

#### Certificate number

- The Certificate number is on the top right corner on the front of this Certificate.
- Quoting this Certificate number will give you access to information about this Certificate and enable you to enquire about your application by phone.
- · You should quote this number in any correspondence.

#### For more Metropolitan Planning Levy information please contact the State Revenue Office:

Mai

State Revenue Office, GPO Box 4376, MELBOURNE VIC 3001 or DX260090 Melbourne

Internet Email

www.sro.vic.gov.au mpl@sro.vic.gov.au

Phone Fax 13 21 61 (local call cost) 03 9628 6856



STATE REVENUE OFFICE PLANNING AND ENVIRONMENT ACT 1987

# Metropolitan Planning Levy (MPL) Certificate

www.sro.vic.gov.au

Norvel Estate Pty Ltd

34 Essex Road

Surrey Hills

**AUSTRALIA** 

Certificate Number: MPLCERT8659

Issue Date:

15 March 2018

**Knox City Council** 

RECEIVED

23 APR 2018

PLANNING DEPARTMENT

Expiry Date: 13 June 2018

PART 1 - APPLICANT DETAILS

Details of person who applied for this Certificate:

Name:

Norvel Estate Pty Ltd

Address:

34 Essex Road

Surrey Hills

**AUSTRALIA** 

PART 2 - LEVIABLE LAND DETAILS

Address of land to which the Metropolitan Planning Levy applies:

Street Address:

1 Norvel Road

Ferntree Gully VIC 3156

Formal Land Description:

Vol/Folio: 9381 / 87

Lot/Plan: 1 / TP297137X

Block/Subdivision:

Crown Reference:

Other: There are two other properties that form part of the site as follows:

Municipality: Knox City Council

Estimated Cost of Development: \$32,500,000

PART 3 - MPL PAYMENT DETAILS

MPL Application ID:

MPL8659

MPL Paid:

\$42,250.00

MPL Payment Date:

14 March 2018

PART 4 - CERTIFICATION

The Commissioner of State Revenue confirms that the whole of the amount of the MPL has been paid in respect of the estimated cost of development.

Paul Broderick

Commissioner of State Revenue

#### PART 5 - EXPLANATORY NOTES

#### General

- The Metropolitan Planning Levy (MPL) is imposed for the privilege of making a leviable planning permit application.
- A leviable planning permit application is an application made to a responsible authority or planning authority under sections 47 and 96A of the Planning and Environment Act 1987 (PEA) for a permit required for the development of land in metropolitan Melbourne, where the estimated cost of the development for which the permit is required exceeds the threshold amount (see MPL threshold amount).
- As a statutory requirement of making a leviable planning permit application, the applicant must give the responsible authority or planning authority a current MPL Certificate. The estimated cost of development stated in the MPL Certificate must be equal to or greater than the estimated cost of the development stated in the leviable planning permit application. If an applicant fails to comply with this requirement, the application for the leviable planning permit is void.
- The applicant for the leviable planning permit application is liable for the MPI
- The Commissioner of State Revenue (Commissioner) has the general administration of the MPL.

#### MPL threshold amount

- . The threshold amount is \$1 million for the 2015-2016 financial year.
- For the financial year beginning on 1 July 2016 and each subsequent financial year, the Consumer Price Indexed (CPI) adjusted threshold amount will be calculated in accordance with section 96R of the PEA.
- On or before 31 May each year, the Commissioner must publish the CPI adjusted threshold amount for the following financial year on the SRO website.

#### How MPL is calculated

- The amount of MPL is \$1.30 for every \$1000 of the estimated cost of the development for which the leviable planning permit is required.
- If the estimated cost of the development for which the leviable planning permit is required is not a multiple of \$1000, the estimated cost is to be rounded up or down to the nearest \$1000 (and, if the amount by which it is to be rounded is \$500, it is to be rounded up).

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- Before making a leviable planning permit application, the applicant must submit a completed Application for Metropolitan Planning Levy (MPL) Certificate and pay the whole MPL amount to the Commissioner. This Application must state the estimated cost of the development and any other information required by the Commissioner.
- If, after the Commissioner has issued a MPL Certificate which has not expired (see MPL Certificate), and the estimated cost of the development increases before the leviable planning permit application is made, the applicant must submit an Application for Metropolitan Planning Levy (MPL) Certificate (Revised) and pay the whole additional MPL amount to the Commissioner. This revised Application must state the increased estimated cost of the development and any other information required by the Commissioner.

#### MPL Certificate

- The Commissioner must issue a MPL Certificate if he is satisfied that the whole amount of the MPL has been paid in respect of the estimated cost of the development.
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- · The Commissioner must Issue a revised MPL Certificate if:
  - the Commissioner has issued a MPL Certificate, which has not expired;
  - the estimated cost of the development increases before the application for a leviable planning permit is made; and
  - he is satisfied that the whole amount of the MPL has been paid in respect of the increased estimated cost of the development.
- · The Commissioner may also issue a revised MPL Certificate to:
  - Correct any error in the information listed in the MPL Certificate (except the estimated cost of development as explained below), or
  - the estimated cost of the development stated in the MPL Certificate is different from the estimated cost of the development stated in the Application for Metropolitan Planning Levy (MPL) Certificate lodged by the applicant.
- A revised MPL Certificate expires 90 days after the day on which it is issued.

#### Refund of MPL

• The only circumstance under which a person who has paid a MPL is entitled to a refund is where there has been a mathematical error in calculating the amount of the MPL by reference to the estimated cost of the development stated in the original or revised Application for Metropolitan Planning Levy (MPL) Certificate. Other than that, a person who has paid a MPL is not entitled to a refund of the whole or any part of the MPL.

#### Certificate number

- The Certificate number is on the top right corner on the front of this Certificate.
- Quoting this Certificate number will give you access to information about this Certificate and enable you to enquire about your application by phone.
- You should quote this number in any correspondence.

#### For more Metropolitan Planning Levy information please contact the State Revenue Office:

Mail

State Revenue Office. GPO Box 4376, MELBOURNE VIC 3001 or DX260090 Melbourne

Internet Email Phone

www.sro.vic.gov.au mpl@sro.vic.gov.au

Fax

13 21 61 (local call cost) 03 9628 6856





The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

# REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 2

VOLUME 11909 FOLIO 762

Security no : 124098550249S Produced 24/06/2022 02:18 PM

#### LAND DESCRIPTION

Lot 1 on Title Plan 963860L.

PARENT TITLES:

Volume 08328 Folio 822 Volume 10808 Folio 226

Created by Application No. 137158W 23/12/2016

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NORVEL ESTATE PTY LTD of |
AQ306807L 03/10/2017

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

AGREEMENT Section 173 Planning and Environment Act 1987 AV502820H 06/04/2022

AGREEMENT Section 173 Planning and Environment Act 1987 AV502900K 06/04/2022

#### DIAGRAM LOCATION

SEE TP963860L FOR FURTHER DETAILS AND BOUNDARIES

#### ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AV502820H (E)	AGREEMENT	Registered	11/04/2022
AV502900K (E)	AGREEMENT	Registered	11/04/2022
AV559716G (E)	REMOVAL OF AGREEMENT	Registered	02/05/2022
AV434848L (E)	AGREEMENT	Withdrawn	01/04/2022
AV434833A (E)	AGREEMENT	Withdrawn	01/04/2022

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 29Q NORVEL ROAD FERNTREE GULLY VIC 3156

### ADMINISTRATIVE NOTICES

NIL

eCT Control  $14973 \mbox{C D.Y.} \& \mbox{CO. PTY LTD}$  Effective from 23/12/2020

Title 11909/762 Page 1 of 2



The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

# REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 2 of 2

DOCUMENT END

Title 11909/762 Page 2 of 2



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# REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 2

VOLUME 11909 FOLIO 763

Security no : 124098082639P Produced 03/06/2022 01:29 PM

#### LAND DESCRIPTION

Lot 2 on Title Plan 963860L.

PARENT TITLES:

Volume 08328 Folio 822 Volume 10808 Folio 226

Created by Application No. 137158W 23/12/2016

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NORVEL ESTATE PTY LTD of |
AQ306807L 03/10/2017

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

AGREEMENT Section 173 Planning and Environment Act 1987 AV502820H 06/04/2022

AGREEMENT Section 173 Planning and Environment Act 1987 AV502900K 06/04/2022

#### DIAGRAM LOCATION

SEE TP963860L FOR FURTHER DETAILS AND BOUNDARIES

#### ACTIVITY IN THE LAST 125 DAYS

	STATUS	DATE
AGREEMENT	Registered	11/04/2022
AGREEMENT	Registered	11/04/2022
REMOVAL OF AGREEMENT	Registered	02/05/2022
AGREEMENT	Withdrawn	01/04/2022
AGREEMENT	Withdrawn	01/04/2022
	AGREEMENT REMOVAL OF AGREEMENT AGREEMENT	AGREEMENT Registered AGREEMENT Registered REMOVAL OF AGREEMENT Registered AGREEMENT Withdrawn

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 29Q NORVEL ROAD FERNTREE GULLY VIC 3156

#### ADMINISTRATIVE NOTICES

NIL

eCT Control  $14973 \mbox{C D.Y.} \& \mbox{CO. PTY LTD}$  Effective from 23/12/2020

Title 11909/763 Page 1 of 2

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# REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

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DOCUMENT END

Title 11909/763 Page 2 of 2



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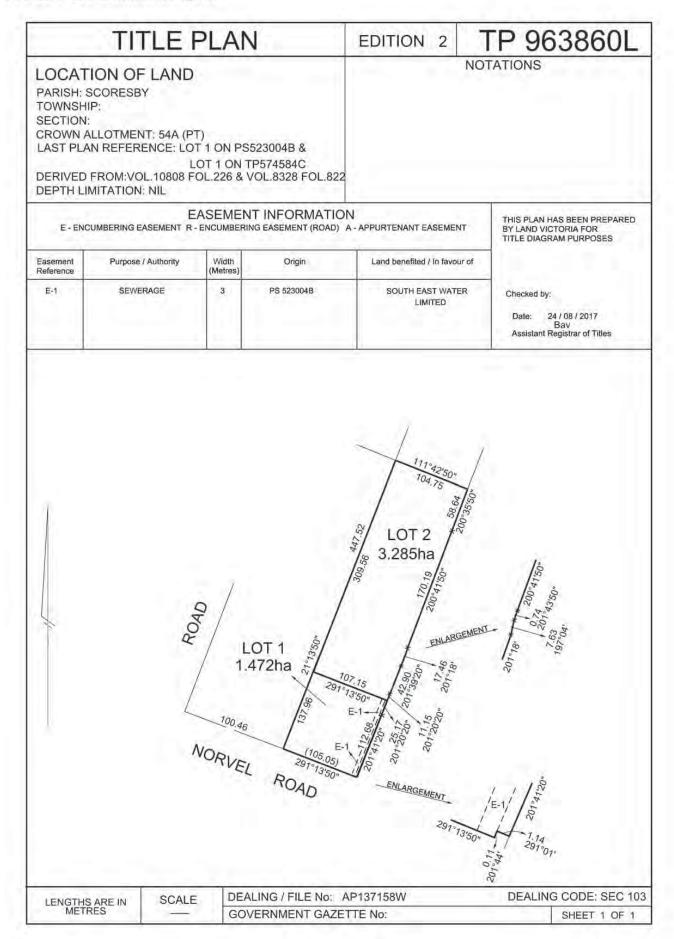
Document Type	Plan
Document Identification	TP963860L
Number of Pages	2
(excluding this cover sheet)	
Document Assembled	03/06/2022 13:34

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RECORD OF ALL ADDITIONS OR CHANGES TO THE PLAN

# PLAN NUMBER TP963860L

WARNING: THE IMAGE OF THIS DOCUMENT OF THE REGISTER HAS BEEN DIGITALLY AMENDED.

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AFFECTED LAND/PARCEL	LAND/PARCEL IDENTIFIER CREATED	MODIFICATION	DEALING NUMBER	DATE	EDITION NUMBER	ASSISTAN REGISTRAI OF TITLES
		RECTIFICATION	AQ221621X	07/09/17	2	BAV
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# REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 1

VOLUME 09381 FOLIO 087

Security no : 124098549632N Produced 24/06/2022 02:10 PM

#### LAND DESCRIPTION

Lot 1 on Title Plan 297137X. PARENT TITLE Volume 08240 Folio 224 Created by instrument H868559 14/02/1980

#### REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
NORVEL ESTATE PTY LTD of AQ306807L 03/10/2017

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

AGREEMENT Section 173 Planning and Environment Act 1987 AV502820H 06/04/2022

AGREEMENT Section 173 Planning and Environment Act 1987 AV502900K 06/04/2022

#### DIAGRAM LOCATION

SEE TP297137X FOR FURTHER DETAILS AND BOUNDARIES

#### ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AV502820H (E)	AGREEMENT	Registered	11/04/2022
AV502900K (E)	AGREEMENT	Registered	11/04/2022
AV559716G (E)	REMOVAL OF AGREEMENT	Registered	02/05/2022
AV434848L (E)	AGREEMENT	Withdrawn	01/04/2022
AV434833A (E)	AGREEMENT	Withdrawn	01/04/2022

------END OF REGISTER SEARCH STATEMENT------

Additional information: (not part of the Register Search Statement)

Street Address: 29Q NORVEL ROAD FERNTREE GULLY VIC 3156

#### ADMINISTRATIVE NOTICES

NIL

eCT Control 14973C D.Y. & CO. PTY LTD Effective from 23/12/2020

DOCUMENT END

Title 9381/087 Page 1 of 1



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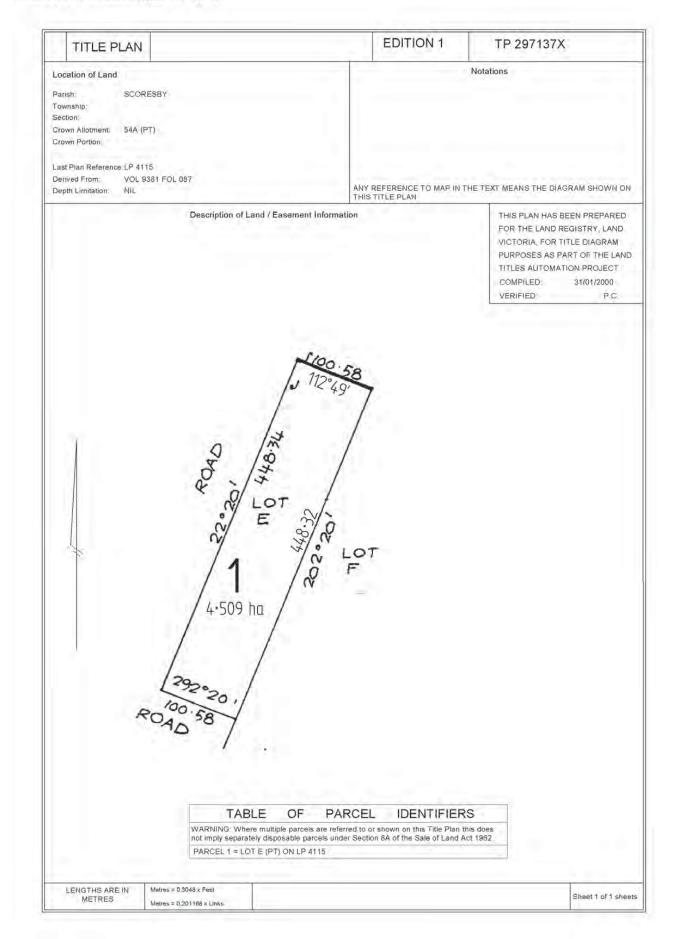
Document Type	Plan
Document Identification	TP297137X
Number of Pages	1
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# Department of Environment, Land, Water & **Planning**

#### **Electronic Instrument Statement**

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Dealing Number AV502820H

Date and Time Lodged 06/04/2022 10:57:05 AM

**Lodger Details** 

Lodger Code 17829T

Name RUSSELL KENNEDY

Address Lodger Box Phone Email

115608-00327 Reference

#### APPLICATION TO RECORD AN INSTRUMENT

Jurisdiction **VICTORIA** 

#### **Privacy Collection Statement**

The information in this form is collected under statutory authority and used for the purpose of maintaining publicly searchable registers and indexes.

#### Estate and/or Interest

FEE SIMPLE

#### Land Title Reference

9381/087 11909/762 11909/763

#### Instrument and/or legislation

**RECORD - AGREEMENT - SECTION 173** Planning & Environment Act - section 173

Applicant(s)

Name KNOX CITY COUNCIL

Address

Street Number 511

Street Name **BURWOOD** Street Type **HIGHWAY** 

Locality WANTIRNA SOUTH

State VIC Postcode 3152

> AV502820H Page 1 of 2





# Department of Environment, Land, Water & Planning

#### **Electronic Instrument Statement**

#### **Additional Details**

Refer Image Instrument

The applicant requests the recording of this Instrument in the Register.

#### Execution

- 1. The Certifier has taken reasonable steps to verify the identity of the applicant or his, her or its administrator or attorney.
- 2. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
- 3. The Certifier has retained the evidence supporting this Registry Instrument or Document.
- 4. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.

Executed on behalf of KNOX CITY COUNCIL Signer Name CHRISTINE PERKINS

Signer Organisation PARTNERS OF RUSSELL KENNEDY
Signer Role AUSTRALIAN LEGAL PRACTITIONER

Execution Date 06 APRIL 2022

File Notes:

NIL

This is a representation of the digitally signed Electronic Instrument or Document certified by Land Use Victoria.

Statement End.





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Document Type	Instrument
Document Identification	AV502820H
Number of Pages	15
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2024-08-26 by Meeting of Council 13 34 Page 1 of 15

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KNOX CITY COUNCIL

and

NORVEL ESTATE PTY LTD (ACN 619 386 855)

#### **HOUSING 173 AGREEMENT**

Land:

Norvel Estate, Norvel Road and Dion Street, Ferntree Gully Victoria 3156

Russell Kennedy Pty Ltd ACN 126 792 470 ABN 14 940 129 185 Level 12, 469 La Trobe Street, Melbourne VIC 3000 PO Box 5146, Melbourne VIC 3001 DX 494 Melbourne T +61 3 9609 1555 F + 61 3 9609 1600 info@rk.com.au

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Ref LAG 115608-00327

**Ally**Law

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#### THIS AGREEMENT is made on

2 March 2022

#### PARTIES

- 1 KNOX CITY COUNCIL of 511 Burwood Highway, Wantirna South, Victoria, 3152 ("Council")
- 2 NORVEL ESTATE PTY LTD

  ACN 619 386 855

  of Control of

#### RECITALS

- A The Council is the responsible authority under the Act for the Scheme.
- B The Owner is registered or is entitled to be registered as proprietor of the Land.
- C The Owner wishes to achieve the Development, a precondition to which is the adoption of the Amendment.
- D The Owner and Council have agreed on arrangements for the provision of the Housing Dwellings as set out in this Agreement.
- E The Owner must enter into this Agreement prior to Council seeking Ministerial approval of the Amendment.
- F This Agreement has been entered into in order to:
  - make provision for the Housing Dwellings; and
  - prohibit, restrict or regulate the use or development of the Land.
- G This Agreement is made under Division 2 of Part 9 of the Act.

#### THE PARTIES AGREE THAT:

#### 1 DEFINITIONS

In this Agreement:

- 1.1 Act means the Planning and Environment Act 1987.
- 1.2 Affordable Housing means housing as defined under the Act.
- 1.3 Agreement means this deed of Agreement, including the Recitals and any Annexures or Schedules to this Agreement.
- 1.4 Amendment means proposed Planning Scheme Amendment C184knox to the Scheme.
- 1.5 Annexure means an annexure to and forming part of, this Agreement.
- 1.6 Business Day means Monday to Friday excluding public holidays in Victoria.

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- 1.7 Concept Plan means the current concept plan in respect of the Amendment and for the Development, including designation of a Stage 1 and a Stage 2, attached at Annexure 1.
- 1.8 Development means the proposed residential development and subdivision of the Land as contemplated in the Amendment and Concept Plan.
- 1.9 Dwelling means a dwelling as defined under the Act and Scheme.
- 1.10 Housing Builder Contract means the contract for the construction of the Housing Dwellings.
- 1.11 Housing Building Permit means a building permit or permits for the construction of the Housing Dwellings under the Building Act 1993.
- 1.12 Housing Dwellings means the number of Dwellings that must be provided through a Housing Provider as Social Housing (and therefore Affordable Housing), as part of the Development.
- 1.13 Housing Funding means the funding that is required to be held or obtained to meet the cost of provision of the Housing Dwellings.
- 1.14 Housing Land means the land shown as Lot 33-40 on the Concept Plan being land within the Development of a size and configuration sufficient for the Housing Dwellings to be constructed.
- 1.15 Housing Planning Permit means a planning permit or permits for the construction of the Housing Dwellings under the Act.
- 1.16 Housing Provider means a housing association authorised or registered as a Participating Registered Agency under the Housing Act 1983 to provide the Housing Dwellings.
- 1.17 Housing Provider Agreement means the agreement between the Owner and the Housing Provider concerning the transfer at no cost of the Housing Land together with related requirements in respect of the Housing Dwellings.
- 1.18 Input Tax Credit in relation to a supply, means a credit under the GST Act for the GST payable by the recipient in respect of the supply.
- 1.19 Land means the land within the Scheme described as:
  - lot 1 on Title Plan 297137X being the land more particularly described in certificate of title volume 09381 folio 087;
  - (ii) lot 1 on Title Plan 963860L being the land more particularly described in certificate of title volume 11909 folio 762; and
  - (iii) lot 2 on Title Plan 963860L being the land more particularly described in certificate of title volume 11909 folio 763.
- 1.20 LG Act means the Local Government Act 1989.
- 1.21 Minister means the Minister for Planning.
- 1.22 Mortgagee means the person or persons registered or entitled from time to time to be registered by the Registrar of Titles as mortgagee of the Land or any part of it

LAG 11547242v3 LAG

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- 1.23 Plan of Subdivision means a plan of subdivision of the Land (or any stage thereof) under the Subdivision Act.
- 1.24 Planning Approvals means any necessary subsequent planning approvals required for the Development, after approval of the Amendment, including any required Development Plan, Planning Permit or approval or endorsement of any plan or document by the Council as responsible authority.
- 1.25 Residential Lot means a lot which in the opinion of the Council is of a size and dimension such that it is intended to be developed as a lot for a dwelling or dwellings without further subdivision.
- 1.26 Schedule means a schedule to this Agreement.
- 1.27 Scheme means the Knox Planning Scheme or any other planning scheme which applies to the Land from time to time.
- 1.28 Social Housing has the same meaning as in section 4(1) of the Housing Act 1983.
- 1.29 Stage means a stage of the Development presently identified in the Concept Plan.
- 1.30 Stage 1 means Stage 1 of a proposed Plan of Subdivision as designated on the Concept Plan, including the Housing Land.
- 1.31 Stage 2 means Stage 2 of a proposed Plan of Subdivision as designated on the Concept Plan containing the balance of the Development beyond Stage 1.
- 1.32 Termination Date means the date upon which Council notifies the Owner in writing that the Owner has fully satisfied the Owner's obligations pursuant to this Agreement or that the Council no longer requires the Owner to comply with the obligations specified in this Agreement.
- 1.33 VCAT means the Victorian Civil Administrative Tribunal.

#### 2 COMMENCEMENT

This Agreement comes into force on the date it was made as set out above.

#### 3 TERMINATION OF THIS AGREEMENT

### 3.1 Ending of Agreement

This Agreement will end progressively in respect of parts of the Land, as follows:

- 3.1.1 for all of the Residential Lots in Stage 1, except the Housing Land, upon satisfaction of the obligations at clause 4.6.1(a); and
- 3.1.2 for the Housing Land and the land in Stage 2, upon satisfaction of the remaining obligations of the Owner, including under clause 4.6.1(b).

#### 3.2 Cancellation of this Agreement

When this Agreement has ended in respect of any relevant part of the Land the Council must, at the request and at the cost of the Owner, apply to the Registrar of Titles under section 183(2) of the Act to cancel the recording of this Agreement on the Register.

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#### 4 HOUSING DWELLINGS

#### 4.1 Housing Dwellings Requirement

The Owner must ensure the provision of the Housing Dwellings;

- 4.1.1 within Stage 1;
- 4.1.2 on the Housing Land to be transferred at no cost to the Housing Provider; and
- 4.1.3 otherwise in accordance with this Agreement.

#### 4.2 Concept Plan and Staging

The Concept Plan, together with the parts of the Land making up Stage 1 and Stage 2:

- 4.2.1 may include multiple stages of a Plan of Subdivision, provided, however the Housing Land must be included in the first stage of any Plan of Subdivision which includes a Residential Lot;
- 4.2.2 may be amended, at the request of the Owner, provided through such amendment:
  - the number of Residential Lots or Dwellings within Stage 1 and contained within the first stage of any Plan of Subdivision must not be greater than one hundred and six (106); and
  - (b) the number of Residential Lots or Dwellings proposed within Stage 2 must not be less than thirty two (32); and
  - (c) the first stage of any Plan of Subdivision incorporating Residential Lots must include the Housing Land; and
  - (d) is subject to obtaining the Council's consent as provided in clause 4.4.

#### 4.3 Number and Make Up of Housing Dwellings

- 4,3.1 Where the Development proceeds as a subdivision in accordance with the attached Concept Plan (of one hundred and thirty eight (138) residential lots), eight (8) Housing Dwellings must be provided.
- 4.3.2 If the number of Residential Lots or Dwellings is reduced below the one hundred and thirty eight (138) proposed in the Concept Plan, eight (8) Housing Dwellings must still be provided.
- 4.3.3 If the density of the Development increases to more than one hundred and thirty eight (138) Residential Lots or Dwellings then the number of Housing Dwellings to be provided must equal the greater of eight (8) or 5% of the total number of Residential Lots or Dwellings within the Development, with the calculation of the number of Housing Dwellings required rounded up (for example, 161 to 180 Residential Lots or Dwellings will mean nine (9) Housing Dwellings must be provided).

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- 4.3.4 The proposed Housing Dwellings must comply with any Urban Design or other guidelines applied to the Development and Dwellings on the Land.
- 4.3.5 The proposed Housing Dwellings must be "tenure blind", that is, with finishes reflecting all other Dwellings within the Development, being integrated into the Development and broadly indistinguishable from comparable private market dwellings in the Development.
- 4.3.6 The Housing Dwellings must be suitably located, accessible and fitted out to meet the needs of the Housing Provider.

### 4.4 Requirements for the Variation of Housing Land

In any case where the Owner seeks to vary the Housing Land from that contemplated in the Concept Plan the following requirements apply:

- 4.4.1 the consent of the Council must be obtained, with such consent:
  - (a) being at the Council's discretion; and
  - (b) not unreasonably withheld; and
  - not being a Planning Approval and not made as a Responsible Authority under this Agreement or the Act; and
- 4.4.2 if the variation includes a request that any part of the Development does not proceed as a subdivision into Residential Lots, as contemplated in the Concept Plan the parties must cooperate on a bona-fide basis to establish an alternate arrangement for the timing and securing the provision of the relevant number of Housing Dwellings, as otherwise contemplated in this Agreement; and
- 4.4.3 no Planning Approval shall be granted or given, nor may any development of the Land commence, until the consent of the Council to the variation of Housing Land is obtained.

#### 4.5 Provision of Housing Dwellings

The provision of the Housing Dwellings is intended to be as follows:

- 4.5.1 The Owner entering into the Housing Provider Agreement with Housing Provider;
- 4.5.2 Confirmation of the Housing Funding;
- 4.5.3 Obtaining of the Housing Planning Permit;
- 4.5.4 The no cost transfer of the Housing Land to the Housing Provider;
- 4.5.5 Obtaining of the Housing Building Permit; and
- 4.5.6 Entry into of the Housing Builder Contract.

### 4.6 Timing of Provision of Housing Dwellings

4.6.1 The Housing Dwellings must be provided as follows:

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- (a) prior to and as a precondition of the issue of a statement of compliance for any Plan of Subdivision for land within Stage 1.
  - the Housing Provider Agreement must exist between the Owner and the Housing Provider;
  - (2) the confirmation of the Housing Funding; and
  - (3) the obtaining of the Housing Planning Permit.
  - (b) prior to and as a precondition of the issue of a statement of compliance for any Plan of Subdivision for land within Stage 2:
    - the Housing Land must be transferred, at no cost, to the Housing Provider;
    - (2) the Housing Builder Contract must be entered into,
    - (3) the Housing Building Permit must be obtained; and
    - (4) the construction of the Housing Dwellings must have commenced.
- 4.6.2 In order to satisfy the Council that the various requirements set as preconditions to a statement of compliance for any Stage of the Plan of Subdivision are met, the Owner will procure and provide the Council with copies of appropriate documents, confirmations or consents as are reasonably required.

#### 4.7 Alternate Provision of Housing Dwellings

In any case where the Owner itself wishes to construct the Housing Dwellings, for a future transfer to a Housing Provider, the parties must negotiate for such amendment on a cooperative and bona fide basis provided the overall intention of providing the Housing Dwellings is effectively achieved, including as a precondition to relevant statements of compliance in respect of the Stage 1, the Housing Land and Stage 2.

#### 5 OWNERS GENERAL COVENANTS

#### 5.1 Planning and other Approvals

- 5.1.1 The Owner must:
  - (a) obtain all Planning Approvals for the Development at the Owner's cost: and
  - (b) exercise its best endeavours to expeditiously pursue the adoption of the Amendment, all Planning Approvals and all other applications for all permits and approvals required for the Development.
- 5.1.2 The Council will proactively facilitate the processing and decision making in respect of the Amendment, Planning Approvals or any other approvals that are required to be granted by Council in order for construction of the Development to occur.

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#### 5.2 Successors in title

Until this Agreement is recorded on the folio of the Register which relates to the Land pursuant to section 181 of the Act, the Owner must ensure that the Owner's successors in title give effect to and do all acts and sign all documents which will require those successors to give effect to this Agreement including requiring the successors in title to execute a deed agreeing to be bound by the terms of this Agreement. Until that deed is executed, the Owner, being a party to this Agreement, remains liable to perform all of the Owner's obligations contained in this Agreement.

#### 5.3 Further assurance

The Owner must do all things necessary (including signing any further agreement, acknowledgment or document) to enable the Council to record this Agreement on the folio of the Register which relates to the Land.

#### 5.4 Payment of Council's costs

The Owner agrees to pay on demand to the Council the Council's reasonable costs and expenses (including any legal fees incurred on a solicitor-client basis but excluding Council staff costs) of and incidental to the preparation, execution and recording of this Agreement.

#### 5.5 Mortgagee to be bound

The Owner covenants to obtain the consent of any Mortgagee to be bound by the covenants in this Agreement if the Mortgagee becomes mortgagee in possession of the Land.

#### 5.6 Indemnity

- The Owner covenants to indemnify and keep the Council, its officers, employees, agents, workmen and contractors indemnified from and against all costs, expenses, losses or damages which they or any of them may sustain incur or suffer or be or become liable for or in respect of any suit action proceeding judgement or claim brought by any person arising from or referrable to this Agreement or any non-compliance with this Agreement but excluding any costs, expenses, losses or damages caused by the negligence or reckless act of the Council.
- 5.6.2 The parties agree that each will conduct itself in a manner that ensures mitigation of its loss in respect of any claim, suit, action, proceeding or judgment brought by any person.

#### 5.7 Non-compliance

If the Owner has not complied with this Agreement within twenty-eight (28) days after the date of service on the Owner by the Council of a notice which specifies the Owner's failure to comply with any provision of this Agreement, the Owner covenants:

- 5.7.1 to allow the Council its officers, employees, contractors or agents to enter the Land and rectify the non-compliance;
- 5.7.2 to pay to the Council on demand, the Council's reasonable costs and expenses (Costs) incurred as a result of the Owner's non-compliance;

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- 5.7.3 to pay interest at the rate of 2% above the rate prescribed under section 2 of the *Penalty Interest Rates Act 1983* on all moneys which are due and payable but remain owing under this Agreement until they are paid in full;
- 5.7.4 if requested to do so by the Council, to promptly execute in favour of the Council a mortgage to secure the Owner's obligations under this Agreement.

#### and the Owner agrees:

- 5.7.5 to accept a certificate signed by the Chief Executive Officer of the Council (or any nominee of the Chief Executive Officer) as prima facie proof of the Costs incurred by the Council in rectifying the Owner's non-compliance with this Agreement;
- 5.7.6 that any payments made for the purposes of this Agreement shall be appropriated first in payment of any interest and any unpaid Costs of the Council and then applied in repayment of the principal sum;
- 5.7.7 that all Costs or other monies which are due and payable under this Agreement but which remain owing shall be a charge on the Land until they are paid in full; and
- 5.7.8 if the Owner executes a mortgage as required by clause 5.7.4, any breach of this Agreement is deemed to be a default under that mortgage.

#### 5.8 Standard of works

The Owner covenants to comply with the requirements of this Agreement and to complete all works required by this Agreement as expeditiously as possible at its cost and to the reasonable satisfaction of the Council.

#### 5.9 Council access

The Owner covenants to allow the Council and its officers, employees, contractors or agents or any of them, to enter the Land (at any reasonable time) to assess compliance with this Agreement and in accordance with the requirements of the Act.

#### 5.10 Covenants run with the Land

The Owner's obligations in this Agreement are intended to take effect as covenants which shall be annexed to and run at law and in equity with the Land and every part of it, and bind the Owner and its successors, assignees and transferees, the registered proprietor or proprietors for the time being of the Land and every part of the Land.

#### 5.11 Owner's warranty

The Owner warrants and covenants that:

5.11.1 the Owner is the registered proprietor (or is entitled to become the registered proprietor) of the Land and is also the beneficial owner of the Land;

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- 5.11.2 there are no mortgages, liens, charges or other encumbrances or leases or any rights inherent in any person other than the Owner affecting the Land which have not been disclosed by the usual searches of the folio of the Register for the Land or notified to the Council;
- 5.11.3 no part of the Land is subject to any rights obtained by adverse possession or subject to any easements or rights described or referred to in section 42 of the *Transfer of Land Act 1958*; and
- 5.11.4 until this Agreement is recorded on the folio of the Register which relates to the Land, the Owner will not sell, transfer, dispose of, assign, mortgage or otherwise part with possession of the Land or any part of the Land without first disclosing to any intended purchaser, transferee, assignee or mortgagee the existence and nature of this Agreement.

#### 6 ACKNOWLEDGEMENTS

- The parties acknowledge and agree that all obligations and contributions set out in this Agreement are in addition to any future requirements arising from the Amendment or any Planning Approvals for the Development except that the Public Open Space is considered by Council to be sufficient to satisfy the requirements of clause 52.01 of the Scheme and that Council agrees that the Development Contributions set out in this Agreement are sufficient to meet the reasonable obligations of the Owner in relation to the Development.
- 6.2 In any case where the Owner has failed to comply with this Agreement, including by a relevant due date or specified event, for that obligation, the Council may withhold its issue of a Statement of Compliance under the Subdivision Act 1988 for any Stage unless or until compliance with this Agreement is achieved.
- 6.3 In any case where any attachment, schedule or annexure to this Agreement is considered unsatisfactory by the Office of the Registrar of Titles, for registration against the Certificates of Title to the Land, then the parties agree that they will consent to the inclusion of any replacement plan or document prepared of a different form to the same effect of the plan or document being replaced, to allow this Agreement, including all relevant attachments, to be registered against the title to the Land. The acknowledgement and consent of the parties under this clause includes agreement to execute, if required, a replacement version of this Agreement.

#### 7 GOODS AND SERVICES TAX

#### 7.1 Definitions and expressions

Expressions used in this Agreement that are defined in the GST Act have the same meaning as given to them in the GST Act, unless expressed to the contrary.

#### 7.2 Amounts payable do not include GST

Each amount, of whatever description, specified as payable by one party to the other party under this Agreement is expressed as a GST exclusive amount unless specified to the contrary.

#### 7.3 Liability to pay any GST

Subject to clause 7.4, in addition to any amount payable by one party to the other party under this Agreement in respect of a taxable supply, the party liable to pay

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the amount (**Recipient**) must pay to the other party (**Supplier**) a sum equivalent to the GST payable, if any, by the Supplier in respect of the taxable supply on the date on which the Supplier makes a taxable supply to the Recipient irrespective of when the Supplier is liable to remit any GST under this Agreement in respect of a taxable supply to any governmental authority.

#### 7.4 Tax Invoice

A party's right to payment under clause 7.3 is subject to a Tax Invoice being delivered to the Recipient.

#### 8 GENERAL

#### 8.1 No fettering of Council's powers

This Agreement does not fetter or restrict the Council's power or discretion in respect of any of the Council's decision making powers including but not limited to an ability to make decisions under the LG Act, and the Act or to make or impose requirements or conditions in connection with any use or development of the Land or the granting of any planning permit, the approval or certification of any plans of subdivision or consolidation relating to the Land or the issue of a Statement of Compliance in connection with any such plans.

#### 8.2 Time of the essence

Time is of the essence as regards all dates, periods of time and times specified in this Agreement.

## 8.3 Counterparts

- 8.3.1 This Agreement may be executed in any number of counterparts and all the counterparts together constitute one and the same instrument; and
- 8.3.2 A copy of an original executed counterpart received by email:
  - (1) must be treated as an original counterpart;
  - (2) is sufficient evidence of the execution of the original; and
  - (3) may be produced in evidence for all purposes in place of the original.
- 8.3.3 If the signatures on behalf of one party are on different counterparts, this will be taken to be, and have the same effect as, signatures on the same counterpart and on a single copy of this Agreement.

# 8.4 Governing law and jurisdiction

This Agreement is governed by and is to be construed in accordance with the laws of Victoria. Each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts and tribunals of Victoria and waives any right to object to proceedings being brought in those courts or tribunals.

#### 8.5 Enforcement and severability

8.5.1 This Agreement shall operate as a contract between the parties and be enforceable as such in a Court of competent jurisdiction regardless of

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whether, for any reason, this Agreement were held to be unenforceable as an agreement pursuant to Division 2 of Part 9 of the Act.

8.5.2 If a Court, arbitrator, tribunal or other competent authority determines that a word, phrase, sentence, paragraph or clause of this Agreement is unenforceable, illegal or void, then it shall be severed and the other provisions of this Agreement shall remain operative.

#### 9 NOTICES

# 9.1 Service of notice

A notice or other communication required or permitted, under this Agreement, to be served on a person must be in writing and may be served:

- 9.1.1 personally on the person;
- 9.1.2 by leaving it at the person's address set out in this Agreement;
- 9.1.3 by posting it by prepaid post addressed to that person at the person's current address for service;
- 9.1.4 by email to the person's current email address notified to the other party; or
- 9.1.5 by facsimile to the person's current number notified to the other party.

#### 9.2 Time of service

A notice or other communication is deemed served:

- 9.2.1 if served personally or left at the person's address, upon service;
- 9.2.2 if posted within Australia to an Australian address, five (5) Business Days after posting, by standard post, six Business Days after posting;
- 9.2.3 if sent by email, subject to the clause 9.2.5, at the time of receipt as specified in section 13A of the *Electronic Transactions (Victoria) Act* 2000:
- 9.2.4 if served by facsimile, subject to clause 9.2.5, at the time indicated on the transmission report produced by the sender's facsimile machine indicating that the facsimile was sent in its entirety to the addressee's facsimile; and
- 9.2.5 if received after 5.00pm in the place of receipt or on a day which is not a Business Day, at 9.00am on the next Business Day.

# 9.3 Proof of receipt of notice by email

In proving that a notice given by email has been received by the recipient, it is sufficient to produce an acknowledgement or receipt that the email has reached the recipient's email address.

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#### 10 INTERPRETATION

In this Agreement, unless the contrary intention appears:

- 10.1 the singular includes the plural and vice versa;
- 10.2 a reference to a document or instrument, including this Agreement, includes a reference to that document or instrument as novated, altered or replaced from time to time;
- 10.3 a reference to an individual or person includes a partnership, body corporate, government authority or agency and vice versa;
- 10.4 a reference to a party includes that party's executors, administrators, successors, substitutes and permitted assigns;
- 10.5 words importing one gender include other genders;
- 10.6 other grammatical forms of defined words or expressions have corresponding meanings;
- 10.7 a covenant, undertaking, representation, warranty, indemnity or agreement made or given by:
  - 10.7 1 two or more parties; or
  - 10.7.2 a party comprised of two or more persons,

is made or given and binds those parties or persons jointly and severally;

- 10.8 a reference to a statute, code or other law includes regulations and other instruments made under it and includes consolidations, amendments, re-enactments or replacements of any of them;
- 10.9 a recital, schedule, annexure or description of the parties forms part of this Agreement;
- 10.10 if an act must be done on a specified day that is not a Business Day, the act must be done instead on the next Business Day;
- 10.11 If an act required to be done under this Agreement on a specified day is done after 5.00pm on that day in the time zone in which the act is performed, it is taken to be done on the following day;
- 10.12 a party that is a trustee is bound both personally and in its capacity as trustee;
- 10.13 a reference to an authority, institution, association or body (original entity) that has ceased to exist or been reconstituted, renamed or replaced or whose powers or functions have been transferred to another entity, is a reference to the entity that most closely serves the purposes or objects of the original entity;
- 10.14 headings and the provision of a table of contents are for convenience only and do not affect the interpretation of this Agreement.
- 10.15 A reference to the Council includes the Council in its capacity as responsible authority pursuant to the Scheme.

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#### 11 REGISTRATION OF AGREEMENT

- 11.1 The Owner will do all things necessary to enable the Council to make an application to the Registrar of Titles to make a recording of this Agreement on the Certificate of Title to the Land in accordance with Section 181 of the Act including the signing of any further agreement, acknowledgement or other document.
- 11.2 The Council will record this Agreement on the Title to the Land.
- 11.3 In any case where the Amendment is not adopted, this Agreement will end and the Council will promptly arrange for the cancellation of registration of the Agreement pursuant to the Act.

**EXECUTED** as a deed of agreement under Division 2 of Part 9 of the Act.

THE COMMON SEAL of KNOX CITY COUNCIL was affixed in the presence of:

Councillor

Councillor

Chief Executive Officer

**EXECUTED** by **NORVEL ESTATE PTY LTD** in accordance with section 127(1) of the *Corporations Act 2001* (Cth) by being signed

by the authorised person:

COMMON SEAL

year -

Sole director and sole company secretary

QING DONG LIU

Full name

Usual Address

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# Department of Environment, Land, Water & **Planning**

#### **Electronic Instrument Statement**

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The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

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**Dealing Number** AV502900K

Date and Time Lodged 06/04/2022 11:11:47 AM

**Lodger Details** 

Lodger Code 17829T

Name RUSSELL KENNEDY

Address Lodger Box Phone Email

Reference 115608-00327

#### APPLICATION TO RECORD AN INSTRUMENT

Jurisdiction **VICTORIA** 

#### **Privacy Collection Statement**

The information in this form is collected under statutory authority and used for the purpose of maintaining publicly searchable registers and indexes.

#### Estate and/or Interest

FEE SIMPLE

#### Land Title Reference

9381/087 11909/762 11909/763

#### Instrument and/or legislation

**RECORD - AGREEMENT - SECTION 173** Planning & Environment Act - section 173

Applicant(s)

Name KNOX CITY COUNCIL

Address

Street Number 511

Street Name **BURWOOD HIGHWAY** Street Type

Locality WANTIRNA SOUTH

State VIC Postcode 3152

> AV502900K Page 1 of 2





# Department of Environment, Land, Water & **Planning**

# **Electronic Instrument Statement**

#### **Additional Details**

Refer Image Instrument

The applicant requests the recording of this Instrument in the Register.

#### Execution

- 1. The Certifier has taken reasonable steps to verify the identity of the applicant or his, her or its administrator or
- 2. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
- 3. The Certifier has retained the evidence supporting this Registry Instrument or Document.
- 4. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.

Executed on behalf of KNOX CITY COUNCIL Signer Name CHRISTINE PERKINS

Signer Organisation PARTNERS OF RUSSELL KENNEDY Signer Role AUSTRALIAN LEGAL PRACTITIONER

**Execution Date** 06 APRIL 2022

File Notes:

NIL

This is a representation of the digitally signed Electronic Instrument or Document certified by Land Use Victoria.

Statement End.





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Document Assembled	

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KNOX CITY COUNCIL

and

NORVEL ESTATE PTY LTD (ACN 619 386 855)

AGREEMENT MADE PURSUANT TO SECTION 173 OF THE PLANNING AND ENVIRONMENT ACT 1987

URBAN DESIGN AND BUSHLAND RESERVE

Property: Norvel Estate, Norvel Road, Ferntree Gully Victoria 3156

Russell Kennedy Pty Ltd. ACN 126 792 470 ABN 14 940 129 185 Level 12, 469 La Trobe Street, Melbourne VIC 3000 PO Box 5146, Melbourne VIC 3001 DX 494 Melbourne T +61 3 9609 1555 F +61 3 9609 1600 info@rk.com.au russellkennedy.com.au

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**Ally**Law

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THIS AGREEMENT is made on

2 March 2022

#### PARTIES

- 1 KNOX CITY COUNCIL
  of 511 Burwood Highway, Wantirna South, Victoria, 3152
  (Council)
- 2 NORVEL ESTATE PTY LTD ACN 619 386 855

of 1

(Owner)

#### RECITALS

- A The Council is the responsible authority under the Act for the Scheme.
- B The Owner is registered or is entitled to be registered as proprietor of the Land.
- C The Owner wishes to achieve the Development, a precondition to which is the approval of the Amendment.
- D This Agreement is to be entered into, and recorded on the titles to the Land, as a precondition to exhibition of the Amendment.
- E This Agreement has been entered into in order to:
  - ensure the vesting of the Bushland Reserve to the Council;
  - ensure the Development occurs in accordance with the Urban Design Guidelines;
  - achieve and advance the objectives of planning in Victoria or the objectives of the Scheme in relation to the Land.
- F This Agreement is made under Division 2 of Part 9 of the Act.

# **OPERATIVE PROVISIONS**

# 1 DEFINITIONS

In this Agreement:

- (a) Act means the Planning and Environment Act 1987.
- (b) Agreement means this Agreement, including the recitals and any annexures to this Agreement.
- (c) Amendment means proposed Planning Scheme Amendment C184knox to the Scheme.
- (d) Annexure means any annexure attached and forming part of this Agreement.
- (e) Bushland Reserve means the part of the Land marked "Bushland Reserve" totalling approximately 1.6980 hectares, as located on the Concept Plan.
- (f) Business Day means Monday to Friday excluding public holidays in Victoria.

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- (g) Concept Plan means the current concept plan in respect of the Amendment for the Development, including the designation of a Stage 1 and a Stage 2, area marked "Bushland Reserve" and area marked "Reserve". A copy of the Concept Plan is attached as Annexure 1.
- (h) Development means the proposed residential development and subdivision, of the Land, facilitated through the Amendment.
- GST Act means the A New Tax System (Goods and Services Tax) Act 1999 (Cth) (as amended).
- (j) GST means the goods and services tax as defined in the GST Act.
- (k) Input Tax Credit in relation to a supply, means a credit under the GST Act for the GST payable by the recipient in respect of the supply
- (I) Land means:
  - lot 1 on Title Plan 297137X being the land more particularly described in certificate of title volume 09381 folio 087;
  - (ii) lot 1 on Title Plan 963860L being the land more particularly described in certificate of title volume 11909 folio 762; and
  - (iii) lot 2 on Title Plan 963860L being the land more particularly described in certificate of title volume 11909 folio 763.
- (m) Mortgagee means the person or persons registered or entitled from time to time to be registered by the Registrar of Titles as mortgagee of the Land or any part of it.
- (n) Owner means the person or persons who are registered or are entitled to be registered as proprietor of an estate in the Land or any part thereof, and includes a mortgagee in possession.
- (o) Permit means any planning permit issued under the Act, to facilitate the Development.
- (p) Plan of Subdivision means a plan of subdivision of the Land (or any stage thereof) under the Subdivision Act.
- (q) Previous Agreement means the previous agreement, under section 173 of the Act, affecting the Land and recorded in dealing AG370823M.
- (r) Scheme means the Knox Planning Scheme or any other planning scheme which applies to the Land from time to time.
- (s) Subdivision Act means the Subdivision Act 1988 (Vic).
- (t) Tax Invoice in relation to a supply, means an invoice for the supply required by the GST Act to support a claim by the recipient for an Input Tax Credit for the GST on the supply.
- (u) Urban Design Guidelines means the document entitled "Norvel Estate, Ferntree Gully, Urban Design Guidelines, Revision D dated 30 May 2021", attached as Annexure 2, or such other amended guidelines approved in writing by the Council in accordance with this Agreement.

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#### 2 COMMENCEMENT

This Agreement comes into force on the date it was made as set out above.

#### 3 ENDING OR AMENDING AGREEMENT

#### 3.1 Previous Agreement

The parties have agreed the Previous Agreement shall end upon the execution and recording of this Agreement on the folio of the Register to the Land.

#### 3.2 Ending or amending

This Agreement:

- 3.2.1 ends in respect of the obligations relating to the Bushland Reserve, upon the vesting or transfer of the Bushland Reserve to the Council;
- 3.2.2 ends in respect of the Urban Design Guideline compliance in accordance with clause 4.7; and
- 3.2.3 otherwise, if this Agreement ends or is amended in accordance with the Act.

#### 3.3 Cancellation or alteration of recording

As soon as reasonably practicable after:

- 3.3.1 the Previous Agreement; or
- 3.3.2 this Agreement,

has ended or has been amended, the Council must, at the request and at the cost of the Owner, apply to the Registrar of Titles under the Act to cancel or alter the recording of the relevant agreement on the folio of the Register to the Land.

#### 4 BUSHLAND RESERVE

# 4.1 Vesting of Bushland Reserve

The Owner covenants and agrees that it must, at no cost to the Council:

- 4.1.1 vest the Bushland Reserve to the Council as a reserve as set out in this Agreement; and
- 4.1.2 if for any reason the Bushland Reserve cannot be vested as a reserve, the parties will cooperate to achieve a transfer to the Council of a lot made up by the Bushland Reserve.

## 4.2 Time of Vesting

- 4.2.1 The Bushland Reserve must be designated as a reserve to vest as part of the next Plan of Subdivision to be lodged in respect of the Land;
- 4.2.2 The Bushland Reserve may be created by:
  - (a) a separate plan pursuant to section 35 of the Subdivision Act, or
  - (b) some other Plan of Subdivision which creates superlots, together with a reserve to create the Bushland Reserve.

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- 4.2.3 The Bushland Reserve must be vested in, or transferred to the Council:
  - (a) following the approval and prior to the gazettal of, the Amendment; and
  - (b) if the approval of the Amendment is delayed then, in any event, no later than 30 June 2023 (or such later date agreed to by the Council).

#### 4.3 Condition of Reserve

The Owner agrees that prior to the vesting or transfer of the Bushland Reserve to the Council it must:

- 4.3.1 not lop, remove, damage or destroy any trees or other vegetation located on the Bushland Reserve;
- 4.3.2 allow the Council or its agents to continue to access the Bushland Reserve area to mow, maintain, weed or treat the Bushland Reserve, to facilitate its ongoing preservation and enhancement; and for fire protection purposes; and
- 4.3.3 not impede or make any claim against the Council arising from the Council access and works on the Bushland Reserve.

#### 4.4 Public Open Space and Obligations

- 4.4.1 In addition to the Bushland Reserve the Owner acknowledges the need to set aside, as part of the Development, a reserve, the area of approximately 0.3676 hectares as a reserve for drainage, fire buffer and other purposes as, noted on the Concept Plan at Annexure 1 or such varied area, identified during the Amendment or Permit approval process.
- 4.4.2 The Owner remains responsible for the payment of any rates, taxes or other charges relating to the area making up the Bushland Reserve calculated and payable prior to the vesting or transfer of the Bushland Reserve to the Council.
- 4.4.3 The transfer or vesting of the Bushland Reserve to or in Council in accordance with the terms of this Agreement by the Owner will comprise and be treated as the public open space contribution required by the Planning Scheme or under the Subdivision Act for the subdivision of the balance of the Land notwithstanding that the contribution is made prior to the making of the requirement.

#### 4.5 Urban Design Guidelines

The Owner covenants and agrees that:

- 4.5.1 the Development constructed on the Land must be constructed in accordance with the Urban Design Guidelines; and
- 4.5.2 the Owner must implement the Urban Design Guidelines on the Land, and maintain the Land in accordance with the Urban Design Guidelines,

all at the sole cost of the Owner and to the satisfaction of the Council.

# 4.6 Amendment of Urban Design Guidelines

4.6.1 The Owner may propose and the Council must consider, any requested amendment of the Urban Design Guidelines arising out of the proposed Amendment, any future permit or otherwise requested.

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- 4.6.2 The Council may, for good and reasonable cause, require and direct the amendment of the Urban Design Guidelines including a requirement for the Owner to procure the preparation of any amended version of the Urban Design Guidelines.
- 4.6.3 To be effective, any amended version of the Urban Design Guidelines must first be approved (by dating and signing) by the Council after being submitted by the Owner for such approval. Once approved by the Council that amended version will replace the Urban Design Guidelines at Annexure 2 to this Agreement.

#### 4.7 Ending Application of Urban Design Guidelines

The requirements of clauses 4.5, 4.6 and 4.7 will end upon registration of a plan of subdivision for the relevant part of the Development completed in accordance with those Urban Design Guidelines.

#### 4.8 Further Dwelling Design Requirements

The Owner acknowledges the further design requirements in relation to the built form of future dwellings may be applied via future planning permits for the Land.

# 5 OWNER'S GENERAL COVENANTS

# 5.1 Successors in title

Until this Agreement is recorded on the folio of the Register which relates to the Land pursuant to section 181 of the Act, the Owner must ensure that the Owner's successors in title give effect to and do all acts and sign all documents which will require those successors to give effect to this Agreement including requiring the successors in title to execute a deed agreeing to be bound by the terms of this Agreement. Until that deed is executed, the Owner, being a party to this Agreement, remains liable to perform all of the Owner's obligations contained in this Agreement.

#### 5.2 Further assurance

The Owner must up all things necessary (including signing any further agreement, acknowledgment or document) to enable the Council to record this Agreement on the folio of the Register which relates to the Land.

#### 5.3 Payment of Council's costs

The Owner agrees to pay on demand to the Council the Council's costs and expenses (including any legal fees incurred on a solicitor-client basis) of and incidental to the preparation, execution, recording, removal, amendment and enforcement of this Agreement.

# 5.4 Mortgagee to be bound

The Owner covenants to obtain the consent of any Mortgagee to be bound by the covenants in this Agreement if the Mortgagee becomes mortgagee in possession of the Land.

#### 5.5 Indemnity

The Owner covenants to indemnify and keep the Council, its officers, employees, agents, workmen and contractors indemnified from and against all costs, expenses, losses or damages which they or any of them may sustain incur or suffer or be or become liable for or in respect of any suit action proceeding judgement or claim brought by any person arising from or referrable to this Agreement or any non-compliance with this Agreement.

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#### 5.6 Non-compliance

If the Owner has not complied with this Agreement within 14 days after the date of service on the Owner by the Council of a notice which specifies the Owner's failure to comply with any provision of this Agreement, the Owner covenants:

- 5.6.1 to allow the Council its officers, employees, agents, workmen and contractors to enter the Land and rectify the non-compliance;
- 5.6.2 to pay to the Council on demand, the Council's reasonable costs and expenses (Costs) incurred as a result of the Owner's non-compliance
- 5.6.3 to pay interest at the rate of 2% above the rate prescribed under section 2 of the Penalty Interest Rates Act 1983 on all moneys which are due and payable but remain owing under this Agreement until they are paid in full;
- 5.6.4 if requested to do so by the Council, to promptly execute in favour of the Council a mortgage to secure the Owner's obligations under this Agreement,

#### and the Owner agrees:

- 5.6.5 to accept a certificate signed by the Chief Executive Officer of the Council (or any nominee of the Chief Executive Officer) as prima facie proof of the Costs incurred by the Council in rectifying the Owner's non-compliance with this Agreement;
- 5.6.6 that any payments made for the purposes of this Agreement shall be appropriated first in payment of any interest and any unpaid Costs of the Council and then applied in repayment of the principal sum;
- 5.6.7 that all Costs or other monies which are due and payable under this Agreement but which remain owing shall be a charge on the Land until they are paid in full; and
- 5.6.8 if the Owner executes a mortgage as required by clause 5.6.4, any breach of this Agreement is deemed to be a default under that mortgage.

# 5.7 Standard of works

The Owner covenants to comply with the requirements of this Agreement and to complete all works required by this Agreement as expeditiously as possible at its cost and to the satisfaction of the Council.

#### 5.8 Council access

The Owner covenants to allow the Council and its officers, employees, agents, workmen and contractors or any of them, to enter the Land (at any reasonable time) to assess compliance with this Agreement.

#### 5.9 Covenants run with the Land

- 5.9.1 The Owner's obligations in this Agreement are intended to take effect as covenants which shall be annexed to and run at law and in equity with the Land and every part of it, and bind the Owner and its successors, assignees and transferees, the registered proprietor or proprietors for the time being of the Land and every part of the Land.
- 5.9.2 The Owner will do all things necessary to enable the Council to make an application to the Registrar of Titles to make a recording of this Agreement on the Certificate

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of Title to the Land in accordance with Section 181 of the Act including the signing of any further agreement, acknowledgement or other document.

#### 5.10 Owner's warranty

The Owner warrants and covenants that:

- 5.10.1 the Owner is the registered proprietor (or is entitled to become the registered proprietor) of the Land and is also the beneficial owner of the Land;
- 5.10.2 the execution of this Agreement by the Owner complies with the Registrar's Requirements for Paper Conveyancing Transactions made under section 106A of the Transfer of Land Act 1958;
- 5.10.3 there are no mortgages, liens, charges or other encumbrances or leases or any rights inherent in any person other than the Owner affecting the Land which have not been disclosed by the usual searches of the folio of the Register for the Land or notified to the Council;
- 5.10.4 no part of the Land is subject to any rights obtained by adverse possession or subject to any easements or rights described or referred to in section 42 of the *Transfer of Land Act 1958*; and
- 5.10.5 until this Agreement is recorded on the folio of the Register which relates to the Land, the Owner will not sell, transfer, dispose of, assign, mortgage or otherwise part with possession of the Land or any part of the Land without first disclosing to any intended purchaser, transferee, assignee or mortgagee the existence and nature of this Agreement.

# 6 ACKNOWLEDGMENT OF OBLIGATIONS OF COUNCIL

The Council will proactively facilitate the processing and decision making in respect of the Amendment, Planning Approvals or any other approvals that are required to be granted by Council in order for construction of the Development to occur.

# 7 GOODS AND SERVICES TAX

# 7.1 Definitions and expressions

Expressions used in this Agreement that are defined in the GST Act have the same meaning as given to them in the GST Act, unless expressed to the contrary.

# 7.2 Amounts payable do not include GST

Each amount, of whatever description, specified as payable by one party to the other party under this Agreement is expressed as a GST exclusive amount unless specified to the contrary.

# 7.3 Liability to pay any GST

Subject to clause 7.4, in addition to any amount payable by one party to the other party under this Agreement in respect of a taxable supply, the party liable to pay the amount (**Recipient**) must pay to the other party (**Supplier**) a sum equivalent to the GST payable, if any, by the Supplier in respect of the taxable supply on the date on which the Supplier makes a taxable supply to the Recipient irrespective of when the Supplier is liable to remit any GST under this Agreement in respect of a taxable supply to any governmental authority.

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#### 7.4 Tax Invoice

A party's right to payment under clause 7.3 is subject to a Tax Invoice being delivered to the Recipient.

#### 8 GENERAL

#### 8.1 No fettering of Council's powers

This Agreement does not fetter or restrict the Council's power or discretion in respect of any of the Council's decision making powers including but not limited to an ability to make decisions under the *Local Government Act 1989*, and the Act or to make or impose requirements or conditions in connection with any use or development of the Land or the granting of any planning permit, the approval or certification of any plans of subdivision or consolidation relating to the Land or the issue of a Statement of Compliance in connection with any such plans.

#### 8.2 Time of the essence

Time is of the essence as regards all dates, periods of time and times specified in this Agreement.

#### 8.3 Counterparts

- 8.3.1 This Agreement may be executed in any number of counterparts and all the counterparts together constitute one and the same instrument; and
- 8.3.2 A copy of an original executed counterpart received by email:
  - (a) must be treated as an original counterpart;
  - (b) is sufficient evidence of the execution of the original; and
  - (c) may be produced in evidence for all purposes in place of the original.
- 8.3.3 If the signatures on behalf of one party are on different counterparts, this will be taken to be, and have the same effect as, signatures on the same counterpart and on a single copy of this Agreement.

# 8.4 Governing law and jurisdiction

This Agreement is governed by and is to be construed in accordance with the laws of Victoria. Each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts and tribunals of Victoria and waives any right to object to proceedings being brought in those courts or tribunals.

#### 8.5 Enforcement and severability

- 8.5.1 This Agreement shall operate as a contract between the parties and be enforceable as such in a Court of competent jurisdiction regardless of whether, for any reason, this Agreement were held to be unenforceable as an agreement pursuant to Division 2 of Part 9 of the Act.
- 8.5.2 If a Court, arbitrator, tribunal or other competent authority determines that a word, phrase, sentence, paragraph or clause of this Agreement is unenforceable, illegal or void, then it shall be severed and the other provisions of this Agreement shall remain operative.

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#### 9 NOTICES

#### 9.1 Service of notice

A notice or other communication required or permitted, under this Agreement, to be served on a person must be in writing and may be served:

- 9.1.1 personally on the person;
- 9.1.2 by leaving it at the person's address set out in this Agreement;
- 9.1.3 by posting it by prepaid post addressed to that person at the person's current address for service;
- 9.1.4 by email to the person's current email address notified to the other party; or
- 9.1.5 by facsimile to the person's current number notified to the other party.

#### 9.2 Time of service

A notice or other communication is deemed served:

- 9.2.1 if served personally or left at the person's address, upon service;
- 9.2.2 if posted within Australia to an Australian address by express post, five (5) Business Days; by standard post, six Business Days after posting;
- 9.2.3 if sent by email, subject to the clause 9.2.5, at the time of receipt as specified in section 13A of the Electronic Transactions (Victoria) Act 2000;
- 9.2.4 if served by facsimile, subject to the clause 9.2.5, at the time indicated on the transmission report produced by the sender's facsimile machine indicating that the facsimile was sent in its entirety to the addressee's facsimile; and
- 9.2.5 if received after 5.00pm in the place of receipt or on a day which is not a Business Day, at 9.00am on the next Business Day.

#### 9.3 Proof of receipt of notice by email

In proving that a notice given by email has been received by the recipient, it is sufficient to produce an acknowledgement or receipt that the email has reached the recipient's email address.

#### 10 INTERPRETATION

In this Agreement, unless the contrary intention appears:

- 10.1 the singular includes the plural and vice versa;
- 10.2 a reference to a document or instrument, including this Agreement, includes a reference to that document or instrument as novated, altered or replaced from time to time;
- 10.3 a reference to an individual or person includes a partnership, body corporate, government authority or agency and vice versa;
- 10.4 a reference to a party includes that party's executors, administrators, successors, substitutes and permitted assigns;

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- 10.5 words importing one gender include other genders;
- 10.6 other grammatical forms of defined words or expressions have corresponding meanings;
- 10.7 a covenant, undertaking, representation, warranty, indemnity or agreement made or given by:
  - 10.7.1 two or more parties; or
  - 10.7.2 a party comprised of two or more persons,

is made or given and binds those parties or persons jointly and severally;

- 10.8 a reference to a statute, code or other law includes regulations and other instruments made under it and includes consolidations, amendments, re-enactments or replacements of any of them;
- 10.9 a recital, schedule, annexure or description of the parties forms part of this Agreement;
- 10.10 If an act must be done on a specified day that is not a Business Day, the act must be done instead on the next Business Day;
- 10.11 if an act required to be done under this Agreement on a specified day is done after 5.00pm on that day in the time zone in which the act is performed, it is taken to be done on the following day:
- 10.12 a party that is a trustee is bound both personally and in its capacity as trustee;
- 10.13 a reference to an authority, institution, association or body (original entity) that has ceased to exist or been reconstituted, renamed or replaced or whose powers or functions have been transferred to another entity, is a reference to the entity that most closely serves the purposes or objects of the original entity;
- 10.14 headings and the provision of a table of contents are for convenience only and do not affect the interpretation of this Agreement.
- 10.15 Unless otherwise specified a reference to the Council includes the Council in its capacity as responsible authority pursuant to the Scheme.

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	11
<b>EXECUTED</b> pursuant to Division 2 of Part 9 of the	e Act.
THE COMMON SEAL of KNOX CITY COUNCIL was affixed in the presence of:  Councillor  Councillor  Chief Executive Officer	COMMON SEAL
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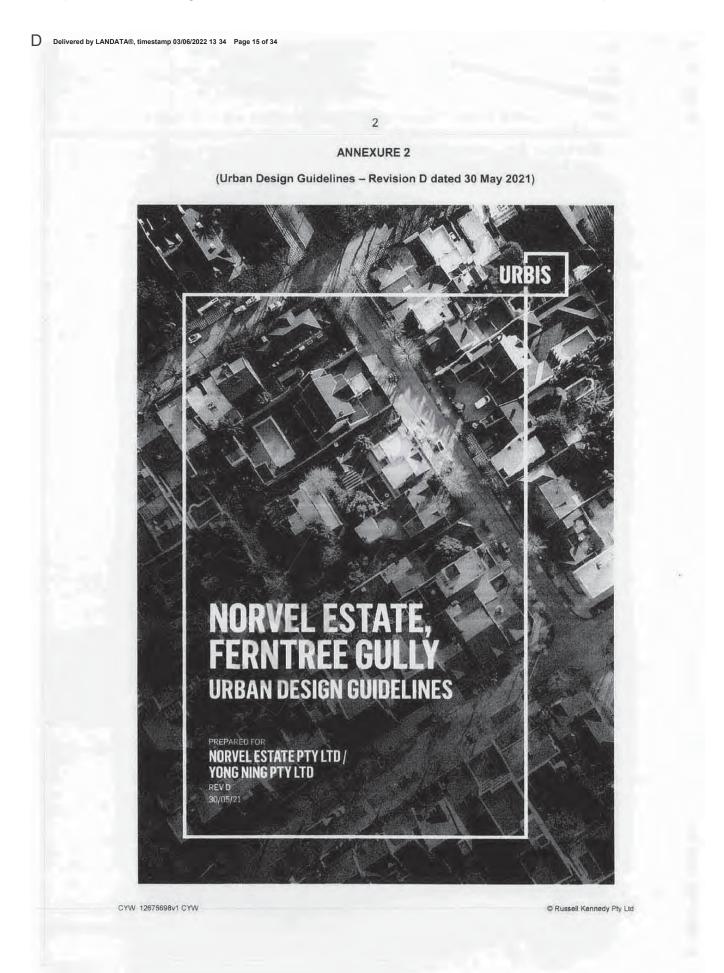
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Delivered by LANDATA®, timestamp 03/06/2022 13 34 Page 13 of 34 12 **EXECUTED** by **NORVEL ESTATE PTY LTD** in accordance with section 127(1) of the *Corporations Act 2001* (Cth) by being signed by the authorised person: Sole director and sole company secretary QING PONG LIY Full name Usual Address

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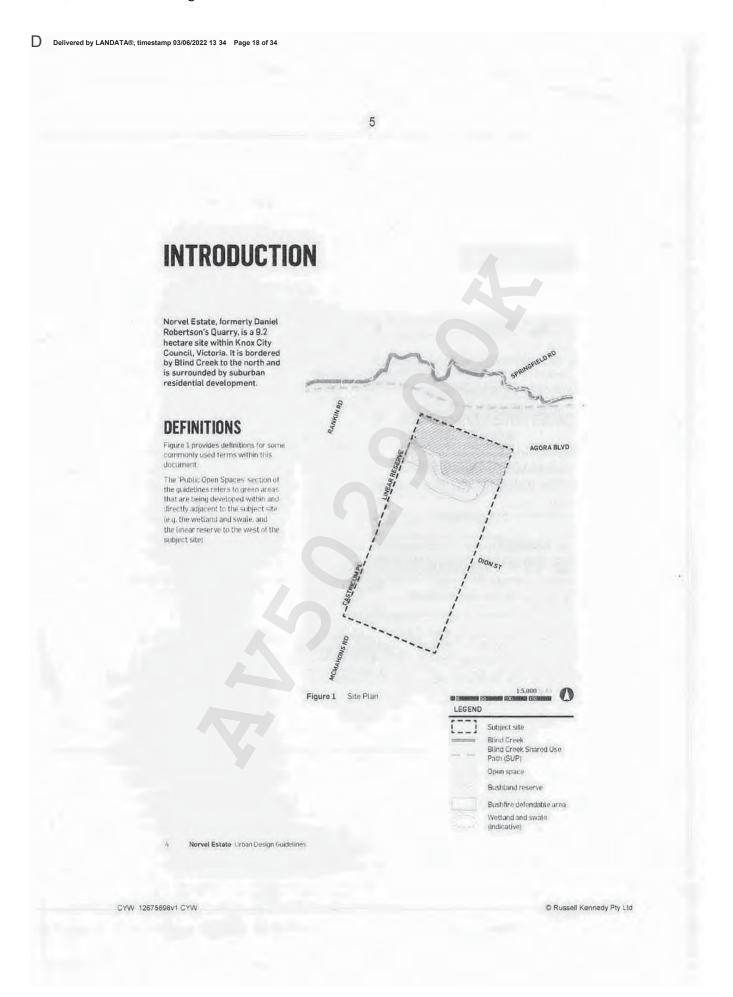
**ANNEXURE 1** (Concept Plan – describing Bushland Reserve) BUSHLAND RESERVE 1.6980 HA NORVEL ROAD I FERNTREE GULLY RESIDENTIAL MASTERPLAN 36-0125

LAG 11547244v4 LAG © Russell Kennedy Pty Ltd





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# PURPOSE OF THE GUIDELINES

The Urban Design Guidelines are intended to provide broad character guidance for a macro development of Norvel Estate. They have been prepared by Urbis to supersede the existing Urban Design Guidelines for the subject site which were prepared in 2004 by Jones & Whitehead Pty Ltd for Knox City Council [the 2004 Guidelines]

The 2004 Guidelines are referenced in Agreement AG370823M under Section 173 (\$173) of the Planning and Environment Act 1987 for Norvel Road Quarry between Knox City Council and Robertson industries Pty Ltd. in

The Schedule to the Development Plan Overlay (applied to the Robertson Land by the Amendment) should generally reflect the principles of the Urban Design Guidelines to the extent possible having regard to the form of development and use of the Robertson Land proposed by the Owner at the time of preparation of the Amendment

These Urban Design Guidelines are prepared with the Intent to be registered into a new \$173 agreement replacing current agreement AG370823M.

# CONTEXT

in the 17 years since the 2004 Guidelines were written. some significant changes to the site and its context have occurred. The quarry has ceased operation and been filled. some vegetation has been cleared, and market expectations arounit jots sizes and housing typologies have changed.

More information on those changes is provided in the appendices, and a hill analysis of the subject site and context can be found in the Norvel Estate Urban Context and Design Response Report by Urbis (2018).

# STRUCTURE OF THE GUIDELINES

These Urban Design Guidelines are broadly based on the Urhan Design Guidelines for Victoria. (The State of Victoria Department of Environment, Land, Water and Planning.

Consistent with the Urban Design Guidelines for Victoria. urban elements are arranged under the following categories:

- 1. Urban Structure
- 2. Movement Network
- Public Open Spaces
   Public Transport Environs
- 5. Buildings
- 6. Objects in the Public Realm

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# **OBJECTIVES & GUIDELINES**

Table 1 Norvel Estate Urban Design Guidelines (Urbis 2021), developed with reference to the Urban Design Guidelines for Victoria (2017)

BJECTIVES GUIDELINES		
1 - URBAN STRUCTURE		
To provide a permeable and functional urban structure of blocks and streets	Create an interconnected street layout with regular block sizes. Create a permeable block layout Connect streets, pedestrian and blockle paths from existing areas into new areas, while minimising disrupsion to the remnant bushland area. Align pedestrian connections along desire-lines.	
To provide a legible urban structure of blocks and streets	Layout street and block patterns to     Provide streets that are generally direct, straight or near straight.     Ensure the design works with the underlying topography to achieve an accessible movement not work and minimise the level changes required between lots.     Allow clear view lines to key landmarks or features in the landscape where possible, and     Avoid cull dessets but if they are necessary, limit their length and maintain a straight signment and clear sightlines to the end as well as pedestrian thoroughly no.	
To ensure the urban structure supports accessibility to surrounding destinations	<ul> <li>Allow for continuous, direct pedestrian and ticycle access from the development to railway stations, bus routes, regional trail network and local services.</li> </ul>	
To integrate the development site into its surrounding area	Connect the development's movement network to the movement network of the surrounding area.     Ensure new portions of streetscape along Norvel Road and Castricum Place complement the existing streetscapes.	
To ensure the public realm structure provides for accessible, safe and conveniently located public spaces	Create public open spaces where the local catchment has sufficient potential users to activate the space.     Any amenities and functions within new public open spaces should help to fill gaps in what is currently provided in the local area.	
To ensure a public realm structure where streets support the amenity and function of neighbourhoods	s support the amenity network and as a public place, and to accommodate services infrastructur	
To ensure the public realm structure provides high amenity and safe interfaces between different uses	Design the interfaces around public open spaces (including the bushland reserve) to avoid blank frontages and encourage passive surveillance, for example by     Providing public paths / streets along both edges:     Designing buildings to front onto the space; and/or     Use of low height and/or visualty permeable fencing types where fences are unavoidable.  Development near the bushland reserve should be designed to satisfy relevant bushfire guidelines and/or CFA (Country Fire Authority) advice.	

Norvel Estate Urban Design Guideline

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OBJECTIVES GUIDELINES To provide a granularity of subdivision Provide lots that: that supports private and public amenity, while allowing for an Are large enough to provide a good quality private landscape informe that contributes positively to the character of this gubilin realm, and appropriate density Take into account the changing market expectations for smaller lot sizes compared to what has traditionally been provided in the local area. To ensure a well-managed, high Develop the public open space, civil infrastructure and streets to a standard amenity public realm acceptable for ongoing maintenance and management Establish an integrated management agreement for the maintenance and repair of the public realm. 2 - MOVEMENT NETWORK To ensure the movement network Provide a pedestrian network that cause for persons of all abilities. Provide for walking and on-road cycling on all streets. accommodates a diversity of transport modes and supports activities, including active transport To ensure the movement network Each lot to have a maximum of one crossover. provides for safe interactions between Arrange vehicle crossovers to allow clear sightlines between drivers entering the crossover and pedestrians on the footpath and cyclists on the street. transport modes Garages to be set buck sufficiently from the front boundary to minimise the potential for cars in driveways to overhang the footpath. Establish a confindous system of pedestrian paths connecting the development with udiacent neighbourhoods, along all streets, continuing through public spaces, and to public transport nodes. To ensure effective pedestrian and bloycle path connections to destinations Provide pedestrian and cyclist connection to the Blind Creek Shared Use Path (SUP). Include footpath's along the street frontage of each property. To ensure pedestrian and bicycle Set path widths to accommodate the anticipated or predicted (evels of paths are accessible and serviceable Preserve a minimum height of at least 2.5m above paths that is clear from overhanging objects. Where bicycle paths curve, set an inside radius of at least 15m and preferably Lay out paths to allow pedestrians and cyclists clear sightlines for a distance Where pedestrian or bicycle paths are bordered by fences, maximise opportunities for informal surveillance from adjacent properties and/or streets. Path design should comply with the relevant standards. Provide directed low-glare lighting to pedestrian and bicycle paths To ensure pedestrian and bicycle Locate vehicle crossovers on straight street sections to ensure high visibility to paths provide safety for pedestrians and cyclists on vehicle crossovers approaching pedestrians and cyclists Continue path treatments across vehicle crossovers to signal priority for To minimise hazards to pedestrians Set pedestrian and bicycle paths back from the roadway or other obstructions. and cyclists from path edges Set trees back from pedestrian and bicycle path edges, in accordance with relevant standards Maintain low planting adjacent to pedestrian and broycle path edges. Maintain clear sightlines along paths and avoid creating obstructions in areas adjacent to pedestrian and bicycle paths.

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Delivered by LANDATA®, timestamp 03/06/2022 13 34 Page 22 of 34 **OBJECTIVES** GUIDELINES To ensure streets have a green Provide a street cross-section that accommodates adequate space free of character conflict with other infrastructure for street tree planting. To ensure convenient and safe at-grade crossings for pedestrians and Locate at-grade crossings on roads where pedestrians and cyclists can be seen by approaching drivers. cyclists Provide a clear space for pedestrians waiting to cross a road, reparate from the through pedestrian path. Provide at-grade pedestrian crossing that facilitates desire line and shortest pedestrian movement to destination To ensure efficient provision of on-Provide a street cross-section that accommodates the appropriate level of onstreet parking street parking for the development 3 - PUBLIC OPEN SPACES Provide clear and legible purestrian paths through public open spaces that link with the surrounding pedestrian network. To ensure convenient and safe access to and through public open spaces To ensure amenity and safety for public open space users Provide areas and facilities which are consistent with Council's open space strategy Locate paths and facilities where they will be visible from surrounding proporties, pamis and/or streets. Provide lighting along main podestrian paths in areas that are intended for night-time use. Lit to the same level as surrounding streets.

Do not light areas intended for day time uses only. Consider the purpose of the bushfire defendable area in the choice and location of recreational structure. Where possible arrange paths, seating and any recreational areas to catch the sun during winner and be shaded during summer. To ensure comfortable and enjoyable public spaces Locate any seating to provide users with a pleasant outlook and opportunity to watch passers-by. To emphasise a sense of place and Select planting and landscape elements that support the existing character or character preferred future character of the local area and also considers bushfire risk. Establish large trees and other plants to enhance the local habitat and microclimate New trees should be a mix of predominantly indigenous and/or native species as recommended in the relevant Council guidelines. integration of locally relevant urban art is encouraged To ensure the public open spaces are well maintained When designing public open spaces, take account of the management agency's capacity to resource ongoing maintenance and management. Regularly maintain hard and soft landscape elements to ensure the spaces are inviting, comfortable and safe. Within the bushfire defendable area, position and maintain trees and other plants to comply with relevant bushfire safety guidelines and/or the advice of Norvel Estate Urban Design Guidelines CYW 12675698v1 CYW @ Russell Kennedy Pty Ltd Delivered by LANDATA®, timestamp 03/06/2022 13 34 Page 23 of 34

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OBJECTIVES	GUIDELINES		
To protect the ecological values of the bushland reserve, Blind Creek, and the local area	Retain and protect remnant indigenous vegetation Maintain the biological integrity of the bushland as a future reserve Avoid the use of potentially invasive plant species arriving a within the development. Ensure the site's stormwater run-off is treated prior to entering Blind Creek. Provide paths through the bushland reserve where necessary for maintenance and emergency services vehicles, and for pedes trians where it is safe and of minimal impact to do so. Any paths through the bushland reserve should: Be tocated in areas that have already been disturbed where possible. Be constructed in a manner that minimises disturbances to remnant vegetation and topography (e.g. no-dig boardwalks where appropriate): Be permeable to water, and Appear naturalistic in character and be designed to minimise any visual impact.		
4 - PUBLIC TRANSPORT ENVIRONS			
To ensure convenient pedestrian and bicycle access to railway stations and public transport nodes	<ul> <li>Allow for continuous, direct, pedestrian and bicycle access routes to railway stations and public transport nodes.</li> </ul>		
5 - BUILDINGS			
Allow for higher density development on the site with varied building types relative to surrounding areas	<ul> <li>Allow for a mix of building types which includes detached houses and pointfally other low-scale housing types (e.g. displexes, terraces, town houses).</li> <li>Allow for a greater proportion of multi-storey houses in the development compared to the surrounding area.</li> </ul>		
Ensure that the form and character of buildings is complementary to that of the surrounding residential and open space areas.	Ensure that building setbacks and façade treatments are varied or articulated to avoid a continuous street wall effect.     Set back garages behind the front building line.     Front setbacks of outward facing lots should respond to the surrounding neighbourhood character.		
Maintain the amenity of adjacent residential uses.			
Ensure the placement and form of buildings supports bushfire safety,	<ul> <li>Trees within the defendable area are to be maintained to comply with CFA requirements.</li> </ul>		
Ensure the built form supports the establishment of new trees and preservation of existing trees.	<ul> <li>Front setbacks within the development site to be set back sufficiently from it street to ensure space for small canopy tree planting where it does not confli- with bushfire defendable space requirements.</li> </ul>		
Minimise construction and post construction impacts of development on the site.	Minimise the extent of impermeable paved areas to avoid excessive stormwater run-off. Minimise earthworks near significant vegetation. Where earthworks are necessary, ensure root zones of existing vegetation are protected to preserve tree health. Provide water-permeable surfaces around significant trees.		

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Delivered by LANDATA®, timestamp 03/06/2022 13 34 Page 24 of 34 GUIDELINES **OBJECTIVES** 6 - OBJECTS IN THE PUBLIC REALM To ensure that objects in the public realm support safety and amenity Avoid unnecessary clutter for example by continuidating lighting  $\ell$  signage functions into a single object Place all objects outside of main pedestrian or bicycle travel paths and away from street corners. Larger infrastructure objects should be offlior visually unobtrusive (e.g. screening with plants) or purposefully designed to be visually pleasant and complement the surrounds. Place power and communications cables underground to reduce visual clutter and allow for the planting of canopy street trees. To ensure objects in the public realm Develop a simple, standardised polette of materials and designs for street are robust and easy to maintain Use resilient materials that are easily closed, maintained and repaired or recycled. Use local Council design standards for street furniture where appropriate. To locate street and park furniture in Place seats where people linger such as the local park and locations where accessible and convenient places Position any bicycle parking hoops to accommodate a bicycle on either side Select lawn types that are suitable for sitting on and for recreation To select trees and planting that are fit-for-purpose Use drought-resistant plant species when irrigation is not available. Use plant species appropriate to the available root space. Select deciduous tree species where winter sun is desired (e.g. north of windows) Select dense, unopied tree species where summer shade is desired. Select evergroom species with dense foliage where screening is needed. Ensure proposed plant species within the bushfire defendable area are selected and placed to satisfy relevant bushfire guidelines and/or CFA advice To ensure trees and planting Select tries and planting appropriate to the cultural context and local identity contribute to local identity and context Provide gives and planting that engage the senses. Select trees in keeping with the scale of the street or space.

Position trees and planting to define a street or path Position trees in streets to form a canopy and enclose the space. Favour the selection of indigenous species where appropriate To ensure trees and planting support Select tree species with clear trunks, and no branches or foliage below the safety and amenity of public space 2500mm in height. Select shrub and ground cover plantings to be no more than 800mm in height. Position trees and planting to allow clear sightlines along streets and across the different mode paths.  $\label{eq:clear_position}$ Position trees away from overhead wires and public lighting to limit overshadowing of public lighting and interference with overhead wires Within the bushfire defendable area, position and maintain trees and plants to satisfy relevant bushfire guidelines and/or CFA advice. This may include but is avoiding creating a continuous tree canopy. limiting total area of tree canopy cover, maintaining trees to have a clean trunk maintaining grasses to an appropriately low height, particularly during the declared fire danger period, and -limiting the sizes of the areas of shrubs and providing adequate spacing between clumps of shrubs. Norvel Estate Urban Design Guidelines Russell Kennedy Ptv Ltd CYW 12675698v1 CYW

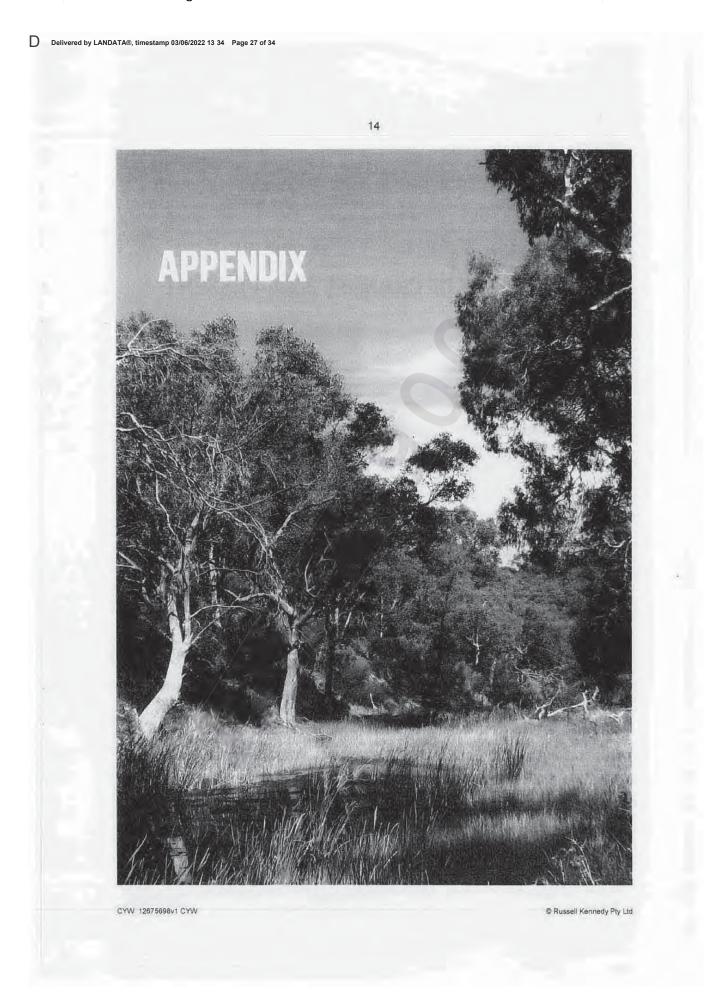
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Delivered by LANDATA®, timestamp 03/06/2022 13 34 Page 25 of 34 12 **OBJECTIVES** GUIDELINES To ensure trees and planting are Manage ongoing maintenance and reptacement of trees and planting according managed and maintained Manage street planting to maintain clear significant along paths and streets Maintain vegetation clear of lighting to allow direct allumination of paths Maintain trees clear of overhead wires

Maintain trees and other planting within the countrie defendable area to be compliant with the relevant bushfire guidelines and/or CFA advice. Keep bushfire defendable area clear of leaf and other flammable debris during the declared fire danger period. Minimise impact on nocturnal wildlife in biologically significant area. Site 34' as defined in 'Sites of Biological Significance in Knox, Vol.2' (2010). Use a style, scale and majorials for side and rear fences that contribute to the existing or desired future character of the area. To ensure that fences contribute to the To maximise informal surveillance to Avoid the use of fences along front property boundaries the street and public spaces For property side boundaries abuitting a street or public space. Iront yards should ideally have no forcing, or otherwise use fencing types that are of a low height and/or are visually permeable. Locate lighting for sal- travel and wayfinding along pedestrian and bicycle paths, and to emphasise crossings, landmarks and destinations. To ensure lighting supports nighttime social and recreational activity, amenity and safety in the public realm Light only those public space areas and paths intended for night use. Where production and bicycle paths pass through public open space, light the paths to the same level as surrounding streets. Locate lighting at points of potential pedestrian-vehicle and pedestrian-bicycle To ensure lighting aids wayfinding and Use external lighting to enhance landscape features htroriste lighting with signs, landscaping and other public space elements. The overall lighting level in public spaces may comprise light from a combination of sources including street lights and residences. Provide or insistent, continuous lighting levels along paths Use lighting types that minimise distortion and glare, and maximise colour recognition of objects and surfaces. Place lighting poles and lamps away from tree canopies, verandas and liverhead wires.

Direct the path and activity lighting downwards to illuminate the immediate. Where tighting bottards are adjacent to pathways, direct the tight beam downwards. Provide lighting Levels that enable recognition of an approaching person's face from approximately 10–15 metres away. Where appropriate, provide signs along paths showing connections and destinations, and the location of public facilities and public transport routes. Provide clear and regular sign posting on main pedestrian routes. To ensure signs inform pedestrians and cyclists and aid way-finding Concentrate pedestrian signs at node points on the pedestrian routes. Position signs clear of pedestrian and bicycle spaces and paths Position signs clear of vegetation. Place pedestrian and cyclist signs at user eye level. Locate property street numbers to be visible from the street, day and night. Prepared by Urbis for Norvel Estate Pty Ltd / Yong Ning Pty Ltd CYW 12675698v1 CYW Russell Kennedy Pty Ltd





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# APPENDIX 1 SUMMARY OF CHANGES 2004-PRESENT

When the 2004 Guidelines were written, some of the advice was responsive to conditions of the site and context that have since changed. These key changes are summarised below.

# **SUBJECT SITE**

Norvel Estate was previously known as the Norvel Road Quarry. It was owned by Robertson Industries and was used for clay extraction to manufacture bricks under the Daniel Robertson brand.

Within the past eight years, the clay pit has been filled so the site has a relatively consistent, gentle slope and the vegetation south of the most densely vegetated remnant woodland has been cleared.



Figure 2 Site in Feb 2007 (Source: Sites of Biological Significance in Knox Vol.2, p.180)

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# **APPENDIX 2 REVIEW OF 2004 GUIDELINES**

### COMMENTARY SECTION

On pages 1 to 4 of the Urban Design Guidelines (2004, Jones & Whitehead Pty Ltd) the following points required review:

- Description of the current usage of the quarry is out of
- Justification of what is an appropriate density for the site is no longer a compelling case.
- Commentary on protected vegetation areas this is unclear since the supporting maps do not specifically define all of the areas named in the text. A portion of the trees within the Vegetation Protection Overlay have already been removed
- Recommendation that the remnant vegetation should become a gated "flora reserve" with limited public access no longer reflects the position of Council
- The section "Other Vegetation on the Site" is no langer applicable since it has all been cleared.
- Much of the commentary on steep slopes is no longer relevant since the site has been filled.

### **GENERAL OBJECTIVES AND GUIDELINES SECTION**

General Objectives and Guidelines are listed on pages 5 to 12 of the 2004 Guidelines. For previty, only the main overarching objectives are quoted, but the commentary also relates to individual guidelines under each objective see Table 7

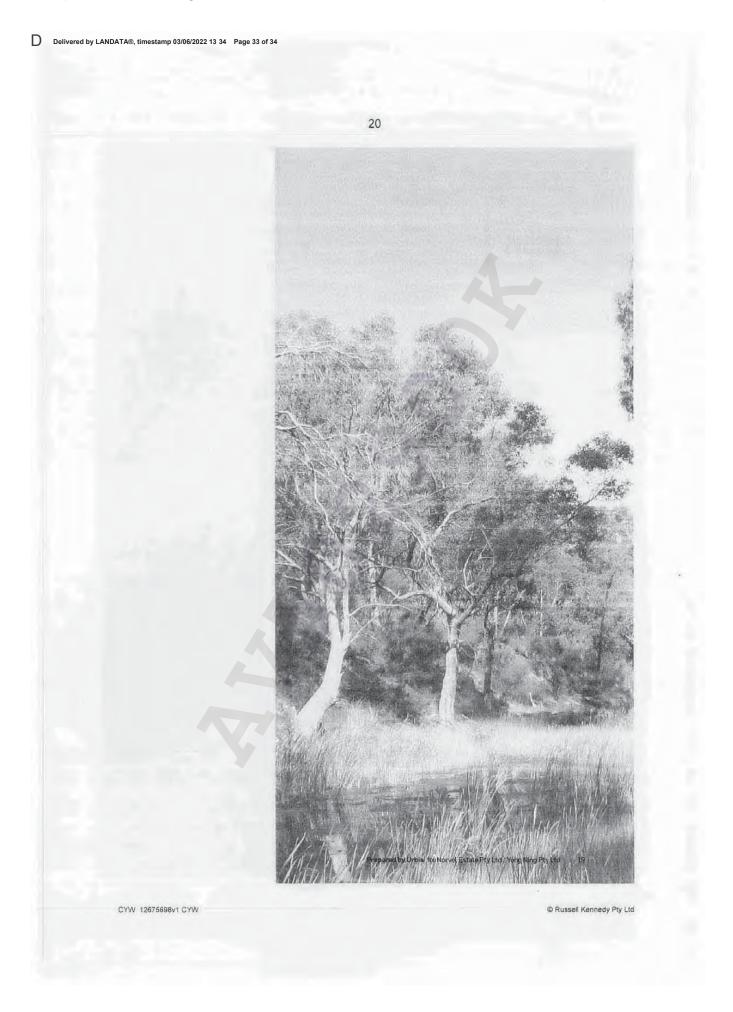
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Delivered by LANDATA®, timestamp 03/06/2022 13 34 Page 32 of 34 19 Review of General Objectives and Guidelines in superseded Urban Design Guidelines (Jones & Whitehead Pty Table 2 Ltd. 2004. p. 5-12) CURRENT STATUS **OBJECTIVE** At a high level the objective is still valid, but requires Ensure that development is complementary to surrounding scene retrement residential neighbourhoods. Quarried areas inveloen filled in, but still valid in Allow for development on quarried areas of the site at a higher density and with varied building types relative to surrounding areas principle. Still valid in principle, however the specifics of public Protect and restore significant indigenous vegetation communities including canopy trees, understorey and herbaceous elements Create an interface between development and the flora and fauna reserve that helps to protect the ecological values of the reserve while allowing benefits to residents and the The him level objective is valid, however many of the guidelines are no longer supported.

Base dun previous advice from Council, the guideline to broader community. support fenced outdoor spaces with minimal plantings next to the reserve" is no longer correct. Create links with parkland along Blind Creek. Still valid Minimise the impacts of construction during, and as a result of, development of the site. Still valid Follow best practice in design, construction and operation of drainage systems. Still valid Support energy-efficient buildings and landacapes. Still valid Plan streets within the site as an integral part of the local Most points still valid Guideline to "Design streets with a character similar to street network. streets in adjoining areas (width, pavement materials)" is limited in some respects by the need to provide a finer grain of subdivision in order to be commercially viable. At a high level the objective is still valid Create an attractive public interface between the new Some of the specific guidelines for achieving the objective are questionable and may not be in line with the most recent Urban Design Framework for Knox. housing and other public open spaces. Norvel Estate Urban Design Guidelines @ Russell Kennedy Pty Ltd CYW 12675698v1 CYW







# Department of Environment, Land, Water & **Planning**

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**Dealing Number** AV559716G

Date and Time Lodged 26/04/2022 10:41:00 AM

**Lodger Details** 

Lodger Code 17829T

Name RUSSELL KENNEDY

Address Lodger Box Phone Email

115608-00327 Reference

### APPLICATION TO REMOVE AN INSTRUMENT

Jurisdiction **VICTORIA** 

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### Estate and/or Interest

AGREEMENT AG370823M

### Land Title Reference

9381/087 11909/762 11909/763

### Instrument and/or legislation

**REMOVE - AGREEMENT - SECTION 173** Planning & Environment Act - section 177

Applicant(s)

Name KNOX CITY COUNCIL

Address

Street Number 511

Street Name **BURWOOD** Street Type **HIGHWAY** 

Locality WANTIRNA SOUTH

State VIC Postcode 3152

> AV559716G Page 1 of 2





# Department of Environment, Land, Water & Planning

### **Electronic Instrument Statement**

### **Additional Details**

None

The applicant/relinquishing party/receiving party requests the removal of this Instrument from the Register.

### Execution

- 1. The Certifier has taken reasonable steps to verify the identity of the applicant or his, her or its administrator or attorney.
- 2. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
- 3. The Certifier has retained the evidence supporting this Registry Instrument or Document.
- 4. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.

Executed on behalf of KNOX CITY COUNCIL Signer Name CHRISTINE PERKINS

Signer Organisation PARTNERS OF RUSSELL KENNEDY
Signer Role AUSTRALIAN LEGAL PRACTITIONER

Execution Date 26 APRIL 2022

### File Notes:

removal of Agreement AG370823M

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Statement End.





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### Transfer of Land

Section 45 Transfer of Land Act 1958

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### 1. Land/s

Land Title 1

Volume 9381

Folio 087

Land Title 2

Volume 11909

Folio 762

Land Title 3

Volume 11909

Folio 763

### 2. Estate and Interest

FEE SIMPLE

### 3. Transferor/s

Transferor

Name

ROBERTSON INDUSTRIES PTY

LTD

ABN

0 0 4 4 3 5 3 7 6

### 4. Transferee/s

Transferee Name

NORVEL ESTATE PTY. LTD.

ACN

6 1 9 3 8 6 8 5 5

Australian Credit Licence

### 5. Manner of Holding

SOLE PROPRIETOR

### 6. Address/es of Transferee/s

Address of Transferee

Unit

Street No

Street Name

Street Type

Locality

State

VIC

Postcode

7. Directing Party

None

### 8. Consideration

\$

### 9. Signing

The transferor transfers to the transferee the estate and interest specified in the land described for the consideration expressed and subject to the encumbrances affecting the land including any created by dealings lodged for registration before the lodging of this transfer.

### Transferor

Executed for ROBERTSON INDUSTRIES PTY LTD by being signed by the person(s) authorised to sign for the company

Director

Full Name Peter Ruxton Robertson

Usual Address

Director/Secretary Robert Rigori

Full Name

Usual Address

1/ML

Signature of Director

Signature of Director/Secretary

Approval Number: 33711111R

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Page 1 of 2 LV-V31-Dec-2015

Land Victoria, 570 Bourke Street, Melbourne, 3000, Phone 8636-2010

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# Transfer of Land

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Transferee

Executed for NORVEL ESTATE PTY. LTD. by being signed by the person(s) authorised to sign for the company

Director/Secretary

Full Name

QING DONG LIU

Usual Address

Signature of Director/Secretary

10. Date

Date: (DD/MM/YYYY) 3/10/2017

1. Lodging Party

Customer Code 145/07

11. Lodging Party

Reference

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# REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 1

VOLUME 09505 FOLIO 570

Security no : 124098550398F Produced 24/06/2022 02:22 PM

### LAND DESCRIPTION

Lot 1 on Title Plan 083661X.
PARENT TITLE Volume 08328 Folio 822
Created by instrument K255486 08/02/1983

### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor KNOX CITY COUNCIL of 511 BURWOOD HIGHWAY WANTIRNA SOUTH VIC 3152 AS877126F 09/01/2020

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE TP083661X FOR FURTHER DETAILS AND BOUNDARIES

### ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 54 AGORA BOULEVARD FERNTREE GULLY VIC 3156

### ADMINISTRATIVE NOTICES

NIL

eCT Control 09872N KNOX CITY COUNCIL Effective from 14/01/2020

DOCUMENT END

Title 9505/570 Page 1 of 1



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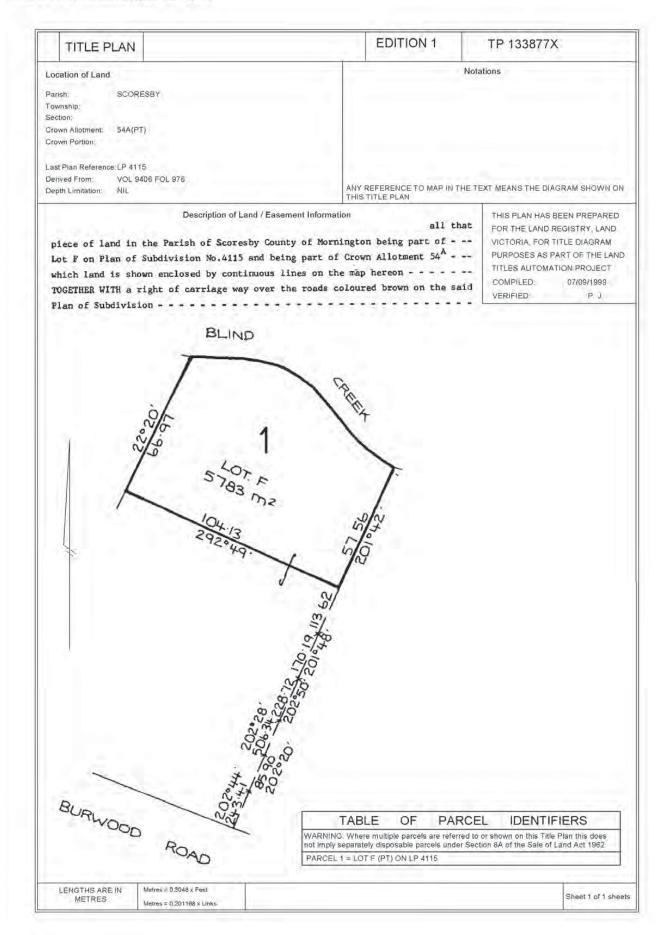
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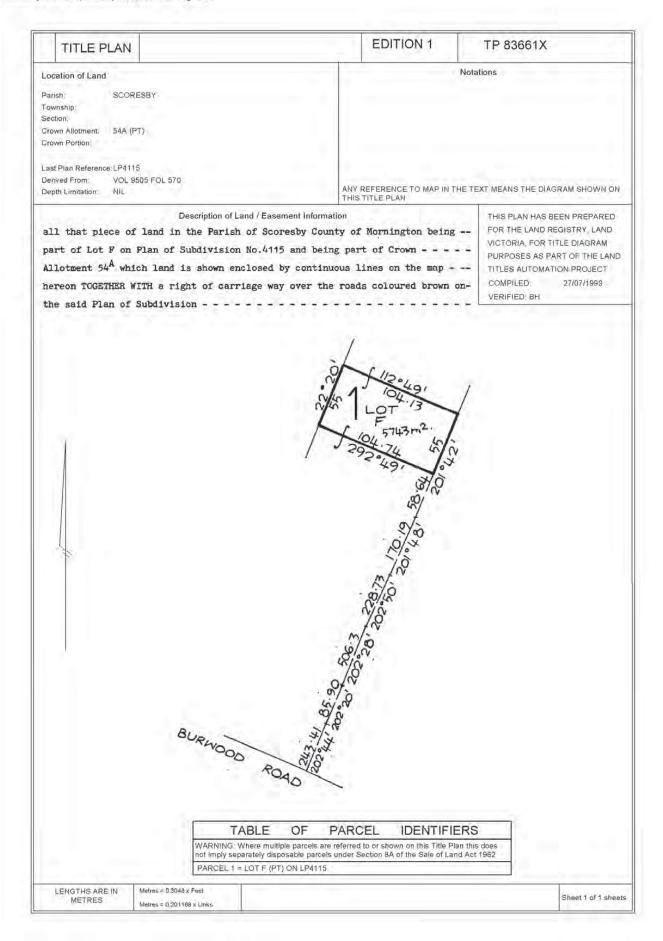
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# REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 1

VOLUME 09406 FOLIO 092

Security no : 124098549923W Produced 24/06/2022 02:14 PM

### LAND DESCRIPTION

Lot 1 on Title Plan 110814D.
PARENT TITLE Volume 09381 Folio 087
Created by instrument J107007 11/08/1980

### REGISTERED PROPRIETOR

Estate Fee Simple Sole Proprietor KNOX CITY COUNCIL of 511 BURWOOD HIGHWAY WANTIRNA SOUTH VIC 3152 AS877126F 09/01/2020

### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

### DIAGRAM LOCATION

SEE TP110814D FOR FURTHER DETAILS AND BOUNDARIES

### ACTIVITY IN THE LAST 125 DAYS

NIL

----- SEARCH STATEMENT-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: "RESERVE" 59R RANKIN ROAD FERNTREE GULLY VIC 3156

### ADMINISTRATIVE NOTICES

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Title 9406/092 Page 1 of 1



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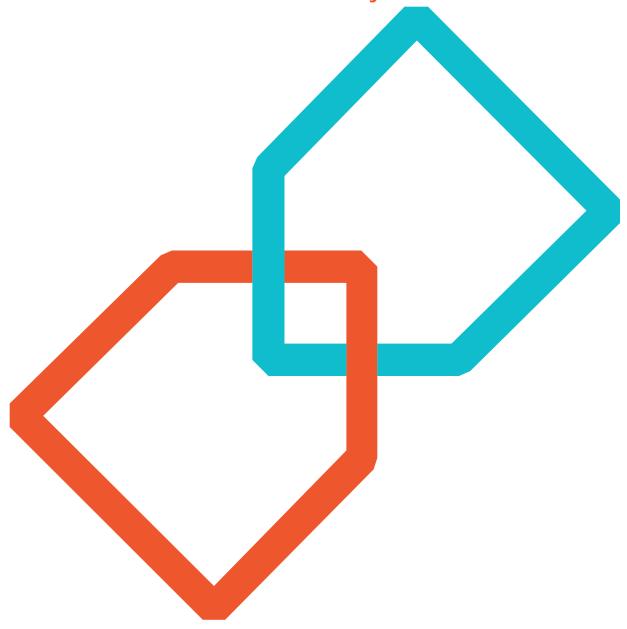
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# **Affordable Housing Strategy**

Norvel Estate, Ferntree Gully



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 $\underline{www.affordable development outcomes.com.au}$ 



# **Executive Summary**

### Overview

This Affordable Housing Strategy has been prepared on behalf of land owned at **29Q Norvel Road**, **Ferntree Gully** 29Q Norvel Road (Lots 1 & 2 on TP963860L and Lot 1 on TP297137X) ('the Site') and forms part of the application for rezoning and subdivision.

The Strategy responds to Knox City Council ('Council') *Affordable Housing Action Plan 2015 – 2020* ('the Plan') and policy objective that approximately five per cent of dwellings are to be negotiated to be provided as Affordable Housing in all significant rezonings.

In response to this objective and in line with the Victorian *Planning and Environment Act 1987* and State Government guidance concerning voluntary planning negotiations, the landowner proposes, subject to approval of the rezoning and sub-division for 138 lots, to facilitate the provision of at least 5 per cent of dwellings as Affordable Housing by the gifting of serviced lots to a Registered Housing Agency for development and management as Affordable Housing.

8 lots have been identified that are proposed to be gifted that once developed, will result in **5.8%** of the development being realised as Affordable Housing.

The titled and serviced land lots will be gifted to a Registered Housing Agency that is regulated by the Victorian Government to provide housing services to lower income Victorians. The title of the lots will be transferred to a Housing Agency within 90 days of the registration of the plan of subdivision and the Agency will be responsible for the design, planning, funding and construction of the dwellings, and their subsequent rental to very low to moderate income households.

The design of Affordable Housing lots will be in accordance the Design Guidelines. The Housing Agency is also expected to aim to achieve high standards of housing liveability and environmental performance, subject to design and feasibility. The dwellings are expected to be predominantly two and three-bedroom dwellings.

In addition to the gifting of the land, the landowner commits to meeting the reasonable costs of a Housing Agency appointed architect to be engaged to prepare plans suitable for planning lodgement.

A permit condition and Section 173 Agreement is proposed to set out the proposal and the specific requirements in relation to the transfer of the lots. A draft term sheet is set out at Attachment 1.

The proposal will result in a significant contribution to a Registered Housing Agency in terms of gifted land value, estimated to be worth between \$2.5 million to \$2.8 million. Construction costs are expected to be met from a combination of Housing Agency equity, access to debt finance, and/or State Government funding under its \$5.3 billion 'Big Housing Program'.

The proposal exceeds Council's 5% Affordable Housing policy aspiration and reflects that the provision of Affordable Housing is a voluntary contribution under the planning scheme. The agreement will result in housing that is of a high quality and is appropriate in terms of size, amenity and cost for intended lower income households and achieves long-term, integrated and tenure-blind Affordable Housing outcomes in the City of Knox.

<sup>&</sup>lt;sup>1</sup> Subject to valuation



### Affordable Housing and Planning Negotiation Framework

Affordable Housing is defined by the *Planning and Environment Act 1987* (the Act) as "housing, including Social Housing, that is appropriate for the housing needs of any of the following - very low, low, and/or moderate income households" (Section 3AA(1)).

Eligibility for Affordable Housing delivered under the Act is set with reference to household income bands published annually by the State Government. A list of gazetted 'matters' provides a framework for assessing the appropriateness of a proposed built form for Affordable Housing (see Part 1).

The key criteria are that a dwelling should be:

- Appropriate in terms of tenure, dwelling type, size, amenity and location;
- Affordable in terms of rent or mortgage repayments, with the commonly accepted benchmark that lower income households should not pay more than 30 per cent of income on housing costs;
- Allocated to eligible households that earn below the government established income bands; and
- · Managed as Affordable Housing for an appropriate period.

The inclusion of Affordable Housing is not a mandatory planning requirement in Victoria.

Knox Affordable Housing Action Plan encourages "negotiation with developers for a voluntary contribution to social housing (of approximately 5%) on larger-scale development sites (on a case-by-case basis)". The Plan does not specify the form that the Affordable Housing is to be provided or the dwelling mix.

The State Government supports local governments to seek to negotiate and reach agreement with a landowner for the inclusion of Affordable Housing where appropriate and commercially viable. Each negotiation and agreed outcome is site-specific. The State has not set a percentage of delivery model that must be applied. VCAT precedent re-affirms that the details of agreement to include Affordable Housing must be voluntarily made and that approval of an amendment or a permit should not be withheld if an agreement to Affordable Housing cannot be reached.<sup>2</sup> An agreement with a landowner does not preclude Council seeking a different delivery arrangement on another site.

### **Key Considerations**

The development of the Affordable Housing offer took into consideration:

- Guidance established under the Act and by the State Government in relation to objectives and opportunities
  to facilitate Affordable Housing via the planning scheme;
- Council policy aspirations and pre-lodgement discussions with officers;
- Landowner requirements that the inclusion of Affordable Housing is reasonable, does not unduly impact on the project feasibility, and reflects that the landowner intends to sub-divide and sell lots (not develop built form).
- Evidence of Affordable Housing need in Knox and the dwelling typology estimated to be required to respond
  to demand and support affordability for priority groups over time;
- Housing Agency advice in relation to preferred lot typology and dwelling mix to respond to housing demand, objectives for any development to achieve Liveable Housing 'Silver' Standard, and capacity and experience to fund the construction;

Victoria Government Department of Environment, Land, Water and Planning (2020) <a href="https://www.planning.vic.gov.au/policy-and-strategy/affordable-housing">https://www.planning.vic.gov.au/policy-and-strategy/affordable-housing</a>, accessed February 2020



- Importance of ensuring integration of Affordable Housing in the neighbourhood, meeting the zoning, character, and design requirements and that housing for lower income and potentially vulnerable persons is not identified on plans or by design;
- Examples of Affordable Housing delivery arrangements in Victoria, particularly where land is provided to a Registered Housing Agency to develop; and
- State Government investment opportunities for Housing Agencies to access funding.

### **Affordable Housing Proposal**

Subject to approval of the rezoning and subdivision for 138 lots, the landowner proposes to enter an Affordable Housing agreement with Council to facilitate the provision of Affordable Housing by way of the gifting of land to accommodate at least 5 per cent of the site's total residential lots at nil consideration to a Registered Housing Agency for development and management by the Housing Agency as Affordable Housing.

The landowner also commits meet the reasonable costs of a Housing Agency appointed architect to prepare plans for the lots for planning lodgement.

Serviced lots will be transferred upon within 90 days of the registration of the plan of subdivision.

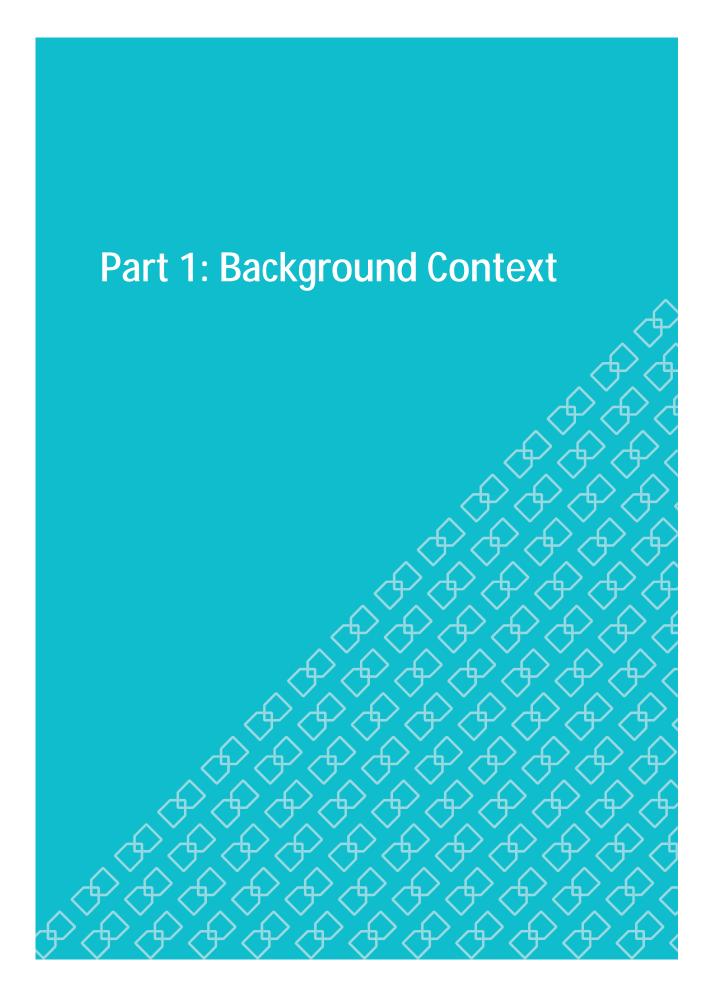
In accordance with the Act, the Affordable Housing agreement will be reflected within a Section 173 Agreement. Draft terms are set out at Attachment 1.

### The proposal will:

- Result in 5.8 per cent of the total residential development lots being realised as Affordable Housing;
- Meet the objective of Council that at least 5 per cent of significant developments is Affordable Housing and that these dwellings are "non-profit housing owned and managed for the primary purpose of meeting social objectives such as affordable rents, responsible management, security of tenure and good location in relation to employment services;" 3
- Result in high quality, architecturally designed dwellings that will adhere to design guidelines, reflect the neighbourhood character and achieve a high standard of liveability and environmental performance;
- Support greater housing diversity in the City of Knox through the development of two-bedroom dwellings;
- Align to the land lot sub-division delivery approach for the development of the Site;
- Support realisation of a commercially viable development;
- Transfer significant value in the form of land to a not-for-profit Registered Housing Agency, which in turn supports attraction of funding and/or financing towards construction; and
- Result in high quality, integrated Affordable Housing suitable to address local need.

<sup>&</sup>lt;sup>3</sup> Knox Affordable Housing Action Plan 2015 – 2020





### **Affordable Housing Overview**

The 'facilitation' of the provision of Affordable Housing is an objective of the *Planning and Environment Act 1987*, defined as:

'Affordable Housing is housing, including social housing, that is appropriate for the housing needs of any of the following - very low income households; low income households; moderate income households.'

A range of programs fall within the Affordable Housing spectrum (Figure 1).



Figure 1: Housing Spectrum (Source: Affordable Development Outcomes)

Household income bands and a list of 'matters that are required to be given regards to' when determining the appropriateness of the intended built form and subsequent housing allocation are gazetted under the Act (Table 1 and Figure 2). Income bands are updated annually.

Household type	Very Low Income	Low Income	Moderate Income
One adult	<\$26,090	\$26,091 - \$41,750	\$41,751 - \$62,610
Couple	<\$39,130	\$39,131 - \$62,620	\$62,621 - \$93,920
Family	<\$54,780	\$54,781 - \$87,687	\$87,688 - \$131,500

Table 1: Affordable Housing Income Ranges, Greater Melbourne, 2020/2021



Figure 2: List of Matters required to be considered to determine appropriateness of built form for Affordable Housing



### Why is Affordable Housing Required

Access to an adequate standard of living, including housing, is foremost a human rights issue. Without appropriate shelter, a person's ability to live and participate in their society to their full potential is significantly decreased. This is recognised in Council plans and Affordable Housing Action Plan.

Affordable Housing is required to accommodate diversity in a community, to maintain social cohesion and to support and sustain local economies with a range of services and businesses.<sup>5</sup>

Access to appropriate and Affordable Housing that is well located is critical to economic productivity and the efficient functioning of a city. Without local Affordable Housing it is difficult for key employment sectors to attract and retain employees or workers are face significant time and cost pressures to access employment. This has wider implications on family functioning and environmental impacts due to an increase in car usage.

A lack of Affordable Housing therefore has negative impacts from both a social and economic viewpoint and is critical economic and social infrastructure.

The provision of, and safeguards to protect sufficient appropriate and adequate Affordable Housing supply has significant social and economic benefits for individuals, families, the wider community and the economy, with established linkages with households':

- Health and wellbeing;
- Capacity to participate in education and the workforce;
- Rates of family violence;
- Level of reliance on social supports and high cost welfare services; and
- Participation in society.

### Who Requires Affordable Housing

People across all life stages can find themselves in need of Affordable Housing at any time due to limitations on their income generating capacity. This may be a long-term constraint (for example, persons who are aged, disabled, suffer from chronic ill health or are a primary carer and therefore unable to work), or a short-term issue, for example, because of loss of employment, family violence or family breakdown, short-term illness or disability.

There is also a range of low paying and increasing casual jobs that do not provide a significant income, particularly for single persons or sole parents.

Council has forecast that an additional 860 social housing dwellings are needed in Knox by 2036 to meet minimum requirements, as well as more diverse and affordable housing options generally.<sup>6</sup>

Very low and low-income households are traditionally the key target group for Affordable Housing. Social Housing is the primary program response to these housing needs. Social Housing is housing owned and/or managed by either the State Government or a Registered Housing Agency ('community housing organisation').

 $<sup>^{\</sup>rm 6}$  Knox Affordable Housing Action Plan 2015 – 2020



<sup>&</sup>lt;sup>4</sup> ICESCR, Article 11 quoted in statement from <a href="http://www.humanrights.gov.au/our-work/rights-and-freedoms/projects/housing-homelessness-and-human-rights">http://www.humanrights.gov.au/our-work/rights-and-freedoms/projects/housing-homelessness-and-human-rights</a>

<sup>5</sup> University of Melbourne, Melbourne School of Design - Transforming Housing (2016) Affordable Housing for All. Melbourne: Faculty of Architecture, Building and Planning, University of Melbourne; 2016.

### **Development, Planning and Policy Context**

### **Development Overview**

The planning application is for the rezoning of the site from Special Use Zone 2 to Neighbourhood Zone and the subdivision of the land to accommodate a total 138 residential lots (Figure 3). A Schedule to the Zone and Design Guidelines are proposed to apply. 5 per cent of lots equates to 6.9 dwellings.



Figure 3: Proposed Subdivision Master Plan, January 2023

### State Government Legislation, Policy and Investment

The *Housing Act 1983* and the *Planning and Environment Act 1987* are the key legislative frameworks governing Affordable Housing delivery and management in Victoria. The focus of the *Housing Act* is on the delivery and management of Social Housing for very low income households including the regulatory system for not-for-profit housing agencies who own and/or manage Social Housing ('Registered Housing Agencies').

In November 2020, the State Government announced a \$5.3b investment package to renew public housing and invest in new Social and Affordable Housing. The program includes:

- $\bullet \qquad \text{Government spot-purchase of under construction or ready-to-construct dwellings from the private sector};\\$
- \$1.38 billion in capital funding to Registered Housing Agencies to develop land or acquire an estimated 4,400 new properties, further supported by low-cost loans;
- Funding to support new Affordable Housing supply delivered in partnership with the private and not-forprofit sectors;
- New planning controls to facilitate the fast-tracking approval of Affordable Housing dwellings; and
- A commitment to develop a 10-year strategy and a compact with Local Government.

Funding will be allocated on a competitive tender process with the first funding rounds now open to Registered Housing Agencies to apply. The government has indicated that proposals from Housing Agencies where land is gifted are encouraged, noting they will reduce the funding requirements and provide high degree of certainty as to development progression.



### Planning Requirements for Affordable Housing

The facilitation of the provision of Affordable Housing is an objective rather than a mandatory requirement under the Victorian *Planning and Environment Act 1987*.

The objective is referenced with regards to a definition and objectives and strategies within the State Planning Policy to increase housing choice in terms of type, tenure and cost and encourage a proportion of new development to be affordable for households on very low to moderate incomes.

State Government supports councils to seek to negotiate and reach agreement with a landowner in relation to Affordable Housing inclusion where the planning and development circumstances are appropriate; there is established evidence of housing need; and the outcome is viable and accepted by the landowner.

State Government guidelines emphasise:

- "The decision to enter into negotiations and conclude an agreement is voluntary. A planning condition in relation to Affordable Housing delivery must have the explicit written agreement of the landowner. Parties may elect to cease negotiations at any stage" ;
- Council should establish a clear strategic justification for Affordable Housing with regards to local need;
- Council should be cognisant of commercial requirements of landowners and developers and establish a value share proposition to support feasibility of Affordable Housing; and
- Approval of an amendment of permit should not be withheld if an agreement to Affordable Housing cannot be reached.<sup>8</sup>

The definition, income ranges and list of 'matters' (Figure 2) provide the framework for a landowner and Council to determine that a proposal will achieve an appropriate built form outcome suitable for use as Affordable Housing.

### **Knox Council Policy**

The *Knox Affordable Housing Action Plan 2015 – 2020* outlines objectives and actions to improve housing affordability in Knox. A key focus of the Action Plan is to increase the supply of Social Housing for the most disadvantaged and vulnerable households.

The Action Plan notes:

"The Planning Scheme can only encourage the provision of social housing – there is currently no means of specifying the provision of social housing within the Planning Scheme. However, it can be negotiated during the process of amending the Knox Planning Scheme to rezone land for residential use."

Since publication of the Action Plan the State Government has made the above mentioned legislative changes and confirmed Affordable Housing may only be agreed not mandated for inclusion.

Council documents define Social Housing as:

"non-profit housing owned and managed for the primary purpose of meeting social objectives such as affordable rents, responsible management, security of tenure and good location in relation to employment services. The term encompasses public housing and includes housing owned or managed by the community. This housing should be well-located and appropriate to the needs of a given household".

<sup>&</sup>lt;sup>9</sup> City of Knox (2011) Defining affordable housing and a minimum supply of social housing for Knox, September 2011



<sup>&</sup>lt;sup>7</sup> Victoria Government Department of Environment, Land, Water and Planning (2020) <a href="https://www.planning.vic.gov.au/policy-and-strategy/affordable-housing.">https://www.planning.vic.gov.au/policy-and-strategy/affordable-housing.</a> accessed February 2020

<sup>8</sup> Victoria Government Department of Environment, Land, Water and Planning (2020) <a href="https://www.planning.vic.gov.au/policy-and-strategy/affordable-housing">https://www.planning.vic.gov.au/policy-and-strategy/affordable-housing</a>, accessed February 2020

The *Planning and Environment Act 1987* has since incorporated the definition of Affordable Housing set out page 6 that takes precedence in a planning negotiation. This definition notes that Affordable Housing *includes Social Housing*, defined as either public housing or housing owned and/or managed by a Registered Housing Agency.

### **Developing Affordable Housing**

The delivery and development of Affordable Housing requires land, planning approval, development and construction expertise, funding and financing, and an organisation with capacity and expertise in management and regulation of outcomes.

Land is a critical element. Housing Agencies are limited in their ability to secure new land due to the high cost and competitive nature of the land market in established areas. Gifted land provides a Housing Agency with considerable benefit both in terms of asset value and opportunity to increase housing supply.

Housing Agencies that have secured land at nil cost have a strong equity position supporting financing and funding applications, control over design and delivery, including environmental and accessibility standards, architectural standards and builder quality and cost, and an enhanced capacity to apply equity to support development costs, thereby reducing subsidy requirements.

Funding is available under the State 'Big Housing Build', with the next funding round expected to occur in mid-2021 for projects that will be constructed between 2022-2025. Funding rounds beyond 2021 are to be confirmed.

Planning approval for Affordable Housing is progressed under Clause 52.20 for projects funded under the Big Housing Build. This clause provides exemptions for Affordable Housing projects whilst also setting high standards in terms of design and amenity. Council must be consulted on any permit application under this clause.

### **Housing Agency Requirements and Interest**

The development of the proposal involved engagement with two registered Housing Agencies to test interest, site and dwelling options and capacity to progress the development should land be gifted. Key feedback included:

- Strong interest in receiving land and managing the costs and development of the built-form;
- Preference to control the design and development;
- Preference for a mix of two and three bedroom dwellings following an initial assessment of demand, location, product typology within the zoning controls and costs and revenue analysis. Potential for a one-bedroom unit was also noted;
- Objective that dwellings would be designed to meet the Liveable Housing Design Standard 'Silver' standard;
- Acknowledgement of the proposed zoning and the subsequent impact in terms of height and requirements in relation to meeting neighbourhood character, dwelling typology and design expectations.

Agencies consulted indicated a strong interest and capacity to directly fund or source funding and/or financing for the construction. The land transfer provides the Housing Agency with a strong equity position which will support borrowings and attraction of funding by government.

### **Examples of Land Gifting and Delivery**

Examples where land has been or will be gifted to a Housing Agency include:

Provision of 5% Affordable Housing formed part of Knox Council's sale of land at Stamford Park to Stockland. To realise this outcome Stockland has entered an agreement with a Housing Agency for land to be provided for 9 dwellings (4.7%), comprising a mix of apartments and townhouses, with delivery in 2020 and 2021. The Housing Agency is responsible for securing funding for construction to be undertaken by Stockland.



- Subject to rezoning approval, a commitment to land to be gifted to a Housing Agency to accommodate 5% of
  dwellings as part of the rezoning of industrial land in Glen Eira. Total development is for 3,000 dwellings within
  a mixed-use development, with a minimum three parcels of land to be gifted to a Housing Agency to secure
  funding and finance and develop. Each land parcel is expected to accommodate up to 50 apartments. An
  agreement has been entered by the landowner and a Housing Agency to support transfer of the first land
  parcel and an application for government funding.
- Drill Hall, Melbourne the City of Melbourne gifted the former Drill Hall to a Registered Housing Agency who subsequently secured Federal and State Government grant funding to restore the hall and develop 58 units for Affordable Housing.
- Storey Drive, Packenham Cardinia Shire Council provided land at a substantial discount to a Registered Housing Agency that has since secured funding and financing to develop 4 x 3-bedroom and 3 x 2-bedroom dwellings.

### **Delivery Process – Norvel Estate**

The process of the Affordable Housing outcome being realised will include the following key steps and milestones:



\*Note steps could occur concurrently or in slightly amended order. Intention is that planning approval is granted in line with timing for title to be transferred to enable progress to development.

To provide comfort in relation to delivery timeframes:

- The landowner will commit to the titles to be transferred to a Housing Agency within 90 days of registration of the plan of subdivision;
- The agreement between the landowner and selected Housing Agency will require the Housing Agency to apply best endeavours to secure planning approval within 12 months of the title transfer and commence construction within 12 months of receipt of a planning permit;
- Planning permit approval will be assessed under Clause 52.20 of the Victorian Planning Scheme.

In addition to transferring the serviced lots, the landowner will meet the Housing Agency appointed architectural costs up to the point of planning lodgement.



# Part 2: Affordable Housing Proposal

### **Proposal**

Subject to approval of the rezoning and subdivision for 138 lots, the landowner agrees to facilitate the provision of Affordable Housing by:

- Gifting serviced land to accommodate at least 5 per cent of the site's total residential lot yield to a Registered Housing Agency at nil consideration for development and management as Affordable Housing;
- Transferring the lots to the Housing Agency within 90 days of the registration of the plan of subdivision; and
- Meeting the reasonable architectural costs of a Housing Agency appointed architect to prepare plans for planning lodgement.

Lots 33 - 40 of the land subdivision master plan have been identified for transfer. These lots have capacity to support development of 8 dwellings (5.8% of total yield), exceeding Council's policy aspirations for 5% Affordable Housing.

In accordance with the Act, the Affordable Housing agreement will be reflected within a Section 173 Agreement. Draft terms for consideration of Council are set out at Attachment 1.

### Alignment to Gazetted 'Matters' to Ensure Appropriateness

The Act requires consideration that Affordable Housing will be appropriate for the intended household recipients in terms of a range of 'matters' published by Government Gazette (Figure 2).

The proposal addresses each of these matters as follows:

Matter	Project Response and Alignment
Response to Housing Need	The provision of land will result in at least 5% of total dwellings being developed and available to very low, low or moderate income households to rent.
	An assessment of Affordable Housing demand indicates:
	<ul> <li>Approximately 2,822 lower income households (earning in the bottom 40 per cent of household incomes) were in rental stress in 2016, representing 26.5 per cent of all households in the rental market;<sup>10</sup></li> </ul>
	<ul> <li>Affordability of the private rental market for very low income households has declined significantly over time, with only 2.9 per cent (99 dwellings) of all private lettings made available to rent in 2019 for Knox City households on a statutory (government) income.<sup>11</sup></li> </ul>
	<ul> <li>Knox has limited housing diversity, with a mismatch between existing dwelling supply (1.9 per cent of dwellings had zero to one-bedrooms and 12 per cent had two-bedrooms) and household composition (43.7 per cent of households are lone (single) persons and couples without children) 12.</li> </ul>
	Registered Housing Agencies have advised that a mix of two and three bedroom dwellings will best respond to their evidence of demand in the area and the expected dwelling typology and size.
Location	The location has been identified by Council as a strategic site for rezoning and appropriate for Affordable Housing.
	Registered Housing Agencies have noted that as a new estate the closest bus infrastructure is approximately 800 – 900 m walk but have indicated that the location will support lower income households that either do not need to rely on public transport for daily travel requirements, or that will have a car. Agencies have expressed strong interest in receiving the land and developing in this location.

<sup>12.</sup> id Consulting, 2020, Dwelling Type, Number of Bedrooms, Household Type, Community Profile, City of Knox



<sup>&</sup>lt;sup>10</sup> .id Consulting, 2020, Rental Stress, Social Atlas, City of Knox

<sup>11</sup> Department of Health and Human Services, 2020, Affordable Lettings by Local Government Area – December quarter 2019 and Author Analysis

Matter	Project Response and Alignment
Туре	The resulting dwellings will be either attached townhouses or free-standing dwellings (or a combination) expected to comprise a majority two and three bedrooms which are appropriate for small families, single persons and couples and that fit within the neighbourhood character and zoning requirements.
Affordability	The dwellings will be affordable for tenants as they will be owned and managed by a registered Housing Agency that has policy requirements to ensure tenants do not pay more than 30% of their income on rent.
Tenure	The dwellings will be appropriate in terms of tenure for very low to moderate income households as they will be provided as rental housing offering which is established by the housing need analysis to be the most suitable housing response for these households.
Allocation	The dwellings will be owned and managed by a registered Housing Agency and will be allocated (rented) to households that meet required income eligibility requirements established by government. Housing Agencies are skilled in letting properties, confirming household eligibility and checking affordability benchmarks will be achieved. They are regulated by the State Government to provide this service.
Integration	The dwellings will be appropriately integrated into the development by way of being visually indistinguishable from market housing, with all housing required to meet the same design standards. Each dwelling will have at least one car space.
Longevity of housing outcome	The dwellings will be provided as Affordable Housing for the period they are owned by the Registered Housing Agency. In the future a Housing Agency could elect to sell and reinvest the proceeds in new Affordable Housing should housing demand change or the cost of renovating is determined to be prohibitive. This is part of regulated prudential asset management planning.

### **Benefits**

Provision of Affordable Housing has been proven to provide a range of economic and social benefits including:

- Savings from reduced reliance on health, justice, emergency services and social services for people
  experiencing homelessness or housing stress;
- Improved household health, capacity to learn and work, education outcomes and participation in social and economic activities; and
- Support for the expansion of key services such as hospital and education facilities by ensuring there is appropriate and affordable housing options for key workers and ancillary staff.

The inclusion of Affordable Housing dwellings is expected to support housing affordability for an estimated 117 people across a 40 year period who will benefit from lower rent and high quality amenity.<sup>13</sup>

### The proposal will:

- Result in an expected 5.8 per cent of the total development being realised as Affordable Housing;
- Meet the objective of Council that these dwellings are owned and managed by a Housing Agency as Affordable Housing for lower income households;
- Align to the land lot sub-division delivery approach for the development of the Site, whereby individual land lots will be transacted, and construction is the responsibility of each new landowner to select a design and builder:
- Be viable for the landowner to achieve and not unduly impact on the progression of the development;
- Transfer significant value in the form of land to a Registered Housing Agency that will support funding and/or financing to be secured to construct dwellings;

<sup>13</sup> Assuming an average of 2.2 persons per dwelling, assuming 8 dwellings, an average lease term of 6 years and a dwelling life-span of 40 years.



- Result in high quality, integrated Affordable Housing that meets the existing and preferred future character
  of the area, planning and design controls, Housing Agency design standards and the established local
  Affordable Housing need; and
- Provide a meaningful contribution of significant value to a Registered Housing Agency, enabling them to respond to local Affordable Housing need.



# **Attachment 1: Draft Section 173 Term Sheet**

Item	
Objective	Confirm the Affordable Housing arrangement agreed as a condition of rezoning.
Parties	Knox Council and Norvel Estate Pty Ltd
Definitions	To include definitions of:  - Affordable Housing (P&E Act)  - Registered Housing Agency  - Affordable Housing Lots  - Eligible Household  - Serviced Lot
Title Registered with Section 173 Agreement	The Section 173 Agreement applies to Title V9381 F081
Agreement	The landowner agrees to:
	<ol> <li>Gift at nil consideration Serviced Lots ('Affordable Housing Lots') suitable to accommodate at least 5 per cent of the site's total residential lot yield (a minimum 7 dwellings on the basis of a 138 lot subdivision), to a Registered Housing Agency.</li> </ol>
	<ol> <li>Meet the reasonable costs of an architect engaged by the Registered Housing Agency to develop dwelling plans for the Affordable Housing Lots to the point they are suitable for town planning lodgement.</li> </ol>
	<ol> <li>Prior to commencement of works, the landowner agrees to enter an agreement with a Registered Housing Agency confirming:         <ol> <li>The Serviced Lots to be transferred by the landowner;</li> <li>Anticipated timing of lot transfer, noting the requirement to transfer within 90 days of registration of the plan of subdivision);</li> <li>Terms in relation to payment of architectural services by the landowner;</li> <li>That the Housing Agency will apply for the exemption of stamp duty;</li> <li>That the Housing Agency commits do everything necessary from it is end, to assist the transfer the lot under its name and pay its conveyance fee etc to allow the transfer to take place;</li> <li>That the Housing Agency will do everything within its control to secure planning approval within 12 months of transfer of title and to secure funding and finance and commence construction within 12 months of the date of planning permit.</li> </ol> </li> </ol>
	4) Transfer the title of the nominated Affordable Housing Lots to the nominated Registered Housing Agency within 90 days of the registration of the plan of subdivision.
	5) Pay the costs for the preparation and registration of the agreement.
	Council agrees to:
	<ol> <li>Do all things necessary to assist in the discharge of the Section 173 Agreement once the Affordable Housing Lots are transferred to the Housing Agency.</li> </ol>
Termination of the Agreement	The Agreement will be automatically terminated once the title to the Serviced Lots has been transferred to a Registered Housing Agency.
Construction	The parties note that the design and construction of the Affordable Housing dwellings and the subsequent letting of dwellings to Eligible Household(s) is the responsibility of the Registered Housing Agency.  The parties note that the terms of transfer will include expectations that planning, and construction, is
	commenced within 24 months of transfer of title.



Item	
Failure to meet condition	Should the lots not be transferred to a Registered Housing within 90 days of the registration of the plan of subdivision the landowner must engage with Council as to the reasons for the delay and the steps to immediately rectify and progress the transfer.
	Should reasons and rectification not be agreed by Council, Council has the power of authority to enforce the transfer.





Arboricultural Assessment & Report Norvel Estate, Ferntree Gully

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April 2023

Prepared for:



#### Name and address of consultant

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#### 2 Instructions

2.1 The instructions provided to Treemap Arboriculture on 27/02/23 by were to provide a revised Arboricultural assessment and report for specific trees located on or adjacent to the subject site, the subject site being 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X).

#### 3 Introduction

- 3.1 The owners of the subject site are undertaking investigations to develop the property. As part of the design and application process, the owners are examining specific trees located on or near the site. This report examines the arboricultural matters associated with these trees.
- 3.2 Under AS4970-2009 (Australian Standard Protection of trees on development sites), the following report would be defined as an 'Arboricultural impact assessment'. The standard indicates that "The report will identify possible impacts on trees to be retained. The report will explain design and construction methods proposed to minimize impacts on retained trees where there is encroachment into the calculated TPZ."

# 4 Key Objectives

- 4.1 To undertake a general assessment of specific trees located on or adjacent to the subject site.
- 4.2 To provide an assessment of the subject trees with respect to their overall condition, structure, safety and suitability for preservation.
- 4.3 To provide recommendations on the suitability of the trees for protection, and provide approved methods of tree protection.

#### 5 Method

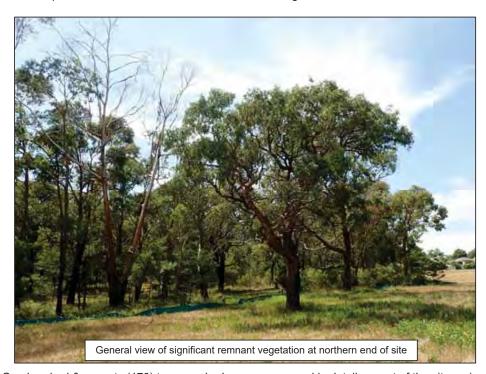
- 5.1 A site and tree inspection were conducted on Friday 10<sup>th</sup> February, 2017 and Wednesday 9<sup>th</sup> December, 2020.
- 5.2 The tree assessment consisted of a visual inspection, which was undertaken with regard to modern arboricultural principles and practices. The assessment did not involve a detailed examination of below ground or internal tree parts. The assessment was undertaken from the ground to determine health, structure, form and age class with measurements taken to establish trunk and crown dimensions. No tree samples or site soil samples were taken unless specified. The assessment provides ratings for particular tree attributes, which use broadly defined criteria (Refer to Appendix 2 for Tree descriptors). Trunk diameters for trees on adjoining land may be estimated due to site access limitations.

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- 5.3 The trees have been allocated a retention value which combines tree condition factors with functional and aesthetic characteristics in the context of an urban landscape. The retention of trees may not depend solely on arboricultural considerations; therefore, the ratings may act as a guide to assist in decisions relating to tree management and retention decisions.
- 5.4 A feature survey plan was provided by the client (Plan of Existing Conditions, prepared by H.J.Macey, Ref. no: 5607/EC, and dated 10/03/17). The assessed trees have been numbered on this plan and Tree Protection Zones have also been provided for all trees (Appendix 3).
- 5.5 A proposed site plan was issued for analysis (Site Plan Tree Removal & Retention prepared by Peddle Thorp, Ref:36-0125, TP058 & TP059, Revision F, dated 27/03/23). The assessed trees have been numbered on these plans and Tree Protection Zones have also been provided for all trees (Appendix 3a).

#### 6 Observations

6.1 The site under review presented as a large allotment consisting of multiple land parcels. The site was formerly a clay quarry. The property adjoins residential style properties to the east. Norvel Road frontage is located to the south and Castricum Place adjoins part of the western boundary. Blind creek adjoins the northern boundary with an access track / easement along the western boundary. The southern three quarters of the site is practically devoid of any vegetation. The northern quarter of the site contained a dense native indigenous forest.



6.2 One hundred & seventy (170) trees or shrubs were assessed in detail as part of the site review.

This included 110 trees on the subject site, 52 neighbouring trees and 8 street trees (Tree no. 105 does not exist in the survey). The detail of each individual tree assessment is provided in table format at Appendix 1. Tree numbers within the assessment table correspond to those provided on the feature survey (Appendix 3).

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- 6.3 The tree assessment conducted within the subject site only examined a proportion of the forested area to the north of the site. The tree assessment was focused towards larger trees (generally greater than 20cm in trunk diameter) at the interface between proposed changes associated with a residential subdivision. There were countless small specimens of *Acacia mearnsii* in the study area that were not examined or surveyed by this report.
- 6.4 Sections of the site are influenced by local vegetation controls. The northern section of the site is influenced a City of Knox Environmental Significance Overlay (ESO) and Schedule 2 to that Overlay (ESO2). This is based on a planning property report for the site being obtained from www. planning.vic.gov.au/ on 27/02/23. The schedules to each overlay states;

#### ESO<sub>2</sub>

A permit is not required to remove, destroy or lop vegetation that is:

- Not indigenous within Knox (e.g. Victorian species of Boronia or Grevillea).
- A tree with its trunk within two metres of the main roof structure of an existing building used for accommodation (excluding a fence).
- A tree overhanging the roof of a building used for Accommodation, excluding outbuildings and works normal to a dwelling. This exemption only allows the removal, destruction or lopping of that part of the tree which is overhanging the building consistent with the Australian Standard® AS 4373 – 2007, 'Pruning of amenity trees'.
- Grass within a lawn, garden or other planted area and is to be mown or slashed for maintenance only.
- Grass within existing pasture and is to be cut or grazed.
- The minimum amount necessary to maintain a Minor utility installation in accordance with a current signed Memorandum of Understanding between Knox City Council and the relevant service provider.
- Required to be removed for normal maintenance of artificial stormwater treatment ponds
   (except where the vegetation removal and/or associated works exceed one hectare in area, or
   where machinery access would result in damage to indigenous vegetation).
- Seedlings or regrowth less than three years old and the land is being maintained for established pasture, crops or garden.
- Woody plants on an existing dam wall.
- For maintenance pruning only and no more than 1/3 of the foliage of any branch is removed from any individual plant. This exemption does not apply to:
  - · Pruning or lopping of the trunk of a tree or shrub.
  - · Vegetation within a road or railway reserve.
- Trees that are native to Victoria might also be influenced by Clause 52.17 (Native vegetation) of the planning scheme because the site is larger than 0.4ha. There are exemptions under this clause whereby "No permit is required to remove, destroy or lop native vegetation to the minimum extent necessary if any of the following apply". The critical exemption in relation to this site is probably Planted Vegetation. The clause states at 52.17-7, Table of Exemptions;

**Planted vegetation**, Native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding.

This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.

Native vegetation is defined as 'Plants that are indigenous to Victoria, including trees, shrubs, herbs, and grasses' under the Definitions of the State Planning provisions – Clause 72.

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- 6.7 Approximately 107 trees are located within the footprint of Schedule 2 to the Environmental Significance Overlay (ESO2). The decision guidelines of this planning control would apply to the majority of trees in this zone.
- 6.8 The vast majority of trees would also be influenced by Clause 52.17 (Native vegetation) of the planning scheme because the site is larger than 0.4ha.
- 6.9 Amongst the 107 trees located on the site towards the northern natural forest area, the following species were identified:

Species	No. of trees
Eucalyptus cephalocarpa	64
Eucalyptus ovata	21
Eucalyptus obliqua	8
Eucalyptus radiata	6
Eucalyptus fulgens	4
Eucalyptus macrorhyncha	3
Acacia melanoxylon	1

The following retention values were assigned to the trees in this group.

Retention value	No. of trees
High	4
Moderate	52
Low	47
None	4

- 6.10 The neighbouring trees and street trees examined as part of the assessment included mostly exotic and introduced native trees and shrubs. The retention value of the majority of these plants was 'Low'. There are some large indigenous trees located on the neighbouring land to the west of the site that would need to be considered in the design response, where site changes are proposed near them.
- 6.11 The most recent site inspection (December 2020) revealed some neighbouring trees and street trees have been removed.
  - 6.11.1 Neighbouring tree 132, 138, 140, 145, 154 & 156 have been removed.
  - 6.11.2 Street tree 165 & 166 have been removed.

# 7 Discussion

The Australian Standard (AS4970-2009) – 'Protection of trees on development sites' puts forward a process for undertaking tree inspections and reports on property where development is being considered. It recommends a preliminary assessment be undertaken to help guide planners and property owners with regard to the preservation of existing trees; that is trees on the site or adjoining land that might contribute to the completed proposal. The standard points out that the preliminary report 'information is to be used by planners, architects and designers, in conjunction with any planning controls and other legislation, to develop the design layout in such a way that trees selected for retention are provided with enough space'.

These assessments often reveal a range of trees with varying attributes for health, structure and overall value. Some trees may be considered insignificant for their size, age, species type or condition, but they might still be considered for retention because they are situated conveniently on

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the site. Conversely, some trees may be exceptional for various reasons but there may be no scope for their retention because of their location or other site constraints. An objective of the tree assessment is to determine the trees that may be preferable, in terms of preservation, and to identify poor or insignificant trees that might be easily replaced or replaced with better species. Trees on neighbouring land are considered during this assessment phase.

The arborist must exercise judgement and expertise with respect to the types of trees that are deemed suitable for retention, and they should also consider what stage the tree is at in its overall lifecycle.

The subject site contained a large number of significant trees towards the northern quarter of the property. The northern section of the site contains intact remnant forest, which continues northwards to the Blind Creek Reserve.

The subdivision plans provided indicate the major site changes will occur within the vacant and unencumbered land to the south of the remnant forest. A very small number of trees are influenced by the proposed subdivision layout. Trees 1-4 are located adjacent to proposed site changes.

Tree 1 - Eucalyptus cephalocarpa (Mealy Stringybark) is not exposed to any Tree Protection Zone encroachment from the building footprint for the dwelling on Lot 138.

Tree 2 - Eucalyptus cephalocarpa (Mealy Stringybark) is not exposed to any Tree Protection Zone encroachment from the building footprint for the dwelling on Lot 138.

Tree 3 - Eucalyptus cephalocarpa (Mealy Stringybark) is exposed to Tree Protection Zone encroachment of less than 10% of the TPZ area from the building footprint for the dwelling on Lot 138. This is considered minor encroachment.

Tree 4 - Eucalyptus cephalocarpa (Mealy Stringybark) is exposed to Tree Protection Zone encroachment of approximately 10% of the TPZ area from the roadway in front of Lot 138 and the building footprint for the dwelling. This is considered minor encroachment.

A large proportion of the remnant forest trees were assigned arboricultural retention values of 'Moderate' and this collection of trees would have broader environmental values, as reported by any ecological assessments conducted on the site.

A further factor that may influence the proposed development of the subject site will be the design in the vicinity of the neighbouring trees and street trees.

All of the assessed trees on neighbouring land have been indicated at Appendix 3 with their respective Tree Protection Zone and Structural Root Zone. This plan has also been issued to the client in electronic format and these layers have been added to the proposed plans.

Street tree 164 - Eucalyptus nicholii (Narrow-leaved Peppermint) is proposed to be removed to allow the installation of crossovers for Lot 1 & Lot 32. Street trees 165 & 166 - Lagerstroemia indica (Crape Myrtle) have already been removed.

Street trees 167 & 169 are proposed to be removed to allow the installation of crossovers for Lot 63 & 64.

Street trees 168, 170 & 171 have been provided adequate clearance and no harm is predicted to them from the design, or the proposed crossovers near them.

There is a low risk of Tree Protection Zone encroachment towards any neighbouring trees from building envelopes associated with the subdivision. The neighbouring trees are distant from the proposed building footprints. The greatest risk towards trees on neighbouring land would be the provision of sewer and drainage services that might be located in easements near the site boundary. The impact of these services towards neighbouring trees would need to be examined on a case by case basis.

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A pedestrian / bike path is proposed in the easement to the west of the site. Tree 140 has already been removed. The pedestrian / bike path also passes through the Tree Protection Zone of multiple trees along this alignment. The proposed design and method of construction for this path will have a significant bearing on the likely impact towards adjacent trees.

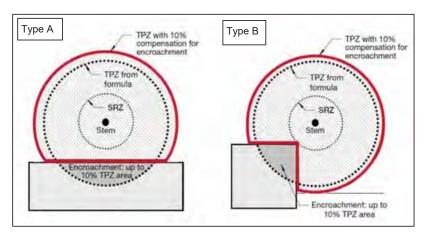
There are no other significant Tree Protection issues relating to trees on adjoining land.

# 7.1 Tree protection zones on development sites

The level of encroachment and the impact to specific trees can be estimated by comparing standard or modified tree protection clearances with those clearances provided to trees in the development design (as discussed above). The overall impact towards a specific tree will be based on the severity of encroachment into the respective tree protection zones. The degree of root activity in the tree protection zone can vary significantly because of existing conditions, which can result in more or less severe impacts to trees. The most accurate means of determining root activity in these zones is to undertake subsurface root investigations. The alternative to undertaking root investigations is to assign appropriate tree protection zones.

This report adopts AS4970-2009, Australian Standard – Protection of trees on development sites as the preferred tree protection method. The method provides a tree protection zone and a tree protection fencing distance (radial measurement from trunk centre) by using the width of the trunk at 1.4m above ground multiplied by 12. The prescribed TPZ distances are provided for each tree in Appendix 1 and tree protection zones are indicated for specific trees at Appendix 3 & 3a.

There is scope to reduce the tree protection zone by an area of 10% without further investigations. The rationale for any reduced tree protection distance is detailed in AS4970-2009 (*Australian Standard – Protection of trees on development sites*). Under encroachment Type A, it is acceptable to reduce the Tree Protection Zone (TPZ) area by 10%. This translates to a reduction in radial clearance distance of approximately 33% on one side of the tree only. This can be applied if there is contiguous space around the tree for root development to occur. The following diagram, from AS4970-2009, is provided to illustrate the approach.



There are vegetation controls that apply to the subject site, and there are more than 100 trees that need consideration under the ESO2 vegetation control.

There are 4 street trees and 42 neighbouring trees that require consideration in the design response.

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### 8 Recommendations

- 8.1 The most recent site inspection revealed some neighbouring trees and street trees have been removed.
  - 8.1.1 Neighbouring tree 132, 138, 140, 145, 154 & 156 have been removed.
  - 8.1.2 Street tree 165 & 166 have been removed.
- 8.2 Of the 110 trees recorded on the site, there are 107 trees that are located within the footprint of Schedule 2 to the Environmental Significance Overlay (ESO2). The decision guidelines of this planning control would apply to a large proportion of trees.
  - 8.2.1 Tree 1 *Eucalyptus cephalocarpa* (Mealy Stringybark) is not exposed to any Tree Protection Zone encroachment from the building footprint for the dwelling on Lot 138.
  - 8.2.2 Tree 2 Eucalyptus cephalocarpa (Mealy Stringybark) is not exposed to any Tree Protection Zone encroachment from the building footprint for the dwelling on Lot 138.
  - 8.2.3 Tree 3 Eucalyptus cephalocarpa (Mealy Stringybark) is exposed to Tree Protection Zone encroachment of less than 10% of the TPZ area from the building footprint for the dwelling on Lot 138. This is considered minor encroachment.
  - 8.2.4 Tree 4 *Eucalyptus cephalocarpa* (Mealy Stringybark) is exposed to Tree Protection Zone encroachment of approximately 10% of the TPZ area from the roadway in front of Lot 138 and the building footprint for the dwelling. This is considered minor encroachment.
- 8.3 Tree 124 & 125 are environmental weeds recorded along the eastern boundary of the site and they are recommended for removal. A permit is not required to remove these weeds.
- 8.4 Street trees 167 & 169 are proposed to be removed to allow the installation of crossovers.
- 8.5 Summary of proposed tree removals (4 trees)

Type of tree	Tree no.	Permit or permission required
Reserve tree		
Street tree (3)	164, 167 & 169	Yes - council
Neighbouring tree	None	

- 8.6 One hundred and seven trees (107) are retained.
- 8.7 Street trees 168, 170 & 171 have been provided adequate clearance and no harm is predicted to them from the design, or the proposed crossovers near them.
- 8.8 There is a low risk of Tree Protection Zone encroachment towards any neighbouring trees from building envelopes associated with the subdivision. The neighbouring trees are distant from the proposed building footprints. The greatest risk towards trees on neighbouring land would be the provision of sewer and drainage services that might be located in easements near the site boundary. The impact of these services towards neighbouring trees would need to be examined on a case-by-case basis.
- 8.9 A pedestrian / bike path is proposed in the easement to the west of the site. Tree 140 has already been removed. The pedestrian / bike path also passes through the Tree Protection Zone of multiple trees along this alignment. The proposed design and method of construction for this path will have a significant bearing on the likely impact towards adjacent trees.
- 8.10 Any vegetation in the study area that was not assessed as part of this report was considered insignificant, generally undesirable or sufficiently clear of any expected works.

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8.11 Any proposed development on the site should make provision for landscaping and the planting of new trees.



# 9 References

Australian Standard AS 4970, 2009. Protection of trees on development sites. Standards

# 10 Definitions

The TPZ and SRZ are defined in AS4970-2009, Australian Standard – Protection of trees on development sites as:

# Tree protection zone (TPZ)

A specified area above and below ground and at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development.

# Structural root zone (SRZ)

The area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres. This zone considers a tree's structural stability only, not the root zone required for a tree's vigour and long-term viability, which will usually be a much larger area.

Appendix 1

Page 1 of 3

У сос	580	280	280	280	28	280	280	780	2000	2000	200	080	280	5807	5807	5807	5807	2807	5807	5807	5807	5807	580	280	580	280	580	280	280	3 2	20 20	3 2	9 9	200	3 2	200	3 8	5 6	3	580	280	280	280		280	280	280	280	280	280	280	20 20	280	280	580	280	280	280		5807			Š	2000	280	580	580	280	580	280.	280	280	280	280	280	280	280	280	580
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AS4970 (m)		2.67	3.15	2.94	3.13	2.20	2.75	2.75	2,13	0 0	2.04	70.2	Z:01	1.92	2.07	1.85	1.75	1.95	2.10	2.16	1.75	1.85	2.24	2.41	234	2.27	270	175	287	2.70	2.12	2.10	1 70	2.70	2.30	1 95	00.0	2000	70.7	2.39	1.67	2.42	2.75		1.89	2.89	2.16	2.16	2.01	3.06	2.72	2.30	2.50	3.13	1.78	2.41	2.70	3.05	2.67	2.43	2.70	3.20	C.	7.09 6.07	2.23	2.18	175	2 13	183	2,65	257	2.59	2.61	2.94	2:03	2.01	2.74	1.78	2.01
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COMMON NAME	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	Narrow-leaved Peppermint	Mealy Strinovbark	Mealy Stringybark	Mealy Stringsbark	Mooly Stringhoulk	Mealy Stilligybair	Swamp Gum	Narrow-leaved Peppermint	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	Narrow-leaved Peppermint	Narrow-leaved Peppermint	Narrow-leaved Peppermint	Mealy Strinovbark	Narrow-leaved Peppermint	Mealy Stringybark	Mealy Strinovbark	Swamp Gum	Swamp Gilm	Mealy Strinovbark	Swamp Gilm	Mealy Strinovbark	Mealy Strinovbark	Mooly Christybalk	Mealy Stringybalk	Mealy Stringybalk	Mealy Stringybalk	Mealy Stringybalk	Mediy Stilligybalk	Mealy Stringsbalk	Mealy Stringybark	Mealy Stringybalk	weary Sumgybarn	Mealy Strinovbark	Blackwood	Messmate Stringvbark	Swamp Gum		Swamp Gum	Messmate Stringybark	Swamp Gum	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	Swamp Gum	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	Swamp Gum	Mealy Stringybark	Mealy Stringybark	Messmate Stringybark	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	Mealy Stringybark	d	Mooly Stringshork	Mealy Stringybalk	Mealy Strinovbark	Mealy Strinovbark	Mealy Stringybark	Mealy Strinovbark	Mealy Strinovbark	Mealy Strinovbark	Messmate Stringybark	Messmate Stringybark	Messmate Stringybark	Messmate Stringybark	Messmate Stringybark	Stri	Mealy Stringybark	Mealy Stringybark
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Appendix 1

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Detail
Tree Assessment
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RETENTION VALUE		Moderate			Т	Moderate		e		T	T	T		Moderate		a		Low	Moderate	Low		Moderate	Ì	1			Low	T		Low	Low	Low	Low	None		Low	Low			None				Low			T	Low			None		Moderate	Moderate	Moderate	Low		Low	Moderate	None	Low	LOW	Low							1	t	Low		None	
TREE TYPE R	ndigenous	denous	+	+	╫	Indigenous	+	Indigenous	+	+	Indipendis	+		denous	ndigenous	ndidenous	ndigenous	idenous	ndigenous	Indigenous		ndigenous	ndigenous	Indigenous	denous	genons	Indigenous	evergreen	5	deciduous	Exotic evergreen	lian native	evergreen	Australian native		Australian native	lian native	deciduous	evergreen	evergreen	deciduous	ge.	ralian native	Australian native	deciduous	decidnous	lian native	Australian native	lian native	genous	Exotic deciduous	evel gledel	snouab	Indigenous	ndige nous	deciduous	deciduous	Exotic deciduous	genous	Indigenous	strallan native	nugerious ofic evergreen	Indiaenous		denous	Jalm	-alm	-alm	Palm	Palm	genous	Victorian native		Indigenous Exotic evergreen	
TRE	lndi	Indi	pu	indi	lpd	lud	Indi	DU I	ipdi	ipul	pu	p pu	pu	pu	pu	pu	lud	lpul	lnd	Indi		Indi	pul	ipi.	DU I	2 2	D P	Exotic	2	Exotic	Exotic	Austra	Exotic	Austra		Austra	Austra	Exotic	Exotic	Exotic	Exotic	Exotic	Austra	Austra	Exotic	EXOIIC	Austra	Austra	Austra	lndi	Exotic	LYON	Indi	ipul	indi	Exotic	Exotic	Exotic	Indi	lud.	Austra	Exotic	Indi		Indi		F	_		-	nd in	Victor		Exotic	
ULE COMMENT	to 30 years	to 50 years	to 50 years	30 to 50 years	50+ vears	Minor asymmetry 30 to 50 years	to 50 years	to 50 years	U years Near dead	o 15 years Hullin decay caliners	0 vears	to 30 wears	to 30 years	8	50 years	8	to 30 years	to 30 years	15 to 30 years	o 15 years   Major limbfall evidence and	associated wound	to 50	to 30 years	o 15 years In decline	0 years	to 30 years	15 to 30 years Upper Carropy defect	O Vears	o Jones	to 30 years	30 to 50 years	to 50 years	to 30 years	0 years		to 50 years	to 30	2	to 5 years	to 15 years	15 years	0 15	to 30 years	to 30 years	0 years	0 years	to 50 years	to 30 years Bifurcation with included bark	to 30 years	to 50 years	1 to 5 years	to so years	to 30	to 30	to 50 years	to 50 years	22	to 50 years	to 30 years Lost main leader	0 years Stump re-sprout	to 30 years Suppressed	15 to 30 years Topper fruity defect	o 15 years Crossing rubbing branches.	Bifurcation with included bark	0 years	to 50 years	00+ years	to 50 years	to 50 years		to 30 years Stump	5 to 15 years Borer damage, In decline 5 to 15 years In decline, Multi-stemmed from	base	0 years 15 to 30 years	
	ric 15 to 3	₹		20 00	2 .5	netry 30	netry 30	netry 30	nc no	in the	i i	nic 15	netry 15	ric 15 to				C				8	netry 15	netry 5 t	IIC	3i o	10 J	2 .5	2		l	l	1	1		30	15	ic 15	1	2	5	21	4	#	1								netry 15	netry	netry 30	metry 30 to	netry 30 to	netry 30	netry 15	etry	0 0	netry 15		·	netry	ic 30	ic 5	ic 30	ic 30	30	netry 15	netry 5 t	,	^	1
FORM	Asymmetric	Minorasymn	Asymmetric	Symmetr	Symmetr	Minorasymn	Minorasymn	Minorasymn	Asymmet	Asymmet	Asymmet	Asymmet	Minor asymmetry	Asvmmet	Symmetr	Asymmetric	Asymmetr	Asymmet	Symmetric	Asymmetric		Symmetr	Minor asymmetry	Minorasymn	Asymmet	Asymmet	Symmetric	Symmetr	9	Asymmet	Symmetr	Symmetr	Symmetr	Symmetric	,	Symmetric	Symmetr	Symmetr	Symmetric	Symmetric	Symmetr	Symmetr	Symmetric	Symmetric	Symmetr	symmetr	Symmetr	Symmetr	Symmetr	Symmetr	Symmetric	oyillieu oy	Minorasymn	Minorasymn	Minorasymi	Minorasymn	Minorasymn	Minorasymn	Minorasymn	Minorasymn	Asymmetri	Minorasvmn	Major asymmetry	major reform	Minorasymmet	Symmetr	Symmetr	Symmetr	Symmetr	Symmetr	Minor asymmetry	Minor asymmetry Minor asymmetry		Minor asymmetric Symmetric	
STRUCTURE	Fair to Poor	Fair	Fair	Fair	Good	Fair to Poor	Fair	Fair	Poor	Fair to Door	3				Fair to Poor	E	Fair to Poor	Fair to Poor	Fair	Poor		Fair	Fair	Fair	Poor	Poor	Fair	Fair	5	Fair to Poor	Fair to Poor	Fair	Fair to Poor	Fair to Poor		Fair	Fair	Fair	Poor	Poor	Fair	Poor	Fair	Fair	Poor	Fair	Fair	Poor	Fair	Fair	Fair	8	Fair	Fair to Poor	Fair to Poor	Fair	Fair	Fair to Poor	Poor	Very poor	Pair to Poor	Poor	Poor		Fair to Poor	Fair	Fair	Fair	Fair	Fair	Very Poor	Poor		Poor Fair	
НЕАГТН	Fair to Poor	to Poor	Fair to Poor	Fair	Pood	Fair	Fair	Fair	Very Poor	3	Dead	Fair to Poor	Fair	Fair	Good	Fair to Poor	Fair	Fair	Fair	Fair		Poor	5				in in			Fair	Fair	Fair	Fair	Fair		Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fall	Fair	Fair	Fair	Fair	Fair	B	Fair	Fair to Poor	Fair	Fair	Fair	Fair	Fair to Poor	Fair	Fair	Fair	Fair to Poor		Fair	Fair	Fair	Fair	Fair	Fair	Dead Fair to Boar	Fair to Poor		Dead	
AGE	Semi-mature	semi-mature	semi-mature	Maturing	semi-mature	Semi-mature	semi-mature	sem-mature	Maturing	Semi-mature	Maturing	Semi-mature	Semi-mature	semi-mature	semi-mature	semi-mature	Semi-mature	semi-mature	Maturing	Maturing		Maturing	semi-mature	Semi-mature	Maturing	Moturing	Semi-mature	Maturing	B. Inches	semi-mature	Maturing	Maturing	Maturing	Maturing	,	Maturing	semi-mature	Semi-mature	Semi-mature	Maturing	semi-mature	semi-mature	semi-mature	Semi-mature	sem-mature	sem-mature	Maturing	Maturing	Maturing	Maturing	Maturing	Matulling	Maturing	Maturing	semi-mature	Maturing	Semi-mature	Semi-mature	Maturing	Semi-mature	semi-mature	Semi-mature	Maturing		t	Maturing	Н	Н		+	$^{+}$	Maturing		Maturing	
HxW (m)	15x8 S		1	22x19	19x12	16x11 S	11x4 S			T	Т	T	13x4	19x11 S	19x12	18x11 S		11x3 S	20x20	23x15		<b>~</b>	T	T	Т	T	15v0	T			7×7			5x5		6x5				8x6			T	5x3			12x7	9x5	16x8	18x12	7x7	Š	16x12	16x11	1/x9	5x5	Т	П		10x7	Ť	t	t		19x18	7x5	6x3	7x5	7x5	7x5	2x1	5x6		1x8 5x5	
SRZ AS4970	2.24	2.34	2.46	3.13	2.63	2.31	1.78	45.2	1.75	1 83	3.18	2.13	1.89	2.34	2.75	2 29	1.75	1.78	3.35	2.85		3.06	1.92	1.89	2.89	0.00	2.4	234	5	1.55	2.07	1.95	1.77	1.55		1.63	1.50	1.55	1.55	1.87	1.50	2.07	1.55	1.55	1.55	1.75	2.57	2.46	2.46	2.67	1.92	2:40	2.53	3.29	2.70	1.92	1.63	1.51	3.01	1.78	1.59	175	3.47		3.52	1.98	2.46	1.98	1.98	1.98	2.24	2.07		1.75	
TPZ AS4970	T	4.80	5.40	9.60	6.36	4.68	2.52	4.80	2770	264	994	3.84	2.88	4.80	7.08	4.56	2.40	2.52	11.28	7.68		9.12	3.00	2.88	7.93	27.0	0.10	480	9	2.00	3.60	3.12	2.46	2.00		2.04	2.00	2.00	2.00	2.82	2.00	3.60	2.00	2.00	2.00	2.40	900	5.40	5.40	09'9	3.00	2	5.76	10.80	5.72	3.00	2.04	2.00	8.76	2.50	2.00	2.40	12.24		12.65	3.24	5.40	3.24	3.24	3.24	4.32	3.28		5.40	
DBH (cm)			45								31.56 (82.8)	32 (02.0)	24	40	25	38	20	21	94	64							37			15	30	26	15,14 (20.5)	15		17	10	15	15	5,15,10 (23.5)	10	30	12	15	15	70					25		48	06	20	25	17	10,10 (14.1)	73	0.8)		39			L					_	4	30		45 20	
COMMON NAME	Mealy Stringybark											Green Scenthark	Green Scentbark	Swamp Gum	Green Scentbark	Swamp Gum	Mealy Stringybark	õ	Swamp Gum	Swamp Gum			Red Stringybark	Red Stringybark	Ked Stringybark	Sugar Cum	Swamp Gum	Variedated Tarata	3335		ree			Crested Wattle		Red-flowering Gum		Almond, Cherry, Peach, Plum	Cape Broom	Loquat 15	Box Elder	Box Elder		Bottle Tree							Cherry-plum		Swamp	Swamp Gum	Yellow box	Apricot	Royal Paulownia	,	Swamp Gum	Swamp Gum		Kohuhu	Swamp Gum									Swamp Paperbark		Mealy Stringybark Chinese Hawthorn	
No SPECIES	Eucalyptus cephaloc		81 Eucalyptus cephalocarpa			1						Firest	Eucalyptus	94 Eucalvotus ovata	65 Fucalvalus fulgens	Ü	Eucalyptus	En		100 Eucalyptus ovata		Eucaly		103 Eucalyptus macrorhyncha			107 Eucalyptus ovata			110 Jacaranda mimosifolia	111 Arbutus unedo	l		114 Paraserianthes lophantha		115 Corymbia ficifolia	116 Banksia sp.	117 Prunus sp.	118 Genista monspessulana	119 Eriobotrya japonica	120 Acer negundo	Acer	T	123 Brachychiton sp.							130 Prunus cerasifera	Variedatum'	132 Removed	133 Eucalyptus ovata	134 Eucalyptus melliodora	136 Prunus armeniaca	ď	Removed	139 Eucalyptus ovata		Casuarna	142 Eddalypus Cepnalocalpa 143 Pittosponim tennifolium	Fucalvotus									152 Acacia melanoxylon 153 Melaleuca ericifolia		154 Removed 155 Photinia serratifolia	1

Appendix 1

Tree Assessment Detail for Norvel Estate, Ferntree Gully

_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Y coordinate			5807152.612	5807146.393	5807142.634	5807136.795	5807129.747	5807128.717	5807111.78	5807105.841	5806923.369	5806912.371	5806897.744	5806892.135	5806888.686		5806883.387		5806879.198		5806874.359
X coordinate			348052.566	348050.521	348048.385	348046.612	348044.344	348043.982	348042.316	348040.329	347994.919	348024.991	348062.881	348080.008	348087.132		348100.705		348112.059		348124.049
RECOMMEND X coordinate Y coordinate			Neighbour's tree	Neighbour's tree	Neighbour's tree	Neighbour's tree	Neighbour's tree	Neighbour's tree	Neighbour's tree	Neighbour's tree	Street tree	Street tree	Street tree	Street tree	Street tree		Street tree		Street tree		Street tree
RETENTION	VALUE		None	Low	None	Low	Low	Low	Low	None	Low	Low	Low	Low	Low		Low		Low		Low
TREE TYPE			Victorian native	Exotic deciduous	Exotic deciduous	Exotic deciduous	Exotic conifer	Exotic conifer	Victorian native	Australian native	Australian native	Exotic deciduous	Exotic deciduous	Exotic deciduous	Exotic deciduous		Exotic deciduous		Exotic deciduous		Exotic deciduous
COMMENT											5 to 15 years   Fungal bracket on lower trunk										
) ITE			0 years	15 to 30 years	15 to 30 years	15 to 30 years	15 to 30 years	15 to 30 years	5 to 15 years	0 years		15 to 30 years	15 to 30 years	15 to 30 years	15 to 30 years		15 to 30 years		15 to 30 years		15 to 30 years
FORM			Minor asymmetry	Minor asymmetry	Minor asymmetry	Minor asymmetry	Minor asymmetry	Minor asymmetry	Minor asymmetry	Minor asymmetry	Minor asymmetry	Minor asymmetry	Stump re-sprout	Minor asymmetry	Symmetric		Symmetric		Symmetric		Symmetric
STRUCTURE			Poor	Fair to Poor	Fair to Poor	Fair to Poor	Fair to Poor	Fair to Poor	Poor	Poor	Fair to Poor	Fair to Poor	Poor	Fair to Poor	Fair		Fair		Fair		Fair
HEALTH			Fair to Poor	Fair	Fair	Fair	Fair	Fair	Fair to Poor	Dead	Fair	Fair	Fair	Fair	Fair		Fair		Fair		Fair
AGE			Maturing	Semi-mature	Semi-mature	Semi-mature	Semi-mature	Semi-mature	Semi-mature	Maturing	Maturing	Young	Young	Young	Semi-mature		Semi-mature		Semi-mature		Semi-mature
HxW (m)			2x8	4x3	7x8	4×4	5x1	5x1	4×4	4x2	12x12	2x1	1x1	2x1	3x2		3x2		2x1		3x2
SRZ	AS4970	Œ	2.07	1.50	1.92	1.55	1.55	1.55	1.55	1.55	3.37	1.50	1.50	1.50	1.50		1.50		1.50		1.50
TPZ	AS4970	Œ	3.60	2:00	3.00	2:00	2:00	2:00	2.00	2:00	11.40	2:00	2:00	2.00	2:00		2.00		2.00		2:00
DBH (cm)			30	13	25	15	15	15	15	15	98	2	_	2	6		10		10		11
COMMON NAME			Gossamer Wattle	Sycamore	Box Elder	Common Pear	Juniper	Juniper	Swamp Paperbark	Gum Tree	Narrow-leaved Peppermint	Crape Myrtle	Crape Myrtle	Crape Myrtle	Freeman Maple		Freeman Maple		Freeman Maple		Freeman Maple
SPECIES			Removed	Acer pseudoplatanus	Acer negundo	Pyrus communis	Juniperus sp.	Juniperus sp.	Melaleuca ericifolia	Eucalyptus sp.	Eucalyptus nicholii	Removed	Removed	Lagerstroemia indica	Acer X freemanii 'Scarlet	Sentinel	Acer X freemanii 'Scarlet	Sentinel	Acer X freemanii 'Scarlet	Sentinel'	171 Acer X freemanii 'Scarlet
No			156	157	158	159	160	161	162	163	164	165	166	167	168		169		170		171

# Appendix 2 Descriptors (Version C - 2013)

			Descriptors	s (Version (	C - 2013)		
Field name		Descriptio	n				
No.		Tree identiigroup.	fication number.	Unique numbers a	are assigned to ea	ich assessed indiv	vidual tree or tree
Species				international taxon es, variety and cul		n system of binom	ial (or trinomial)
Common Name				as occurs in curre a single tree spec			
<b>DBH</b> (Diameter at breast height)		1.4m above	e the existing grou	(expressed in cen und level. Multiple ngle stem for tree p	e stemméd trees a	re calculated usin	
<b>TPZ</b> (Tree protection zone)		Based on A	AS 4970	sed as a radial dis			
SRZ (Structural Ro Zone)		Structural F Based on <i>F</i>	•	sed as a radial dis	stance in metres, i	measured from tru	ınk centre.
HxW (Height x Wid	dth)	Indicates h	eight and width o	f single tree and m	neasurement gene	erally expressed ir	whole metres
Age Young Semi-mature			e and/or recently p	planted e and yet to achieve	e expected size in	situation	
Maturing Over-mature		Specimen a		cted size in situatio			
Health			•	a broad descripti			
Ratings	(	Good	Fair	Fair to Poor	Poor	Very poor	Dead
Structure		Term assig	ned that provides	a broad description	on of the structure	and stability of th	e tree.
Ratings	(	Good	Fair	Fair to Poor	Poor	Very poor	Failed
Form Symmetric		Description	n Inced crown				
Asymmetric		Crown bias	ed in one directior	n; can be minor or r			
Stump re-sprout Manipulated				g from stump or tru ow; managed for s		use or aesthetic ou	utcome
Comment		Additional o		ovide specific deta	ail on the condition	of the tree or ma	nagement
Tree type		Descriptio	n				
Indigenous				or region of the sub	ject site		
Victorian native				part of Victoria (no			
Australian native				alia but is not a Vic			
Exotic deciduous				ind typically sheds and typically holds it			
Exotic evergreen Exotic conifer				and typically holds in and is classified as		Juliu	
Native conifer				alia and is classifie		m	
Palm			nocotyledon				
Other			riptions as indicat	ed			
Retention value			rating provided o	n tree based on a	ssessment factors	s. Provided as a g	uide for
Ratings			High	Moderate	Lov	V	None

Descriptors reviewed annually and subject to change

Remove

Consider

removal

Recommended action based on condition of the tree with reference to proposed site changes

Street tree

Neighbour's

Already

Transplant

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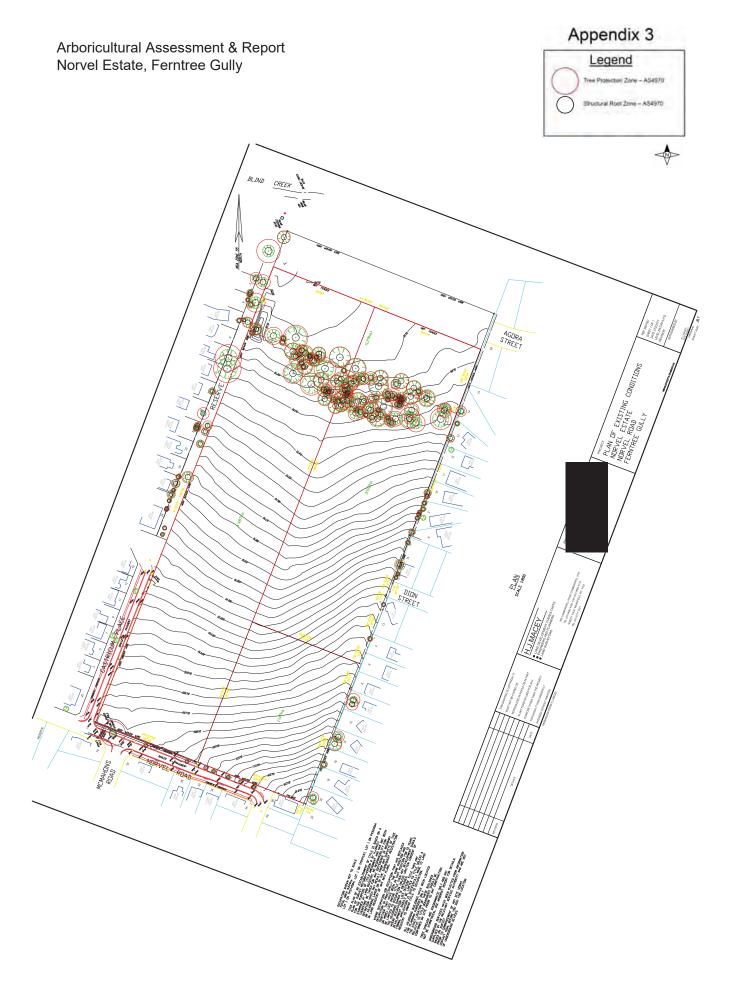
Recommend

Responses

Retain

Could be

retained



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- 12. To the writer's knowledge all facts, matter and all assumptions upon which the report proceeds have been stated within the body of the report and all opinion contained within the report have been fully researched and referenced and any such opinion not duly researched is based upon the writers experience and observations.

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December 2020

# Biodiversity Assessment, 29Q Norvel Road, Ferntree Gully



**Final Report** 

**Prepared for:** 

**Norvel Estate** 



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# **Document Control**

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# **Cover Photograph**

A photograph of the study area taken during the current assessment.

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# **Executive Summary**

Ecolink Consulting Pty Ltd was engaged to undertake a Biodiversity Assessment at 29Q Norvel Road (Lots 1 and 2 on TP963860L and Lot 1 on TP297137X), Ferntree Gully (the study area). The purpose of the assessment was to assess and map the ecological values and constraints within the study area to support an application for a residential development.

The study area is located within the Gippsland Plain bioregion of Victoria and the Port Philip and Westernport Catchment Management Area. It is zoned Special Use Zone 2 within the Knox City Council municipality. The northern part of the study area is covered by an Environmental Significance Overly – Schedule 2 (ESO2). This overlay aim to protect sites and vegetation of biological significance within the Knox City Council municipality from extinction, and to maintain and improve habitat corridors and connectivity

The study area is located within a suburban setting, approximately 30 kms east of Melbourne. Vegetation surrounding the study area has been heavily modified, although a strip of riparian vegetation, associated with Blind Creek provides connectivity between the moderate quality vegetation within the north of the study area and other patches of vegetation within the municipality.

The study area was previously a clay quarry that has been filled and rehabilitated in the past eight years. The quarry occupied the southern two-thirds of the study area, but left the vegetation in the northern part of the study area relatively intact. This has resulted in the identification of three distinct remnant patches where native vegetation either persists or has regenerated. The remainder of the study area is dominated by exotic species, where Perennial Rye-grass *Lolium perenne* has been sown to stabilise the rehabilitation works.

Two remnant patches of native vegetation were identified within the study area. Habitat Scores indicate that the vegetation is of high quality in the north of the study area, with Habitat Scores ranging from 26 to 55 (out of 100). Other native vegetation, that is not classified as remnant, was recorded in the south of the study area. This area is likely to be regenerating from the seed bank that was dormant within the imported top soil used to rehabilitate the quarry and is exempt from offsets as it is less than ten years old. It is dominated by Hop Goodenia *Goodenia ovata*.

The northern portion of the study area supported relatively high quality remnant vegetation. The overstorey was dominated by Mealy Stringybark *Eucalyptus cephalocarpa* and Swamp Gum *Eucalyptus ovata*, with fewer occurrences of Messmate Stringybark *Eucalyptus obliqua*, Red Stringybark *Eucalyptus macrorhyncha*, Narrow-leaf Peppermint *Eucalyptus radiata*, as well as occasional occurrences of Green Scentbark *Eucalyptus fulgens* that is listed as state significant on the Advisory List.

The midstorey contained a dense shrub cover, generally dominated Sweet Bursaria Bursaria spinosa subsp. spinosa, Prickly Tea-tree Leptospermum continentale, Swamp Paperbark Melaleuca ericifolia, Prickly Currant-bush Coprosma quadrifida, Shiny Cassinia Cassinia longifolia and Prickly Moses Acacia verticillata. The understorey was also dominated by a diversity of native species, with the most dominant and widespread species including Kangaroo Grass Themeda triandra, Weeping Grass Microlaena stipoides var. stipoides, Wallaby-grasses Rytidosperma spp., Forest Wire-grass Tetrarrhena juncea, Bracken Pteridium esculentum, and Thatch Saw-sedge Gahnia radula, as well as



herbs including Bidgee Widgee Acaena novae-zelandiae. Weeds were dominant in some locations including a substantial area with a moderate cover abundance (30-40%) of Kikuyu Cenchrus clandestinus and an area within a moderate cover of Panic Veldt-grass Ehrharta erecta var. erecta.

Only a relatively small proportion of RP1 and RP2, within the study area, will require vegetation removal for the proposed development. Three scattered indigenous trees were also recorded in an area that may support a trail to connect the development to Blind Creek and a sewer, but these trees are unlikely to require removal through sensitive design of these elements.

The project has avoided the removal of native vegetation wherever practicable and will minimise impacts to biodiversity values. Despite this, where removal of native vegetation is proposed biodiversity offsets will be required. The offset required is 0.126 General Habitat Units with a minimum Strategic Biodiversity Score of 0.202 located within the Port Phillip and Westernport Catchment Management Authority area, or Knox City Council municipality, as well as two large trees.

Ten fauna species were recorded within the study area, comprising a range of common native and introduced birds and reptile species. All of these species are common to the local area.

Although 18 threatened flora and fauna species have been previously recorded within three kilometres of the study area within the last thirty years, only one was recorded during the current assessment. Green Scentbark *Eucalyptus fulgens* was recorded within the study area. This species is listed as 'Rare' on the Advisory List of Rare and Threatened Plants in Victoria. Rosemary Grevillea *Grevillea rosmarinifolia* has also been recorded within the study area previously, but not during the current assessment. There is the potential that this species remains within the study area, although none of these species will be impacted by the proposed development. There is only a low likelihood that the previously recorded Grey Goshawk *Accipiter novaehollandiae novaehollandiae* utilises the study area, and it is unlikely to provide important habitat for this species.

In this context, and based on the relevant legislation and policies, the following recommendations are made:

- Minimising the amount of native vegetation removal within the study area;
- Provide a biodiversity offset of 0.126 General Habitat Units with a minimum Strategic Biodiversity Score of 0.202 located within the Port Phillip and Westernport Catchment Management Authority area, or Knox City Council, and two large trees;
- Prepare a Land Management Plan that includes managing the ecological values of the study area;
- Prepare a Construction Environmental Management Plan that includes the following management actions prior, during and post construction:
  - o Appropriately fence and manage retained native vegetation;
  - Soil containment, sediment and erosion measures;
  - o Weed management prescriptions, targeting noxious weeds; and
- A wildlife handler should be present when felling any trees.



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# Introduction

Ecolink Consulting Pty Ltd was engaged by to undertake a Biodiversity Assessment for the proposed residential development of 29Q Norvel Road (Lots 1 and 2 on TP963860L and Lot 1 on TP297137X), Ferntree Gully.

The purpose of the Biodiversity Assessment is to assess and map the ecological constraints within the study area (if any exist), in particular, the location, extent and quality of native vegetation to support an application to remove any native vegetation under Clause 52.17 of the Planning Scheme, as described in the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment Land Water and Planning 2017b). A previous assessment of the vegetation within the study area was undertaken in 2005 (Brown 2005), under the 'Net Gain' policy (Department of Natural Resources and Environment 2002), which has been superseded by the *Guidelines for the removal, destruction or lopping of native vegetation* policy.

Therefore, this Biodiversity Assessment will:

- Review previous ecological assessments of the study area;
- Determine the current ecological values of the study area;
- Evaluate any impacts that are likely to occur to any ecological values as a result of the potential loss of vegetation at the study area;
- Evaluate the extent and quality of native vegetation within the study area, required under the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b); and,
- Make recommendations to minimise or mitigate impacts to these ecological values, based on relevant legislation and policies.

# **Methods**

# **Desktop Assessment**

In order to determine the ecological values that have previously been recorded within the study area, and its vicinity, the following databases and literature were consulted:

- Planning Schemes Online (Department of Environment Land Water and Planning 2018c) to identify the planning zones and overlays relating to environmental matters e.g. Vegetation Protection Overlays, or Environmental Significance Overlays;
- The Biodiversity Interactive Map from the Department of Environment, Land, Water and Planning (DELWP) to identify historic and current Ecological Vegetation Classes (EVCs) (Department of Environment Land Water and Planning 2017a);



- The Victorian Biodiversity Atlas (Department of Environment Land Water and Planning 2018d) for records of threatened<sup>1</sup> flora and fauna within three kilometres of the study area within the previous 30 years;
- The Native Vegetation Information Management System (NVIM) to determine biodiversity offsets for native vegetation removal (Department of Environment Land Water and Planning 2018b);
- The 'Weeds of National Significance' database (Department of the Environment and Energy 2018b);
- The Protected Matters Search Tool from the Department of the Environment and Energy (DoEE) (Department of the Environment and Energy 2018a) to identify Matters of National Environmental Significance that may occur within three kilometres of the study area; and,
- Relevant legislation and policies (as required).

In addition three reports previously prepared for the site were also reviewed:

- Brown L (2005). Habitat hectare assessment of Daniel Robertson's Quarry, Ferntree Gully, Victoria. Unpublished report by Biosis Research Pty Ltd for Daniel Robertson Australia Pty Ltd (Brown L: Port Melbourne);
- Mueck S and Organ A (2001). Flora and Fauna Assessment of Daniel Robertson's Quarry, Ferntree Gully, Victoria. Unpublished report by Biosis Research Pty Ltd for Daniel Robertson Australia Pty Ltd (Mueck S and Organ A: Port Melbourne); and
- Treemap Arboriculture (2016). Arboricultural Assessment and Report; Norvel Road, Ferntree Gully. Unpublished report by Treemap Arboriculture for Norvel Estate Pty Ltd (Treemap Arboriculture: Heidelberg).

# **Field Assessment**

### **Flora and Fauna Assessment**

The study area was assessed by Principal Ecologists, Simon Scott and Dr Stuart Cooney, on 9 February 2017. Both ecologists are suitably experienced at undertaking flora and fauna assessments and Simon holds a Vegetation Quality Assessors Accreditation from DELWP (No. 0015).

All flora species observed within the study area were recorded, with the exception of planted vegetation that was not considered a 'weed' (i.e. planted vegetation that was not spreading or reproducing). Where a species was not able to be confidently identified in the field, a sample was collected and later identified. Plants were identified to species level wherever possible, however, some plants that were planted, cultivars, hybrids, or plants that did not contain suitable fertile material used for identification were recorded to genus level.

Vegetation communities such as EVCs and nationally significant vegetation communities were recorded (if observed) and compared with their corresponding benchmarks or thresholds to ensure that they were accurately assigned.

<sup>&</sup>lt;sup>1</sup> Threatened flora and fauna includes species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the Victorian *Flora and Fauna Guarantee Act 1988* and the DSE Advisory Lists (Department of Environment and Primary Industries (2009; 2013; 2014).



A list of all fauna species observed within, and immediately surrounding, the study area was produced. This list consists of species seen, heard, or identified by other evidence of their presence (e.g. feathers, scats). Leica 12 X 50 binoculars and call mimicry/playback were used to assist in the identification species.

The presence of fauna habitat was noted, particularly in relation to potential habitats for threatened species. The greatest amount of time was spent surveying potential fauna habitats (e.g. trees, water bodies, crevices or under ground debris) during the assessment.

Threatened flora and fauna species were marked with a hand-held Garmin eTrex 10 GPS (accuracy +/- five metres) and key ecological values such as vegetation communities, scattered indigenous trees, fauna habitats, or threatened species habitats were mapped onto an aerial photograph of the study area.

# Guidelines for the removal, destruction or lopping of native vegetation

Although the initial site assessment was undertaken under the policy that existed prior to the introduction of the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) (Department of Environment Land Water and Planning 2017b), this final version of the report has been updated to reflect the current native vegetation removal policy in terms of reporting, terminology and offset requirements.

The Guidelines require that information regarding the biodiversity values of the site were obtained though:

- Site-based information that was measured or observed at a site, including:
  - Extent of native vegetation patches;
  - Large trees;
  - Native vegetation condition assessed in accordance with the Vegetation Quality
     Assessment Manual Guidelines for Applying the Habitat Hectares Scoring Method
     (Department of Sustainability and Environment 2004);
  - o Ecological Vegetation Classes (EVC); and
  - Sensitive wetlands and coastal areas.
- Landscape scale information that cannot be measured or observed at the site and includes maps and models procured from DELWP.

The Guidelines require a Habitat Hectare assessment in instances where the impact is to be assessed under the Detailed Assessment Pathway. It was not possible to determine the risk-based pathway for the loss of native vegetation, and we therefore opted to complete the Habitat Hectare assessment in accordance with the methodology prescribed within the *Vegetation Quality Assessment Manual – Guidelines for Applying the Habitat Hectares Scoring Method* (Department of Sustainability and Environment 2004) at patches<sup>2</sup> of vegetation. All indigenous vegetation was assessed, and then assigned a quality rating based on the Habitat Hectare score (Department of Sustainability and Environment 2004).

<sup>&</sup>lt;sup>2</sup> A 'patch' is defined as an area with at least 25% cover abundance of perennial native vegetation, or a group (i.e. three or more) trees forming a continuous canopy.



To determine offsets, the location and species of indigenous 'scattered trees'<sup>3</sup>, and any 'large trees'<sup>4</sup> within patches were mapped. Details of the location, extent of native vegetation (patches, scattered trees and large trees) that are proposed for removal was provided to DELWP who produced a Native Vegetation Removal report which details the required offsets for impacts to native vegetation patches, Large Trees and scattered trees.

# **Limitations and Qualifications**

The following limitations and qualifications apply to this report:

- The results of the desktop assessment are reliant on data obtained from various databases and other reports. The accuracy of these historical data and some of the results provided within these reports cannot be verified.
- Some flora and fauna species may only be recorded during certain times or seasons (e.g. plants that only contain above-ground biomass and are only visible annually, nocturnal mammals and birds, migratory birds, or fauna identified through seasonal breeding calls such as some frog species). The author has made an informed decision about the likely presence of threatened species that may be present, or that may utilise habitats within the study area, based on a detailed desktop assessment, a review of the species' biology, an understanding of the ecological values of the local area, and an assessment of flora and fauna as well as their habitats.
- As with all ecological assessments, a greater survey effort is likely to yield additional flora and fauna records. Where these additional flora and fauna records may alter the recommendations made within this report, (e.g. where additional threatened species may utilise habitats within the study area, or where threatened species may be impacted by the proposed development), further assessment may be recommended, depending on the implications of relevant policies and legislation.

Despite these limitations to the assessment, the results gained by both a desktop and a field assessments are adequate to address the purpose of this report.

<sup>&</sup>lt;sup>3</sup> Scattered trees are defined as a native canopy tree that does not form a patch

<sup>&</sup>lt;sup>4</sup> Large trees are defined as meeting the size threshold specified in the bioregional EVC Benchmark



#### **Results**

# **Study Area**

The study area is located within suburban Ferntree Gully, approximately 30 kms east of Melbourne. The northern boundary of the study area adjoins Blind Creek and the Blind Creek Billabong Reserve, while the rest of the study area is bordered by suburban housing lots (Figure 1). The landscape is generally flat, gently sloping towards Blind Creek in the north.

The study area was previously a clay quarry (Mueck and Organ 2001). The quarry occupied the southern two-thirds of the study area, with remnant woodland covering the northern section, interfacing with Blind Creek. A comparison of the maps provided in the previous reports prepared for the study area, suggests that some of the vegetation on the eastern boundary of the study area has been removed since those reports were prepared, although this happened prior to 2009, when Nearmap recorded its first aerial image of the study area (Nearmap 2018). The quarry was filled with material sourced off-site from mid-2014 to early-2016 (Nearmap 2018), and now comprises slashed exotic grasslands in the south, while the woodland remains in the north of the study area.

An additional area that is proposed for a trail and sewer was assessed along the western boundary of the study area that is largely flat and devoid of native vegetation (Plate 1).

## **Flora**

# **Flora Species**

A total of 101 plant and tree species were recorded during the current assessment. This comprised 64 indigenous and 37 exotic plant species (Table A1).

The south of the study area, in the location of the previous quarry had been sown with Perennial Rye-grass *Lolium perenne* and lacked an overstorey and mid-storey. Despite this, some areas of regrowth supported more than 25% cover abundance of native species, dominated by Hop Goodenia *Goodenia ovata*, which meant they met thresholds to be classified as patches of remnant vegetation. It is likely that these plants have regenerated from the seed bank of imported soil spread over the quarry as part of its rehabilitation. As this regrowth is less than 10 years old, although identified as patches of remnant vegetation, they are exempt from offsetting under the Biodiversity Assessment Guidelines (see below).

The northern portion of the study area supported relatively high quality remnant vegetation. The overstorey was dominated by Mealy Stringybark Eucalyptus cephalocarpa and Swamp Gum Eucalyptus ovata, with fewer occurrences of Messmate Stringybark Eucalyptus obliqua, Red Stringybark Eucalyptus macrorhyncha, Narrow-leaf Peppermint Eucalyptus radiata, as well as occasional occurrences of Green Scentbark Eucalyptus fulgens that is listed as state significant on the Advisory List (Department of Environment and Primary Industries 2014).

The midstorey contained a dense shrub cover, generally dominated Sweet Bursaria *Bursaria spinosa* subsp. *spinosa*, Prickly Tea-tree *Leptospermum continentale*, Swamp Paperbark *Melaleuca ericifolia*, Prickly Currant-bush *Coprosma quadrifida*, Shiny Cassinia *Cassinia longifolia* and Prickly Moses *Acacia verticillata*. The understorey was also dominated by a diversity of native species, with the most dominant and widespread species including Kangaroo Grass *Themeda triandra*, Weeping Grass



Microlaena stipoides var. stipoides, Wallaby-grasses Rytidosperma spp., Forest Wire-grass Tetrarrhena juncea, Bracken Pteridium esculentum, and Thatch Saw-sedge Gahnia radula as well as herbs including Bidgee Widgee Acaena novae-zelandiae. Weeds were dominant in some locations including a substantial area with a moderate cover abundance (30-40%) of Kikuyu Cenchrus clandestinus and an area within a moderate cover of Panic Veldt-grass Ehrharta erecta var. erecta.

Compared with the results provided by Biosis (2001), we recorded fewer annual species such as lilies and orchids. This may be expected as the assessment was undertaken during late Summer, after a period of hot weather. It is likely that these annual species that were recorded by Biosis (2001) persist within the study area.

# Flora Habitat/Vegetation Communities

The vegetation within the study area was required to be assessed and classified against the policy and legislation stipulated by three tiers of government:

- Local Where various overlays and policies may apply pursuant to the Knox City Council Planning Scheme (Department of Environment Land Water and Planning 2018c);
- State Which includes DELWP's EVC mapping of vegetation communities (Department of Environment Land Water and Planning 2018a) and consideration under the Biodiversity Assessment Guidelines (Department of Environment and Primary Industries 2013); and,
- Commonwealth where vegetation may meet 'thresholds' to be classified as a federally listed community under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (Department of Sustainability Environment Water Population and Communities 2011).

## Local

The study area is currently zoned Special Use Zone 2 (Department of Environment Land Water and Planning 2018c). It is located within the Knox City Council municipality. Special Use Zone 2 land is to provide for the earth and energy resources industry. It is expected that the proponent will seek to have this zoning changed prior to development of the residential estate.

The northern section of the study area is covered by an Environmental Significance Overlay (ESO) 2 (Figure 1) (Department of Environment Land Water and Planning 2018c). Although this largely covers the area proposed for a reserve, it extends to the northern part of the proposed development. The ESO2 recognises sites of biological significance within the Knox City Council municipality. It aims to protect these sites from extinction, maintain and improve habitat corridors and connectivity, use offsets to achieve a 'Net Gain' in vegetation where native vegetation is to be removed and ensure development is consistent with these goals. Applicants will need to justify any native vegetation removal, where the Council considers that a development may impact the environmental objectives of the ESO2. This report includes consideration of the ESO2 in its recommendations.

#### State

The study area is located within the Gippsland Plain bioregion of Victoria and the Port Philip and Westernport Catchment Management Area (Department of Environment Land Water and Planning 2016a). Historically, the study area is likely to have supported Ecological Vegetation Classes (EVC)



127: Valley Heathy Forest in the south and EVC 937: Swampy Woodland in the north, associated with Blind Creek. EVC 127: Valley Heathy Forest is characterised as "a low, open forest to 15 metres tall with a sedgy/grassy understorey with a component of small ericoid shrubs and grass-trees. Soil and moisture factors are critical in delimiting the vegetation" (Department of Environment Land Water and Planning 2018a). EVC 937: Swampy Woodland is characterised as an "open eucalypt woodland to 15 metres tall with ground-layer dominated by tussock grasses and/or sedges and often rich in herbs. Occurs on poorly drained, seasonally waterlogged heavy soils, primarily on swamp deposits but extending to suitable substrates within some landscapes of sedimentary origin" (Department of Environment Land Water and Planning 2018a).

Current modelling of vegetation within the study area suggests that little of these vegetation types remain. The current modelling of EVC 127: Valley Heathy Forest is in the area cleared prior to 2009 in the east of the study area (Department of Environment Land Water and Planning 2017a). The site assessment confirmed that none of the modelled EVC 127: Valley Heathy Forest remains in the study area, however a large patch of relatively high quality EVC 937: Swampy Woodland persists in the north of the study area, contiguous with the vegetation associated with Blind Creek.

#### Commonwealth

Department of the Environment and Energy (2018a) modelling suggests that that the critically Endangered vegetation communities Natural Damp Grassland of the Victorian Coastal Plains and White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland may occur within the study area.

The remnant vegetation within the study area does not meet the criteria to qualify as Natural Damp Grassland of the Victorian Coastal Plains because it is characteristic of a woodland/forest type vegetation structure and not a grassland. It does qualify as White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland because the dominant overstorey species are not characteristic of this vegetation community.

#### **Threatened Flora Species**

Two threatened flora species have previously been recorded within three kilometres of the study area within the last 30 years: Rosemary Grevillea *Grevillea rosmarinifolia* and Giant Honey-myrtle *Melaleuca armillaris* subsp. *armillaris* (Figure 3). A further seven species are predicted to occur within the study area based on the Protected Matters Search Tool (Department of the Environment and Energy 2018a). A consolidated list of these threatened flora species as well as their conservation status, preferred habitats and likelihood of occurrence for each species is provided in Table A3.

One of the records of Rosemary Grevillia is from within the northern part of the study area in 2001. The current assessment did not relocate this plant, however it is possible that this species persists within the study area. It is currently proposed that the vegetation within the north of the study area will be retained within a reserve vested to council. On this basis, this plant would not be impacted by the proposed development of the study area.



Giant Honey-myrtle is not indigenous to the area. Nearby records are from planted specimens, as it is widely used as an ornamental plant, or in windrows. Further consideration of this plant is not required.

One threatened species, Green Scentbark, was recorded during the current assessment. Four Green Scentbark trees were been identified near the boundary of the reserve area during the current assessment and the Arborist's assessment (Treemap Arboriculture 2018); three of which may be impacted by the proposed development (Treemap tree numbers 92, 93 and 95: Figure 2). Other individuals are likely to occur within the reserve area, but will not be impacted by the proposed development. Green Scentbark is listed as 'Rare' on the Advisory List of Rare and Threatened Plants in Victoria (Department of Environment and Primary Industries 2014), so impacts to this species should be avoided or limited where possible.

No threatened species are likely to occur outside of the reserve area, because of the high level of land modification associated with the quarry. It is concluded that no other threatened flora species are likely to be impacted by the development given the protection of the highest quality vegetation within the study area and the current assessment of the remainder of the study area.

#### **Vegetation Assessment**

Three patches of native vegetation were identified within the study area (Table 1; Figure 2), although a Habitat Hectare assessment was only completed on Patch 1 (RP1) and 2 (RP2).

Patch 3 cannot, by definition be 'remnant', as it is regenerating native plants from seed stock from imported soil. It is therefore exempt from requiring offsets under the 'regrowth' Clause of 52.17 within the Planning Scheme, and offsets are not required (Department of Environment Land Water and Planning 2018c).

The vegetation in the north of the study area (RP1) is the highest quality vegetation with a score of 55 out of 100 (Plate 3). This vegetation retains many of the characteristics of its natural state when compared with the EVC benchmark (Department of Environment Land Water and Planning 2018a). RP2 occurs on the fringes of this vegetation, the mid-storey/shrub layer has been removed, the understorey contains a lower diversity and there is a higher cover abundance of weeds).



**Table 1**. Habitat Hectare Scores for the remnant patches of native vegetation within, and adjoining, the study area.

Qualit	y Zone		RP1	RP2
Bioreg	ion		Gippsland Plain	Gippsland Plain
EVC na	ame		SW	SW
EVC n	umber		937	937
A	ssessment Criteria	Maximum Score	Patch Score	Patch Score
	a. Large old trees	10	7	5
	b. Canopy cover	5	4	4
_	c. Understorey	25	20	5
Site	d. Lack of weeds	15	9	2
Si	e. Recruitment	10	3	0
	f. Organic litter	5	5	5
	g. Logs	5	2	0
	h. Total (sum of a-g)	75	50	21
be	i. Patch size	10	2	2
andscape-	j. Neighbourhood	10	1	1
Lar	k. Distance to core	5	2	2
I. Habi	tat Points (total)	100	55	26
m. Hal	oitat score (I ÷ 100)		0.55	0.26

# **Table Notes:**

SW – Swampy Woodland

Only a relatively small portion of RP1 will require vegetation removal for the proposed development.

# **Tree Assessment**

Three scattered indigenous trees were also recorded in the laneway on the western boundary of the study area (Table 2). These trees, or their Tree Protection Zones<sup>5</sup> may be impacted by a proposed path and sewer between the new estate and the Blind Creek Trail that runs across the north of the

<sup>&</sup>lt;sup>5</sup> The Tree Protection Zones have been determined in accordance with the Australian Standard for the Protection of Trees within Development Sites (AS 4970 - 2009) (Standards Australia 2009). It defines the Tree Protection Zone (TPZ) radius as 12 x DBH, but should not be less than 2 metres or greater than 15 metres. If an area greater than 10% of a tree's Tree Protection Zone is impacted by works, that tree will be considered lost and offset obligations will apply.



study area. However, sensitive design of this infrastructure, with input from a qualified arborist, is likely to avoid impacts to these trees.

Table 2. Tree species recorded within the scattered tree area of study area

Tree No.	Species Name	Common Name	DBH (cm) <sup>1</sup>	TPZ Radius (cm)
1	Eucalyptus ovata	Swamp Gum	97	1,164
2	Eucalyptus ovata	Swamp Gum	101	1,212
3	Eucalyptus ovata	Swamp Gum	87	1,044

#### Table Notes:

#### **Fauna**

#### **Fauna Species**

Ten fauna species were recorded within the study area during the current assessment (Table A2, Appendix A). This included eight native bird species, one introduced bird species, and one native reptile. Other fauna species would be recorded if greater time was spent on-site.

All of the species are all typical of fauna that are expected to occur in the foothills of the Dandenong Ranges. Only one reptile was recorded during the site assessment, Garden Skink *Lampropholis guichenoti*, although it is likely that other frogs, skinks and snakes would utilise the study area on occasion. Further discussion on species that may occur within the various fauna habitats is provided below.

#### **Fauna Habitats**

The remnant vegetation within the study area and adjoining properties provides moderate to high quality woodland habitat to a range of species. The large trees are likely to provide habitat to a range of common bird and arboreal mammal species. This is likely to include gregarious bird species such as Rainbow Lorikeets *Trichoglossus haematodus* and Noisy Miners *Manorina melanocephala*. Mammals such as Common Ringtail Possums *Pseudocheirus peregrinus* and Common Brushtail Possums *Trichosurus vulpecula* are also likely to forage in the canopy of these trees, whilst microbats are likely to use the fissures and flaking bark as diurnal roosting locations. Where the understory exists, smaller birds such as Superb Fairywrens *Malurus cyaneus* and Brown Thornbills *Acanthiza pusilla*, as well as a range of honeyeaters, are likely to find refuge from larger, more aggressive birds.

Most of the other native birds observed, such as the Crimson Rosella *Platycercus eximius*, Australian Magpie *Gymnorhina tibicen* and Little Raven *Corvus mellori*, are widespread and common throughout open areas, suburban areas and farmlands throughout eastern Melbourne.

The vegetation is likely to provide an important corridor for fauna species moving across the landscape. This vegetation connects to other vegetation associated with Blind Creek to the north of the study area. These connections within the landscape are important for many species' ability to adapt to seasonal changes in food abundance, dispersal from natal areas and to facilitate gene mixing within the broader population.

<sup>&</sup>lt;sup>1</sup> Diameter at breast height



# **Threatened Fauna Species and Communities**

A consolidated list of the 16 threatened fauna species previously recorded on, or within the vicinity of, the study area within the last thirty years, as well as a further 17 fauna species that may occur within the study area is provided in Table A4 (see also Figure 3). The conservation status, preferred habitats and likelihood of occurrence for each species is provided within this table.

There is a single record of a Grey Goshawk *Accipiter novaehollandiae novaehollandiae* from within the study area in 1997 (Figure 3). Grey Goshawks are largely sedentary birds, that favour large patches of vegetation (usually in excess of 10 hectares in size) (Marchant and Higgins 1993). The bird that was observed in 1997 may have been a juvenile bird looking for a new territory. It is unlikely that the study area provides important habitat for this species. Grey-headed Flying-foxes *Pteropus poliocephalus* are likely to fly over the study area on a regular basis, however, the lack of fruiting trees within the study area means that it is unlikely to provide important resources to this species. The majority of the other threatened fauna species listed in Table A4 are wetland dependent or aquatic species that unlikely to occur within the study area on a regular basis.

No threatened species were recorded during the current assessment. No fauna communities listed under the Victorian *Flora and Fauna Guarantee Act 1988* were recorded within the study area and none are likely to occur.



#### Discussion

A detailed summary of the legislation that was considered when preparing this report is provided in Appendix 2. The discussion presented in this section of the report does not re-iterate information provided in Appendix 2, but summarises the results and recommendations arising from the interpretation of this legislation.

#### Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The desktop assessment identified seven threatened flora, 15 threatened fauna species and two threatened vegetation community, listed under the EPBC Act that may occur within the study area. None of these species have previously been recorded within the study area and preferred habitat for these species does not occur within the study area, despite providing moderate to high quality habitat to a range of native species. This is largely attributed to local extinctions of the species that are modelled to occur or have historically occurred within the study area and its surrounds, as well as the type of habitat within the study area (i.e. many of the EPBC Act listed species that may occur within the landscape are associated with aquatic environments, which is limited within the study area).

On the basis of this, a referral to the Commonwealth Department of the Environment and Energy under the EPBC Act is not recommended.

#### Flora and Fauna Guarantee Act 1988 (Vic)

The desktop assessment identified five flora and 20 fauna species listed under the FFG Act that may occur within the study area (Tables A3 and A4). One of these species (Grey Goshawk) has been recorded within the study area on one occasion, however the study area is unlikely to provide important core habitat to this species because of its limited size, but may provide habitat for dispersing immature animals moving between areas of more suitable habitat.

In addition, the FFG Act also lists 'protected flora'. Protected flora includes whole families or genera, not just plant species, such as daisies, heaths, orchids, and most Acacias. These species and genera are not necessarily regarded as threatened, but require an approved 'protected flora licence or permit' from DELWP prior to their removal from *public* land. As the development is not located in public land, a 'protected flora licence of permit' will not be required.

#### Planning and Environment Act 1987 (Vic)

Although there is no native vegetation in the area covered by the VPO1, some of the vegetation within the ESO2 is proposed for removal (Figure 1 and 2). The removal of this vegetation is required to facilitate the road that will act as a buffer between the proposed reserve and the development (P. D'Emilio. Peddle Thorp Architects, *In litt.* 10 February 2017). The proposed development will require a planning permit from the City of Knox Council under Clause 52.17 prior to the removal, destruction or lopping of this native vegetation (Department of Environment Land Water and Planning 2017b). Biodiversity offsets will be required for any such impacts (discussed below).



#### Catchment and Land Protection Act 1994 (Vic)

Primary considerations of the Catchment and Land Protection Act 1994 (Vic) relate to soil and water conservation, as well as the management of pest plants and animals.

The study area contains three weed species that are listed as 'noxious' within the Port Phillip and Westernport Catchment Management Area (Table A1). These include Blackberry Rubus fruticosus spp agg., Boneseed Chrysanthemoides monilifera and Montpellier Broom Genista monspessulana, Hawthorn, Spear Thistle Cirsium vulgare and Sweet Briar Rosa rubiginosa which are listed as 'Regionally Controlled'. The proponent is required to 'control the spread' of all 'regionally controlled' species from their property (Melville 2008).

In addition, two species are listed as 'Restricted'; Bridal Creeper Asparagus asparagoides and Soursob Oxalis pes-caprae. There are limitations on the collection and trade of these species.

Four of these noxious species are also listed as Weeds of National Significance; Bridal Creeper, Boneseed, Blackberry and Montpellier Broom.

The proposed development should aim to remove these plants when construction commences, and ensure they are removed during the future the landscaping and maintenance of the study area. It is expected that weed management would form part of a Construction Environment Management Plan. Where revegetation is required, the palette of species to be used should represent the historic ECV of the study area (EVC 937: Swampy Woodland). All plants should be of local provenance and not include hybrid species.

The Construction Environment Management Plan provides guidance on the management of noxious weeds during the development and remove any weeds that establish post-construction. The Construction Environment Management Plan will also include details relating to the:

- Fence and exclude access to areas of retained native vegetation, including the remnant patches and the scattered trees;
- Maintenance of vehicle hygiene and vehicle wash-down areas;
- Use of clean fill (if required);
- Management of noxious that may establish post-construction through spraying with herbicide or hand-removal;
- Use of noxious species during any landscaping of the property.

Erosion and sediment control is also expected to be implemented as part of the Construction Environment Management Plan to EPA Standards in order to avoid direct and indirect impacts to the native vegetation and drain and Blind Creek downslope.

#### Wildlife Act 1975 (Vic)

It is likely that some locally common species of fauna will be displaced by the proposed development. Furthermore, there remains a low likelihood that animals may be accidentally injured when removing vegetation, particularly the large trees. All native vertebrate wildlife is protected under the *Wildlife Act 1975* (Vic), and therefore contractors must use due care when removing vegetation from the study area. It is recommended that an ecologist or wildlife handler is present during the felling of any trees that may contain resident fauna.



#### Guidelines for the removal, destruction or lopping of native vegetation

The location of the native vegetation within the study area means that the proposed development will inevitably result in the loss of some of that vegetation. Applicants who wish to remove native vegetation must generally demonstrate how the application meets the three-step approach to:

- 1. Avoid the removal, destruction or lopping of native vegetation.
- 2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided; and
- Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b).

Most of the vegetation within the study area is modelled by DELWP as being 'Location 1' vegetation which is the lowest on a scale of 1, 2 and 3 (Department of Environment Land Water and Planning 2018b). However an area of Location 2 vegetation is modelled near the middle of the study area, and the southern boundary of the proposed reserve. Native vegetation that is to be impacted will need to be offset, consistent with Clause 52.17 of the Knox City Council planning scheme.

Based on the current assessment, and the Master Plan for the development (Peddle Thorp Architects, 36-0125, Rev E: dated November 2020), 1.129 hectares of native vegetation will be directly impacted by clearing for the proposed development (Figure 2). However, 0.738 hectares of this vegetation, that comprises RP3, is exempt from requiring offsets because it is classified as regeneration less than ten years old (Department of Environment Land Water and Planning 2017b). Most of the vegetation that is classified as Location 2 vegetation will be avoided. Offsets will be required for the remaining 0.391 hectares of native vegetation (parts of RP1 and RP2) (Appendix 3).

#### **Native Vegetation Removal Report**

A Native Vegetation Removal Report has been prepared for the proposed development and is provided in Appendix 3. This report uses the Habitat Hectare scores and native vegetation polygons collected during the current assessment. The report includes the species specific offset test, which determines if the proposed vegetation removal will have a proportional impact on any Victorian rare or threatened species habitat above a specific offset threshold, which is set at 0.005 per cent of total habitat for each species. This test was applied to current proposal, and it was determined that no species specific offsets were required. Table 3 and Appendix 3 present the offset required for the removal of the remnant vegetation.



Table 3. Native vegetation offset requirements under the current development plan

Location Risk	Location 2	
Risk Based Pathway	Intermediate	
Total Extent Removed	0.083ha	
Remnant Patches	• 0.391ha	
Scattered Trees	• Nil	
<b>General Offset Requirements</b>	0.126 General Habitat Units	
	Two Large Trees	
Specific Offset Requirements	Nil	
Minimum Strategic Biodiversity Score	0.202	
Offset Location	Port Phillip and Western Port CMA or within the Knox City	
	Council municipality	

#### **Avoidance and Minimisation Statement**

The development plan has undergone a number of iterations to avoid and minimise impacts to native vegetation. Iterations of the development plan have avoided impacts to modelled Rusty Velvet-bush *Lasiopetalum ferrugineum* within the study area and aimed to retain the highest quality native vegetation within the study area. This has resulted in the retention of vegetation adjoining the existing patch of native vegetation (RP1) that extends beyond the study area to the riparian vegetation of Blind Creek. Most of this vegetation was Location 2 vegetation (the second highest modelled risk rating), and has been generally avoided by the proponent. The result of these efforts has been to achieve an assessment under the Intermediate Risk-based pathway.

Subsequent development of the Master Plan has introduced buffers between the residential lots and the retained vegetation. These will serve the dual purposes of fire and habitat protection. In addition, the Water Treatment Area will further protect the retained vegetation the north of the study area. Where management of defendable space is required in the north of the property, partial removal of native vegetation is proposed to maintain as much the ecological value of the site as possible, particularly large trees, while ensuring the development is safe from bushfire attack.



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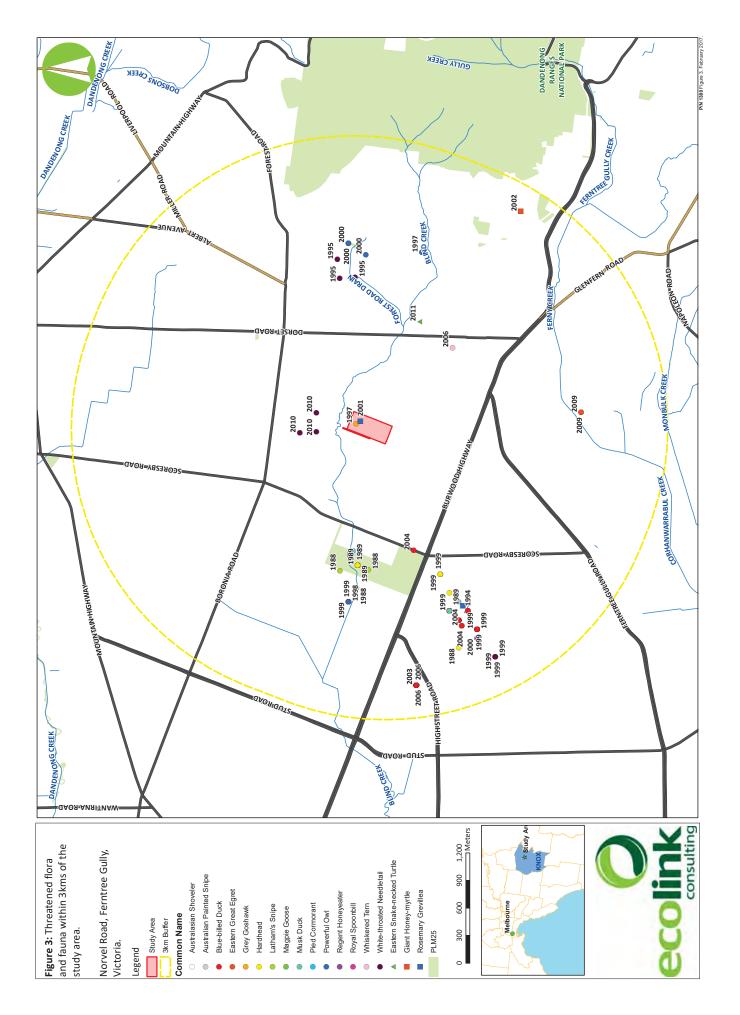
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#### **Figures**









#### **Plates**



**Plate 1**. The location of the proposed sewer and trail on the western boundary of the study area, looking south.



**Plate 2**. Regrowth from the seed-bank of the imported fill, showing the dominance of Hop Goodenia





Plate 3. Remnant Patch 1



#### **Appendices**

#### Appendix 1. Flora and Fauna Tables.

Table A1. Flora recorded within the study area

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weed Classification
	Austral Bracken	Pteridium esculentum	-	-
	Bidgee-widgee	Acaena novae-zelandiae	-	-
	Black Wattle	Acacia mearnsii	-	-
	Black-anther Flax-lily	Dianella revoluta s.l.	-	-
*	Blackberry	Rubus fruticosus spp. agg.	Yes	Regionally controlled
	Blackwood	Acacia melanoxylon	-	-
*	Boneseed	Chrysanthemoides monilifera	Yes	Regionally controlled
*	Bridal Creeper	Asparagus asparagoides	-	Restricted
	Bristly Wallaby-grass	Rytidosperma setaceum	-	-
*	Brown-top Bent	Agrostis capillaris	-	-
	Bundy	Eucalyptus goniocalyx s.s.	-	-
	Centella	Centella cordifolia	-	-
	Cherry Ballart	Exocarpos cupressiformis	-	-
*	Cleavers	Galium aparine	-	-
*	Cocksfoot	Dactylis glomerata	-	-
	Common Apple-berry	Billardiera scandens s.l.	-	-
	Common Blown-grass	Lachnagrostis filiformis s.l.	-	-
	Common Bog-sedge	Schoenus apogon	-	-
	Common Cassinia	Cassinia aculeata subsp. aculeata	-	-
*	Common Centaury	Centaurium erythraea	-	-
	Common Grass-sedge	Carex breviculmis	-	-
	Common Love-grass	Eragrostis brownii	-	-
	Common Raspwort	Gonocarpus tetragynus	-	-
	Common Rice-flower	Pimelea humilis	-	-
*	Common Sow-thistle	Sonchus oleraceus	-	-
	Common Spike-sedge	Eleocharis acuta	-	-
	Common Tussock- grass	Poa labillardierei	-	-
	Common Woodruff	Asperula conferta	-	-
	Cotton Fireweed	Senecio quadridentatus	-	-
*	Couch	Cynodon dactylon var. dactylon	-	-
	Cudweed	Euchiton sp.	-	-
	Dodder Laurel	Cassytha spp.	-	-
	Drooping Cassinia	Cassinia sp. aff. arcuata	-	-



Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weed Classification
		(Midlands)	Significance	Classification
*	English Ivy	Hedera helix	-	-
*	Flatweed	Hypochaeris radicata	-	-
	Forest Wire-grass	Tetrarrhena juncea	-	-
	Grassland Wood-sorrel	Oxalis perennans	-	-
*	Hairy Bird's-foot Trefoil	Lotus subbiflorus	-	-
*	Hairy Hawkbit	Leontodon saxatilis subsp. saxatilis	-	-
	Hop Goodenia	Goodenia ovata	-	-
	Ivy-leaf Violet	Viola hederacea sensu Willis (1972)	-	-
	Kangaroo Grass	Themeda triandra	-	-
	Kidney-weed	Dichondra repens	-	-
*	Kikuyu	Cenchrus clandestinus	-	-
*	Large Quaking-grass	Briza maxima	-	-
	Love Creeper	Comesperma volubile	-	-
	Mealy Stringybark	Eucalyptus cephalocarpa s.s.	-	-
	Messmate Stringybark	Eucalyptus obliqua	-	-
	Milkmaids	Burchardia umbellata	-	-
*	Montpellier Broom	Genista monspessulana	Yes	Regionally controlled
	Mountain Clematis	Clematis aristata	-	-
*	Musky Heron's-bill	Erodium moschatum	-	-
	Myrtle Wattle	Acacia myrtifolia	-	-
*	Onion Grass	Romulea rosea	-	-
	Pale Flax-lily	Dianella longifolia s.l.	-	-
	Pale Rush	Juncus pallidus	-	-
*	Panic Veldt-grass	Ehrharta erecta var. erecta	-	-
*	Paspalum	Paspalum dilatatum	-	-
*	Perennial Rye-grass	Lolium perenne	-	-
*	Pimpernel	Lysimachia arvensis	-	-
*	Prairie Grass	Bromus catharticus	-	-
	Prickly Currant-bush	Coprosma quadrifida	-	-
	Prickly Moses	Acacia verticillata	-	-
	Prickly Tea-tree	Leptospermum continentale	-	-
*	Prunus	Prunus spp.	-	-
*	Radiata Pine	Pinus radiata	-	-
	Reed Bent-grass	Deyeuxia quadriseta	-	-
*	Ribwort	Plantago lanceolata	-	-
	Shiny Cassinia	Cassinia longifolia	-	-
	Shrubby Fireweed	Senecio minimus	-	-
	Silvertop Wallaby- grass	Rytidosperma pallidum	-	-



Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weed Classification
	Slender Speedwell	Veronica gracilis	-	-
	Slender Wallaby-grass	Rytidosperma racemosum var. racemosum	-	-
	Small Loosestrife	Lythrum hyssopifolia	-	-
	Small Poranthera	Poranthera microphylla s.l.	-	-
	Snowy Daisy-bush	Olearia lirata	-	-
	Soft Tussock-grass	Poa morrisii	-	-
*	Soursob	Oxalis pes-caprae	-	Restricted
	Spiny-headed Mat- rush	Lomandra longifolia	-	-
	Stinking Pennywort	Hydrocotyle laxiflora	-	-
*	Suckling Clover	Trifolium dubium	-	-
	Swamp Club-sedge	Isolepis inundata	-	-
	Swamp Gum	Eucalyptus ovata	-	-
	Swamp Paperbark	Melaleuca ericifolia	-	-
	Sweet Bursaria	Bursaria spinosa subsp. spinosa	-	-
#	Sweet Pittosporum	Pittosporum undulatum	-	-
*	Sweet Vernal-grass	Anthoxanthum odoratum	-	-
	Tall Rush	Juncus procerus	-	-
	Thatch Saw-sedge	Gahnia radula	-	-
*	Toowoomba Canary- grass	Phalaris aquatica	-	-
	Tree Everlasting	Ozothamnus ferrugineus	-	-
	Variable Stinkweed	Opercularia varia	-	-
	Variable Sword-sedge	Lepidosperma laterale	-	-
	Veined Spear-grass	Austrostipa rudis	-	-
*	Water Couch	Paspalum distichum	-	-
	Wattle Mat-rush	Lomandra filiformis	-	-
	Weeping Grass	Microlaena stipoides var. stipoides	-	-
*	White Clover	Trifolium repens var. repens	-	-
	Yellow Wood-sorrel	Oxalis corniculata s.l.	-	-
*	Yorkshire Fog	Holcus lanatus	-	-

#### **Table Notes:**

This table does not include ornamental plants, trees or shrubs that were not spreading or reproducing beyond where they were planted.

<sup>\*</sup> Exotic # Naturalised



Table A2. Fauna recorded within the study area

Origin	Common Name	Species Name
Birds		
	Crested Pigeon	Ocyphaps lophotes
*	Spotted Dove	Streptopelia chinensis
	Sulphur-crested Cockatoo	Cacatua galerita
	Musk Lorikeet	Glossopsitta concinna
	Rainbow Lorikeet	Trichoglossus haematodus
	Crimson Rosella	Platycercus elegans
	Superb Fairy-wren	Malurus cyaneus
	Red Wattlebird	Anthochaera carunculata
	Little Raven	Corvus mellori
	Australian Magpie	Cracticus tibicen
Reptiles		
	Garden Skink	Lampropholis guichenoti

#### Definitions

<sup>\* -</sup> Introduced species



Biodiversity Assessment, Norvel Road, Ferntree Gully

Table A3. Threatened flora that has previously been recorded within, or in the vicinity of the study area (Department of Environment Land Water and Planning 2017a), or that has habitat that may occur within the vicinity of the study area (Department of the Environment and Energy 2018a).

Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Sighting (no of sightings)	Habitat Present on Site	Likelihood of Presence
Clover Glycine	Glycine latrobeana	Vulnerable	Vulnerable FFG Listed	Grassy woodland; plains grassland; box woodland; dry sclerophyll forest.	NPR	ON O	Unlikely
Giant Honey-myrtle	Melaleuca armillaris subsp. armillaris		Rare	Mainly confined to near-coastal sandy heaths, scrubs slightly raised above saltmarsh, riparian scrubs, rocky coastlines and foothill outcrops eastwards from about Marlo. Occurrences to the west are naturalised.	2002 (1)	0	Unlikely
Leafy Greenhood	Pterostylis cucullata	Vulnerable	Endangered FFG Listed	Tea-tree heath	NPR	No	Unlikely
Lilac Leek-orchid	Prasophyllum colemaniae	Vulnerable	Extinct	Highly localised, growing among grass tussocks and shrubs in open forest. No populations are currently known to exist	NPR	No	Unlikely
Maroon Leek-orchid	Prasophyllum frenchii	Endangered	Endangered FFG Listed	Tea-tree heath; wattle tea-tree scrub; valley sclerophyll forest. Predominantly in or near coastal swamps. Rarely occupies sites more than 10 km inland	NPR	O Z	Unlikely
Matted Flax-lily	Dianella amoena	Endangered	Endangered FFG Listed	Grassy Wetland; Red Gum woodland; plains grassland; grassy woodlands.	NPR	N O	Unlikely



#### Likelihood Unlikely Unlikely Unlikely Habitat ٩ ž 2 sightings) Sighting Recent 2001 (2) NPR NPR Beside swamps in grassy low open forest, grasslands and dry sclerophyll forests riparian scrub. Required moist soils, Prefers well drained soils in plains Valley sclerophyll forest tolerates inundation. Habitat Preferences Endangered FFG Listed Victorian Rare Endangered Vulnerable Critically National Biodiversity Assessment, Norvel Road, Ferntree Gully rosmarinifolia subsp. **Amphibromus Species Name** rosmarinifolia vacciniifolia **Pomaderris** Grevillea fluitans Rosemary Grevillea Wallaby-grass River Swamp Round-leaf

\* Likelihood of Presence Definitions:

Unlikely – Site does not contain habitat and/or it is outside the species' known, current distribution.

Low -Site contains some marginal habitat, but the species was not observed and has not been recently recorded in previous surveys in the area.

Moderate – Site contains preferred habitat that may support a population of the species. However, other factors, such as fragmentation, disturbance or predators may be impacting any local

High - Site contains the preferred habitat which is likely to support the species.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded at the site.

NPR – No previous record, modelled presence only under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018a).

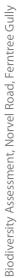
Threatened status based on the Advisory List of Rare or Threatened Plants in Victoria (Department of Environment and Primary Industries 2014).



Biodiversity Assessment, Norvel Road, Ferntree Gully

Table A4. Threatened fauna that has previously been recorded within, or in the vicinity of the study site (Department of Environment Land Water and Planning 2017a), or that has habitat that may occur within the vicinity of the site (Department of the Environment and Energy

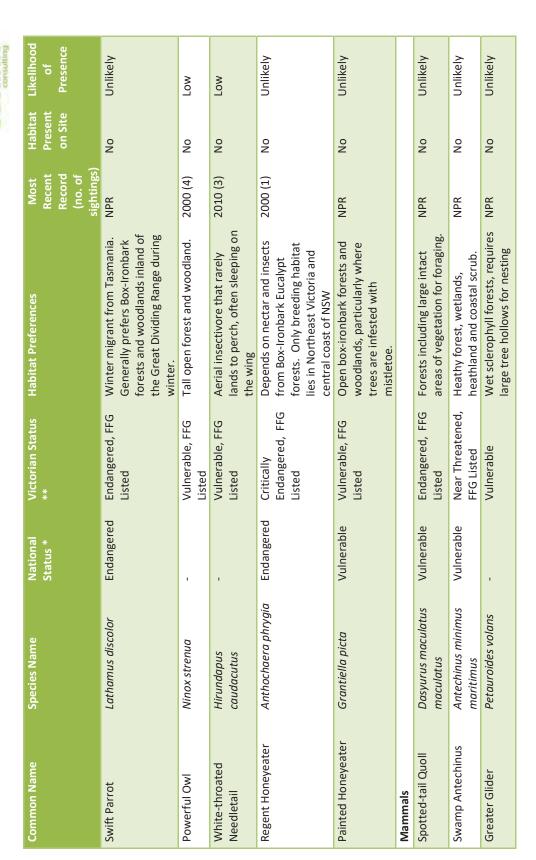
.(50-50-							
Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Record (no. of	Habitat Present on Site	Likelihood of Presence
Birds							
Magpie Goose	Anseranas semipalmata	ı	Near Threatened, FFG Listed	Large seasonal wetlands and well-vegetated dams, wet, grasslands	1994 (21	O N	Unlikely
Blue-billed Duck	Oxyura australis		Endangered, FFG Listed	Well-vegetated freshwater swamps, large dams, lakes. More open waters in winter.	2011 (51)	ON.	Unlikely
Musk Duck	Biziura lobata	·	Vulnerable	Permanent swamps with dense vegetation, more open waters in non-breeding season.	2001 (2)	O N	Unlikely
Australasian Shoveler	Anas rhynchotis	1	Vulnerable	Heavily vegetated swamps and floodwaters.	1991 (2)	N O	Unlikely
Hardhead	Aythya australis	ı	Vulnerable	Deep, vegetated swamps, open water.	2007 (32)	o N	Unlikely
Royal Spoonbill	Platalea regia		Near Threatened	Larger shallow waters (inland and coastal), well-vegetated shallow freshwater wetlands, floodplains, billabongs, sewage ponds, irrigation storages, tidal mudflats, estuaries, salt marshes, salt fields, mangroves, islands.	2007 (4)	O Z	Unlikely

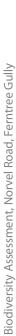




Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Record (no. of	Habitat Present on Site	Likelihood of Presence
Australasian Bittern	Botaurus poiciloptilus	Endangered	Endangered	Reed beds, dense vegetation of freshwater swamps and creeks.	NPR	o N	Unlikely
Eastern Great Egret	Ardea modesta	ı	Vulnerable, FFG Listed	Floodwaters, rivers and shallows of wetlands, intertidal mud flats.	2009 (9)	o Z	Unlikely
Pied Cormorant	Phalacrocorax varius	ı	Near Threatened	Large freshwater and saline wetlands and tidal bays along the coast.	1988 (2)	N O	Unlikely
Grey Goshawk	Accipiter novaehollandiae novaehollandiae		Vulnerable, FFG Listed	Wet Eucalypt / mixed forest with closed canopy and generally low stem density	1997 (1)	O N	Unlikely
Australian Painted- Snipe	Rostratula australis	Vulnerable	Critically Endangered, FFG Listed	Uncommon summer migrant to Victoria. Lowlands on shallow freshwater swamps with emergent vegetation, and flooded salt marshes.	NPR	ON	Unlikely
Eastern Curlew	Numenius madagascariensis	Critically Endangered	Vulnerable, FFG Listed	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	0 N	Unlikely
Curlew Sandpiper	Calidris ferruginea	Critically Endangered	Endangered, FFG Listed	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	0 N	Unlikely
Latham's Snipe	Gallinago hardwickii	ı	Near Threatened	Wet grasslands, open and wooded swamps.	2010 (21)	o N	Unlikely
Whiskered Tern	Chlidonias hybridus javanica	1	Vulnerable	Lakes, swamps with emergent or floating plants, low bushes in saltmarsh and estuaries.	2006 (1)	O N	Unlikely









Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Record (no. of	Habitat Present on Site	Likelihood of Presence
Grey-headed Flying-fox	Pteropus poliocephalus	Vulnerable	Vulnerable, FFG Listed	Roost sites commonly occur in gullies, in vegetation with dense canopy cover and close to water.	NPR	O Z	Moderate
Smoky Mouse	Pseudomys fumeus	Endangered	Endangered, FFG Listed	Dry sclerophyll forests with tussocky understorey	NPR	No	Unlikely
Broad-toothed Rat	Mastacomys fuscus mordicus	Vulnerable	Endangered, FFG Listed	A range of habitats from sub- alpine to coastal heathland, with high vegetative coverage in high rainfall areas	NPR	ON	Unlikely
Frogs							
Growling Grass Frog	Litoria raniformis	Vulnerable	Endangered, FFG Listed	Permanent lakes, swamps, dams and lagoons.	NPR	N <sub>O</sub>	Unlikely
Reptiles							
Eastern Long-necked Turtle	Chelodina longicollis		Data Deficient	Coastal and inland waterways, often seen wandering far from water	2011 (2)	ON.	Unlikely
Fish							
Australian Grayling	Prototroctes maraena	Vulnerable	Vulnerable, FFG Listed	Clear gravelly streams; deep slow flowing pools.	NPR	N <sub>O</sub>	Unlikely
Dwarf Galaxias	Galaxiella pusilla	Vulnerable	Vulnerable, FFG Listed	Slow moving waters, including ephemeral drains.	NPR	N O	Unlikely

### oblo Motor.

This table excludes species listed exclusively as 'migratory' or 'marine' under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018a).

## \* Likelihood of Presence Definitions:

Unlikely – Site does not contain habitat and/or it is outside the species' known, current distribution. Birds and bats may fly over

Low -Site contains some marginal habitat, but the species was not observed and has not been recorded in previous recent surveys in the area. Birds and bats may fly over.



Moderate – Site contains preferred habitat that may support a population of the species. Birds and bats may opportunistically or seasonally forage at the site.

High - Site contains preferred habitat which is likely to support the species. Birds and bats are likely to regularly (at least seasonally) forage or roost at the site.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded on the site.

NPR – No previous record, modelled presence only under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018a).

Threatened status based on the Advisory List of Threatened Vertebrate Fauna in Victoria (Department of Sustainability and Environment 2013) and the Advisory List of Threatened Invertebrate Fauna in Victoria (Department of Sustainability and Environment 2009).

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#### **Appendix 2. Legislation**

#### **Commonwealth Legislation**

#### **Environment Protection and Biodiversity Conservation Act 1999 (Cth)**

The Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) is to provide for the conservation of 'Matters of National Environmental Significance'. The Act defines eight Matters of National Environmental Significance:

- World Heritage properties;
- National Heritage Places;
- Ramsar wetlands of international significance;
- Nationally listed threatened species and ecological communities;
- Listed migratory species;
- Commonwealth marine areas;
- The Great Barrier Reef Marine Park; and,
- Nuclear actions.

Under the Act, actions that are likely to have a significant impact upon Matters of National Environmental Significance require approval from the Federal Environment Minister. This approval is sought through a referral process for a particular action. An action includes any project, development, undertaking, activity or series of activities. Consideration of the requirement for an 'EPBC Referral' to the Minister has been made within this report.

#### **State Legislation**

#### Flora and Fauna Guarantee Act 1988 (Vic)

The Flora and Fauna Guarantee Act 1998 (Vic) (FFG Act) provides a legal framework for enabling and promoting the conservation of all Victoria's native flora and fauna, and to enable management of potentially threatening processes on public land. The Act lists native species, communities, and processes that threaten native flora and fauna, under Schedules of the Act. This enables the assessor and regulators to establish management measures to mitigate impacts on listed values within Victoria.

A 'Protected Flora and Fauna Licence or Permit' from DSE is required to 'take' listed flora species that are members of listed communities or protected flora from public land. 'Taking' flora is defined as any action which results in the removal or death of a native plant. A permit is not required under the FFG Act for private land, unless listed species are present and the land is declared 'critical habitat' for the species.

An evaluation of the likelihood of the presence of significant flora and fauna species on the subject site, including those listed under the FFG Act that have previously been recorded in the vicinity of the site, has been undertaken.

#### Planning and Environment Act 1987 (Vic)

The *Planning and Environment Act 1987* (Vic) (P&E Act), later amended by the *Planning and Environment (Planning Schemes) Act 1996* (Vic) provides the foundation of planning schemes in



Victoria. Planning schemes set out policies and provisions for the development and protection of land within each municipality in Victoria.

The Planning and Environment (Planning Schemes) Act 1996 provides for the Minister for Planning to prepare a set of standard provisions for planning schemes called the Victoria Planning Provisions (VPP). The VPP is a state-wide reference document or template from which planning schemes are sourced and constructed. Incorporation of references such as the Permitted Clearance of Native Vegetation — Biodiversity Assessment Guidelines into Section 12 of the VPP ensures that all municipalities must consider this policy. Local zones and overlays, such as Environmental Significance Overlays, may be incorporated into Section 30 and 40 of the planning provisions by each Council, but only remain relevant within that municipality.

The objectives of the P&E Act are to integrate local land use, development planning and development policy with environmental, social, economic, conservation and resource management policies at State, regional and municipal levels through a set of planning schemes. The Act also establishes a clear procedure for public participation in decision making in amending planning schemes

Some important sections of the planning scheme, in relation to the ecological values of a site, include:

- Section 12 of the State Planning Policy Framework, which identifies, and aims to protect, key biodiversity assets from inappropriate development. It directly refers to Victoria's No Net Loss policy and other legislation which must be considered when preparing a planning permit application;
- Provision 52.17 which identifies where native vegetation removal is exempt from requiring a planning permit;
- Provision 66.02 which identifies all of the mandatory referral authorities. In particular the Victorian Department of Environment and Primary Industries is identified as the recommending referral authority if a proponent proposes:
  - To remove, destroy or lop native vegetation if the area to be cleared is 0.5 hectare or more.
  - To remove, destroy or lop native vegetation for the following class of application based on the risk-based pathway as defined in the Permitted clearing of native vegetation – Biodiversity assessment guidelines
    - High risk-based pathway.
    - To remove, destroy or lop native vegetation if a property vegetation plan applies to the site.
    - To remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority (Department of Environment Land Water and Planning 2018c).

#### Catchment and Land Protection Act 1994 (Vic)

The Catchment and Land Protection Act 1994 (Vic) (CALP Act) is the principle legislation relating to the management of pest plants and animals in Victoria. Under this Act, landowners have a responsibility to avoid causing or contributing to land degradation. Where possible, landowners are



required to conserve soil, protect water resources, eradicate 'regionally prohibited' weeds, prevent the growth and spread of 'regionally controlled' weeds and control pest animals. The CALP Act lists the species that are considered weeds and pest animals.

#### Wildlife Act 1975 (Vic)

Victoria's Wildlife Act 1975 (Vic) and the Wildlife Regulations 2002 (Vic) protect all indigenous vertebrate fauna, some non-indigenous vertebrate fauna, and some invertebrate fauna listed as 'threatened' under the FFG Act. The Wildlife Act 1975 (Vic) prevents intentional injury to wildlife, and stipulates that a licence should be granted where there is a possibility that wildlife are injured, or where wildlife is to be kept, relocated or traded.

In most cases, where the proponent is planning to develop a site, a planning permit approval provides this licencing approval, however, this report advises if an additional permit is required. Circumstances where this legislation may not be relevant is where fish are involved, on public land where additional regulatory approval is required, or where other permits are required (such as where fauna are required to undergo invasive procedures or installation of telemetry systems).

#### Fisheries Act 1995 (Vic)

The Fisheries Act 1995 (Vic) provides the legislative framework for the regulation, management conservation of Victorian fish species and their habitats. As with the Victorian Wildlife Act 1975 described above, the key method to ensure compliance is through licencing. Where fish, or their habitats, are likely to be impacted, this report will identify additional requirements.

#### Other relevant policy

Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b)

The Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b) were released by DELWP in December 2017. These guidelines supersede the Biodiversity Assessment Guidelines (Department of Environment and Primary Industries 2013).

A permit to remove native vegetation under clause 52.16 and 52.17 of the Victoria Planning Provisions is required unless:

- The table of exemptions to this clause specifically states that a permit is not required;
- It is native vegetation or an area specified in the schedule to the clause;
- A Native Vegetation Precinct Plan corresponding to the land is incorporated into the relevant planning scheme; or
- Bushfire exemptions apply in bushfire prone areas (Department of Environment Land Water and Planning 2017b).

The Guidelines describe the permitting process for applications to remove native vegetation on private and public property within Victoria. A key strategy of the State Planning Policy Framework, relating to biodiversity, is to ensure that there is no net loss to biodiversity as a result of the



removal, destruction or lopping of native vegetation. This is achieved through iteratively applying the three-step approach:

- 1. Avoiding the removal, destruction or lopping of native vegetation.
- 2. Minimising impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
- 3. Providing an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b; p. 4).

Native vegetation is defined in the Victoria Planning Provisions as 'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses' (Department of Environment Land Water and Planning 2017b).

Native vegetation is further classified into two categories (Department of Environment Land Water and Planning 2017b):

- A remnant patch of native vegetation (measured in hectares) is either:
  - An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native, or
  - Any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or
  - Any mapped wetland included in the Current Wetlands Map, available in DELWP systems and tools.

OR

• A scattered tree (measured in number of trees), is a native canopy tree that does not form a patch (Department of Environment Land Water and Planning 2017b).

In addition, a canopy tree with a Diameter at Breast Height (DBH) greater than or equal to the large tree benchmark for the relevant bioregional EVC is defined as a large tree. Large trees can be either a large scattered tree or a large tree within a patch.

The contribution that is made by native vegetation to the biodiversity values of Victoria is determined through an assessment of both site-based information and landscape scale information.

At a site-based level, the contribution is determined through an assessment of:

- The extent of native vegetation;
- The number of large trees (either within a patch or scattered trees), relative to the appropriate EVC benchmark;
- · The native vegetation condition, which is determined through a Habitat Hectare assessment
- The conservation status of the Ecological Vegetation Class (EVC) to which the vegetation can be classified; and,
- The presence of sensitive wetlands and coastal areas.



At a landscape scale, the value of the vegetation is determined with reference to its strategic context in the Victorian landscape (Department of Environment and Primary Industries 2013). This is determined by the vegetation's 'Strategic Biodiversity Score' (SBS) and its 'Habitat Importance Score' (HIS) for its value to rare and threatened species (Department of Environment Land Water and Planning 2017b).

All native vegetation within Victoria has a SBS that has been determined through spatial modelling, based on its rarity, level of depletion, species habitats, and condition and connectivity (Department of Environment Land Water and Planning 2017b). SBS scores are between 0 and 1 and are used to determine the offset required for the loss of that vegetation. Native vegetation only has a HIS score if it is habitat for a particular rare or threatened species<sup>6</sup> (Department of Environment Land Water and Planning 2017b). There are two types of rare or threatened species habitats that may be provided by native vegetation:

- Highly localised habitats for rare or threatened species where impact to this particular
  patch of native vegetation could result in a significant biodiversity impact, such as a breeding
  colony or species with a limited geographic extent.
- **Dispersed rare or threatened species habitats** where habitat for the threatened species has become depleted or fragmented over time (Department of Environment Land Water and Planning 2017b).

The HIS is used to apply the decision guidelines in relation to the removal of a patch of native vegetation and to determine offset requirements (Department of Environment Land Water and Planning 2017b).

Applications to remove native vegetation are categorised against one of three assessment pathways. These pathways are categorised as:

- Basic limited impacts on biodiversity.
- Intermediate could impact on large trees, endangered EVCs, and sensitive wetlands and coastal areas.
- Detailed could impact on large trees, endangered EVCs, sensitive wetlands and coastal areas, and could significantly impact on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017b).

This is initially determined in two ways, based on the 'location map' and the extent risk of the vegetation proposed to be removed. The location risk is determined with reference to the *Native Vegetation Location Risk* map available on DELWP's website (Department of Environment Land

• DELWP's Advisory List of Rare or Threatened Plants in Victoria (DEPI 2014a) as 'endangered', 'vulnerable', or 'rare', but does not include the 'poorly known' category.

<sup>&</sup>lt;sup>6</sup> Rare or threatened species are species listed in:

DELWP's Advisory List of Threatened Vertebrate Fauna in Victoria (DEPI 2013) as 'critically endangered', 'endangered' or 'vulnerable', but does not include 'near threatened' or 'data deficient' categories

DELWP's Advisory List of Threatened Invertebrate Fauna in Victoria (DEPI 2009) as 'critically endangered', 'endangered' or 'vulnerable', but does not include 'near threatened' or 'data deficient' categories.



Water and Planning 2018b). This map shows whether native vegetation is classified as Location 1, 2 or 3.

The extent risk is determined based on the amount of native vegetation that is proposed for removal and includes the area (in hectares) of impact to native vegetation, the number of scattered trees, and the number of large trees (Table A5).

**Table A5.** Assessment pathways for removal of remnant patches of native vegetation (Department of Environment Land Water and Planning 2017b).

Extent		Location	
	Location 1	Location 2	Location 3
Less than 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

All applications to remove native vegetation must include the following information:

- 1. Information about the native vegetation to be removed, including:
  - a. The assessment pathway and reason for the assessment pathway;
  - b. A description of the native vegetation to be removed;
  - c. Maps showing the native vegetation and property in context;
  - d. The offset requirement, determined in accordance with section 5 of the Guidelines that will apply if the native vegetation is approved to be removed.
- 2. Topographic and land information relating to the native vegetation to be removed;
- 3. Recent, dated photographs of the native vegetation to be removed;
- 4. Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five year period before the application for a permit is lodged;
- 5. An 'Avoid and Minimise' statement;
- 6. A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the *Conservation, Forests and Lands Act 1987* (Vic) that applies to the native vegetation to be removed;
- 7. Where the removal of native vegetation is to create defendable space, a written statement explaining why the removal of native vegetation is necessary;
- 8. If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations at decision guideline 8, and
- 9. An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified, and can be secured in accordance with the Guidelines (Department of Environment Land Water and Planning 2017b; p. 20-21).



If the application will be assessed under the Detailed Assessment Methodology, the following additional requirements apply:

- 10. A site assessment report of the native vegetation to be removed, including:
  - a. A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status.
  - b. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any large trees within patches.
  - c. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any scattered trees, and whether each tree is small or large.
- 11. Information about impacts on rare or threatened species habitat, including:
  - a. The relevant section of the Habitat importance map for each rare or threatened species requiring a species offset.
  - b. For each rare or threatened species that the native vegetation to be removed is habitat for, according to the Habitat importance maps: the species' conservation status the proportional impact of the removal of native vegetation on the total habitat for that species whether their habitats are highly localised habitats, dispersed habitats, or important areas of habitat within a dispersed species habitat (Department of Environment Land Water and Planning 2017b; p. 22).

Ten decisions guidelines are identified within the Guidelines that the responsible or referral authority must consider when deciding on an application to remove native vegetation. These are summarised as follows:

- 1. The degree to which the application avoids and minimises impacts to native vegetation, and where vegetation is proposed to be removed, the highest quality vegetation is avoided;
- 2. The role that the vegetation to be removed has in relation to landscape services such as erosion control, ground-water quality, waterway quality;
- 3. The role of the vegetation in the preservation of landscape features;
- 4. Whether any part of the native vegetation to be removed, destroyed or lopped is protected under the *Aboriginal Heritage Act 2006* (Vic);
- The need to remove, destroy or lop native vegetation to create defendable space to reduce the risk of bushfire to life and property, having regard to other available bushfire risk mitigation measures;
- 6. Whether the native vegetation to be removed is in accordance with any Property Vegetation Plan that applies to the site;
- 7. Whether an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines;
- 8. Whether the application is consistent with a Native Vegetation Precinct Plan (where relevant);
- 9. For applications in both the Intermediate and Detailed Assessment Pathway only, the impacts on biodiversity values that would occur as a result of vegetation removal; and,
- 10. For applications in the Detailed Assessment Pathway only, the impacts on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017b).



#### Offset requirements

In all cases where native vegetation is approved for removal, the proponent is liable for the security of an offset site that meets the requirements under the Guidelines. An offset can be either a:

- First party offset on the same property as the proposed removal of native vegetation, or on another property owned or managed (in the case of Crown land) by the party requiring the offset, or
- Third party offset on another party's property. Third party offsets are traded as native vegetation credits.

In most cases a third party offset is the simplest and most cost effective means of securing the required offset.

There are three components to offset requirements:

- 1. Offset type (general or species).
- 2. Offset amount (measured in general or species habitat units).
- 3. Offset attributes.

Two types of offset are identified: General Offsets and Specifies Offsets. Specific Offsets may only be required if the native vegetation to be removed is habitat for rare or threatened species that are identified in an Intermediate or Detailed Assessment Pathway application (Department of Environment Land Water and Planning 2017b). To determine this, a 'Specific Biodiversity Equivalence Score' is calculated by multiplying the habitat hectares with the HIS for each species that may be impacted. For each of the species, this figure is divided by the sum of all the Specific Biodiversity Value Scores calculated for the remaining vegetation under investigation to give a specific offset threshold for each species. If the amount of vegetation removed exceeds this threshold, then a Specific Offset is required. If it does not exceed the threshold, then only a General Habitat Offset is required (Table A6)(Department of Environment Land Water and Planning 2017b).

Table A6 summarises the offset requirements for each of the Assessment Pathways and offset types.



 Table A6. Offset requirements for the removal of native vegetation

		Offset amount		Offset attributes	
Assessment Pathway	Offset Type	Risk Adjusted Biodiversity Equivalence	Species Habitat Requirement	Vicinity	Strategic Biodiversity Score
Basic Assessment Pathway	General offset	1.5 times the general biodiversity equivalence score <sup>1</sup> of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
Intermediate	General offset	1.5 times the general biodiversity equivalence score of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
or Detailed Assessment Pathway	Specific offset	For each species impacted, 2 times the specific biodiversity equivalence score of the native vegetation to be removed.	Likely habitat for each rare or threatened species that a specific offset is required for, according to the specific- general offset test.	No restrictions.	No restrictions.

<sup>&</sup>lt;sup>1</sup> The general biodiversity equivalence score is determined by multiplying the vegetation's habitat hectare score by its SBS.



#### **Appendix 3. Native Vegetation Removal Report**





#### Native vegetation removal report

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

Date of issue: 10/12/2020 Report ID: ECL\_2020\_030

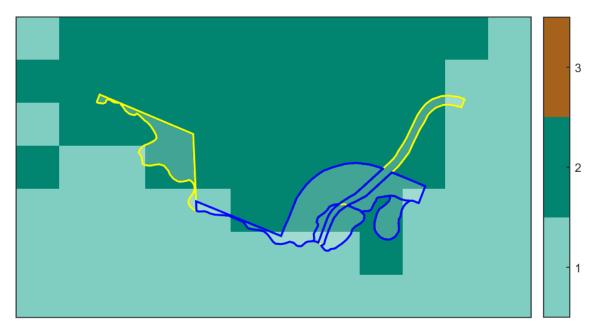
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Project ID 1380_Norvel_Estate_EnSym_07122020	
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#### Assessment pathway

Assessment pathway	Intermediate Assessment Pathway
Extent including past and proposed	0.391 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.391 ha
No. Large trees proposed to be removed	2
Location category of proposed removal	Location 2  The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

#### 1. Location map





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#### Native vegetation removal report

#### Offset requirements if a permit is granted

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

General offset amount <sup>1</sup>	0.126 general habitat units
Vicinity	Port Phillip and Westernport Catchment Management Authority (CMA) or Knox City Council
Minimum strategic biodiversity value score <sup>2</sup>	0.202
Large trees	2 large trees

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

Appendix 1 includes information about the native vegetation to be removed

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

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

<sup>1</sup> The general offset amount required is the sum of all general habitat units in Appendix 1.

<sup>2</sup> Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required



#### Native vegetation removal report

#### Next steps

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

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

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

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

- The assessment pathway and reason for the assessment pathway
- A description of the native vegetation to be removed (met unless you wish to include a site assessment)
- · Maps showing the native vegetation and property
- The offset requirements determined in accordance with section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- · Recent dated photographs
- · Details of past native vegetation removal
- An avoid and minimise statement
- A copy of any Property Vegetation Plan that applies
- A defendable space statement as applicable
- A statement about the Native Vegetation Precinct Plan as applicable
- An offset statement that explains that an offset has been identified and how it will be secured.

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

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

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2024-08-26 - Meeting Of Council Attachment 6.5.4

# Appendix 1: Description of native vegetation to be removed

All zones require a general offset, the general habitat units each zone is calculated by the following equation in accordance with the Guidelines:

General habitat units = extent x condition x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

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

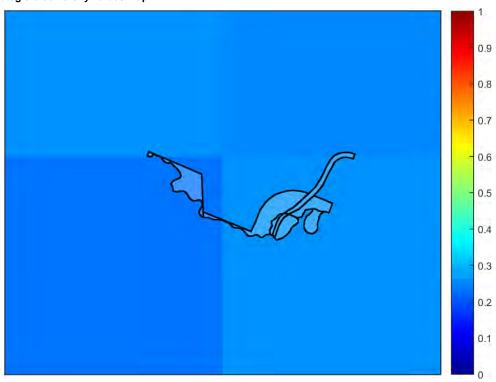
### Native vegetation to be removed

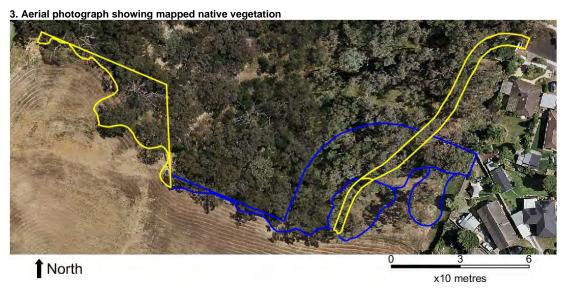
	Information provided by or on behalf of the applicant in a GIS file					Information calculated by EnSym						
Zone	Туре	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
0-A	Patch	gipp0937	Endangered	0	no	0.550	0.002	0.002	0.259		0.001	General
0-B	Patch	gipp0937	Endangered	2	no	0.550	0.086	0.086	0.230		0.044	General
0-C	Patch	gipp0937	Endangered	0	yes	0.275	0.131	0.131	0.259		0.034	General
0-D	Patch	gipp0937	Endangered	0	yes	0.130	0.033	0.033	0.260		0.004	General
0-E	Patch	gipp0937	Endangered	0	yes	0.130	0.030	0.030	0.260		0.004	General
0-F	Patch	gipp0937	Endangered	0	no	0.550	0.049	0.049	0.259		0.025	General
0-G	Patch	gipp0937	Endangered	0	no	0.260	0.009	0.009	0.260		0.002	General
0-H	Patch	gipp0937	Endangered	0	yes	0.130	0.009	0.009	0.260		0.001	General
0-I	Patch	gipp0937	Endangered	0	yes	0.275	0.042	0.042	0.260		0.011	General

Appendix 2: Information about impacts to rare or threatened species' habitats on site This is not applicable in the Intermediate Assessment Pathway.

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Appendix 3- Images of mapped native vegetation 2. Strategic biodiversity values map





### 4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

Blue boundaries denote zones of partial removal with a halved condition score.





Terramatrix project: -2018-01 BAL-Ferntree Gully Cover image: Bushland reserve to the north of development area

#### Accountability

Stage	Date completed	Name	Title
Analysis & report preparation	13 October 2020		Senior Analyst
Peer review	13 October 2020		Managing Director

#### **Version Control**

Version Date issued		Comments	Issued by
1.0	14 October 2020	Bushfire Development Report (BDR) to client	
1.1 09 February 2021		Updated with council and CFA agreement details and landscaping content	
1.2 27 July 2022		Alter reference to fire track	
1.3	06 March 2023	Update site address & plan	

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### 1 Introduction

This Bushfire Development Report (BDR) has been prepared on behalf of Norvel Estate Pty Ltd, to show how the proposed subdivision and associated planning scheme amendment and subsequent development of 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X) ('the site'), can comply with the applicable planning and building controls that relate to bushfire, specifically the requirements of Clause 13.02-1S *Bushfire Planning*, in the Knox Planning Scheme.

The proposal is to subdivide the land for subsequent residential development. The site will comprise approximately 138 townhouse lots with associated open space and residential road network. The site comprises 9.2ha of land comprising a former quarry with an area of remnant bushland in the northern part. The southern section of the site will be developed for residential purposes (the 'development area'), with the balance of the site remaining as bushland ('the bushland area') and vested with the City of Knox to form an adjunct bushland area to the Blind Creek Trail.

This report assesses the bushfire risk and demonstrates how the development can respond to the objectives and strategies for bushfire safety at Clause 13.02-1S in the Planning Policy Framework (PPF) (Knox Planning Scheme, 2018a).

The site is partially within a designated Bushfire Prone Area (BPA). BPAs are those areas subject to or likely to be subject to bushfires, as determined by the Minister for Planning. Developed land around the site has been largely removed from the BPA, with the areas remaining arising from the presence of the bushland area within the site and the Blind Creek Trail to the north. Where BPA coverage reflects the presence of vegetation that has now been removed (such as along the western boundary of the site), an application to excise those areas from the BPA will be made during development, and from any further areas of the site that will become eligible for excision as development occurs.

Higher hazard land within a BPA that may be subject to extreme bushfire behaviour is covered by the Bushfire Management Overlay (BMO); however, no part of the site is affected by the BMO and the closest BMO areas are approximately 2km to the east toward the western face of the Dandenong Ranges in the Boronia/The Basin area.

This report assesses the bushfire hazard and identifies how development of the site can appropriately mitigate the bushfire risk and respond to, and comply with, the applicable bushfire planning and building controls. It has been prepared in accordance with applicable guidance for the assessment of, and response to bushfire risk, provided in:

- Bushfire State Planning Policy Amendment VC140, Planning Advisory Note 68 (DELWP, 2018);
- AS 3959-2018 Construction of buildings in bushfire prone areas (Standards Australia, 2019) and;



- Local planning for bushfire protection, Planning Practice Note 64 (DELWP, 2015a);
- Planning Permit Applications Bushfire Management Overlay Technical Guide (DELWP, 2017).
- Design guidelines for settlement planning at the bushfire interface (DELWP, 2020).



Figure 1 – Site and surrounds with bushland area and Blind Creek Trail at the northern end (Google Earth imagery 01/12/2018).



# 1.1 Site summary

Address: 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on

TP297137X)

Property size: 9.2ha

Local Government Area: Knox City Council

Zone/s Special Use Zone and Schedule 2 (SUZ2)

Overlay/s Environmental Significance Overlay and Schedule 2 (ESO2)

**Directory reference:** Melway 64 G12, H11

**Site assessment date**: 25/07/2018 and 12/05/2020

Assessed by:

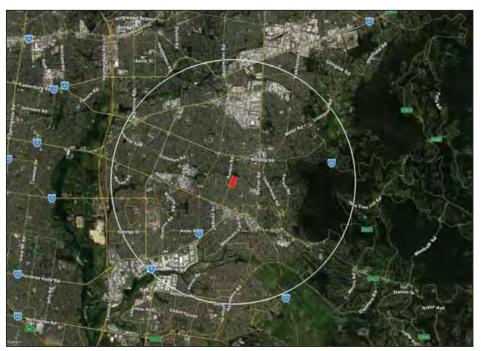


Figure 2 - Site location (site shown in red fill, 5km buffer of site in white outline; Google Earth imagery 01/12/2018).



# 2 Bushfire planning and building controls

This section summarises the applicable planning and building controls that relate to bushfire.

### 2.1 Clause 13 Environmental Risks and Amenity

This clause in the Planning Policy Framework (PPF) has three provisions pertinent to bushfire.

#### 2.1.1 Clause 13.01-1S Natural Hazards and Climate Change

The objective of this Clause is to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning. Specified strategies to achieve the objective are:

- 'Consider the risks associated with climate change in planning and management decision making processes.
- Identify at risk areas using the best available data and climate change science.
- Integrate strategic land use planning with emergency management decision making.
- Direct population growth and development to low risk locations.
- Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time.
- Ensure planning controls allow for risk mitigation or risk adaptation strategies to be implemented.
- Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards' (Knox Planning Scheme, 2018b).

#### 2.1.2 Clause 13.02-1S Bushfire Planning

Clause 13.02-1S has the objective 'To strengthen the resilience of settlements and communities to bushfire through risk based planning that prioritises the protection of human life' (Knox Planning Scheme, 2018a). The policy must be applied to all planning and decision making under the Planning and Environment Act 1987, relating to land which is:

- Within a designated Bushfire Prone Area;
- Subject to a Bushfire Management Overlay; or
- Proposed to be used or developed in a way that may create a bushfire hazard.

Priority must be given to the protection of human life by:

- Prioritising the protection of human life over all other policy considerations.
- Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.



 Reducing the vulnerability of communities to bushfire through consideration of bushfire risk in decision-making at all stages of the planning process' (Knox Planning Scheme, 2018a).

Key strategies are stipulated that require strategic planning documents, planning scheme amendments and development plan approvals to properly assess bushfire risk and include appropriate bushfire protection measures. This also applies to planning permit applications for:

- Subdivisions of more than 10 lots;
- Accommodation;
- Child care centres;
- Education centres;
- Emergency services facilities;
- Hospitals;
- Indoor recreation facilities;
- Major sports and recreation facilities;
- Places of assembly; and
- Any application for development that will result in people congregating in large numbers.

Development should not be approved where '...a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented' (Knox Planning Scheme, 2018a).

This report assesses the hazard and identifies the bushfire protection measures that will be required for future development on the site. It is considered that development can appropriately prioritise the protection of human life, and meet the objectives of Clause 13.02-1S, largely by ensuring future dwellings will not be exposed to RHF above 12.5kW/m², which is commensurate with a BAL-12.5 construction standard.

The maximum 12.5kW/m<sup>2</sup> safety threshold is required in settlement planning as the upper limit for acceptable risk. Responsible authorities must 'Not approve any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009<sup>1</sup> (Knox Planning Scheme, 2018a).

Consultation with CFA has determined development must provide for a BAL-12.5 construction standard across the entire site. Analysis of how the development can respond to the strategies in Clause 13.02-1S is provided in Section 6.

<sup>&</sup>lt;sup>1</sup> AS 3959-2009 has been superseded by AS 3959-2018, which was invoked in the National Construction Code (NCC) in May 2019, therefore all references to AS 3959-2009 should be read as the most recent version of the standard.



### 2.2 Clause 21 Municipal Strategic Statement

#### 2.2.1 Clause 21.04-1 Bushfire

Clause 21.02-4 provides an overview acknowledging the risk of bushfire in the Knox LGA, with the main focus on the Dandenong Foothills and the Lysterfield area. The clause lists the key issues with regard to bushfire:

- Identifying areas prone to bushfire.
- Managing development to minimise risk to life, property and the environment.
- Limiting new development in the Dandenong Foothills and Lysterfield where vegetation removal for bushfire management would affect significant vegetation (Knox Planning Scheme, 2017a).

The clause has the objectives:

### Objective 1

• To ensure that new development responds to bushfire risk to life and property (Knox Planning Scheme, 2017a).

#### Objective 2

• Limit development in areas at high risk from bushfire where there is also significant vegetation of high biological and/or landscape value and where planned bushfire protection measures may be incompatible with the natural environment, landscape and biodiversity values (Knox Planning Scheme, 2017a).

It provides several strategies; however, they address only those areas covered by the BMO. No part of the 29Q Norvel Road site is covered by the BMO.

The measures addressed in this report in response to Clause 13.02 (see Section 2.1.2) and the BPA (see Section 2.4) are considered to meet Objective 1. Objective 2 is unlikely to apply as the site is not in an area at high risk of bushfire and the development areas are largely constrained to those parts of the site affected by previous extractive industry that have limited residual biodiversity value.

#### 2.2.2 Clause 21.06 Housing

Clause 21.06 complements multiple clauses of the State Planning Policy Framework with additional content to support implementation of the State and Local Planning Policy Frameworks (Knox Planning Scheme, 2019).

Clause 21.06 addresses bushfire at 21.06-4 Areas with significant landscape and environmental



*values.* As with Clause 21.04-4 *Bushfire*, Clause 21.06-4 identifies the Dandenong Foothills and Lysterfield as the main areas of bushfire risk in Knox, and lists two key issues:

- Protecting Bush Suburban areas (the Dandenong Foothills and Sites of Biological Significance) from overdevelopment.
- Ensuring new residential development responds to bushfire issues (Knox Planning Scheme, 2019).

The clause has the objectives:

### Objective 5

 To protect and enhance the landscape and environmental values of natural areas of significance within the municipality (Knox Planning Scheme, 2019).

#### Objective 6

• To reduce the risk and impacts of bushfire in the high risk areas of the Foothills of the Dandenong Ranges and Lysterfield (Knox Planning Scheme, 2019).

It provides strategies largely focussed on the Dandenong Foothills and Lysterfield, two of which are:

- 5.2 Direct significant growth in housing stock to locations outside of the Bush Suburban areas.
- 6.2 Site, design, construct and manage development to meet the requirements of the relevant fire authority to minimise the impact of ember attack, radiant heat and direct flame contact from a bushfire (Knox Planning Scheme, 2019).

The development of the 29Q Norvel Road site supports strategy 5.2 by providing a large development area, outside of the Bush Suburban areas (identified at Figure 1 of the Clause), in a location with a lower bushfire threat. It is also compliant with strategy 6.2 through the measures detailed in this report.

### 2.3 Clause 71.02-3 Integrated Decision Making

Clause 71.02-3 states that planning and responsible authorities should endeavour to integrate policies and balance conflicting objectives in favour of net community benefit and sustainable development. However, in bushfire affected areas, the protection of human life must be prioritised over all other policy considerations (Knox Planning Scheme, 2018c).

### 2.4 Bushfire Prone Area (BPA)

Bushfire Prone Areas (BPA) are those areas subject to or likely to be subject to bushfire, as determined by the Minister for Planning. The site is partially in a designated BPA (see Figure 3); the extent of BPA coverage over the site will change as the BPA mapping excision process is applied. Part of the site is subject to an excision review application at the time of preparation of

#### this report.



Figure 3 - BPA coverage (brown shading) of site (in blue outline).

Those areas of highest bushfire risk within the BPA are designated as BMO areas.

In a BPA, the Building Act 1993 and associated Building Regulations 2018, through application of the National Construction Code (NCC), require bushfire protection standards for class 1, 2 and 3<sup>2</sup> buildings, 'Specific Use Bushfire Protected Buildings' and associated class 10A buildings<sup>4</sup> or decks. The applicable performance requirement in the NCC is:

'A building that is constructed in a designated bushfire prone area must, to the degree necessary, be designed and constructed to reduce the risk of ignition from a bushfire, appropriate to the —

- (a) potential for ignition caused by burning embers, radiant heat or flame generated by a bushfire; and
- (b) intensity of the bushfire attack on the building (ABCB, 2019).

Compliance with *AS 3959-2018 Construction of buildings in bushfire prone areas* (Standards Australia, 2019) is 'deemed-to-satisfy' the performance requirement<sup>5</sup>.

<sup>&</sup>lt;sup>2</sup> Class 1, 2 and 3 buildings are defined in the NCC and are generally those used for residential accommodation, including houses and other dwellings, apartments, hotels and other buildings with a similar function or use.

<sup>&</sup>lt;sup>3</sup> Specific Use Bushfire Protected Buildings are defined in the Victorian *Building Regulations 2018*, they generally comprise 'vulnerable' uses and include schools, kindergartens, childcare facilities, aged care facilities and hospitals.

<sup>&</sup>lt;sup>4</sup> Class 10a buildings are defined in the NCC as non-habitable buildings including sheds, carports, and private garages.

<sup>&</sup>lt;sup>5</sup> For Class 1 and associated Class 10a buildings, the *NASH Standard for Steel Framed Construction in Bushfire Areas* is also deemed to satisfy the performance requirement.



Applicable buildings must be constructed to a minimum Bushfire Attack Level (BAL)-12.5, or higher, as determined by a site assessment or planning scheme requirement.

A BAL is a means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact. There are six BALs defined in AS 3959-2018, which range from BAL-LOW, which has no bushfire construction requirements to BAL-FZ (Flame Zone) where flame contact with a building is expected.

Larger developments and certain vulnerable uses in a BPA (see Section 2.1.2) are also required by Clause 13.02-1S *Bushfire Planning* to:

- 'Consider the risk of bushfire to people, property and community infrastructure.
- Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk.
- Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts' (Knox Planning Scheme, 2018a).

There are no significant obstacles to future development of the site complying with the applicable strategies at Clause 13.02-1S and the building regulations invoked by the BPA coverage (see Section 6).

DELWP review and excise areas from the BPA approximately every 6 months. Land becomes eligible for excision if it satisfies state-wide hazard mapping criteria, including that the land needs to be:

- At least 300m from areas of classified vegetation (except grassland) larger than 4ha in size; and
- At least 150m from areas of classified vegetation (except grassland) 2 to 4ha in size; and
- At least 60m from areas of unmanaged grassland more than 2ha in size (DELWP, 2015b).

For isolated areas of vegetation greater than 1ha but less than 2ha, the shape of the area and connectivity to any other hazardous vegetation is a further consideration (DELWP, 2015b). Land around the site that is not in the BPA (i.e. BAL-LOW areas) is shown in Figure 3 and Map 3.

Part of the western side of the development site is eligible for excision from the BPA as the vegetation along the western boundary has already been removed. This area will be subject to a BPA review application prior to development, with alterations to the BPA expected to be gazetted around six months after the review. Reviews occur on an approximate six-month basis, with gazettal of changes approximately six months after review.



### 2.5 Other development controls

### 2.5.1 Zoning

The site is currently in a Special Use Zone – Schedule 2 (SUZ2). The development area of site will be rezoned to General Residential Zone (GRZ) prior to subdivision and development. Neither zone has implications for the development with regard to bushfire.

The balance of the site, forming those areas to be vested with Knox City Council to form an adjunct area to the Blind Creek Trail, will be retained as a bushland reserve. The bushfire implications of this bushland reserve are the subject of this report.

### 2.5.2 Overlays

The purpose of the Environmental Significance Overlay (ESO) at Clause 42.01 is to identify areas where the development of land may be affected by environmental constraints and to ensure that development is compatible with identified environmental values (Knox Planning Scheme, 2018e). It provides exemptions from requirements for a permit for vegetation removal for the purposes of fire protection for existing buildings. The purpose of ESO Schedule 2 (ESO2) is to protect sites of biological significance from a range of adverse impacts including removal of indigenous vegetation, habitat fragmentation, weed invasion, alteration to stream flows and changes to topography that may impact negatively on vegetation or cause erosion or landslip (Knox Planning Scheme, 2017b).

#### It also includes:

'To provide for adequate bushfire protection measures that minimise adverse environmental impacts' (Knox Planning Scheme, 2017b).

Decision guidelines specific to bushfire protection are:

- Whether any bushfire protection measures are required.
- Whether the proposal, including proposed replanting, will result in an increase in bushfire risk to life and property and if so, whether there are more suitable alternatives.
- Whether the proposal has been appropriately sited so as to reduce the bushfire risk.
- Whether the bushfire protection measures are designed so as to minimise ecological damage while still achieving the fire safety objective.
- Whether the development and/or vegetation outcomes on the site are compatible with the ongoing bushfire protection management measures (Knox Planning Scheme, 2017b).

This report demonstrates that the development of the 29Q Norvel Road site is in accordance with these decision guidelines.



### 3 Bushfire hazard site assessment

### 3.1 Classified vegetation

Vegetation within the 100m assessment zone around the development area boundary has been classified in accordance with the AS 3959 methodology. Classified vegetation is vegetation that is deemed hazardous from a bushfire perspective.

The classification system is not directly analogous to Ecological Vegetation Classes (EVCs) but uses a generalised description of vegetation based on the AUSLIG (Australian Natural Resources Atlas: No. 7 – Native Vegetation) classification system. The classification is based on the mature state of the vegetation and the likely fire behaviour that it will generate.

The site was assessed in its current condition as detailed in this report. This assessment informed the development layout following consultation with the Knox City Council and CFA.

Part of the development area is outside of the BPA (see green dashed line on Map 1). For the purposes of this report, the 100m site assessment zone has been applied around that part of the development area within the BPA.

#### 3.1.1 Forest

Treed vegetation in the bushland reserve within and adjacent to the northern part of the site best accords with the Forest group of AS 3959-2018. Forest vegetation comprises areas with trees up to 30m high or taller at maturity, typically dominated by eucalypts, with 30–70% foliage cover (may include understorey ranging from rainforest species and tree ferns to sclerophyllous low trees or shrubs). Includes pine and eucalypt plantations (Standards Australia, 2020).

DELWP biodiversity mapping indicates that the treed vegetation on the northern end of the site comprises the ecological vegetation class EVC 127 Valley Heathy Forest. In its presumed natural state it has a benchmark tree canopy cover of 30% and shrubby understorey (DSE, 2004), which is consistent with a Forest classification.

Vegetation density varies across the bushland reserve, with the western side generally being denser. As a precautionary approach, and in the absence of assurance regarding the future management of the reserve, the whole of the bushland reserve has been classified as Forest.

#### 3.2 Excluded vegetation and non-vegetated areas

Areas of low threat vegetation and non-vegetated areas can be excluded from classification in accordance with Section 2.2.3.2 of AS 3959-2018, if they meet one or more of the following criteria:



- (a) 'Vegetation of any type that is more than 100m from the site.
- (b) Single areas of vegetation less than 1 ha in area and not within 100m of other areas of vegetation being classified vegetation.
- (c) Multiple areas of vegetation less than 0.25ha in area and not within 20m of the site, or each other, or of other areas of vegetation being classified vegetation.
- (d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified vegetation.
- (e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.
- (f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks' (Standards Australia, 2020).

For the purposes of this report, it is assumed that all vegetation within the development area will become low threat and excludable from classification as the development is completed, therefore Map 1 does not show any classified vegetation within the development area boundary.

Low-threat areas excluded from classification also include the managed gardens and building surrounds of some nearby properties and minor areas of roadside vegetation. Non-vegetated areas include the roads, driveways and structures within the 100m site assessment zone (see Map 1).

### 3.3 Topography

The AS 3959 methodology requires that the 'effective slope' be identified to determine the BAL and applicable defendable space or vegetation setback distances. This is the slope of land under the classified vegetation that will most significantly influence the bushfire attack on a building. Two broad types apply:

- Flat and/or Upslope land that is flat or on which a bushfire will be burning downhill in relation to the development. Fires burning downhill (i.e. on an upslope) will generally be moving more slowly with a reduced intensity.
- Downslope land under the classified vegetation on which a bushfire will be burning
  uphill in relation to the development. As the rate of spread of a bushfire burning on a
  downslope (i.e. burning uphill towards a development) is significantly influenced by
  increases in slope, downslopes are grouped into five classes in 5° increments from 0° up
  to 20°.

The topography on and around the site within the 100m assessment zone is relatively benign,



with no significant changes in elevation that would exacerbate the bushfire attack (see Map 1). The land slopes up towards the development area at  $1^{\circ}$ , placing it in the 'Downslope >0° to  $5^{\circ}$ ' slope category. This is modelled as  $1^{\circ}$  in the Method 2 modelling shown at Section 5.2.



Map 1 – Bushfire hazard site assessment plan.



Figure 4 – Higher density Forest on the western side of the bushland reserve.



Figure 5 – More open Forest on the eastern side of the bushland reserve which will be managed by the City of Knox to provided setbacks for a BAL-12.5 construction standard.



Figure 6 – Looking south-west from the bushland reserve, up the gentle slope into the proposed development area.



Figure 7 – Forest in the middle section of the bushland reserve including areas to be managed in a low threat state to provide setbacks.



#### 3.4 Fire weather

The Forest Fire Danger Index (FFDI) and the Grassland Fire Danger Index (GFDI) represent the level of bushfire threat based on weather (and fuel) conditions. An FFDI 100/GFDI 130 is applied in non-alpine areas of Victoria by the building system, to establish building setback distances from classified vegetation in accordance with AS 3959-2018.

The indices are also used for predicting fire behaviour including the difficulty of suppression, forecasting Fire Danger Ratings (FDRs) and determining an appropriate level of preparedness for emergency services. Table 1 displays the FDRs, their FFDI range<sup>6</sup> and the description of conditions for each FDR.

Note that the benchmark of an FFDI 100 represents a 'one size fits all' model of extreme fire weather conditions for the state, but which has been exceeded during some significant fire events, including at some locations in Victoria on 'Black Saturday' 2009. Therefore, it is important to note that this is not necessarily the *worst-case* conditions for any particular location, including the development site.

It should be noted that, especially in eastern and southern Australia, since the 1950s there has been an increase in the length of the fire weather season and a greater number of higher risk days (CSIRO/BOM, 2018). There is a 'high confidence' that climate change will result in a harsher fire weather climate for the Southern Slopes Victoria West sub-region that the study area is in; with a 'low confidence' in the magnitude of the expected change (CSIRO/BOM, 2019).

However, currently the CFA and DELWP have no published policy on FFDI recurrence intervals. There is, therefore, no compelling rationale for applying a different FFDI/GFDI from the 'default' FFDI 100/GFDI 130 threshold used throughout non-Alpine areas of Victoria in the planning and building system<sup>7</sup>.

<sup>&</sup>lt;sup>6</sup> The GFDI ranges for each FDR in Table 1 may vary in some jurisdictions.

 $<sup>^{7}</sup>$  In alpine areas of Victoria an FFDI 50 applies for determining BALs using Method 1 of AS 3959-2018.



Table 1 – Fire Danger Ratings (Source: AFAC, 2017; CFA 2017b).

Forest Fire Danger Index	Grassland Fire Danger Index	Fire Danger Rating (FDR)	Description of conditions
100+	150+	Code Red	The worst conditions for a bush or grass fire. Homes are not designed or constructed to withstand fires in these conditions. The safest place to be is away from high risk bushfire areas.
75-99	100-149 <b>Extreme</b> 50-99 <b>Severe</b>		Expect extremely hot, dry and windy conditions. Fires will be uncontrollable, unpredictable and fast moving. Spot fires will start, move quickly and will come from many directions.  Homes that are situated and constructed or modified to withstand a bushfire, that are well prepared and actively defended, may provide safety.  You must be physically and mentally prepared to defend in these conditions.
50-74			Expect hot, dry and possibly windy conditions. If a fire starts and takes hold, it may be uncontrollable. Well prepared homes that are actively defended can provide safety.  You must be physically and mentally prepared to defend in these conditions.
25-49		Very High	If a fire starts, it can most likely be controlled in these
12-24		High	conditions and homes can provide safety. Be aware of how fires can start and minimise the risk. Controlled burning off may occur in these conditions if it is
0-11		Low – Moderate	safe – check to see if permits apply.



# 4 Bushfire hazard landscape assessment

One of the bushfire hazard identification and assessment strategies in Clause 13.02-1S is to use the best available science to identify the hazard posed by vegetation, topographic and climatic conditions. The basis for the hazard assessment should be:

- 'Landscape conditions meaning the conditions in the landscape within 20 kilometres and potentially up to 75 kilometres from a site;
- Local conditions meaning conditions in the area within approximately 1 kilometre from a site:
- Neighbourhood conditions meaning conditions in the area within 400 metres of a site;
   and
- The site for the development' (Knox Planning Scheme, 2018a).

This section considers the hazard beyond the site level.

#### 4.1.1 Landscape – to 20km

The development site at 29Q Norvel Road, Ferntree Gully is in the Dandenong Creek valley, located in the eastern part of the Knox City Council LGA, approximately 28 kilometres south-east of the Melbourne CBD.

The site is between the Dandenong Valley Parklands to the west and the foothills of the Dandenong Ranges to the east. The site is to the north of Ferntree Gully Road and south of Boronia Road (see Figure 1, Figure 2 and Map 2).

To the west, between the site and the Eastlink M3 Freeway and further beyond Dandenong Creek, the low threat suburban areas of greater Melbourne extend to the CBD and beyond. To the east, the balance of Ferntree Gully separates the site from the higher threat bushland areas of the Dandenong Ranges, approximately 2.3km to the east and south-east

The landscape is characterised by three main land types:

- Around the site, the low threat heavily urbanised areas of greater Melbourne extend
  west to the CBD and beyond, and east to the Dandenong Ranges, north to Ringwood and
  south to Dandenong South. Urban areas comprise the great majority of the 20km
  landscape assessment zone.
- Approximately 2.3km to the east and south-east, the urban areas give way to the
  bushland of the Dandenong Ranges and Lysterfield, identified in the Knox Planning
  Scheme as higher bushfire areas and covered by the BMO. In these areas, hilly terrain
  and dense forest extend north-to-south through the eastern part of the 20km landscape
  assessment zone. There is no credible scenario, however, in which a fire in these areas
  could affect the site other than by smoke.



To the north of the site, beyond Maroondah LGA, the landscape is a complex mosaic of urban development of varying density, patches of pastoral land and further north, densely forested areas over an undulating and sometimes steep landscape through the Warrandyte and North Warrandyte areas. The 20km landscape assessment zone to the north includes the forested areas of the foothills of the Christmas Hills range leading north to Kinglake and beyond. Again, it is very unlikely that a fire in these areas could affect the site other than by smoke.

The designated BPA covers the eastern and northern sectors of the 20km landscape assessment zone, with minor coverage in the urban areas around parks and bushland reserves, including the Dandenong Valley Parklands to the west of the site. The BMO covers large areas of treed vegetation and is restricted to the east and north of the site, with the closest BMO area being approximately 2km to the east. The BPA affecting the site is part of a small and isolated area of coverage associated with the Blind Creek Trail (see Figure 3). The vegetation affecting the site is not contiguous to any large area of vegetation on a landscape scale.

There is an extensive fire history within 20km, restricted to the larger forested areas to the north and east (see Map 2). The distinctly localised nature of the fire history to the north and east and the absence of fire in the urban areas of Ferntree Gully and the Dandenong Valley Parklands further affirms the low threat nature of the site and surrounds.

The landscape scale bushfire threat from all directions is low, with the site separated from the bushfire threat in the wider landscape by the extensive low threat urban areas. The site could be affected by smoke from the forested areas to the north and east, with some small possibility of ember attack from the north but any immediate approach by a bushfire from these areas is not credible.

The 29Q Norvel Road site has good access to the comprehensive local road network. There is ready access to lower threat areas around the site, including areas not in the BPA.

#### 4.1.2 Local - to 1km

Within the 1km local assessment zone, other than around the site and the Blind Creek Trail, the land in all directions around the site is not in the BPA (see Map 3) and consists of established urban areas. Patches of vegetation are largely confined to reserves, parks, roadsides, private gardens and the Blind Creek corridor. The surrounding area (see Map 3) is characterised by small areas of fragmented remnant and planted vegetation in managed gardens on private properties and managed roadsides.

As part of greater Melbourne, there is a significant emergency service capability to respond to bushfire.



Consequently, although areas of the BPA coverage within the 1km local assessment zone could potentially be affected by bushfire, a large-scale bushfire as envisioned by the AS 3959 model is unable to occur in the Blind Creek corridor or the bushland reserve forming the northern part of the site. Any bushfire in this area would be responded to with considerable resources.

The arrangement and distribution of vegetation within the Blind Creek corridor and the bushland reserve is unlikely to change significantly into the future.

#### 4.1.3 Neighbourhood - to 400m

Within 400m, the neighbourhood scale bushfire risk to the site is largely consistent with that for 1km, although there is a greater proportion of land in the BPA. This is reflected in the Bushfire Hazard Site Assessment (see Map 1).

The localised bushfire hazard of the bushland reserve is more evident, comprising the only area of unmanaged vegetation within the neighbourhood and emphasising the absence of any potential for a large-scale, fully developed bushfire as envisioned by the AS 3959 model. A smaller, locally ignited fire is possible, with short fire runs and fire intensity likely to be moderated by the presence of the managed or non-vegetated areas of the Blind Creek Trail (see Figure 8 and Figure 9).



Figure 8 – Blind Creek Trail junction to the north of the site.



Figure 9 – Open managed area on Blind Creek Trail near the north-western corner of the bushland reserve.

### 4.2 Landscape risk

To assist in defining the risk beyond the site scale, four 'broader landscape types', representing different landscape risk levels, are described in the DELWP technical guide *Planning Applications Bushfire Management Overlay*. These are intended to streamline decision-making and support more consistent decisions based on the landscape risk (DELWP, 2017).

The four types range from low risk landscapes where there is little hazardous vegetation beyond 150m of the site and extreme bushfire behaviour is not credible, to extreme risk landscapes with limited or no evacuation options, where fire behaviour could exceed AS 3959-2018 presumptions (see Table 1).

The development site and immediately surrounding landscape accords with Broader Landscape Type 1, with elements of Broader Landscape Type 2, in that whilst the vegetation is not restricted to grassland, bushfire can only approach from one direction and there is immediate egress to the adjacent urban area that provides shelter from bushfire (see Table 2).



Table 2 - Landscape risk typologies (from DELWP, 2017).

Broader Landscape Type 1	Broader Landscape Type 2	Broader Landscape Type 3	Broader Landscape Type 4			
<ul> <li>There is little         vegetation beyond         150 metres of the site         (except grasslands         and low-threat         vegetation).</li> <li>Extreme bushfire         behaviour is not         possible.</li> <li>The type and extent         of vegetation is         unlikely to result in         neighbourhood-scale         destruction of         property.</li> <li>Immediate access is         available to a place         that provides shelter         from bushfire.</li> </ul>	<ul> <li>The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site.</li> <li>Bushfire can only approach from one aspect and the site is located in a suburban, township or urban area managed in a minimum fuel condition.</li> <li>Access is readily available to a place that provides shelter from bushfire. This will often be the surrounding developed area.</li> </ul>	<ul> <li>The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site.</li> <li>Bushfire can approach from more than one aspect.</li> <li>The site is located in an area that is not managed in a minimum fuel condition.</li> <li>Access to an appropriate place that provides shelter from bushfire is not certain.</li> </ul>	<ul> <li>The broader landscape presents an extreme risk.</li> <li>Fires have hours or days to grow and develop before impacting</li> <li>Evacuation options are limited or not available.</li> </ul>			
INCREASING RISK						

### 4.3 Regional Bushfire Planning Assessment

As part of the response to the 2009 Victorian Bushfires Royal Commission, Regional Bushfire Planning Assessments (RBPAs) were undertaken across six regions that covered the whole of Victoria. The RBPAs provide information about 'identified areas' where a range of land use planning matters intersect with a bushfire hazard to influence the level of risk to life and property from bushfire. The RBPAs state that 'This information should be addressed as part of strategic land use and settlement planning at the regional, municipal and local levels' (DPCD, 2012).

The Regional Bushfire Planning Assessment – Melbourne-Metropolitan Region covers the Knox City Council area. Ferntree Gully is not noted as an area of interest with regard to bushfire. The more significant bushfire threat of the Dandenong Ranges and Lysterfield area to the east is



highlighted (DPCD, 2012), however this has limited relevance to the site.

#### 4.4 Credible bushfire scenarios

The most likely bushfire scenarios for a large landscape fire in Victoria, are an approach from those directions typically associated with the direction of the wind on severe or higher, fire danger days i.e. from the north, north-west, west or south-west (Long, 2006).

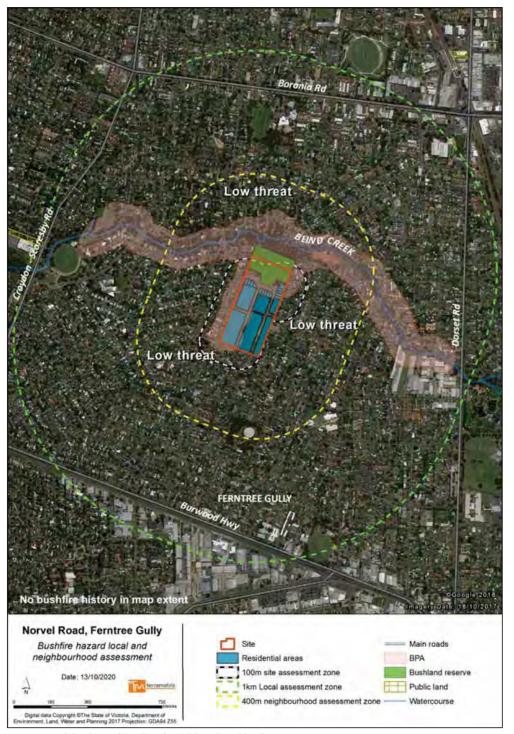
There is no credible scenario in which the site can be approached by a large landscape scale bushfire due to the developed nature of the land in all directions except for the small area of the bushland reserve to the north. A fire in the Blind Creek corridor could approach the site from the north and burn into the bushland reserve and through the treed vegetation of the Reserve. Due to the narrowness of the corridor, the fragmented nature of the vegetation and benign terrain, there is little opportunity for a fire of the scale envisioned by AS 3959 to develop.

Any such fire would be an accelerating fire with the forward rate of spread and fire intensity moderated by the presence of the managed and non-vegetated areas of the Blind Creek corridor (see Figure 8 and Figure 9). Residents near the bushland reserve will be able to readily move to the low threat urban areas within and beyond the 29Q Norvel Road site to the south. The emergency resources of the Greater Melbourne area would be available for fire suppression and evacuation.





Map 2 – Bushfire hazard landscape assessment plan.



Map 3 – Bushfire hazard local and neighbourhood landscape assessment.



# 5 Planning and design response

This section identifies how future development can respond to the bushfire risk, including the requirements of Clause 13.02-1S, published CFA guidance and the building regulations applicable to construction in a BPA.

#### 5.1 BAL construction standards

To satisfy key settlement planning strategies of Clause 13.02-1S, the future dwellings and other buildings on the site requiring a BAL (see Section 2.4), should be sufficiently setback from classified vegetation to enable a BAL-12.5 construction standard.

Building setbacks are measured from the edge of the classified vegetation to the external wall of a building, excluding eaves, roof overhangs and some other building appurtenances<sup>8</sup> (Standards Australia, 2019) (see Figure 10).

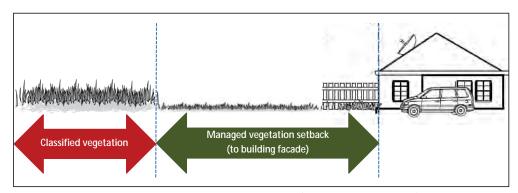


Figure 10 – Example of building-classified vegetation setback (adapted from CFA, 2013).

The setbacks required in response to the identified classified vegetation, based on the hazard assessment in Section 3 and determined using the complex Method 2 procedure of AS 3959-2018, are shown in Table 3 below. The landscaping to be applied to the balance of the site will be created in accordance with the setback distances specified in Table 3. Where required, dwellings on lots adjacent to the bushland reserve will be setback the commensurate distance from classified vegetation in the bushland reserve.

<sup>&</sup>lt;sup>8</sup> The setback distance is measured from the edge of the classified vegetation to the external wall of the building, or for parts of the building that do not have external walls (including carports, verandas, decks, landings, steps and ramps), to the supporting posts or columns. The following parts of a building are excluded:

a) Eaves and roof overhangs.

b) Rainwater and domestic fuel tanks.

c) Chimneys, pipes, cooling or heating appliances or other services.

d) Unroofed pergolas.

e) Sun blinds (Standards Australia, 2019).



### 5.2 Method 2 modelling

The site assessment at Section 3 determined that the Forest within the bushland reserve is on an effective slope of 1°, a slope that is in the AS 3959-2018 and Table 2 to Clause 53.02 slope category of 'Downslope >0° to 5°'. The default values of Table 2 to Clause 53.02 are calculated using the highest slope value of the category (i.e. 5°), which overstates the bushfire behaviour likely to affect the site as a result of the very slight rise of the land from the Blind Creek.

Consequently, the required extent of defendable space for the proposed dwellings with a BAL-12.5 construction standard was determined using the detailed method for determining the bushfire attack level (BAL) - Method 2 of AS 3959-2018.

The bushland reserve to the north of the development area and the classified vegetation contiguous to it outside of the site extends for approximately 260m – 300m to the north and north-west of the proposed dwellings. A fire that ignites on the northern fringe of this area and burns into the site is unlikely to reach a quasi-steady state rate of spread and intensity as assumed by the AS 3959-2018 test fire before it reached the proposed dwellings.

Consequently, the potential fire behaviour of credible bushfire scenarios in the bushland reserve was modelled using a combination of site-specific inputs (slope and run length) and default inputs (Forest fuel load, fire front width and weather) from the AS 3959-2018 methodology.

These inputs were combined to determine potential fire behaviour in terms of forward rate of spread, fireline intensity, flame length and radiant heat flux for an accelerating fire over a distance of 300m on a 1° downslope. The results of the modelling were then used to determine the low threat setback distances required for a BAL-12.5 construction standard.

Table 3 - Summary of Method 2 setback distance and construction standard determination.

Attribute	Value
Inputs	
Vegetation	Forest
FFDI	100
Flame temp (K)	1090
Flame emissivity	0.95
Flame width (m)	100
Heat of combustion (kJ/kg)	18,600
Rate of spread model	Accelerating
Fire run distance (m)	300
Surface fuel load (t/ha)	25
Overall fuel load (t/ha)	35
Effective slope (°)	1
Site slope (°)	3



Outputs	
Rate of spread (km/h)	3.2
Calculated elevation of receiver (m)	9.2
Flame length (m)	18.4
View factor	1.0000
Flame angle (*)	90.0
Radiant heat	
Distance to reach 12.5 kW/m² (m)	39.1

Map 4 shows the low threat setback distance required to enable a BAL-12.5 construction standard. A setback distance of 39m has been applied, beyond which all dwellings can be built to a BAL-12.5 construction standard. The site management, setbacks and modelling detailed here have been discussed with the CFA and gained in-principle support.

Table 4 – Building setbacks for BAL-12.5 construction standard.

Vegetation type	Effective slope BAL construction standard		Low threat setback distance (m)	
Forest	Downslope 1°	BAL-12.5	39	

Map 4 shows the required BAL-12.5 setbacks for the dwellings within the development area. It is not anticipated that the overall development area will change significantly, but if the lot layout changes as the design is finalised, the setback distance of 39m will be applied and all dwellings will be setback the required distance as per the criteria listed at Section 5.1.. The setback is shown as orange shading extending from the bushland reserve and must comprise managed low threat vegetation or non-vegetated areas.

The application of the 39m setback will enable all proposed dwellings to achieve a BAL-12.5 construction standard. Where the 39m setback extends over the nearby lots, dwellings on those lots must be located beyond the full extent of the setback.

#### 5.3 Vegetation management

In the north-east of the site, part of the 39m setback required to enable a BAL-12.5 construction standard for dwellings close to the bushland reserve extends over areas of the reserve.

The bushland reserve will be vested with the Knox City Council to form an adjunct bushland area to the Blind Creek Trail and managed as a Council park. Following extensive consultation, informed by preliminary reports by Terramatrix and vegetation assessments by Ecolink Consulting (22/06/2020, unpublished), the Knox City Council has agreed to manage part of the reserve for the purpose of providing bushfire protection for the proposed dwellings.



Management will be in accordance with guidelines published in 'Fire preparedness for Sites if Biological Significance in Knox – 2015/2016 (Knox City Council, 2015) and adapted to the site in consultation with the CFA.

The vegetation management will create a regularly managed low threat setback in which vegetation is at, or close to, the defendable space standards at Clause 53.02 (Knox Planning Scheme, 2018d).

The Knox City Council Bushland Management Team has indicated that the site will be visited monthly during the declared fire danger period (James Rose, Knox City Council Bushland Management Team Leader, *email communication* 12/08/2020) and works undertaken as required. The line to which vegetation is to be managed will be mapped and followed by GPS to ensure consistent delivery of the required 39m low threat area.

The agreed upon fire management regimen for the bushland is as follows:

#### Trees must not overhang or touch any elements of the building.

- From a site inspection on 10 November, Council officers can confirm that the shape of the canopies of tree #3 and #4 will not overhang or touch the proposed future building at Lot 138.
- Council proposed nevertheless to do a general maintenance and pruning of tree #3 and #4 to prune dead branches and reduce canopy extending towards Lot 138.

Within 10 metres of the building at Lot 138, flammable objects must not be located close to the vulnerable parts of the building.

 Council will not put flammable public furniture within 10m of the building envelope of Lot 138.

Council will maintain clumps of canopy trees, each clump will have canopy separated from another clump by at least 5 metres. These will consist of the nine clumps marked 1-9 and highlighted in yellow on the above plans.

- Preliminary pruning and thinning work will be undertaken, under the supervision of Council to achieve the above outcome, prior to Statement of Compliance being issued for the stage of the subdivision plan creating Lot 138.
- Pruning of trees in each clump will be undertaken to create separation between clumps.
   Council officer will be on-site supervising works to achieve this outcome by identifying best trees/branches to be removed between each clump and retain the biodiversity significance/health of the bushland.
- Ongoing maintenance of each clump will be undertaken to remove any dead or diseased branches/vegetation.
- All smaller Wattle trees growing within each clump or between clumps will be removed to thin the population within each of the clumps.



- Thinning of Clumps #5 and #6 by removal of Wattle and diseased/dead trees.
- Canopy separation pruning between clumps within the defendable space and trees outside the defendable will be also applied.
- Under pruning to establish and maintain a clearance of at least 2 metres between the lowest tree branches and ground level will be implemented.
- All area within the clumps will be mowed and no shrubs will be kept or allowed to grow under the trees comprising each clump.

Grass must be short cropped and maintained during the declared fire danger period.

All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.

There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

- During the Fire Season, the area will be mowed monthly or on an as-needed basis
- Outside the Fire Season, the area will be mowed on an as-needed basis.
- The understorey/grass beneath each clumps of canopy trees will be mowed to be cleared of debris and vegetation.
- Dead/fallen timber will be removed from the defendable area.
- The mowing will extend further the defendable area towards Agora Blvd (as depicted by the blue dashed line)
- Low lying branches which intrude into the 2m under pruned space will be removed.

Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.

Shrubs must not be located under the canopy of trees.

• Shrubs will be removed from under the canopy of the trees in the defendable area.

Maintenance track<sup>9</sup> access (marked in purple as an unformed track) will have a minimum trafficable width of 3.5m and be clear of encroachments for at least 0.5m on each side and 4m above the accessway.

- The track will remain constantly mowed and freed of encroachment.
- Access to the track will comprise removable bollard at Agora Blvd and Road F.
- Trees will be removed nearing Agora Blvd to allow for trafficable radius.
- Final maintenance track will need to be confirmed between Trees #7, #8 and #9, and will meet radius requirement for emergency vehicles.
- Low lying branches will be removed along the maintenance track.
- The track will share the axis of the pedestrian access path past clumps 1 and 7 to Agora Blvd.

<sup>&</sup>lt;sup>9</sup> Original text used the term 'fire track' and 'fire emergency track'; this has been altered to avoid confusion as the track is not intended for fire access or fire fighting purposes and is not a CFA requirement. No works other than mowing are required or anticipated for this maintenance track.



#### Maintaining the setback distances

 Clearly identify the management area edge for the purposes of maintaining separation from dwellings

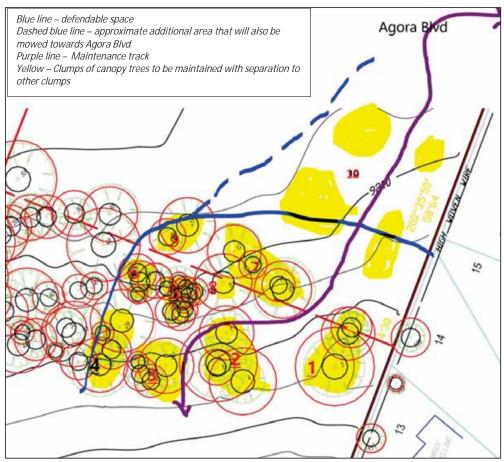


Figure 11 – Sketch of area of management to which the vegetation management plan applies.

#### 5.4 North-easternmost lot (Lot 138)

Lot 138 is located in the north-easternmost corner of the development area closest to the bushland reserve and will contain the dwelling most exposed to the effects of bushfire. The bushland reserve will be managed in a low threat state for a distance of 39m from the dwelling to support the BAL-12.5 construction standard in Lot 138 and all lots facing the Bushland Reserve.



#### 5.5 Landscaping and drainage reserve

The drainage reserve on the western side of the site adjacent to the bushland reserve will incorporate landscaping in accordance with the Norvel Estate, Ferntree Gully Landscape Report (Urbis, 2021). The landscape report provides details of the proposed vegetation throughout the development site; the development area will be provided with street trees as recommended by Knox City Council, nature strips and plantings. This vegetation will form part of the low threat urban area of the subdivision, largely outside of the BPA and is not discussed here.

The landscape report also addresses the Bushland Reserve across the northern part of the site, and the drainage reserve on the western boundary. A vegetated swale (see Figure 12) running between the development area and much of the Bushland Reserve will drain into the drainage reserve, which will discharge onto the Bushland Reserve and Blind Creek. The landscape plan has been prepared with reference to the proposed Knox City Council vegetation management regime (see Section 5.3), the CFA publication 'Landscaping for Bushfire' and the need to provide a low threat zone between the residential dwellings and the Bushland Reserve (see Figure 13).



Figure 12 – Example of the vegetated swale to be created adjacent to the Bushland Reserve (Urbis, 2021).

With regard to bushfire safety, the landscape report states 'The proposed design takes this into account and seeks to minimise dangers to life and property through the positioning of a road as a buffer, providing appropriate building setbacks, and by selecting appropriate plant species and positioning of plants' (Urbis, 2021).

Additionally, the report points out that linear reserve adjacent to the Bushland Reserve will comprise 'of low grass and hardscape, with clean- trunked trees that are loosely positioned so they do not form a continuous canopy' and that 'The tree species proposed here are "firewise" according to the criteria set out in the Country Fire Association's (CFA's) resource "Landscaping for



Bushfire - Garden Design and Plant Selection" (Urbis, 2021).

Figure 13 shows the arrangement of vegetation within the 39m setback to be managed in a low threat state. These areas will be subject to management by Knox City Council as discussed at Section 5.3).



Figure 13 – Drawing 02 of the Landscape plan of the Bushland Reserve/residential area interface (Urbis, 2022).



#### 5.6 Dwellings outside of the BPA

The green dashed line on Map 1 shows the extent of non-BPA land within the site, largely reflecting the prior land use and previously cleared areas that were devoid of vegetation. Regrowth vegetation in these areas will be removed by the development of the site and further areas will be excised from the BPA.

Some of the land in the east of the site that is currently in the BPA satisfies the DELWP criteria for excision from the BPA (see Section 2.4) and will be the subject of a future application for review of BPA mapping over the site (see Map 1 and Map 4). The areas within the site eligible for excision are anticipated to be excised from the BPA prior to development. Buildings not in the BPA will not need to be built to a BAL construction standard or provided with low threat setbacks.

#### 5.7 Access and perimeter road

The development areas will access the wider road network via two points to 29Q Norvel Road to the south and via an extension to Dion Street to the east (see Map 4 for location of permanent accessways). This is consistent with DELWP guidance (DELWP, 2020) that recommends multiple egress routes away from a bushfire hazard and will enhance bushfire safety and support more effective fire fighting.

Perimeter roads are a desirable subdivision design feature (DELWP, 2020); to achieve, or contribute to, BAL setbacks, separate future development from hazardous vegetation with a 'hard' non-vegetated edge, facilitate property protection and firefighting (see Figure 14). The majority of the development area at Norvell Road will be separated from the bushfire hazard to the north by a perimeter road that forms part of the required 39m setback.

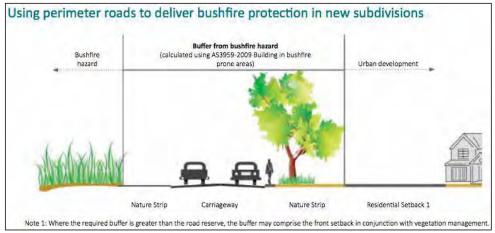


Figure 14 - Illustration of a perimeter road to provide required development setbacks (DELWP, 2015a).



Adequate access and egress for emergency management vehicles can be provided via a residential road network as per Clause 56.06-4 of the Knox Planning Scheme (Knox Planning Scheme, 2010) and incorporating a perimeter road between the development area and the bushfire hazard. CFA commentary during the consultation process has also addressed the road layout and conditions.

## 5.8 Water supply for fire fighting

The residential area will be provided with a reliable water supply for fire fighting, via a conventional reticulated hydrant system, in accordance with the hydrant objective for residential subdivision at Clause 56.09-3 (Knox Planning Scheme, 2014).



Figure 15 – Proposed development layout.



Map 4 – Setback and management zone that allow for a BAL-12.5 construction standard on affected lots.



## 6 Response to Clause 13.02-1S Bushfire Planning

The applicable strategies at Clause 13.02-1S are detailed in the following sub-sections, and a summary is provided about how the proposed development responds to the strategies.

#### 6.1.1 Protection of human life strategies

Priority must be given to the protection of human life.

#### Prioritising the protection of human life over all other policy considerations

As identified in Section 4, the site is in a low bushfire risk location. Accordingly, the protection of human life can be prioritised by adopting the measures recommended in this report and through application of the existing planning and building regulations for construction in a BPA, including ensuring future dwellings and other buildings are located where a BAL-12.5 construction standard can be achieved (i.e. achieving setbacks for future buildings from unmanaged vegetation, such that radiant heat can be expected to be below 12.5kW/m²).

Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.

The site is in a low risk location and has ready access to lower threat urban locations to the south and east (see Map 3).

The nearest *lowest* risk location is the south-eastern part of the development area, within the site itself, that is not in the BPA and is a BAL-LOW area (see Map 3). This non-BPA land will be developed along with the balance of the development area. This area is immediately adjacent to and accessible from the lots closer to the bushland reserve and provides access to the wider urban areas of Ferntree Gully.

As development progresses, reliably low threat urban areas within the site will become eligible for excision from the BPA if they satisfy the exclusion criteria (see Section 2.4). Some of the land within the development areas already satisfies these criteria and will be the subject of an application for review of BPA mapping over the site.

Reducing the vulnerability of communities to bushfire through consideration of bushfire risk in decision-making at all stages of the planning process

This report provides the basis for incorporating bushfire risk into decision-making associated with development of the site.

The CFA consider that community resilience to bushfire will be strengthened (and hence, presumably, vulnerability to bushfire will be reduced) when a strategic planning proposal



demonstrates that Clause 13.02-1S strategies have been applied, and where a proposal takes advantage of existing settlement patterns so that new development will not expose the community to increased risk from bushfire.

The CFA provide principles to respond to Clause 13.02-1S including that settlement planning decisions should:

- 'Direct development to locations of lower bushfire risk.
- Carefully consider development in locations where there is significant bushfire risk that cannot be avoided.
- Avoid development in locations of extreme bushfire risk.
- Avoid development in areas where planned bushfire protection measures may be incompatible with other environmental objectives' (CFA, 2015).

It is considered that the development can appropriately implement the strategies in Clause 13.02-1S that aim to prioritise protection of human life and will, therefore, meet the CFA strategic planning principles for bushfire. The site is in a low bushfire risk location, is not affected by the BMO and is adjacent to an existing low threat urban area outside of the BPA. More of the site will become eligible for excision from the BPA when development occurs.

#### 6.1.2 Bushfire hazard identification and assessment strategies

The bushfire hazard must be identified, and an appropriate risk assessment be undertaken.

Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.

This report identifies the hazard in accordance with the commonly accepted methodologies of AS 3959-2018 and, as appropriate, additional guidance provided in and *Planning Advisory Note 68 Bushfire State Planning Policy Amendment VC140* (DEWLP, 2018).

The type and extent of (hazardous) vegetation within, and up to 100m around the site, has been identified and classified into the AS 3959 vegetation groups. Classification was based on the anticipated long-term state of the vegetation, EVC mapping, aerial imagery, site assessment, published guidance on vegetation assessment for bushfire purposes and experience with the fuel hazard posed by the vegetation types that occur within the region.

Geographic Information System analysis of publicly available contour data for the area was undertaken and effective slopes determined.

In relation to climatic conditions and fire weather, the AS 3959 default FFDI 100/GFDI 130



benchmark used in the Victorian planning and building system, has been applied as discussed in Section 3.4.

Considering the best available information about bushfire hazard including the map of designated bushfire prone areas prepared under the Building Act 1993 or regulations made under that Act.

The extent of BPA coverage has been considered and the nearby BPA land is shown in Map 3. This is based on the most recent BPA mapping for the area, which was published 7<sup>th</sup> September 2020. This mapping is anticipated to change prior to the commencement of development, subject to the results of the application for review of the BPA that will be submitted.

Applying the Bushfire Management Overlay in planning schemes to areas where the extent of vegetation can create an extreme bushfire hazard.

None of the site is covered by the BMO (see Map 2 and Map 3), with the nearest coverage approximately 2km to the east. This is considered appropriate and reflects state-wide BMO mapping introduced into the Knox Planning Scheme on 3<sup>rd</sup> October 2017.

Considering and assessing the bushfire hazard on the basis of:

- Landscape conditions meaning the conditions in the landscape within 20 kilometres and potentially up to 75 kilometres from a site;
- Local conditions meaning conditions in the area within approximately 1 kilometre from a site;
- Neighbourhood conditions meaning conditions in the area within 400 metres of a site; and
- The site for the development.

The hazard has been assessed and described at a range of scales (see Sections 3 and 4 and Maps 1-3).

At the site scale, the assessment follows the AS 3959-2018 methodology of classifying vegetation and topography within 100m of the site.

At the neighbourhood, local and broader landscape scale, the risk has been considered within 400m and 1km of the site and extending out beyond 20km in accordance with guidance provided in Planning Advisory Note 68 (DELWP, 2018) and the BMO Technical Guide (DELWP, 2017).

Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.

The CFA has been extensively consulted during the preliminary planning for this site and,



having arrived at agreement with the City of Knox with regard to the extent and type of vegetation management within the bushland reserve have had input to the development layout and response to the bushfire planning requirements. This report forms part of the further consultation process that will occur prior to development.

Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures.

DELWP advisory and practice notes, Clause 13.02-1S, and the building regulations invoked by the BPA coverage, specify the general requirements and standards for assessing the risk. These have been used in this report as appropriate and bushfire protection measures have been identified commensurate with the risk.

Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied, or bushfire protection measures can be adequately implemented.

It is considered that if the provisions of the Building Act 1993 and associated Building Regulations 2018, through application of the National Construction Code (NCC), are complied with and the objectives and strategies of Clause 13.02-1S are successfully implemented, as discussed in this report, then the risk can be deemed to be acceptably mitigated such that development can proceed.

The CFA specify that areas where development should not proceed could include:

- 'Isolated settlements where the size and/or configuration of the settlements will be insufficient to modify fire behaviour and provide protection from a bushfire.
- Where bushfire protection measures will not reduce the risk to an acceptable level.
- Where evacuation (access) is severely restricted.
- Where the extent and potential impact of required bushfire protection measures
  may be incompatible with other environmental objectives or issues, e.g.
  vegetation protection, land subject to erosion or landslip' (CFA, 2015).

These characteristics are not applicable to the site.

#### 6.1.3 Settlement planning strategies

Settlement planning must strengthen the resilience of settlements and communities and prioritise protection of human life.



Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).

The applicable distances for dwellings or other buildings to be setback from classifiable vegetation, such that RHF is calculated to not exceed 12.5kW/m² and BAL 12.5 dwellings could potentially be sited, have been determined (see Section 5). The lot layout and proposed landscaping will be designed to provide these setbacks to achieve a BAL-12.5 construction standard.

Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.

The nearest *lowest* risk locations are considered to be those areas in the surrounding urban areas which are not in a designated Bushfire Prone Area (BPA). These comprise the urban areas of Ferntree Gully (see Map 2 and Map 3), immediately beyond the site boundaries. In addition, part of the proposed development area is already outside of the BPA and is in a low threat state. This area will expand as development commences and further areas are excised from the BPA.

Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development.

Achieving no net increase in risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reduce bushfire risk overall.

There will be no increase in risk to existing residents or community infrastructure if development achieves vegetation setbacks from hazardous vegetation to enable BAL-12.5 construction, provides an appropriate water supply for fire fighting via a conventional reticulated hydrant system and appropriate access/egress for emergency vehicles and residents via a conventional residential road network.

The risk to existing residents of nearby urban areas will be reduced by the development of additional urban residential areas and associated low threat or non-vegetated land. As identified above, this will eventually create BAL-LOW areas with the potential to be excised from the BPA.

Areas of proposed landscaping are well separated from existing urban areas and will not increase the bushfire risk for existing residents. The maintenance of the 39m setback, including management of part of the new bushland reserve, will also act to reduce the bushfire threat to the existing dwellings adjacent to the north-east of the site.



Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.

This report appropriately assesses and addresses the risk at a range of scales.

Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.

No alternative low risk development locations have been identified or assessed as part of this study.

Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009'.

If the setback distances from any hazardous vegetation as identified in this report are implemented as proposed, then construction can achieve a BAL not exceeding BAL-12.5. Excision from the BPA of some parts of the site would enable BAL-LOW construction in those areas.

#### 6.1.4 Areas of high biodiversity conservation value

Ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are of high biodiversity conservation value.

The proposed management of that part of the 39m setback over the eastern part of the bushland reserve will be carried out by Knox City Council in accordance with published guidelines expressed in 'Fire preparedness for Sites if Biological Significance in Knox – 2015/2016 (Knox, 2015) and agreed management practices. The management of vegetation within the bushland reserve was agreed to following extensive discussions and site assessments and is detailed at Section 5.3. Biodiversity impacts have been minimised through this process.

Terramatrix is not aware of any biodiversity impacts associated with the development of the majority of the site that is outside of the bushland reserve.

#### 6.1.5 Use and development control in a Bushfire Prone Area

Clause 13.02 requires that 'In a bushfire prone area designated in accordance with regulations made under the Building Act 1993, bushfire risk should be considered when assessing planning applications for the following uses and development:

- Subdivisions of more than 10 lots.
- Accommodation.



- Child care centres.
- Education centres.
- Emergency services facilities.
- Hospitals.
- Indoor recreation facilities.
- Major sports and recreation facilities.
- Places of assembly.
- Any application for development that will result in people congregating in large numbers' (Knox Planning Scheme, 2018a).

#### It further states that:

'When assessing a planning permit application for the above uses and development:

- Consider the risk of bushfire to people, property and community infrastructure.
- Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk.
- Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts' (Knox Planning Scheme, 2018a).

The development of the 29Q Norvel Road site should be able to achieve acceptable safety if:

- Appropriate setbacks for future development from classified vegetation are achieved to enable BAL-12.5 construction in the BPA;
- Management of vegetation within the bushland reserve occurs so as to provide the requisite setback distances;
- Adequate access and egress for emergency management vehicles is provided by a residential road network to assist property defence and fire fighting; and
- A reliable water supply for fire fighting is provided, via a conventional reticulated hydrant system, in accordance with the hydrant objective for residential subdivision at Clause 56.09-3.



#### 7 Conclusion

The proposed Planning Scheme Amendment and future development of the 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X) site in Ferntree Gully was assessed for compliance with Clause 13.02-1S of the Knox Planning Scheme, the AS 3959-2018 methodology invoked by the Victorian building regulations and additional guidance provided in *Planning Practice Note 64 Local planning for bushfire protection* (DEWLP, 2015), *Planning Advisory Note 68 Bushfire State Planning Policy Amendment VC140* (DEWLP, 2018a) and, in relation to the landscape hazard assessment, the DELWP technical guide *Planning Permit Applications Bushfire Management Overlay* (DELWP, 2017).

Part of the site is currently a designated BPA; however, no part of the site or land within 2km around it is covered by the BMO. The type and extent of (hazardous) vegetation within, and up to 100m around the site, has been identified and classified into AS 3959-2018 vegetation groups, based on DELWP extant EVC mapping, aerial imagery and site investigation. The classification is based on the current state of the vegetation and identifies that the current hazard is Forest to the north of the site.

The terrain in the site and the surrounding landscape is benign from a bushfire perspective, being predominantly flat but with a slight rise toward the site from the Blind Creek. For the purposes of determining BALs and vegetation setback distances for future buildings, an accelerating fire on a slope of 1° was modelled using Method 2 of AS 3959-2018.

The landscape is one of low bushfire risk, which will decrease further as development on the site occurs. Bushfire behaviour can reasonably be expected to be well within AS 3959-2018 presumptions and design parameters as detailed in the Method 2 modelling applied. The hazard is largely restricted to the bushland reserve to the north of the site, where appropriate vegetation management can provide the required low threat setback.

Accordingly, it is considered that the risk can be mitigated to an acceptable level and the development can appropriately prioritise the protection of human life, if dwellings (and any other buildings that require a BAL) are separated from hazardous vegetation to allow BAL-12.5 construction, in accordance with the building regulations and key settlement planning strategies in Clause 13.02.

Good access and egress for emergency management vehicles and residents, in the event of a bushfire, can be achieved via a conventional urban-residential road network. A reliable water supply for fire fighting can be provided via a conventional reticulated hydrant system in accordance with the hydrant objective for residential subdivision.



## 8 Appendix – BALs explained

Bushfire Attack Level (BAL)	Risk Level	Construction elements are expected to be exposed to	Comment
BAL-LOW	VERY LOW: There is insufficient risk to warrant any specific construction requirements but there is still some risk.	No specification.	At 4kW/m² pain to humans after 10 to 20 seconds exposure. Critical conditions at 10kW/m² and pain to humans after 3 seconds. Considered to be life threatening within 1 minute exposure in protective equipment.
BAL-12.5	LOW: There is risk of ember attack.	A radiant heat flux not greater than 12.5 kW/m <sup>2</sup>	At 12.5kW/m <sup>2</sup> standard float glass could fail and some timbers can ignite with prolonged exposure and piloted ignition.
BAL-19	MODERATE: There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat.	A radiant heat flux not greater than 19 kW/m <sup>2</sup>	At 19kW/m <sup>2</sup> screened float glass could fail.
BAL-29	HIGH: There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level of radiant heat.	A radiant heat flux not greater than 29 kW/m <sup>2</sup>	At 29kW/m² ignition of most timbers without piloted ignition after 3 minutes exposure. Toughened glass could fail.
BAL-40	VERY HIGH: There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front.	A radiant heat flux not greater than 40 kW/m <sup>2</sup>	At 42kW/m² ignition of cotton fabric after 5 seconds exposure (without piloted ignition).
BAL- FZ (i.e. Flame Zone)	EXTREME: There is an extremely high risk of ember attack and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front.	A radiant heat flux greater than 40 kW/m²	At 45kW/m² ignition of timber in 20 seconds (without piloted ignition).

Source: derived from AS 3959-2018 (Standards Australia, 2019).



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## **Cultural Heritage Management Plan**

#### **CHMP 18338**

Sponsor: Norvel Estate Pty Ltd

Heritage Advisors: Dr Bianca Waldie, Dr Adam Valka and Dr Linda Sonego

Authors: Dr Bianca Waldie, Dr Adam Valka and Dr Linda Sonego

Date of Completion: 21 February 2023

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## **Quality Information**

Document Norvel Estate Residential Development, 29Q Norvel Road, Ferntree Gully

Date 21 February 2023

Prepared by

#### **Revision history**

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version	Date	Details	Name/Position	Signature
1	09/11/2022	Draft for internal review		
2	01/12/2022	Final draft for client review		
3	22/12/2022	Final review prior to submission		

Photo caption (Cover plate, main photo): (Cover plate, main photo): Norvel Estate activity area, facing north (2021)

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## Norvel Estate Residential Development, 29Q Norvel Road, Ferntree Gully Cultural Heritage Management Plan

#### CHMP 18338

Size of activity area: Medium Assessment: Desktop and Standard Aboriginal cultural heritage present: NO

Heritage Advisors:
Authors:
Date of Completion: 21 February 2023

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Wurundjeri Woi-wurrung

> Cultural Heritage Aboriginal Corporation

24 February 2023

File No. WT1391 CHMP No. 18338



Dear

Cultural Heritage Management Plan: 18338 – Norvel Estate Residential Development, 29Q Norvel Road, Ferntree Gully

I refer to your application to the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation dated 3<sup>rd</sup> of January 2023 seeking approval of the Cultural Heritage Management Plan 18338 entitled *Norvel Estate Residential Development, 29Q Norvel Road, Ferntree Gully* (21 February 2023).

With reference to s.53(1) and s.61(a)-(e), and in accordance with s.63(1) of the Aboriginal Heritage Act 2006 (the Act), the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation have considered and have approved this plan.

If you require any additional information about this advice, please contact me on the number below.

Yours sincerely,



Heritage Unit Manager, Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation

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#### **Executive summary**

Compliance requirements are set out in Part 1 of the Cultural Heritage Management Plan.

The activity consists of a residential subdivision and associated works (utility installations, stormwater drainage and recreation facilities) at 29Q Norvel Road, Ferntree Gully. The activity is a medium sized activity according to Regulation 81 of the *Aboriginal Heritage Regulations 2018* and is located in the local government area of the City of Knox.

#### **Desktop Assessment**

The desktop assessment found that a total of 43 registered Aboriginal cultural heritage places are located within the geographic region. The majority of previously registered Aboriginal places within the geographic region are artefact scatters (n=19). The remaining Aboriginal places comprise low-density artefact distributions (n=13), scarred trees (n=8) and historical references (n=3). No Aboriginal cultural heritage places have been previously recorded within the activity area.

Aboriginal cultural heritage places have been recorded in each geomorphological unit within the geographic region, and it is therefore considered possible that Aboriginal cultural heritage places may be present within the activity area. The probability of these places being present is considered to be higher within land that is near Blind Creek. The most likely Aboriginal cultural heritage place types to be located within the activity area were distributions of Aboriginal stone artefacts, within both surface and subsurface contexts.

The prior land use history of the activity area, which has included agropastoral land use, land clearing, and the construction and backfilling of a quarry will have impacted upon the contextual integrity of Aboriginal cultural heritage material that may be present within the activity area. Consequently, it is considered unlikely that in situ Aboriginal places will be present in the activity area.

The results of the desktop assessment have demonstrated that while it may have been reasonably possible that Aboriginal cultural heritage was present in the activity area, extensive ground disturbance across the area of impact in the activity area (excluding the treed section of the bushland reserve and drainage reserve/additional bushland area) has occurred. However, as the bushland reserve and parts of the drainage reserve/additional bushland have not undergone previous ground disturbance and have a moderate potential to contain Aboriginal cultural heritage due to their proximity to Blind Creek, it is reasonably possible that Aboriginal cultural heritage material is present in the activity area. Consequently, a standard assessment is required under Regulation 62(1) of the *Aboriginal Heritage Regulations 2018*.

#### Standard Assessment

The field survey was conducted over two non-consecutive days on 28 February and 15 November 2022. A total of three Investigation Areas (IAs) were identified within the activity area, consisting of the highly disturbed central and southern sections of the activity area (IA1), the northern section of the activity area containing bushland (IA2) and a small section of Castricum Place in addition to an area approximately 10 m wide stretching from Castricum Place along the western edge of the activity area to the north (IA3). Average ground surface visibility across the activity area during the standard assessment was very poor (between 1% and 8%). The activity area was identified as having undergone varying degrees of past disturbance.

Upon providing additional information regarding the disturbance within the impact area after the standard assessment results meeting and confirmation of no proposed impacts within undisturbed areas of the activity area, it was agreed that complex assessment was not required as a part of this assessment.

#### Aboriginal Cultural Heritage

No Aboriginal cultural heritage material was located in the activity area during the assessments for this CHMP.



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## **Abbreviations**

ALA APR BP CHMP dGPS E EVC FP-SR GMU HA IA LDAD	Andrew Long and Associates Pty Ltd Archaeological Potential Rating Before Present (Years) Cultural Heritage Management Plan Differential geographical positioning system East Ecological Vegetation Class First Peoples – State Relations Geomorphological unit Heritage Advisor Investigation Area Low-density artefact distribution	N NE NOI NW RAP S SE STP SW VAHR W WWCHAC	North Northeast Notice of intent to prepare a CHMP Northwest Registered Aboriginal Party South Southeast Shovel test pit Southwest Victorian Aboriginal Heritage Register West Wurundjeri Woi-wurrung Cultural Heritage
LDAD	Low-density artefact distribution	WWCHAC	Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation



# PART 1 - CULTURAL HERITAGE MANAGEMENT CONDITIONS

These conditions become compliance requirements once the Cultural Heritage Management Plan is approved. Failure to comply with a condition is an offence under section 67A of the *Aboriginal Heritage Act 2006*.

The Cultural Heritage Management Plan must be readily accessible to the Sponsor and their employees and contractors when carrying out the activity.



## 1. CULTURAL HERITAGE MANAGEMENT CONDITIONS

#### 1.1 Overview of cultural heritage management conditions

This section outlines the cultural heritage management conditions to be complied with as a condition of the approval of this cultural heritage management plan. These conditions are detailed below, in accordance with Section 61(c) of the *Aboriginal Heritage Act 2006* (Vic).

No works other than those listed in the activity description (Section 4.2) are permissible under this CHMP. If/when it becomes apparent that works not listed in Section 4.2 are required then an amendment to the approved CHMP will likely be required.

#### 1.2 General Conditions

#### Condition 1 – Hard copy of the CHMP to be kept on site for the duration of the activity

#### To be completed during the activity

A hard copy of this approved CHMP must be kept within the activity area for the duration of the activity and be readily available to all on-site staff, contractors and sub-contractors, as well as any RAP representative, Aboriginal Heritage Officer or Authorised Officer who may attend the activity area during works.

#### Condition 2 - Cultural heritage awareness induction

To be completed before and during the activity

<u>All personnel who will be involved in ground disturbance works</u> within the approved CHMP activity area must complete a cultural heritage awareness induction conducted by a representative of the RAP before they can undertake those works.

At a minimum, one induction must be conducted prior to the commencement of the activity. Where additional personnel involved in ground disturbance works are required after activity commencement, these personnel must also complete a cultural heritage awareness induction conducted by a RAP representative prior to commencing ground disturbing works within the activity area.

A heritage advisor must be engaged by the Sponsor and must also attend these inductions and prepare an induction booklet containing Part 1 of the approved CHMP for distribution to each inductee. Each induction must include a brief history of the Aboriginal occupation of the activity area and broader region; a summary of the archaeological investigations conducted within the activity area; specific details of any Aboriginal places and Heritage located during the CHMP assessment; a summary of the conditions and contingencies contained within the approved CHMP; and the obligations of site workers/contractors and sponsors under the Victorian Aboriginal Heritage Act 2006. The RAP representative will fill out a Cultural Heritage Induction Checklist which will be provided as a record of inducted individuals.

The RAP must be notified at least four weeks before the inductions are required, prior to or during the activity. A Worker Request Form must be completed and sent to the RAP to book a representative for each induction.

Each induction must be organised and paid for by the Sponsor.



#### Condition 3 - RAP inspections

#### To be completed during the activity

A RAP Inspection must be completed by a RAP representative at each stage of works in order to review the progress of the activity, check that each applicable condition and contingency contained within the approved CHMP is in effect, and determine if any unexpected cultural heritage has been uncovered in the works area/s. Please refer to Map 1 for inspection areas.

The RAP Inspections, must occur at the following points:

- one inspection must be conducted at each stage of ground stripping works for the wetland in the drainage reserve/additional bushland area (topsoil stripping and wetlands basin excavation) (Map 1) All excavated spoil must also be retained within the activity area for inspection;
- one inspection must be conducted at each stage of trenching works for the wetland in the drainage reserve/additional bushland area (topsoil stripping and trench excavation) (Map 1) All excavated spoil must also be retained within the activity area for inspection;
- one inspection must be conducted after the removal of trees within the drainage reserve/additional bushland area (Map 1) All excavated spoil must also be retained within the activity area for inspection.

The requirement for additional inspections must be determined in consultation with the RAP cultural heritage unit after completion of the third inspection.

A RAP representative must conduct the inspections, and a heritage advisor/archaeologist may also attend the inspections if requested by the Sponsor. If the inspections reveal suspected non-compliance with the approved CHMP, then the procedure outlined in Contingency 3 must be initiated. If suspected Aboriginal cultural heritage (including Human Remains) is identified during the inspections, then the procedure outlined in Contingency 4 must be initiated. If the inspection reveals a suspected breach of the *Victorian Aboriginal Heritage Act 2006* then this must be reported to First Peoples - State Relations (FP-SR) immediately and an Authorised Officer or Aboriginal Heritage Officer may be called out and/or a Stop Order may be issued by FP-SR.

The RAP must be notified at least four weeks before the RAP Inspections are required, prior to or during the activity. A Worker Request Form must be completed and sent to the RAP to book a representative for each RAP Inspection.

The procedures outlined in this condition must be organised and paid for by the Sponsor.

#### Condition 4 - Notification to RAP of commencement and conclusion of activity

#### To be completed before and after the activity

At least four weeks prior to commencement of the activity the Sponsor must notify the RAP of the intended activity commencement date.

No later than four weeks after the conclusion of the activity, the Sponsor must notify the RAP of the activity conclusion date.

#### Condition 5 - Activity area

#### To be completed before and during the activity

All works associated with the activity must be conducted within the activity area delineated within this approved CHMP (Map 3).



#### 1.3 Specific Conditions

#### Condition 6 - Area of no ground disturbing works

#### Condition 6a: no ground disturbing works

No ground disturbing works within the upper 2 m of soil deposit are permitted within the area defined as 'No surface ground disturbing works' as defined in Map 2 of this CHMP before, during or after the activity. The 'No surface ground disturbing works area' comprises the whole of the bushland reserve and the forested area of the drainage reserve/additional bushland area (Map 2).

#### Condition 6b: temporary fencing requirements

The 'No ground disturbing works area' must be clearly marked with temporary fencing, where not already fenced, and must clearly delineate the area. Current fencing must be maintained and clearly signed. No fencing is required where vegetation is too dense for pedestrian access. The area where the vegetation is too dense for pedestrian access making the erection of temporary fencing impractical is marked on Map 2 as 'Boundary protected by dense bushland'. The temporary fencing compliance requirements are set out below and in Map 2.

#### Before the activity:

- the bushland reserve and the forested area of the drainage reserve/additional bushland area must be fenced off from the residential development area prior to the commencement of the activity;
- fencing must be sturdy above-ground temporary fencing with mesh panels and concrete feet (or similar). Fencing is not required in locations where existing permanent fencing is already in place;
- fencing must be clearly marked at regular intervals with signage indicating the enclosed area as a nogo zone.

#### During the activity:

- temporary fencing around the perimeter of the bushland reserve and forested area of the drainage reserve/additional bushland area as shown in Map 2 must remain in place for the duration of the activity and remain fit for purpose;
- A throughfare is permitted along the area of the maintenance track; however, it must be clearly signposted at both the northern and southern entry points into the maintenance track stating that no ground-disturbing works are permitted along the maintenance track. The location of the maintenance track is identified in Map 2.

#### After the activity:

• temporary fencing may be removed following the completion of the activity.

#### Activities permitted in the 'No ground disturbing works' area:

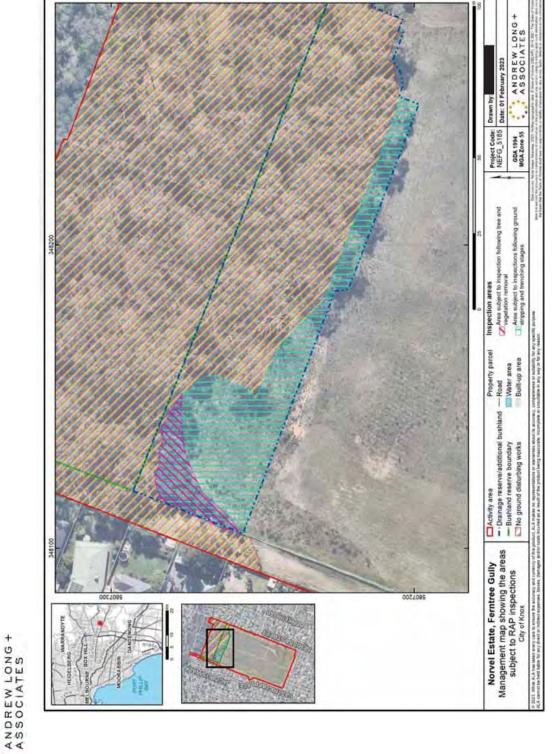
Activities permitted under this CHMP in the bushland reserve as defined in Map 2 are as follows:

- non ground disturbing works in preparation for the construction of the maintenance track including mowing, branch trimming and the cutting of shrubs at ground level;
- non ground disturbing works for the construction of the maintenance track as outlined in Section 4 of this CHMP:
- underboring of sewer alignment at a depth between 2 m and 4 m.



Activities permitted under this CHMP in the previously disturbed area of the drainage reserve/additional bushland area as outlined in Map 2 of this CHMP are as follows:

- topsoil and vegetation stripping for the construction of the wetlands basin and associated infrastructure;
- removal of shrubs via non ground disturbing removal methods e.g. cut at ground level;
- underboring of sewer alignment at a depth between 2 m and 4 m.



Map 1: Areas of RAP inspections



Map 2: Area of no ground-disturbing works



# 2. CONTINGENCY PLANS

#### 2.1 Introduction

This section describes contingency plans for the unexpected discovery of Aboriginal cultural heritage during the activity and for other matters that may affect the conduct of the activity, such as disputes, delays and other obstacles. This section also includes custody and management arrangements for Aboriginal cultural heritage that has been recovered or salvaged from the activity area and mechanisms for reviewing ongoing compliance with the management and contingency requirements of this CHMP. In achieving the specific contingency plans, the Sponsor may elect to delegate responsibility for stated actions to their nominated delegate. The Sponsor retains their legal responsibility under the *Aboriginal Heritage Act 2006* (Vic.) in relation to compliance with these contingency plans.

In accordance with Schedule 2 Clause 13(1) of the *Aboriginal Heritage Regulations 2018*, a CHMP must include contingency plans for the following:

- a) the matters referred to in section 61 of the Aboriginal Heritage Act 2006;
- b) the resolution of any disputes between the Sponsor and relevant registered Aboriginal parties in relation to the implementation of the plan or the conduct of the activity;
- c) reviewing compliance with the cultural heritage management plan and mechanisms for remedying non-compliance;
- d) the management of Aboriginal cultural heritage found during the activity;
- e) the notification, in accordance with the Act, of the discovery of Aboriginal cultural heritage during the carrying out of the activity.

#### 2.2 Contingency 1: Matters referred to in section 61 of the Act

The following matters must be considered in assessing whether a CHMP relating to an activity is to be approved:

- a) whether the activity will be conducted in a way that avoids harm to Aboriginal cultural heritage;
- b) if it does not appear to be possible to conduct the activity in a way that avoids harm to Aboriginal cultural heritage, whether the activity will be conducted in a way that minimises harm to Aboriginal cultural heritage;
- c) any specific measures required for the management of Aboriginal cultural heritage likely to be affected by the activity, both during and after the activity;
- d) any contingency plans required in relation to disputes, delays and other obstacles that may affect the conduct of the activity;
- e) requirements relating to the custody and management of Aboriginal cultural heritage during the course of the activity.

If Aboriginal cultural heritage is discovered unexpectedly during the activity, Contingency 4 (which takes into account matters referred to in section 61 of the Act with regard to harm avoidance and minimisation, and the



development of specific measures to manage Aboriginal cultural heritage) must be implemented by the Sponsor.

Contingency 2 (which sets out the contingency plans required in relation to disputes, delays and other obstacles that may affect the conduct of the activity) must be adhered to by the Sponsor.

Contingency 5 (which outlines the requirements relating to the custody and management of Aboriginal cultural heritage identified during the activity) must be implemented by the Sponsor.

The contingency plans presented in this section are specific to the activity and the activity area described within this CHMP. If, following the approval of this CHMP, any changes to the activity or the activity area requiring statutory authorisation occur, the Sponsor must either apply to amend the approved CHMP or prepare a new CHMP that incorporates any changes.

#### 2.3 Contingency 2: Dispute resolution process

Procedures for dispute resolution aim to ensure that all parties are fully aware of their rights and obligations, that full and open communication between parties occurs, and that those parties conduct themselves in good faith

If a dispute arises in relation to the implementation of the CHMP or the conduct of the activity, the following dispute resolution procedure is required:

- 1. All disputes will be jointly investigated and documented by both the RAP and the Sponsor.
- 2. The RAP and the Sponsor must meet within one week of the initial notification of the dispute to seek agreement as to a suitable resolution.
- 3. The sponsor and the RAP must arrange for authorised representatives to be present at the meeting.
- 4. At the meeting, the authorised representatives of both the RAP and the Sponsor must state their understanding of the issue(s) in relation to the dispute and ensure each party is aware of their position. If requested by either the RAP or the Sponsor, third party mediation may be held during the meeting.
- 5. If the authorised representatives of the parties reach agreement, the agreed resolution to the dispute must be recorded in writing and signed by both parties (i.e., Agreed Method Statement). If the authorised representatives of the parties do not reach agreement, the parties will participate in third party mediation of the dispute by an agreed mediator within two weeks of the first meeting to discuss the dispute. Any agreed outcome of the mediation must be recorded in writing and signed by both parties (Agreed Method Statement).

Any costs relating to the third-party mediation procedure outlined above must be met equally by the Sponsor and RAP.

Regardless of the category of dispute, the dispute resolution process does not preclude:

- The parties seeking advice from First Peoples State Relations to assist in resolution of the dispute;
   and
- 2. Any legal recourse open to the parties being taken; however, the parties agree that the above resolution mechanism will be implemented before such recourse is made.



#### 2.4 Contingency 3: Reviewing compliance and mechanisms for remedying noncompliance with the CHMP

The Sponsor is responsible for reviewing compliance with this CHMP. If the answer to any of the questions in Table 1 below is "No", all works must cease immediately and the Sponsor must contact the RAP immediately to discuss the suspected non-compliance and measures for remedying noncompliance. The Sponsor must attend an on-site or in-office meeting (if requested by the RAP) to determine the most appropriate remedy for the non-compliance. The Sponsor must provide all information about any suspected non-compliance to the RAP, and any act of non-compliance may result in an investigation by an Authorised Officer or Aboriginal Heritage Officer as per section 81(1)(a) of the Act. Any measures for remedying non-compliance must be at the direction of the RAP. Failure of parties to reach an agreed course of action in this manner will be classed as a dispute.

A record of CHMP compliance must also be maintained by the Sponsor at all times and must be available for inspection by an Authorised Officer or Aboriginal Heritage Officer as authorised under Section 165A and Section 181(1)(b) of the Act, or any other representative of the RAP or First People-State Relations. The Sponsor is responsible for ensuring that the compliance checklist outlined in Table 1 is adhered to at all times during the activity.

Table 1: Compliance checklist

Contingency	Yes/No	If no	
Prior to activity			
Has the RAP been notified at least four weeks in advance of the commencement of the activity in accordance with Condition 4?		Immediately notify the RAP	
Have all staff/contractors involved in ground disturbing works undertaken a cultural heritage induction in accordance with Condition 2?		Works must not commence and the RAP must be contacted immediately.	
Have any RAP Inspections taken place in accordance with Condition 3?		Works must not commence and the RAP must be contacted immediately.	
Has temporary fencing and signage been erected around the 'No ground-disturbing works' area in accordance with Condition 6?		Works must not commence and the fencing and signage requirements must be erected immediately.	
During activity			
Have all staff/contractors involved in ground disturbing works undertaken a cultural heritage induction in accordance with Condition 2?		All works must immediately cease and the RAP must be contacted immediately.	
Is a hard copy of the CHMP available on site and accessible to all site workers and contractors as per Condition 1?		All works must immediately cease and the RAP must be contacted immediately.	
Have any RAP Inspections taken place in accordance with Condition 3?		All works must immediately cease and the RAP must be contacted immediately.	
If suspected human remains have been identified, have all works immediately ceased and the Coroner and Victoria Police been contacted as per the 5-step contingency plan in Contingency 4?		All works must immediately cease and the RAP must be contacted immediately.	
If suspected Aboriginal Cultural Heritage other than human remains has been discovered, has the correct procedure been followed as per Contingency 4?		All works must immediately cease within 10 metres (in all directions) of the suspected heritage and the Sponsor, Heritage Advisor and the RAP must be contacted immediately.	
Are all works associated with the activity being conducted within the activity area delineated within this CHMP in accordance with Condition 5?		All works must immediately cease and the RAP must be contacted immediately.	

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Has the 'No ground-disturbing work' area been clearly delineated and sign-posted in accordance with Condition 6?	All works must immediately cease and the RAP must be contacted immediately.
After activity	
Have any RAP Inspections taken place in accordance with Condition 3?	RAP must be contact immediately.
Has the RAP been notified of the conclusion of the activity in accordance with Condition 4?	Immediately notify the RAP.
Has the procedure been followed for custody and management of Aboriginal Cultural Heritage identified during the activity?	Refer to Contingency 5.

All actions associated with the procedures specified in this contingency must be organised and paid for by the Sponsor.

# 2.5 Contingency 4: Management of Aboriginal cultural heritage found during the activity

#### 2.5.1 Discovery of human remains

If any suspected human remains are found during any activity, 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 immediately on 1300 888 544. This advice has been developed further and is described in the following five-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; and,
- The remains must be left in place and protected from harm or damage.

#### 2) Notification:

- If suspected human remains have been found, the State Coroner's Office and Victoria Police must be notified immediately;
- If there are reasonable grounds to believe that the remains are Aboriginal Ancestral Remains, the Coronial Admissions and Enquiries hotline must be contacted immediately on 1300 888 544:
- All details of the location and nature of the human remains must be provided to the relevant authorities; and
- If it is confirmed by these authorities the discovered remains are Aboriginal Ancestral Remains, the person responsible for the activity must report the existence of them to the Victorian Aboriginal Heritage Council in accordance with section 17 of the Act.

#### 3) Impact mitigation or salvage:

- The Victorian Aboriginal Heritage Council, after taking reasonable steps to consult with any Aboriginal person or body with an interest in the Aboriginal Ancestral Remains, will determine the appropriate course of action as required by section 18(2)(b) of the Act; and
- 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 First People-State Relations; and Appropriate management measures must be implemented to ensure that the Aboriginal Ancestral Remains are not disturbed in the future.

#### 2.5.2 Discovery of other Aboriginal cultural heritage

If suspected Aboriginal cultural heritage, other than human remains, is identified during the works, the following procedure must be implemented:

#### 1) Discovery:

All works within 10 metres (in all directions) of the location of suspected Aboriginal cultural
heritage must be immediately halted. This exclusion zone around the suspected Aboriginal
place must be protected from further disturbance and harm with an appropriate barrier (e.g.,
above-ground, temporary fencing) marked with "no go zone" signage. The suspected
Aboriginal cultural heritage must not be removed, and all personnel undertaking the activity
must be notified of the suspected discovery.

#### 2) Notification and assessment:

- The person in charge of the works at the time of the discovery must notify the Sponsor, the RAP and a Heritage Advisor (HA) of the suspected Aboriginal cultural heritage within one business day of its discovery, as per section 24(3) of the Act.
- The HA, a RAP representative, and the Sponsor must undertake an inspection of the suspected Aboriginal cultural heritage as soon as practicable, and within a maximum of three business days of the notification of the discovery. If a representative of the RAP is unable to participate in the inspection within the specified time period, the HA can undertake the inspection with the Sponsor, provided that the HA provides photographic documentation and a written report on the inspection to the RAP within one business day of the completion of the inspection.
- The HA and RAP must determine if the suspected Aboriginal cultural heritage is Aboriginal cultural heritage. If the suspected Aboriginal cultural heritage is determined not to be Aboriginal cultural heritage, the protective barrier may be removed, and works may recommence within the exclusion zone.
- If the suspected Aboriginal cultural heritage is determined to be Aboriginal cultural heritage by the HA and RAP, the HA must fully document this Aboriginal cultural heritage. If required, the exclusion zone must be modified to ensure that all the Aboriginal cultural heritage is protected from disturbance.
- The person in charge of the works must report the discovery of the Aboriginal cultural heritage to the Secretary as per Contingency 6.

#### 3) Management:

Following the inspection, the Sponsor and RAP must discuss and agree to a course of action
for the management of the Aboriginal cultural heritage. The Sponsor must consider avoiding
harm to the Aboriginal cultural heritage as a first priority (section 61(a) of the Act). If it is not
possible to avoid harm, the Sponsor must make every attempt to minimise harm to the



Aboriginal cultural heritage (section 61(b)), for example by reducing impact on the cultural heritage so that all or a part is not disturbed by the activity.

- A written agreement documenting the measures for managing the Aboriginal cultural heritage (section 61(c)), and how to continue with works, must be made within five working days of the on-site inspection by the RAP, HA and Sponsor. This written agreement must be prepared by the HA and circulated to the Sponsor and RAP, and it must be approved in writing by the Sponsor and RAP.
- If harm cannot be avoided, then this written agreement may include salvage of the Aboriginal cultural heritage. Any salvage must be completed by an appropriately qualified archaeologist/HA, and in accordance with proper archaeological practice. An archaeological report detailing the methods, analysis and results of the excavation must be completed. The methods and scope of the salvage, and any research questions to be addressed by the salvage, must be endorsed by the RAP. RAP representatives must participate in any salvage, and a copy of the salvage report must be provided to the RAP and Victorian Aboriginal Heritage Registry within 12 months of the completion of the salvage program.
- If any organic material (e.g., shell, charcoal, hearth) or deposits suitable for dating (e.g., radiometric, Optically Stimulated Luminescence) are identified during any salvage program, these must be collected and dated in accordance with proper scientific practice.
- Victorian Aboriginal Heritage Registry forms and Record Edits for the Aboriginal cultural heritage must be completed within three months of the completion of any harm avoidance, minimisation or management measures.

Failure of parties to reach an agreed course of action in this manner will be classed as a dispute.

The HA (with the written approval of the RAP) must advise the Sponsor when suspended construction works can proceed. In general, works may recommence when the required harm avoidance, minimisation or management measures have been completed in their entirety.

All actions associated with the procedures specified in this section must be organised and paid for by the Sponsor.

# 2.6 Contingency 5: Removal, custody, curation and management of Aboriginal cultural heritage during the activity

The Heritage Advisor must ensure that all Aboriginal cultural heritage (other than Aboriginal Ancestral Remains) recovered from the activity area during the activity is managed in the following way:

- The Heritage Advisor may initially retain custody of the recovered Aboriginal cultural heritage for scientific analysis for a period of up to 12 months from the completion of the activity. In the event that the Heritage Advisor is no longer able to retain custody of the Aboriginal cultural heritage, the Heritage Advisor must return the Aboriginal cultural heritage to the RAP immediately.
- The Heritage Advisor must fully document, package, and securely store all recovered Aboriginal cultural heritage until it is repatriated to the RAP. All Aboriginal cultural heritage must be clearly labelled with respect to its provenance.
- The Heritage Advisor must submit all relevant documentation for this Aboriginal cultural heritage to the VAHR.
- Within 12 months of the completion of the activity, the Heritage Advisor must contact the RAP to arrange the return or reburial of all Aboriginal cultural heritage recovered within the activity area according to the RAP's direction.



The return process must occur as follows:

- All Aboriginal cultural heritage must be appropriately packaged in a durable container (at the direction of the RAP), sorted by the archaeological context from which it was recovered.
- The packaged Aboriginal cultural heritage must be accompanied by a hard copy of the CHMP conditions and contingencies, VAHR record/s, and artefact catalogue/s.
- All relevant recording and documentation, including submission of an Object Collection For to the VAHR, must be completed by the Heritage Advisor within two weeks of the return.
- Following the return of the recovered Aboriginal cultural heritage to the RAP, the RAP may elect to rebury the recovered Aboriginal cultural heritage.

The reburial process must occur as follows:

The burial location must be negotiated and agreed upon in writing between the Sponsor and the RAP.

- The burial location must be protected from future development or disturbance.
- All Aboriginal cultural heritage must be appropriately packaged in a durable container, as directed by the RAP.
- The packaged Aboriginal cultural heritage must be accompanied by a hard copy of the CHMP, VAHR
  record/s, and artefact catalogue/s.
- The reburial of the Aboriginal cultural heritage must be conducted by a RAP representative/s.
- A Heritage Advisor must attend the reburial and record the burial location with a dGPS.
- All relevant recording and documentation, including submission of an Object Collection Form to the VAHR, must be completed by the Heritage Advisor within two weeks of reburial.

The specific arrangements for repatriation of the Aboriginal cultural heritage must be completed as per the Wurundjeri Artefact Repatriation Policy current at the time of the repatriation.

If for any reason the RAP cannot take possession of the Aboriginal cultural heritage, the custody of the Aboriginal cultural heritage must comply with the Act and be assigned in the following order of priority:

Any relevant registered native title holder for the land from which the Aboriginal cultural heritage has been salvaged;

- Any relevant native title party (as defined in the Act) for the land from which the Aboriginal cultural heritage has been salvaged;
- Any relevant Aboriginal person or persons with traditional or familial links with the land from which the Aboriginal cultural heritage has been salvaged;
- Any relevant Aboriginal body or organisation which has historical or contemporary interests in Aboriginal heritage relating to the land from which the Aboriginal cultural heritage has been salvaged;
- The owner of the land from which the Aboriginal cultural heritage has been salvaged;
- The Museum of Victoria.

All actions associated with the procedures specified in this section must be organised and paid for by the Sponsor.

#### 2.7 Contingency 6: Notification of discovery of Aboriginal cultural heritage

The Secretary must be notified of the discovery of any Aboriginal cultural heritage during the activity as soon as practicable and within a period not exceeding 30 days of discovery, as per section 24(2) of the Act.



#### 2.8 Contingency 7: Subdivision

As per Schedule 2 Clause 13(2) of the Regulations, if the activity is a subdivision referred to in regulation 49 of the Regulations, the contingency plans must address:

- a) how each lot is intended to be used or developed by the Sponsor; or
- b) if a lot is not intended to be used or developed by the Sponsor, the use or development of the lot permitted by the relevant planning scheme.

The activity description in this CHMP outlines how each lot is intended to be used or developed by the Sponsor. Where the activity description does not set out the intended use or development proposed for each lot, the use or development of each lot must adhere to the permitted uses under the relevant planning scheme (see Appendix 3).

It is noted that the current use of the area does not allow for residential development; however, the old brick quarry was rehabilitated by the former owners (Robertson Industries) in preparation of rezoning for residential development. The current owner of the property (Norvel Estate Pty Ltd) is in the process of applying for the property 29Q Norvel Road to be rezoned for residential use.



# **PART 2 - ASSESSMENT**



# 3. INTRODUCTION TO THE CULTURAL HERITAGE ASSESSMENT

#### 3.1 Reason for preparing the cultural heritage management plan

Norvel Estate Pty Ltd (the Sponsor) has commissioned Andrew Long and Associates Pty Ltd (ALA) to prepare a Cultural Heritage Management Plan (CHMP) for the proposed construction of a residential development on land located at 29Q Norvel Road, Ferntree Gully, Victoria.

This CHMP has been prepared by the Sponsor as a mandatory CHMP under Section 46 of the *Aboriginal Heritage Act 2006* (the Act) to allow the management and protection of Aboriginal cultural heritage during the course of activities associated with the proposed residential development and associated works at 29Q Norvel Road, Ferntree Gully, that may disturb Aboriginal cultural heritage places within the activity area. In addition, this cultural heritage management plan provides contingency arrangements for managing the identification of Aboriginal cultural heritage places that may be identified during construction works associated with the development.

A mandatory CHMP is required for an activity if (Regulation 7) –

- (a) all or part of the activity area for the activity is an area of cultural heritage sensitivity; and
- (b) all or part of the activity is a high impact activity.

#### 3.1.1 Is this activity area an area of cultural heritage sensitivity?

#### Regulation 26 - Waterways

- (1) Subject to subregulation (2), a waterway or land within 200 metres of a waterway is an area of cultural heritage sensitivity.
- (2) If part of a waterway or part of the land within 200 metres of a waterway has been subject to significant ground disturbance, that part is not an area of cultural heritage sensitivity.

The proposed activity area encompasses land situated within 200 m of Blind Creek. Therefore, the activity area is located within an area of cultural heritage sensitivity as defined in Regulation 26(1) of the *Aboriginal Heritage Regulations 2018*.

#### 3.1.2 Is this activity a high impact activity?

High impact activities are defined in Division 5 of the *Aboriginal Heritage Regulations 2018* (Vic). In this instance, the activity will principally include the construction of a residential subdivision, development and associated works (roads, utility installation, flood controls, stormwater treatment and a proposed bike path) at 29Q Norvel Road, Ferntree Gully, which is a high impact activity as established by Regulation 46, Regulation 48 and Regulation 49 of the *Aboriginal Heritage Regulations 2018* (Vic).

Division 5 of the Regulations lists activities which are 'high impact activities' for the purposes of assessing whether a CHMP is required. With regard to the proposed works, the relevant regulations are as follows:



#### Regulation 46 Buildings and works for specified uses

- 1) The construction of a building or the construction or carrying out of works on land is a high impact activity if the construction of the building or the construction or carrying out of the works
  - a. would result in significant ground disturbance; and
  - b. is for, or associated with, the use of the land for any one or more of the following purposes—
    - (xxvii) a utility installation, other than a telecommunications facility, if -
      - (D) the works affect an area exceeding 25 square metres.

#### Regulation 48 Dwellings

- 1) The construction of 3 or more dwellings on a lot or allotment is a high impact activity.
- 2) The carrying out of works for 3 or more dwellings on a lot or allotments is a high impact activity.

#### Regulation 49 Subdivision of land

- 1) The subdivision of land into 3 or more lots is a high impact activity if
  - a. the planning scheme that applies to the activity area in which the land to be subdivided is located provides that at least 3 of the lots may be used for a dwelling or may be used for a dwelling subject to the grant of a permit; and
  - b. the area of at least 3 of the lots is less than 8 hectares.

As the proposed works are for the construction of a residential subdivision with associated infrastructure, the works are defined as high impact activities within the *Aboriginal Heritage Regulations 2018* (Vic).

#### 3.1.3 Is a mandatory Cultural Heritage Management Plan required for the activity?

According to the criteria and definitions outlined above, the Sponsor is required to prepare a mandatory CHMP for the proposed activity as per Regulation 7 of the *Aboriginal Heritage Act 2006* (Vic), as the activity area is located within an area of Aboriginal cultural heritage sensitivity and the proposed activity is a high impact activity.

#### 3.2 Notice of intent to prepare a Cultural Heritage Management Plan

A Notice of Intent to Prepare a Cultural Heritage Management Plan (NOI), as required by Section 54 of the *Aboriginal Heritage Act 2006*, was submitted to the Secretary of the Department of Premier and Cabinet on 29 September 2021, and a response was received on 29 September 2021 allocating the plan the number 18338 (Appendix 1).

The NOI was submitted to the Registered Aboriginal Party (RAP), the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC), on 29 September 2021. The RAP responded to the NOI on 30 September 2021 indicating that they intended to evaluate the CHMP (Appendix 2).

The NOI was submitted to the relevant Local Government Authority (City of Knox) on 30 September 2021.

The Sponsor was requested to send a copy of the NOI to the owners/occupiers of the activity area.



#### 3.3 The location of the activity area

The activity area located at 29Q Norvel Road, Ferntree Gully, is situated within the Knox City Local Government Area, approximately 27 km to the east of the City of Melbourne. The Norvel Road site is located on the northern side of Norvel Road and extends north to the Blind Creek reserve, which is a protected bushland area. The activity area lies to the north of Norvel Road, east of Castricum Place, south of Blind Creek and is surrounded by residential development.

The respective property parcels are listed in Table 2.

Table 2: Activity area cadastral details

Address	SPI
29Q Norvel Road, Ferntree Gully	1\TP297137
29Q Norvel Road, Ferntree Gully	1\TP963860
29Q Norvel Road, Ferntree Gully	2\TP963860
Norvel Road road reserve	
Castricum Place road reserve	
54 Agora Boulevard, Ferntree Gully	1\TP83661
Road (No property address)	R1\LP4115

The activity area currently lies within:

- SUZ2 Special Use Zone Schedule 2
- Urban Floodway Zone [UFZ]

For current permitted uses see Appendix 3. The current use of the area does not allow for residential development; however, the old brick quarry was rehabilitated by the former owners (Robertson Industries) in preparation of rezoning for residential development. The current owner of the property (Norvel Estate Pty Ltd) is in the process of applying for the property 29Q Norvel Road to be rezoned for residential use.

As the activity area is a rectangular block of more than one hectare, but less than 40 hectares, it is considered a medium activity as established by Regulation 81 of the *Aboriginal Heritage Regulations 2018* (Vic). The location of the activity area is shown in Map 3.

#### 3.4 The name of the Sponsor

The Sponsor of this CHMP is:

Qing Dong Liu Phone: 0403 213 018 Email: qdliu@outlook.com

Address: 448 Heidelberg Road, Fairfield VIC 3078

#### 3.5 The name of the Heritage Advisors

This CHMP has been authored by qualified archaeologists and heritage advisors in accordance with Section 189 of the Aboriginal Heritage Act 2006 (Vic).

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The Heritage Advisors and authors for this CHMP are:



Dr Bianca Waldie, Senior Project Manager, Andrew Long and Associates PhD in Archaeology, Flinders University of South Australia, 2019 Masters in Archaeology Flinders University of South Australia, 2012 Bachelor of Archaeology, Flinders University of South Australia, 2009 Industry Experience – 11 years

Dr Linda Sonego, Senior Project Manager, Andrew Long and Associates PhD in Classical Archaeology, La Trobe University, 2019
Masters in Cultural Heritage Management, University of Siena, 2012
Bachelor of Arts with Honours, La Trobe University, 2002
Industry Experience – 5 years

Dr Adam Valka, Assistant Project Manager, Andrew Long and Associates PhD in Archaeology, La Trobe University, 2021
Bachelor of Archaeology with Honours, La Trobe University, 2015
Industry Experience – 2 years

#### 3.6 The owners and occupiers of the land

The owner of the land is Norvel Estate Pty Ltd and the land is currently a vacant block. The Sponsor is responsible for the coordination of works associated with the proposed activity.

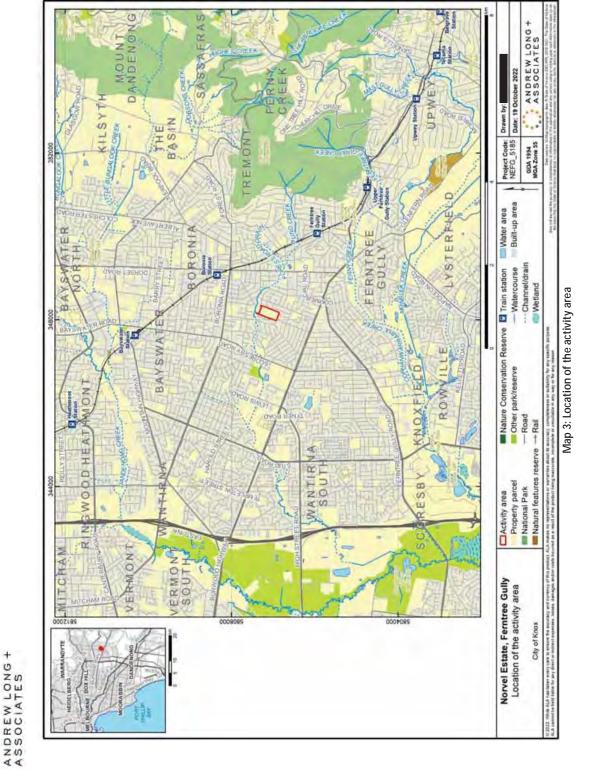
SPI Address Owner/Occupier 29Q Norvel Road, Ferntree Gully VIC3156 1\TP297137 Norvel Estate Ptv Ltd 1\TP963860 Norvel Estate Pty Ltd 29Q Norvel Road, Ferntree Gully VIC3156 29Q Norvel Road, Ferntree Gully VIC3156 Norvel Estate Pty Ltd 2\TP963860 Norvel Road road reserve City of Knox Castricum Place road reserve City of Knox 1\TP83661 54 Agora Boulevard, Ferntree Gully City of Knox R1\LP4115 No property address for this parcel City of Knox

Table 3: The owners and occupiers of the land

#### 3.7 Registered Aboriginal Parties/Activity Advisory Group

At the time that the NOI was submitted, the RAP appointed by the Victorian Aboriginal Heritage Council for land including the activity area was WWCHAC.

The WWCHAC remained the sole RAP appointed for the activity area at the time this CHMP was submitted for evaluation and have responsibility for Indigenous cultural heritage matters relating to the activity area.



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# 4. ACTIVITY DESCRIPTION

#### 4.1 Introduction

This section includes a detailed description of the nature of the proposed activity and any ancillary works associated with the activity as well as a description of the likely impact on the surface of the land and buried former land surfaces, in order to assess the scope for potential impact on Aboriginal cultural heritage.

No works other than those listed in the activity description (Section 4.2) are permissible under this CHMP. If/when it becomes apparent that works not listed in Section 4.2 are required then an amendment to the approved CHMP will likely be required.

#### 4.2 Description of the activity

The activity area includes the property at 29Q Norvel Road, a small area of Council land to the north of 29Q Norvel Road and some surrounding road reserves, which will become the Norvel Estate Residential Development. The residential development will include approximately 138 residential allotments and associated works. The northern extent of the activity area contains a portion of protected bushland (Blind Creek Reserve), which will be protected from development impact (please refer to Appendix 4 and Map 4 for a detailed design showing the lack of development within the protected bushland area), and the drainage reserve, which also includes areas of protected bushland corresponding to the forested area within the drainage reserve/additional bushland area (Map 4). Impacts from the activity within the drainage reserve/additional bushland have been designed to remain within the previously cleared area only, which is located near the southern extent of the drainage reserve/additional bushland and correspond to works associated with stormwater and site drainage (Map 4). The activity will impact the remainder of the activity area with the topsoil stripped to approximately 300 mm for the subdivision and will also consist of:

- site preparation works including site clearance;
- installation of the sewer pipeline to an approximate depth of 2 m;
- connection to the sewer main under the protected bushland and/or bike path. The sewer main under the drainage reserve/additional bushland area, the bushland reserve and/or bike path is to be constructed via underboring at a depth between 2 m and 4 m. The exact alignment of the sewer has not been determined but is expected to run parallel with the western edge of the activity area. The sewer main will be connected to an existing pit located along the edge of Blind Creek Trail within the activity area, not requiring an exit pit and therefore will not require disturbance of the ground surface. The entry pit will be located within the previously disturbed area of the drainage reserve/ additional bushland or the area of the former quarry;
- installation of water drainage and wetlands with associated swale and outfall in the previously
  disturbed section of the drainage reserve/additional bushland located at the northern end of the
  subdivision (Map 9). The depth of impact is not yet determined although it is assumed impacts will
  be extensive;
- construction of an above ground bund associated with the water drainage and wetlands within the previously disturbed section of the drainage reserve/additional bushland area. The construction method will be built up to a height of approximately 300 mm.



- installation of services (electricity, telecommunications, gas, potable and recycled water etc.) to an approximate depth of 1.5 m;
- road surfacing, road and kerb construction, shared use paths and landscaping works to an approximate depth of 1 m;
- construction of a bollarded emergency access track connecting Castricum Place to the residential subdivision along the western boundary of the activity area;
- proposed bike path along the western edge of the activity area extending from Blind Creek Trail in the north to the emergency bollarded access at Castricum Place in the south. The proposed bike path construction methodology will be above ground and will not involve ground disturbance of the ground surface;
- other minor works such as the installation of signage and landscaping as may be required;
- no trees will be removed in the bushland reserve or within the previously undisturbed area of the drainage area/additional bushland area located in the northern section of the activity area within the 'No ground disturbing works area' as outlined in Map 4;
- shrubs removed from the 'No ground disturbing works' will not be removed through ground breaking removal methods but will be cut off at ground level;
- construction of a maintenance track connecting Agora Boulevard and the residential subdivision
  across the bushland reserve and the drainage reserve/additional bushland area. The proposed
  construction of the maintenance track will use an above ground construction methodology and will
  be formed using compacted granitic sand. No grading, surface stripping or other ground disturbing
  works are required as part of the construction methodology;
- site preparation for the maintenance track within the bushland reserve and drainage reserve/additional bushland will involve mowing of the existing track and trimming of branches overhanging the track, and the removal of small shrubs cut to ground level (not removed via ground disturbing means) only:
- no ground disturbing works, with the exception of the sewer alignment, are proposed in the bushland reserve as defined in Appendix 4 (Lot Development Plan Sept 2022):
- no ground disturbing works, with the exception of the sewer alignment, are proposed in the
  undisturbed section of the drainage reserve/additional bushland area as defined in Appendix 4 (Lot
  Development Plan Sept 2022) before, during or after the activity;
- no ground disturbing works are permitted in the bushland reserve or the undisturbed area of the drainage reserve/additional bushland area as outlined in Map 4 before, during or after the activity with the exception of the sewer alignment.

While the use of the activity area is known, the exact development footprint (such as the location of dwellings, utilities, roads and fencing etc.) is not (see Appendix 4 for the preliminary development proposal). As such, for this subdivision the description is in accordance with Clause 6(2)(b) Schedule 2 of the *Aboriginal Heritage Regulations 2018*, being 'if no description under paragraph (a) is provided in relation to a lot, the use or development of the lot permitted by the relevant planning scheme'. All works undertaken during the proposed activity will be permitted under the 'Special Use Zone – Schedule 2' (SUZ2) under the City of Knox Planning Scheme (Appendix 3) once the submission for rezoning of the activity area has been approved by Council.

Despite the removal of topsoil across the impact area, the possible impact on Aboriginal cultural heritage within the activity area is likely to be negligible as the use of a large section of the activity area (corresponding to the impact area for the proposed activity) as a former quarry has caused large scale disturbance of the former buried land surface and the removal of soils of the former buried land surface. Additionally, the



underboring works for the sewer main under the protected bushland area and/or bike path will be at a depth between 2 m and 4 m, which is below the artefact bearing deposit.

ANDREW LONG + ASSOCIATES



Map 4: Designated areas within the activity area



### 5. EXTENT OF THE ACTIVITY AREA

#### 5.1 Introduction

The extent of the activity area is described in this section. This CHMP relates only to the area described within this section.

#### 5.1 Introduction

The activity area is located in Ferntree Gully, approximately 27 km southeast of the Melbourne Central Business District (CBD) and situated within the local government area of the City of Knox. The activity area consists of the land parcel at 29Q Norvel Road, along with small parcels of the Council Reserve located to the north of 29Q Norvel Road, and adjacent road reserves along Norvel Road and Castricum Place. Approximately two thirds of the activity area has been cleared and currently consists of non-native grasses and weeds covering the ground surface. The activity area is bounded by a Council bushland reserve in the north that includes Blind Creek, residential development to the east, residential development and Castricum Place to the west, and Norvel Road to the south.

The activity area was formerly occupied by a clay brick quarry, which upon closure was filled and graded to ensure the site falls towards the bushland and Blind Creek in the north to facilitate drainage into Blind Creek. The northern section of the site, which currently sits within an area of cultural heritage sensitivity (Regulation 26: Blind Creek), will largely remain undeveloped where vegetation exists. However, where vegetation does not exist the developers propose to locate flood controls and stormwater treatment assets.

The subject site encompasses an area of approximately 9.81 ha, with a development area of 7.67 ha, which makes it a medium activity area according to Regulation 81 of the *Aboriginal Heritage Regulations 2018* (Vic) (Map 2).



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# 6. DOCUMENTATION OF CONSULTATION

#### 6.1 Notice of intention to prepare a Cultural Heritage Management Plan

In accordance with the requirements of Section 54 of the Act, on 29 September 2021 a formal NOI was submitted to the Secretary, Department of Premier and Cabinet and the RAP (WWCHAC) (Appendix 1). A response was received from the RAP on 30 September 2021 indicating that in accordance with Division 4, Section 55 of the Act the RAP intended to evaluate the CHMP.

The NOI was also submitted to the owners/occupiers, and the relevant Council, Knox City Council.

#### 6.2 Registered Aboriginal Parties

At the time the NOI was submitted, the WWCHAC was the RAP appointed for the activity area.

The WWCHAC was present during the assessments and was consulted throughout the preparation of this CHMP. Consultation with the WWCHAC was also undertaken through formal meetings.

#### 6.3 Summary of consultation

The WWCHAC provided representatives who participated in the planning and execution of this CHMP. Although a formal request for oral information relating to the activity area was put forward to the WWCHAC Elders on 8 February 2022, no oral information relating to the activity area was provided to the Heritage Advisor. The outcomes of both formal and informal consultation are presented in Table 4.

**Table 4: Summary of consultation** 

Date	Mode of communication	Sender	Recipient	Communication
29/9/2021	Email			NOI submitted to VAHR.
29/9/2021	Email			VAHR respond to NOI submission and allocate CHMP number 18338.
1/10/2021	Email			Submission of NOI to RAP.
30/9/2021	Email			Confirmation that Wurundjeri will evaluate CHMP 18338 and will participate in all relevant aspects of the CHMP.
30/9/21	Email			Submission of the NOI to the LGA.
30/9/21	Email			Confirmation of NOI email.
8/2/2022	Meeting			Inception meeting for CHMP 18338. Established the activity and activity area, need to slightly extent AA to cover the footpath around the block. Established that the site was quarried for clay bricks in the past and the central and southern parts are significantly disturbed. The northern area is bushland reserve, and no impact is proposed in that area.

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		Need to send Wurundjeri further documents (stormwater management plan) to see if the outflow will impact the ground surface of the bushland area. If so, testing will be required, if not, no testing required.
Email		Oral history request sent to WWCHAC.
Email		Sent additional information – Stormwater management plan, CHA assessment and photos of activity area from CHA.
Email		Sent copy of meeting notes to get signed by HA and Sponsor.
Email		Email from Caroline Spry stating that the documents had been reviewed and that the Elders have requested a standard assessment to inspect the trees in the bushland reserve.
Email		Sent copy of signed meeting notes and services report.
Email		Response from the RAP advising that the Elders do not have any oral history they wish to provide for this CHMP.
Fieldwork		Standard assessment
Meeting		Standard Results Meeting for CHMP 18338. The results of the standard assessment were discussed with particular focus on the proposed wetlands area in the north western section of the activity area. The Elders requested further information regarding the proposed wetlands and advised that as it appears to extend into the reserve area, complex assessment may be required. Confirmation of the wetlands design were requested.
Email		Email outlining previous disturbance in the proposed wetlands area and request for no further assessment in this area sent to WWCHAC.
Email		Replied received requesting specific detail regarding the dimensions and likely depth of impact for the wetlands basin works in addition to the most up-to-date development plan.
Email		Specific detail on dimensions and likely depths of wetlands basin works provided in addition to a copy of the storm water management plan and most up-to-date development plan.
Email		Additional information requested on proposed impacts within the reserve area and along Castricum Place.
Email		Additional information provided including surveys from before the filling of the quarry, after the filling of the quarry and aerial imagery.
Email		Query regarding proposed impacts in the treed area of the bushland reserve such as benches/seating and
	Email  Email  Email  Fieldwork  Meeting  Email  Email  Email  Email  Email  Email	Email  Email  Email  Email  Email  Fieldwork  Meeting  Email  Email  Email  Email  Email  Email  Email



3/10/2022	Email	Clarification provided that the designs in the Bushfire Management Plan and Storm Water Management Plan are currently outdated. The most up-to-date design is the Lot Development Plan dated 02 Sept 2022, which
3/10/2022	Phone	was resent.  Request from Wurundjeri for a copy of the updated Bushfire Management Plan (if available) and if not, a letter from the Sponsor confirming that there are no proposed impacts within the treed area of the bushland reserve as shown on the Lot Development Plan dated 02 Sept 2022.
3/10/2022	Email	Updated Bushfire Management Plan provided in addition to the final proposal design plan.
4/10/2022	Email	Wurundjeri advised that the landscape plan-decking and timber slat benches in the drainage and bushland reserve areas was still included in the Bushfire Management Plan.
4/10/2022	Email	Advised that the Bushfire Management Plan was undertaken to inform the final design and did not include the final design.
6/10/2022	Email	Advised of reservations on making decisions based on a document that appears to present conflicting plans and potential impact. Requested the landscape design of the Bushfire Management Plan to be updated if possible. The Elders also requested confirmation of the following:  • That the construction of the unformed maintenance trail and granitic sand path through the bushland reserve shown on the landscape design on the Bushfire Management Plan would not require any surface stripping or grading at all prior to compacting any granitic sand along with confirmation that their alignment would be planned around any existing trees and not require tree removal.  • The same confirmation was requested for the path running along the western edge of the activity area.  • The aggregate maintenance grass depicted to the east of the swale drain would not require removal of any existing trees or subsurface impact on land that has not been previously disturbed by quarrying.
7/10/2022	Email	<ul> <li>ALA confirmed the following points:</li> <li>The Bushfire Management Plan will not be included in the CHMP as a design reference and that a request has been put to the Sponsor to provide an updated copy.</li> <li>A draft description of the activity provided.</li> <li>The granitic sand path through the bushland reserve depicted on the landscape design has been removed from the final proposal design.</li> <li>The unformed maintenance track will follow an existing unformed track through the bushland reserve and will not require any trees to be removed or any surface stripping/grading prior to the compaction of the granitic sand; however, in preparation for the works to take place it may require mowing and tree branches overhanging the path to be trimmed.</li> </ul>



		The aggregate maintenance gross devicted to	
		The aggregate maintenance grass depicted to the east of the swale drain will likely have impacts but that this area was highly disturbe by rehabilitation works after the closure of the quarry. The design has been created to avoid removal of trees.	d e
11/10/2022	Email	Wurundjeri advised that the Elders were happy with the proposal and requested the standard condition and contingencies. Additionally, one inspection per stage of ground stripping for the wetland/drainage reserve and one per stage of trenching for the wetland/drainage reserve area along with a conditionally what is allowed in the bushland/drainage reserves were requested.	S
14/10/2022	Email	Updated Bushfire Management Plan provided and advised that regrowth within the previously disturb area of the drainage reserve will require removal for the construction of the wetlands. An updated activity description was provided to reflect these edits.	r
18/10/2022	Email	Wurundjeri advised that the Elders have requested inspection at the location of the proposed wetlands after the removal of trees.	
19/10/2022	Email	Updated activity area including the area of road reserve along Castricum Place, the connection of th maintenance track with Agora Boulevard and the connection of the bike path to the existing bike path sent to the VAHR.	
19/10/2022	Email	Updated activity area including the area of road reserve along Castricum Place, the connection of th maintenance track with Agora Boulevard and the connection of the bike path to the existing bike path to WWCHAC. Additional information was also sent outlining previous clearing of trees and other vegetation in the areas added for the bike path and maintenance track connections.	n
19/10/2022	Email	Acknowledgement of receipt of updated activity are received.	ea
20/10/2022	Email	Draft conditions and mapping provided for commer	nt.
25/10/2022	Email	Request received to include the following:  Change Condition 3 to refer to an inspection particle and to remove the minimum and maximum number of inspections unless it is confident to how many stages there will be.  Include an inspection map.  Further information regarding how the 'No ground-disturbing works' area will be signed.	
04/11/2022	Email	Updated draft conditions provided for comment.	
08/11/2022	Email	Advised that Elders were satisfied that their concer on the draft conditions had been addressed.	ns
09/11/2022	Email	Follow up email with additional information on disturbance within the unsurveyed areas of the acti area.	vity



15/11/2022	Email	Reply received advising that the Elders have requested a survey of the additional areas at a minimum.
17/11/2022	Email	Reply outlining previous disturbance at Castricum Place and limited to no scope for complex assessment in this area due to the presence of underground utilities.
18/11/2022	Email	Reply received requesting additional information on the extent of the paved area of the emergency access area at Castricum Place and requesting that the standard assessment include the whole western section of the activity area along the area of the proposed bike path.
18/11/2022	Email	Reply to Wurundjeri advising that the paved section of the emergency access at Castricum Place is unlikely to extend more than five metres and will not extend outside the area already disturbed by underground utilities. ALA also confirmed that the standard assessment will include the whole western section of the activity area along the proposed bike path.
18/11/2022	Email	Acknowledgement of the information provided regarding the paved section of the emergency access area.
23/11/2022	Fieldwork	Standard assessment of three additional areas added to the activity area after completion of the first standard assessment and the whole western section of the activity area along the proposed bike path.
24/11/2022	Email	Results of the standard assessment of the additional areas provided.
25/11/2022	Email	Reply requesting additional information around the area of the connection of the maintenance track to Agora Boulevard and confirmation that the proposed bike path along the western boundary of the activity area was surveyed.
25/11/2022	Email	Additional photos and confirmation of the survey along the bike path provided.
29/11/2022	Email	Reply advising that the Elders are satisfied that due to existing services, previous impacts and low potential for any Aboriginal cultural heritage, no complex assessment is required. However, the Elders did request confirmation from the Sponsor that no ground scraping works are required to remove weeds etc. before the construction of the bike path and maintenance track.
29/11/2022	Email	ALA replied advising the Sponsor had confirmed that no ground scraping works are required to remove weeds prior to the construction of the bike path and the maintenance track. Additionally, ALA advised that the Sponsor is fully aware that any changes to the design once the detailed design is finalised, may require an amendment to the CHMP.
01/12/2022	Email	Reply advising that the Elders were satisfied with the information that has been provided.
02/12/2022	Email	Updated Sponsor details provided.



02/12/2022	Email	Updated Sponsor details provided. It is noted that the Sponsor listed on the NOI will continue to be involved in the CHMP process and will be acting as the
02/12/2022	Email	Sponsor's representative.  VAHR advised that the Sponsor details have been updated in the VAHR database and advised that the original NOI, despite no longer being correct, must be included in the CHMP but that this will not affect the outcome or evaluation.

Following the desktop assessment, a project inception meeting was held for CHMP 18838 on 8 February 2022 between

Results of

the desktop assessment were discussed including the high level of noted disturbance from the use of a large portion of the activity area as a clay brick quarry and its remediation including backfill and grading in 2015-2016. In addition to the large scale disturbance it was also noted that the reserve in the northern section of the activity area did not appear to have been impacted by the former quarry and seemed relatively undisturbed.

Two WWCHAC representatives were invited to participate in the standard assessment. Discussions with WWCHAC representatives during the survey on 28 February 2022 established the potential sensitivity of the activity area. It was noted that the activity area has been subject to a high degree of disturbance from the clay quarry but that the bushland area to the north appeared undisturbed.

A standard assessment results meeting was held on 20 July 2022 between

Results from the standard assessment were discussed including a detailed description of previous ground disturbance noted across the activity area. Concern was raised by the Elders during the meeting that the proposed location for the wetlands was within an area not impacted by quarrying activities and therefore within the undisturbed bushland reserve in the northern section of the activity area and advised that complex assessment was necessary in that area but were satisfied that no additional testing

was required in the remainder of Investigation Area 1 (IA1).

After discussions with the Sponsor, ALA advised WWCHAC that the proposed wetlands had been specifically designed to be located within the previously disturbed area and while that particular section of the activity area had not been subject to specific quarrying activities it had been highly disturbed during the remediation works of the quarry in 2015 and 2016. An email outlining the previous disturbance was sent to WWCHAC on 23 August 2022 with a proposal to conclude the assessment at the standard assessment level. After additional email correspondence and the provision of additional information outlining both the activity and previous disturbance from remediation works of the former quarry, it was agreed that no complex assessment was required for this CHMP. The Elders requested inclusion of the standard conditions and contingencies with an additional condition outlining the activities that are permitted within the bushland and drainage reserve/additional bushland area.

Draft conditions were sent to WWCHAC for comment on 20 October 2022. A reply was received from WWCHAC on 25 October 2022 with comments on the draft conditions including a request to change Condition 3 to refer to an inspection per stage and to remove the minimum and maximum number of stages unless it is clear how many stages there will be; to include an inspection map; and an enquiry as to how the 'No ground-disturbing works' area will be signed. Updated draft conditions were provided to Wurundjeri for comment on 4 November 2022 with a reply received on 8 November 2022 advising the Elders were satisfied their concerns regarding the draft conditions had been addressed but advising that additional requests around the conditions may arise during the evaluation period.

A follow up email was sent on 9 November 2022 requesting confirmation that no additional assessment was required for the three additional areas added to the activity area after the completion of the standard



assessment including an emergency access point at Castricum Place, connection of the proposed bike path on the western side of the activity area to the existing bike path running alongside Blind Creek and connection from Agora Boulevard to the proposed maintenance track on the eastern side of the activity area. A reply was received on 15 November 2022 that the Elders had requested survey of the three additional areas at a minimum. ALA replied on 17 November advising that no impacts are proposed along the proposed bike path or maintenance track and that due to the presence of underground utilities, complex assessment along Castricum Place was extremely limited.

A standard assessment of the three additional areas and the bike path along the western edge of the activity area that were added to the activity area after the original standard assessment (28 February 2022) was undertaken on 23 November 2022. Two WWCHAC representatives were invited to participate in the standard assessment. Discussions were held regarding past disturbance and proposed impacts across these additional areas and the activity area in general. Disturbance from underground utilities was noted at the northern end of the bike path area and at Castricum Place. The clearing of trees was also noted along the proposed maintenance track including the connection area at Agora Boulevard.

The results of the standard assessment were sent to Wurundjeri via email on 24 November 2022 and a reply was received on 29 November 2022 advising that the Elders were satisfied that due to existing services, previous impacts and low potential for Aboriginal cultural heritage within the activity area, no complex assessment is required. However, the Elders requested confirmation that no scraping of the ground would be required to remove weeds along the bike path and maintenance track as a part of the works. If so, subsurface investigation to the depth of impact would be required. ALA replied advising that the Sponsor had confirmed that no ground disturbing works at all were required along the bike path and maintenance track and that the Sponsor is fully aware that if there are any changes to the design once the detailed design is finalised, an amendment may be required. A reply was received from WWCHAC on 1 December 2022 advising that the Elders were satisfied with the information provided.



# 7. DESKTOP ASSESSMENT

#### 7.1 Introduction and aims

This section outlines the aims, methods, and results of the desktop assessment. The aims of a desktop assessment are:

- to undertake a search of the Victorian Aboriginal Heritage Register (VAHR) for information relating to the activity area;
- to determine a geographic region that is relevant to the Aboriginal cultural heritage that may be present in the activity area;
- to review reports and published works about Aboriginal cultural heritage within the geographic region;
- to review historical and ethnohistorical accounts of Aboriginal occupation of the geographic region;
- to review the landforms or geomorphology of the activity area;
- to review the history of use of the activity area; and
- to collect and review oral history relating to the activity area if applicable.

#### 7.2 Method of assessment

The methods used to undertake the desktop assessment included:

- using appropriate sources, including Victorian government online information, reviewing and summarising relevant environmental background;
- searching the Victorian Aboriginal Heritage Register (VAHR) and other research sources (for example, consultancy reports, academic research) for information relating to the activity area and the geographic region (a VAHR search was undertaken on 5 October 2021 and an updated search was undertaken on 17 October 2022); and
- reviewing and analysing this information to identify or characterise the Aboriginal cultural heritage site types and locations likely to be present within the activity area.

#### 7.3 Obstacles

There were no obstacles to undertaking the desktop assessment.

#### 7.4 Persons involved in the desktop assessment

The desktop assessment was completed prior to the commencement of the standard assessment and subsequently updated during the drafting of this CHMP. The following individuals were involved in completing the desktop assessment:



•

#### 7.5 RAP information

Please note that no oral information was collected during the desktop assessment.

#### 7.6 Geographic region

It is important to understand the geographic and environmental context of the activity area in order to gain a better understanding of the possible resources available to pre-contact Aboriginal people and European settlers which may have influenced past human activity. This information also assists in determining the degree to which environmental (e.g., natural erosion of landforms) and/or human processes (e.g., land clearance, cultivation) have impacted on Aboriginal cultural heritage places.

For the purposes of the CHMP the geographic region has been defined by existing geographical features on the landscape, specifically waterways. The western and northern edges of the geographic region are marked by the upper section of Dandenong Creek, which extends for approximately 22 km from the mouth of the Corhanwarrbul Creek in Scoresby to its upland headwaters in Olinda. The eastern edge of the geographic region cuts across the Dandenong ranges for 7 km, being specifically defined by the length of Perrins Creek between Olinda and Beagleys Bridge, and that of Hardys Creek between Kallista and its junction with the Monbulk Creek at Belgrave. The southern border of the geographic region stretches for 18 km, following the Monbulk Creek from Belgrave until its confluence with the Corhanwarrbul Creek in Rowville and subsequent convergence with the Dandenong Creek in Scoresby (Map 6).

This geographical region neatly captures the dominant geological and vegetation classes historically relevant to the activity area and includes a number of Aboriginal cultural heritage places associated with a variety of substrates in the vicinity of the activity area. It is deemed sufficient to adequately capture information relating to relevant landforms, geology and soils, fauna and flora, and past evidence for Aboriginal occupation relating to the activity area, including all relevant Aboriginal cultural heritage place types. Expanding it further would add little to the information base required to establish an adequate physical and cultural regional context.

#### 7.7 Geomorphology, landforms, and environment of the activity area

#### 7.7.1 Landforms/geomorphology

#### 7.1.1.1 Geomorphology

The Victorian Geomorphological Framework (VGF) provides a tiered hierarchy of geomorphological land unit (GMU) descriptions. These land units describe landforms with attention to the geological composition of landscapes and the mechanisms by which they have been shaped. The geographic region includes five land units (refer to Table 5, Map 7 and Map 6). Of those five units, just under half the land within the geographic region consists of low relief landscapes at low elevation (GMU 1.3.1). Other prominent landforms within the geographic region include terraces, fans and floodplains (GMU 1.3.3) and deeply dissected ridge and valley landscapes (GMU 1.4.4).

The activity area consists entirely of low relief landscapes at low elevations (GMU 1.3.1) (Table 6), which falls into the Eastern Uplands geomorphological division. The low relief landscapes at low elevation (GMU 1.3.1) are characterised by a dissected plateau-like surface of hills, which are otherwise known as the Nillumbik Terrain. This area is mostly developed on erosion resistant lithologies and contain some red gradational or texture-contrast soils on rises and yellow texture contrast soils in the valleys where there is less drainage (Joyce et al. 2003: 536-578). Soils within this area are comprised predominantly of red to yellow acid texture



soils (Kursols) and are likely to be comprised of recently deposited sediments that may have clear stratification (Stratic Rudosols).

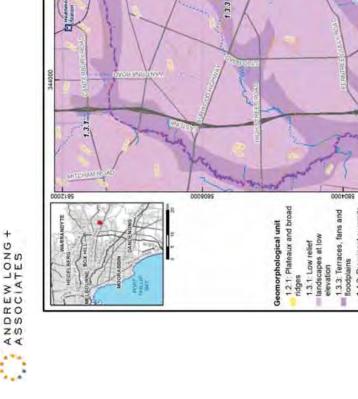
Table 5: Geomorphological land units within the geographic region

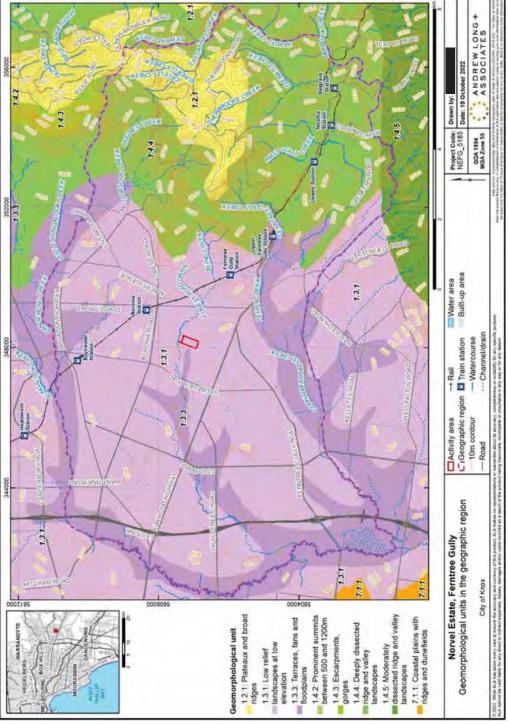
GMU	GMU name	Area (hectares)	% of total area
1.2.1	Plateaux and broad ridges (Strathbogie, Koetong-Shelly, Errinundra, Kinglake, Olinda)	8,070,320.89	6.85
1.3.1	Low relief landscapes at low elevation (Cann River south, Silvan, Templestowe)	53,732,906.45	45.62
1.3.3	Terraces, fans and floodplains (Kiewa Valley, Wonnangatta Valley)	21,971,405.21	18.65
1.4.4	Deeply dissected ridge and valley landscapes (headwaters of major rivers such as the Wonnangatta, King and Kiewa Rivers Mt. Coopracambra)	33,372,525.69	28.33
1.4.5	Moderately dissected ridge and valley landscapes (Alexandra, Yea, Baranduda)	645,198.83	0.55
Total		117,792,357.1	100

Table 6: Geomorphological land units within the activity area

GMU	GMU name	Area (hectares)	% of total area
1.3.1	Low relief landscapes at low elevation (Cann River south, Silvan, Templestowe)	98,064.91	100
Total		98,064.91	100

Map 6: Geomorphology of the selected geographic region





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#### 7.1.1.2 Geology

The underlying geology of the geographic region includes nine different geological units, which are listed in Table 7 and depicted in Map 7. The more prominent geological formations with the broader region include older geological units, such as Humevale siltstone (Dxh) and Ferny Creek Rhyodacite (Dif).

The underlying geology of the activity area consists of only two different geological units (refer to Table 8). Approximately three quarters of the activity area consists of Humevale Siltstone (Dxh), with the remainder of the area consisting of Colluvium (Qc1) in the north.

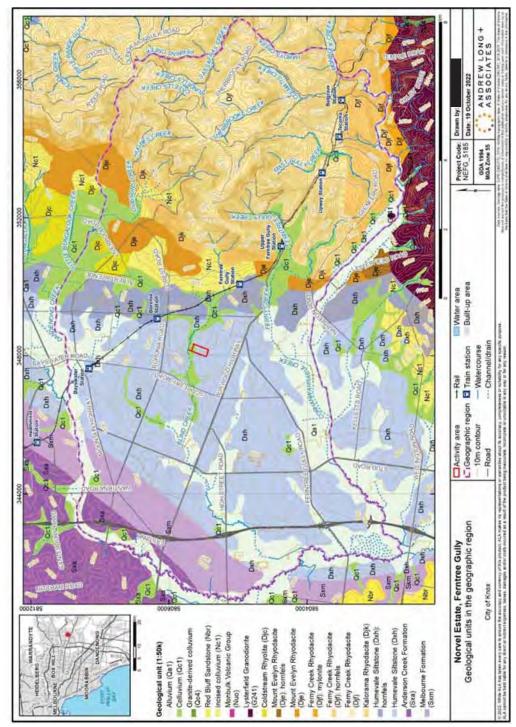
Table 7: Geological units in the geographic region (50K)

Geological unit	Area (hectares)	Proportion of geographic region (%)
Alluvium (Qa1)	22,795,730.77	19.35
Anderson Creek Formation (Sxa)	1,457,495.84	1.24
Coldstream Rhyolite (Djc)	786,754.88	0.67
Colluvium (Qc1)	3,642,971.18	3.09
Ferny Creek Rhyodacite (Djf)	31,803,501.45	27
Ferny Creek Rhyodacite (Djf): hornfels	4,997,509.34	4.24
Humevale Siltstone (Dxh)	30,007,676.22	25.48
Humevale Siltstone (Dxh): hornfels	5,594,579.14	4.75
Incised colluvium (Nc1)	3,539,425.96	3
Kalorama Rhyodacite (Djk)	2,500,165.47	2.12
Melbourne Formation (Sxm)	6,908,990.28	5.87
Mount Evelyn Rhyodacite (Dje)	3,757,556.55	3.19
Total	117,792,357.1	100

Table 8: Geological units in the activity area (50K)

Geological unit	Area (hectares)	Proportion of activity area (%)
Colluvium (Qc1)	24,456.46	23.98
Humevale Siltstone (Dxh)	74,547.41	76.02
Total	98,064.91	100

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Map 7: Geology of the selected geographic region



#### 7.7.2 Environment

The following information provides a general context for the environment of the activity area.

#### 7.7.2.1 Climate

The climate of Australia has altered and fluctuated since the time of earliest human occupation around 40,000-60,000 years ago within the Pleistocene period. The Pleistocene period is conventionally dated from two million to 10,000 years ago (Mulvaney & Kamminga, 1999, p. 103).

During the Pleistocene, lower sea levels were present across Australia, and the southern coastline extended southwards, connecting Tasmania to the Australian mainland (Cosgrove 1999: 362). During the Late Pleistocene to Early Holocene (Holocene period generally dates from around 10,000 years ago to the present day; Mulvaney and Kamminga 1999: 103) sea levels began to rise in response to post-glacial marine transgression resulting from the melting of Late Pleistocene ice sheets (Lambeck and Nakada 1990: 143). This rise in sea levels separated Tasmania from the mainland and reduced the area of the Australian mainland. Victorian sea levels stabilised and reached modern levels before around 6000 years BP (Lambeck and Nakada 1990: 149).

During the period of Aboriginal occupation of the Melbourne region, the climatic conditions varied greatly in regard to temperature and rainfall levels. During the late Pleistocene period, there was less rainfall and less precipitation throughout the continent, reducing the woodland forest areas of southern Australia and resulting in a predominance of grasslands. During the Last Glacial Maximum (21,000-15,000 years BP), temperatures were approximately 6-10 degrees lower than today (Mulvaney and Kamminga 1999: 116). Within this time, there is evidence for dry/shallow lakes with conditions likely to have been too dry to support swamp or open-water environments (Aitken and Kershaw 1993: 76; Bowler 1981: 436–37). The inland of Australia was characterised by arid and dry conditions and it is likely that Aboriginal people during this period would have experienced severe drought. Within southern Victoria these climatic conditions generally discouraged tree growth, although some trees survived in particularly sheltered and watered areas (Mulvaney and Kamminga 1999: 116).

In the late Pleistocene to early Holocene (around 12,000-9,000 BP), warmer temperatures and increased precipitation resulted in the expansion of woodland and forest areas dominated by Eucalypts (Aitken and Kershaw 1993: 67). There is also evidence that the Holocene experienced fluctuating environmental conditions after 5,000 years ago, including lower levels of moisture during the mid to Late Holocene, and fluctuating water conditions (Aitken and Kershaw 1993: 78; Reid 1989: 48; Wilkins et al. 2013: 8, 10).

It is important to note that variability in past climate may have resulted in variable approaches to subsistence and land use patterns by Aboriginal people in the past. It is entirely reasonable to suspect that Aboriginal land use patterns prior to the Last Glacial Maximum, and during the Last Glacial Maximum, differed from what might be expected during the Holocene. While it is not always possible, predictive models regarding the potential location for Aboriginal archaeological sites, should try to consider the importance of relict waterways and lakes, and the like, when trying to determine where Aboriginal archaeological sites may be located.

# 7.7.2.2 Pre-contact vegetation

The distribution and following descriptions of the likely vegetation classes that would have been dominant in the area in 1750 have been derived from modelling developed by the Department of Environment, Land, Water and Planning (Map 8). The geographic region demonstrates a diverse number of different Ecological Vegetation Classes (EVCs) that are characteristic of the Gippsland Plain (GipP) bioregion.

The activity area itself, is located on the Gippsland Plain bioregion, which consists of flat low lying coastal and alluvial plains with a gently undulating terrain dominated by barrier dunes and floodplains and swampy flats. The

<sup>&</sup>lt;sup>1</sup> https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks- Accessed 04/01/2022



soils associated with the upper terrain are both texture contrast soils (Chromosols, Sodosols) and gradational texture soils (Dermosols), and typically support the Lowland Forest ecosystem. The dunes are predominantly sandy soils (Podosols and Tenosols) supporting Heathy Woodland and Damp Sands Herb-rich Woodland ecosystems. The fertile floodplains and swamps are earths and pale yellow and grey texture contrast soils (Hydrosols) and support Swamp Scrub, Plains Grassy Woodland, Plains Grassy Forest, Plains Grassland and Gilgai Wetland ecosystems.

The bioregion is generally below 200 m above sea level while the coastline includes sandy beaches backed by dunes and cliffs, and shallow inlets with extensive mud and sand flats. The bioregion has a temperate climate, averaging between 500 to 1100 mm a year. The majority of rain falls in winter, and the Strzelecki Ranges create a rain-shadow to the east. A number of rivers drain the bioregion including the Avon, Bass, Latrobe, Macalister, Mitchell, Tambo, Tarwin, Thompson and Yarra.

Dry Forests, including Grassy Dry Forest (EVC 22), Herb-rich Foothill Forest (EVC 23), Shrubby Foothill Forest (EVC 45), Valley Grassy Forest (EVC 47), Valley Heathy Forest (EVC 127) and Grassy Forrest (EVC 128) are the most prominent EVCs included in the geographic region (Table 9). The pre 1750 EVCs thought to have been present within the activity area are consistent with prominent EVCs noted throughout the broader geographic region, with the activity area consisting of Dry Forests (Table 10 and Map 8).

Trees that would naturally be found within the dry forests may have included a range of eucalypts, such as *Eucalyptus radiata s.l.* (Narrow-leaf Peppermint), *Eucalyptus leucoxylon* (Yellow Gum), *Eucalyptus melliodora* (Yellow Box) and *Eucalyptus rubida* (Candlebark). The ground layer beneath these trees would have been covered by a variety of herbs, lilies, grasses and sedges, albeit this ground covering would have likely been rather sparse during drier seasons.

The swampy woodland adjacent to the waterways would also have supported a eucalypt woodland, albeit the trees likely to be present would have included Eucalyptus ovata (Swamp Gum), Eucalyptus cephalocarpa s.s (Mealy Stringybark), Eucalyptus radiata s.l. (Narrow-leaf Peppermint) and Eucalyptus obliqua (Messmate Stringybark). The ground beneath would have been covered by tussock grasses, sedges and herbs. Both the dry forests and swampy woodlands would have supported a wide range of edible plants and animals that would have attracted Aboriginal people to land within and around the activity area.

Recent satellite and aerial imagery of the activity area indicates that historic land use of the activity area, which initially included agropastoral land use and later the construction of a quarry, has resulted in widespread deforestation throughout most of the activity area. The southern section of the activity area was cleared and excavated for a quarry. Some remnant vegetation remains in the northern part of the activity area, where minimal works will be undertaken (stormwater and drainage works). Consequently, it is unlikely that Aboriginal scarred tress will be found in the area of works for the activity, or anywhere in the southern part of the activity area, It is also evident that should Aboriginal stone tools be present within the activity area, those that are found on the ground surface, or the upper part of the soil profile, are very likely to have been disturbed as a result of the soil clearing, stripping and quarrying activities conducted in the activity area since historic European use of land.

Table 9: Modelled 1750s Ecological Vegetation Classes within the geographic region

EVC Group Name	EVC No	EVC Name	Area (hectares)	%	
Dry Forests		Subtotal	73,397,651.91	62.31	
	22	Grassy Dry Forest	1,831,353.45	1.55	
	23	Herb-rich Foothill Forest	7,045,391.34	5.98	
	45	Shrubby Foothill Forest	6,607,861.19	5.61	
	47	Valley Grassy Forest	2,477,347.49	2.1	
	127	Valley Heathy Forest	47,277,039.89	40.14	
	128	Grassy Forest	8,158,658.54	6.93	
Heathy Woodlands		Subtotal	1,701.52	<1%	
	793	Damp Heathy Woodland	1,701.52	<1%	
Herb Rich Woodlands		Subtotal	609,174.2	0.52	
	164	Creekline Herb-rich Woodland	609,174.2	0.52	

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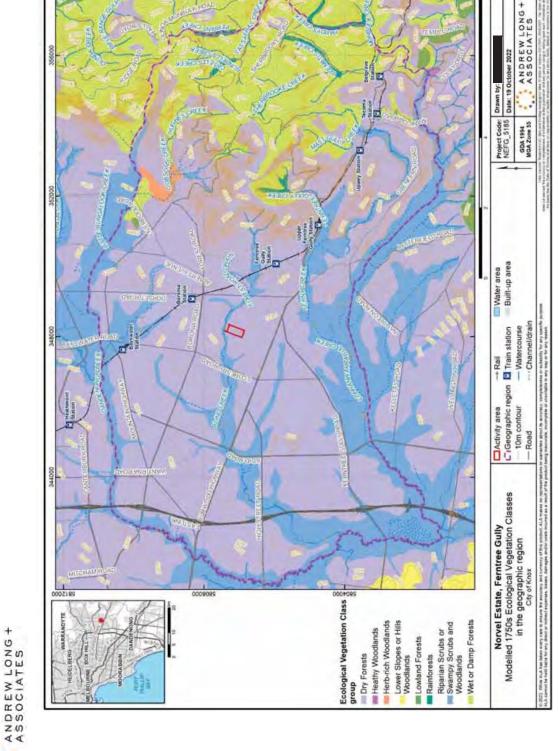


EVC Group Name	EVC No	EVC Name	Area (hectares)	%
Lowland Forests		Subtotal	48,752.27	0.04
	16	Lowland Forest	48,752.27	0.04
Rainforests		Subtotal	744,035.23	0.63
	31	Cool Temperate Rainforest	744,035.23	0.63
Riparian Scrubs or Swampy Scrubs and Woodlands		Subtotal	23,292,634.06	19.77
	17	Riparian Scrub/Swampy Riparian Woodland Complex	675.78	<1%
	18	Riparian Forest	1,162,729.23	0.99
	83	Swampy Riparian Woodland	3,819,747.95	3.24
	126	Swampy Riparian Complex	1,269,808.84	1.08
	937	Swampy Woodland	17,039,672.26	14.47
Wet or Damp Forests		Subtotal	19,698,407.9	16.72
	29	Damp Forest	9,772,162.98	8.3
	30	Wet Forest	9,926,244.92	8.43
Total			117,792,357.1	100

Table 10: Modelled 1750s Ecological Vegetation Classes within the activity area

EVC Group Name	EVC No	EVC Name	Area (hectares)	%								
Dry Forests												
	127	Valley heathy Forest	98064.91	100								
Total			98,064.91	100								

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Map 8: Modelled pre 1750s ecological vegetation classes within the selected geographic region



# 7.8 Review of historical and ethnohistorical accounts of Aboriginal occupation in the geographic region

In this section the available historical and ethnohistorical information relating to Aboriginal people in the geographic region is briefly reviewed. This information will assist in formulating a model of Aboriginal subsistence and occupation patterns across the region. In conjunction with an analysis of the documented archaeological record of the region, ethnohistorical information provides a framework for the interpretation of archaeological sites in the wider area and predictive modelling of potential location of archaeological site types within the activity area.

The lives of Aboriginal groups in the wider Melbourne area were severely disrupted by the establishment and expansion of European occupation. As a result, only limited information regarding the pre-contact lifeways of Aboriginal people within the geographic region is available. A full ethnographic search, including a review of the significant George Augustus Robinson and William Thomas papers, was outside the scope of this assessment. The Robinson and Thomas manuscripts contain extensive information about social practices of Aboriginal groups in the Melbourne area at the time of European occupation, such as naming conventions, dress, personal ornamentation, and other aspects of material culture, coming of age and other ceremonies, and spatial arrangements of contiguous tribespeople at large encampments (Clark 1990).

Correctly identifying and describing nineteenth century Aboriginal groups within the geographic region is difficult. This is largely a result of discrepancies in early European accounts and the difficulties early settlers had in understanding Aboriginal languages and social systems (see Barwick 1984: 106). Furthermore, the devastating effects on Aboriginal people of European presence (e.g., the loss of traditional lands and resources, spread of disease, social breakdown and removal of groups and individuals to reserves and mission stations) have compounded the difficulties associated with accurately recounting an early ethnohistory of the Aboriginal people of the Melbourne region.

It is also important to note that the ethnohistorical information presented within this report is based on the observations and writings of men from the nineteenth century, and certain contextual limitations should be considered when reading these accounts. As pointed out by Barwick (1984: 103), "... their jealousies, ambitions, loyalties and roles in colonial society shaped their inquiries and the content of their publications".

These nineteenth century authors were writing from an Anglo-centric and gender-biased viewpoint for a colonial audience who had a very limited and generally negative view on Aboriginal life, heritage, and culture. Despite these shortcomings, nineteenth century ethnographical accounts are a useful resource; the information has often been provided to the author by Aboriginal informants or by first-hand observations and experience.

#### 7.8.1 Ethnohistorical accounts

The geographic region is located within the language group of the *Woi wurrung* (spelling according to Clark 1990: 364), the group that occupied the basins of the Yarra and Plenty Rivers. A language group consists of independent groups of closely related kin, or 'clans', who are spiritually linked to designated areas of land through their association with topographic features connected to mythic beings or deities. Clan lands were inalienable, and clan members had religious responsibilities (e.g., conducting rituals) to ensure 'the perpetuation of species associated with the particular mythic beings associated with that territory' (Berndt 1982: 4).

The *Woi wurrung* clan most closely associated with the geographic region were the *Wurundjeri willam*, who identified with the Yarra and Plenty rivers (Barwick 1984: 118, 122–124). Clan boundaries were defined by mountains, creeks and rivers, and clans were very familiar with the geography of their territory and the seasonal availability of resources within it. At European settlement, Bebejan was *ngurungaeta* (clan head) of the *Wurundjeri willam* whose territory included the area around Darebin Creek (Howitt 1904: 309). Bebejan



was the father of William Barak (Barwick 1984: 124). The majority of references to *Wurundjeri willam* describe Aboriginal associations with either the Yarra River or Mount William, west of Kilmore (Presland 1983). The *Wurundjeri willam* had an extensive network of political, economic and social relations with neighbouring clans, including those from other language groups. Marriage was sought from the *Bunjil* moieties of the *Bun wurrung* (spelling according to Clark 1990: 364) to the south, the *Taungurong* to the north and a clan near Mount Macedon and Lancefield (Barwick 1984: 104).

Woi wurrung groups followed a semi-sedentary hunter-gatherer lifestyle. Resource-rich watercourses and swamps, containing a diversity of fish, shellfish, birds and other plant or animal foods, formed a particular focus for regular Aboriginal occupation. For instance, William Thomas observed clans in the wider Westernport district living a hunter-gatherer lifestyle, moving within their lands to make use of seasonal plant and animal resources, trading opportunities and to meet ritual and kinship obligations (Gunson 1968: 10).

Prior to European settlement the geographic region would have contained a great number and variety of faunal species associated with the rivers, creeks and floodplains of the area. Some of the food resources that may have been utilised by Aboriginal people include wetland root crops such as *Typha* and *Triglochin*, dry land root crops such as *Microseris lanceolata "murrnong* or yam-daisy), freshwater fish, eels and crustaceans, waterfowl and land mammals. With the demise of habitat, the number and range of species that once existed has been greatly reduced, however, land mammal species once commonplace throughout the region would have included possum, native rats, bettong, wallaby, kangaroo and bandicoot. During the pre-European contact period, the waterways would have supported black swans, ducks, ibis, quail, fish and crustaceans (LCC 1991: 107).

A large variety of plants were not only valued for their potential food resources, but also for their medicinal uses and their suitability for the manufacture of implements. Ephemeral swamp plants, such as bull rushes and sedges, were also an important source of food, as well as fibre for woven bags and decorative items. Detailed lists of plant and animal species available within the Port Phillip area can be obtained from Presland (2010), Gott and Conran (1991) and Zola and Gott (1992) Economic species included:

- 1. *Themeda triandra* (Kangaroo Grass) fishing nets, leaves and stem yielding fibre for string (Zola and Gott 1992: 58).
- 2. *Convolvulus erubescens* (Pink Bindweed or Blushing Bindweed) tough starchy roots were cooked and eaten (Gott and Conran 1991: 22).
- 3. *Triglochin spp* (Water-ribbons) bearing starch-sweet tubers that were cooked and eaten (Gott and Conran 1991, p. 9; Zola and Gott 1992: 12).
- 4. *Poa labillardierei* (Common Tussock-grass) the fibre from these tough grasses was used to make string for nets, and for bags, baskets and mats (Zola and Gott 1992: 58).
- 5. Phragmites australis (Common Reed) the tall straight flowering stems were used for spear-shafts or cut into short lengths and used to make necklaces. The leaves were used to weave bags and baskets, and the non-starchy roots were also eaten (Gott and Conran 1991: 66; Zola and Gott 1992: 12).
- 6. Acacia melanoxylon (Blackwood) the wood was used to manufacture spear-throwers, shields and clubs, while the bark was heated and infused with water to bathe rheumatic joints (Gott and Conran 1991: 50; Zola and Gott 1992: 53).

# 7.8.2 Post-contact history

After the establishment of Melbourne and the rapid dispersal of pastoralists around Port Phillip in search of quality grazing and water for stock, the *Woi wurrung* were swiftly excluded from traditional food resources and the more reliable water sources in the region. In particular, the yam daisy or *murnong*, a staple food found in grassy plains, was rapidly destroyed by introduced grazing animals. Access to the woodlands, swamps and billabongs became difficult following the establishment of station homesteads at significant locations. In



addition to the dislocation and social breakdown caused by this conflict, the limited resource diversity available to each group became critical, forcing the survivors increasingly to depend on government and station supplied rations.

The development of Melbourne and its hinterland during the mid-nineteenth century resulted in not only the rapid loss of traditional lands and resources, but also the spread of diseases including venereal disease, social breakdown and the removal of Aboriginal groups and individuals to reserves and mission stations (Caldere and Goff 1991: 3).

The close proximity of the mass of urban settlers to these Aboriginal groups inevitably caused problems for the colonial administration, and consequently a Government Mission was set up in 1837 on an 895-acre site at South Yarra, close to an established camping area on the site of the Botanical Gardens. George Langhorne was responsible for its management. Rather than resolving Aboriginal grievances, the objective of the mission was to 'civilise' Aboriginal people and those who decided to live at the mission were provided with rations in exchange for agricultural endeavours. Children were also provided with rations for attending school classes. *Woi wurrung* people were mainly associated with the mission although a few *Bun wurrung* individuals and members of other language groups were noted as being affiliated with the mission in 1838 (Clark and Heydon 1998: 27). The mission was short-lived, and alternative locations were sought away from the 'influence' of Melbourne.

Various reserves were subsequently established as refuges for Aboriginal people around Port Phillip and Westernport by Assistant Protector William Thomas during 1839-1843 in an attempt to move the remaining Aboriginal people further away from Melbourne. These included Arthurs Seat, Merri Creek, Mordialloc Creek and most importantly the Westernport Protectorate Station on the Dandenong Creek at Narre Warren (Clark and Heydon 1998: 28; Barwick 1998: 31). Thomas hoped that the stations would encourage Aboriginal people to take up an agricultural lifestyle, but he spent most of his time unsuccessfully trying to keep Aboriginal people out of Melbourne. One of the major problems was the way in which the *Woi wurrung* and *Bun wurrung* were frequently treated as the same group, leading to internal dissent and dissatisfaction. The Westernport Protectorate Station, for instance, was located on *Woi wurrung* land, which was not acceptable to the *Bun wurrung*, who were treated like strangers.

In 1839 a census requested by George Robinson, the Chief Protector of Aborigines in the Port Phillip Protectorate, of Aboriginal people living in and around Melbourne found that the probable Aboriginal population at this time consisted of 140 *Woi wurrung*, 50 *Wada wurrung* and 12 *Bun wurrung* people (Lakic and Wrench 1994: 110, 113). However, it is likely that the numbers of Aboriginal people in Melbourne varied greatly throughout this period and was subject to the influx of various groups and individuals.

From the 1830s onwards, Aboriginal people continued to camp in the vicinity of the township of Melbourne. Mostly they were Aboriginal people belonging to *Woi wurrung* and *Bun wurrung* clans, and their preferred camping places were along the south bank of the Yarra River, opposite the settlement of Melbourne, and Government Paddocks (between present-day Princess Bridge and Punt Road) (Clark and Heydon 1998: 25). *Woi wurrung* and *Bun wurrung* people camped from the falls (near Princess Bridge) for approximately 1.5 km southeast along the river. A particularly favoured location for camping was on the hill overlooking 'Tromgin', a swamp south of the Yarra River. Robinson and Thomas, Assistant Protectors, reportedly spent much time throughout the late 1830s to mid-1840s attempting to 'break up' Aboriginal camps by the Yarra River and discouraging Aboriginal people from visiting the township itself (Clark and Heydon 1998: 34–5, 40, 49). In 1840, Thomas noted that:

By what I can learn, long ere the settlement was formed the spot where Melbourne now stands and the flats on which we are now camped [on the south bank of the Yarra was the regular rendezvous for the tribes known as Warorangs, Boonurongs, Barrabools, Nilunguons, Gouldburns twice a year or as often as circumstances and emergences required to settle their grievances, revenge deaths... (Thomas in Presland 1985: 35).



The population of *Woi wurrung* and *Bun wurrung* people declined steeply in 1847, caused by an influenza epidemic, leading to deaths and the dispersal of Aboriginal people from camps by the Yarra River (Clark and Heydon 1998).

Through the influence of the Government, Missionary Societies and the new 'landowners', the number of Aboriginal people in the area dwindled as a result of high mortality rates and forced movement out of the township. Complaints from settlers who wanted to exclude Aboriginal people from their newly acquired land and move them further into the 'bush' and requests by Aboriginal people themselves for a 'station' of their own, led to the establishment of an Aboriginal reserve known as Coranderrk, near Healesville, in 1863. The majority of *Woi wurrung* people lived at Coranderrk from 1863 to the early 1900s when the introduction of the *Aborigines Act 1909* requiring all 'half castes' to leave Mission Stations, resulted in Aboriginal people moving back to Melbourne, attracted by work opportunities (Rhodes et al. 1999: 88–89).

# 7.9 A Review of Land Use History for the Area

Historical European land use within the activity area will have impacted upon the preservation of archaeological materials relating to pre-existing Aboriginal occupation of the area. Vegetation clearance, agriculture and the former brick quarry will have contributed to the disturbance of surface and subsurface Aboriginal cultural heritage across the majority of the activity area.

This section contains a brief synthesis of the historical development of the geographic region containing the activity area from the late 19<sup>th</sup> to the early 21<sup>st</sup> century. The following synthesis represents a generalised historical sketch of the development of the region and specific information on the land use history of the activity area.

#### 7.9.1 Land Use History of the Geographic Region

Ferntree Gully was originally called 'Fern Tree Gully' because of the scenic gully and was given the status of a National Park in 1927. The gully (now in Tremont) was an excursion destination in the 1870s, and its popularity increased when the railway was extended from Ringwood to Upper Ferntree Gully in 1889<sup>2</sup>.

The area was part of an outstation established by Reverend Clow in 1840<sup>3</sup>. By the 1870s the area had two hotels with a post office also having been established. Further eastwards timber-cutters were cutting down the forest and to meet local needs a school was opened in 1880, with further establishments opening soon after. The area was able to be reached by electric tram from 1929 and by the end of World War I Ferntree Gully had become a retreat for Melburnians with large boarding houses being built for that purpose.

#### 7.9.2 Land Use History of the Activity Area

A tourist map of Dandenong Ranges, Fern Tree Gully and Gembrook district from 1928 by the Department of Lands and Survey (Figure 1) shows very little to no development within the Ferntree Gully area. Lower Fern Tree Gully Station (now known as Ferntree Gully Station) is documented on the eastern side of the activity area. In the aerial below from 1946 (Figure 2) extensive surrounding development was undertaken within the Ferntree Gully area; however, the activity area remained densely covered with vegetation on the western boundary in 1946.

The south eastern section of the activity area was used as a market garden in the 1950s with the remainder retained as natural bushland (Australian Environmental Auditors 2016, 10). The land was purchased by Robertson Industries in the 1950s, who cleared a large section of the activity area for use as a clay quarry that

<sup>&</sup>lt;sup>2</sup> https://www.victorianplaces.com.au/ferntree-gully

<sup>&</sup>lt;sup>3</sup> https://collections.museumsvictoria.com.au/articles/2272



operated from the 1960s to the 2000s. The aerials from 1978 (Figure 3) and 1987 (Figure 6) show clearing of the southern end of the activity area, with vegetation still dense towards the northern and eastern boundaries.

The aerial from 1978 shows a type of drainage extending into the treed area on the western side of the activity area where the design for the wetlands, as part of the activity for this CHMP, is currently proposed (Figure 3 and Figure 5). Additionally, the 1978 aerial shows clearing of trees also along the eastern edge of the activity area, particularly around the area where the maintenance track is proposed to connect with Agora Boulevard. The area along the proposed maintenance track at Agora Boulevard remains largely cleared of trees with small recent regrowth in the area also visible (Figure 11). By 2009 much of the western side of the activity area along the area of the proposed bike path had also been cleared of trees (Figure 9 and Figure 10).

Over the lifetime of the quarry, more than 400,000 m³ of material was removed from the activity area to make clay bricks and other products at the Daniel Robertson Brickworks in Nunawading (Australian Environmental Auditors 2016, 10) (Figure 3 to Figure 9). The quarry area was rehabilitated after the closure of the quarry to prepare the land for residential development. The quarry was backfilled between December 2013 and April 2016 with additional trees removed both in the area of the proposed wetlands and across the whole southern section of the activity area as part of the rehabilitation works (Figure 12 to Figure 15, Map 9 and Map 10). Grading of the proposed wetlands (Figure 12 to Figure 14) area and the southern section of the activity area including the area where additional trees were removed, also took place (Figure 13 and Figure 6). The fill consisted of natural siltstone and was sourced from the redevelopment of Eastland Shopping Centre (Australian Environmental Auditors 2016 10).

The current aerial (Figure 16) shows that activity area is vacant with grass cover over the majority of the area. It also shows dense vegetation in the northern end along Blind Creek and the trail, and recent vegetation regrowth within the proposed wetlands basin area.

The current aerial also shows residential development directly to the west of the activity area. Dial Before You Dig (DBYD) results show that the area along Castricum Place has been disturbed by the installation of underground utilities related to the residential development (Appendix 5).



Figure 1: A tourist map of Dandenong Ranges, Ferntree Gully and Gembrook district from 1928 by the Department of Lands and Survey. Approximate activity area highlighted in red





Figure 2: Aerial of the approximate location of the activity area from 1945 (DELWP 1945)



Figure 3: 1978 aerial depicting the approximate location of the activity area (Landata 1978)





Figure 4: Detail of 1978 aerial imagery showing clearing of trees in the south of the activity area, approximate activity area in red (Landata 1978)



Figure 5: Detail of 1978 aerial imagery, northern section of the activity area, approximate activity are in red (Landata 1978)





Figure 6: Detail of 1987 aerial showing the activity area, approximate activity area in red (Landata 1987)



Figure 7: 1989 aerial image of the activity area, approximate activity area in red (Landata 1989)





Figure 8: 2001 aerial image of the activity area (Earth Resources 2022)



Figure 9: 12 October 2009, aerial view of the activity area prior backfilling of the activity area, approximate activity area in red (Nearmap 2022)

WOIVER ENTER RESIDENCES DEVELOPMENT, THE Wavel Road, SELECTED WILLY





Figure 10: 12 October 2009, aerial view of the activity area showing proposed bike path mostly cleared of tree, approximate activity area in red (Nearmap 2022)

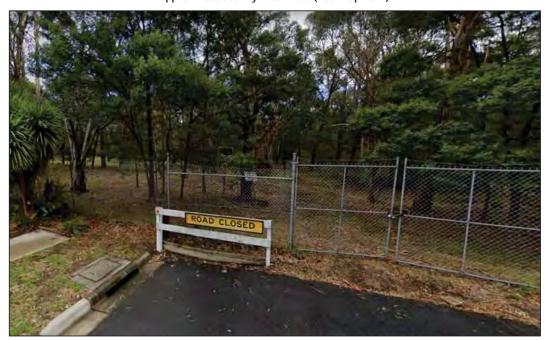


Figure 11: Current view, connection of the maintenance track with Agora Boulevard showing clearing and recent vegetation regrowth (Google Maps 2022)





Figure 12: 14 December 2015 aerial showing widespread clearing within the proposed wetlands basin area for rehabilitation works, western activity area boundary in red (Nearmap 2022)



Figure 13: Detail of 5 February 2016 aerial of proposed wetland basin after rehabilitation works, western activity area boundary in red (Nearmap 2022)





Figure 14: Detail of 20 March 2016 aerial after backfilling and grading of the former quarry, proposed wetlands basin area, western activity area boundary in red (Nearmap 2022)



Figure 15: 20 Mach 2016 aerial photo of the activity area after backfilling and grading of the former quarry, approximate activity area in red (Nearmap 2022)

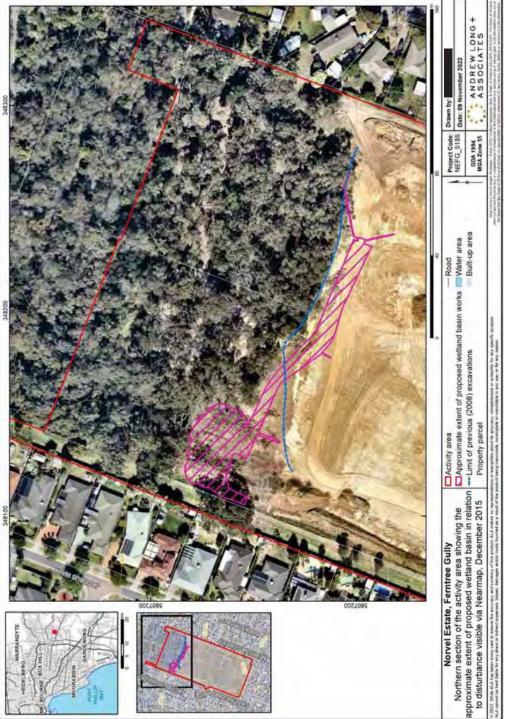




Figure 16: 1 September 2021 aerial showing the approximate activity area (Nearmap 2022)



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Map 9: Placement of proposed wetlands basin and associated works after tree removal, 2015

Map 10: Proposed wetlands basin and associated works, 2016

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# 7.10 Review of reports and published work about Aboriginal cultural heritage in the region

Over the past 20 years numerous cultural heritage assessments have been conducted in the uplands of the Dandenong Catchment Region. These investigations have been largely commissioned either by both public and private agencies involved in housing developments or in relation to works carried out along the numerous waterways of the Nillumbik Terrain. Consequently, archaeologists working with RAPs have achieved reasonable survey coverage of the area under investigation.

# 7.10.1 Regional studies

The following studies have examined the archaeology of the geographic area within a regional, rather than a localised context. Regional studies assist in characterising the general pattern of archaeological site distribution across a broad region.

An archaeological survey of was conducted by the Victorian Archaeological Survey on behalf of the Ministry for Planning and Environment, as part of the preparation of a concept plan for the Dandenong Creek Valley.

A total of five landforms were identified along the course of the Dandenong Creek:

- 1. The Dandenong Ranges
- 2. The Nillumbik Terrain
- 3. The Dandenong Floodplain
- 4. The Brighton Coastal Plain
- 5. The Carrum Swamp.

The survey resulted in three additional scarred trees and one artefact scatter being explained through the overall low level of surface visibility. All but one of these places were situated within the Dandenong Creek floodplain, with the outlier being a scarred tree located at the head of Bruces Creek in the Dandenong Ranges

When including sites previously recorded within the survey area, a total of 30 registered places were present within the survey area at the time, 26 of which were scarred trees. Investigators found that greater numbers of these places were located downstream of Dandenong in the Cranbourne-Carrum region than in the uplands, although it was argued that this situation was at least partly due to the increased degree of urban development to the north. North of Dandenong, a tendency of sites to occur on the lower hills of the Nillumbik Terrain was noted.

Ultimately, four areas of high potential cultural sensitivity were identified: the Doongalla Estate, Winton Wetlands, BOW metropolitan parkland and the Police Paddocks. Out of these locations, the Winton Wetlands and BOW metropolitan parkland (specifically Koomba Park) are of particular relevance to this CHMP due to their location on the western edge of the current geographic region.

Archaeology of the Central Highlands: Background Study - FP - SR Report 971 (Bird 1993)

A review of background information relating to the Aboriginal cultural heritage of the greater Central Victorian Highlands was conducted by Bird (1993) for Aboriginal Affairs Victoria. The area under investigation largely comprised the Eastern Victorian Uplands geomorphic division, within which the current activity area for this assessment (CHMP 18338) is also situated. The report identified two landforms as dominating the area under



investigation: gentle to moderate hills and steep mountains and hills. Relatively marginal sections of plains were also noted.

A total of 291 registered Aboriginal places had been recorded within the Central Victorian Highlands at the time of this report, 202 of which were situated within the Eastern Victorian Uplands. The vast majority of places (n = 220) were furthermore located within the boundaries of the Ringwood 1:100,000 topographic mapsheet (#7922), which Bird reasoned was largely reflective of the increased ease of access and number of surveys conducted within the Melbourne metropolitan area. Artefact scatters, isolated artefacts and scarred trees were identified as the most common place types throughout the Central Victorian Highlands.

Biosis assessed the cultural heritage sensitivity of the waterway and floodplain landforms throughout the greater Melbourne area. This study was conducted on behalf of Melbourne Water, as a prerequisite for any future stream management works.

Ultimately, a GIS database was constructed to illustrate the potential cultural sensitivity of the region under investigation. The report divided the analysed areas into five categories:

- 1. Waterways of potential high sensitivity
- 2. Waterways of unknown potential or integrity
- 3. Floodplains of potential high sensitivity
- 4. Floodplains of unknown potential or integrity
- 5. Areas of known high sensitivity.

The boundaries of these categories were demarcated based on the location of registered sites, consultation with the Traditional Owners and the locations where ground disturbance is known to have taken place. In the case of the Upper Yarra basin, highland and terrace landforms situated adjacent to floodplains were identified as bearing the highest potential sensitivity. In contrast, the low numbers of sites detected within the floodplains was suggested to have been the result of surface traces being obscured by alluvial deposits.

The report recommended field surveys should be conducted in areas of known or potential high sensitivity prior to any ground disturbance works being carried out, while desktop assessments could be used to determine whether fieldwork was warranted for areas of unknown potential or integrity.

#### 7.10.2 Localised studies

There are several localised studies in the geographic region that have relevance to the current project. The report and CHMP summaries included below include subsurface investigations along the floodplain of Blind Creek, which is a similar landform to that found within the activity area of this CHMP, and are located within the vicinity of this CHMP.

TerraCulture conducted a cultural heritage assessment along a section of
including the section of Blind Creek adjoining the current activity area for this assessment
This investigation was initiated on behalf of Hassell and Melbourne Water, as part of a series
of Project Concept Plans (PCP) conducted by Melbourne Water to document the scope and effects of various
waterway improvements within the Port Phillip catchment area.

Disturbances noted along Blind Creek included the excavation of drainage works, the construction of utility buildings, sporting facilities, paths and bridges, the clearing of native vegetation and landscaping works. A pedestrian inspection confirmed that the area had been heavily modified, with introduced vegetation dominating the landscape. No Aboriginal cultural heritage was identified during the survey, although an area of relatively undisturbed creekline in the vicinity of the current activity area for this assessment



was noted to have a more natural streambed with some remnant native vegetation and unsealed walking tracks, and was identified as a location of potential cultural sensitivity.

Situated approximately 530 m west of the current activity area, surface and subsurface testing was conducted by Archaeology at Tardis on behalf of Josh Taylor, prior to the construction of three new residences at an . The activity area was 0.1 hectare in size and was located on a existing residential lot: landform also identified as present within the current CHMP activity area: the Blind Creek floodplain. Ground surface visibility in the activity area was poor (0-5%), with heavy ground disturbance evident through prior landscaping, residential construction, and gardening activity onsite. Complex testing comprised the excavation of one 1x1 m and three 0.5 x 0.5 m manual test pits. The basal clay was reached at depths between 300 mm and 600 mm, being overlain by four contexts of brown, humic garden soil, over a strong mottled brown-orange clayey silt, overlying a strong greyish-brown silt, overlying the basal clay layer consisting of a strong light orange clay. One test pit (TP), located in the front garden of the property, contained only a silty garden soil overlying clay. The absence of the natural soil profile, as was identified in the test pits located at the rear of the property, was believed to be due to more intense garden disturbance. No Aboriginal cultural material was recorded during the CHMP assessment. Located 200 m north-east of the current activity area, surface and subsurface testing was carried out by Jem Archaeology for MMM Build Pty Ltd, prior to the construction of three residential buildings at 24 covering an area of 0.1 hectares. Ground surface visibility was low during the standard assessment, due to both the overgrown state of the lot and the dumping of refuse within the activity area. A heavy degree of ground disturbance was also noted, with prior landscaping and construction works removing sediment to a depth of 1 m in some sections of the activity area for Subsurface testing comprised a single 1x1 m manual test pit and six 0.4 x 0.4 m shovel test pits. The clay base was reached at a depth ranging from 100-170 mm, with the overlying deposits comprising heavily disturbed clayey silt and lenses of sandy construction fill. No Aboriginal cultural material was recorded in either stage of the CHMP assessment. Situated 150 m north-east of the current activity area, surface and subsurface testing was conducted by Triskel Heritage Consultants on behalf of AF Property Developers Pty Ltd, prior to the construction of a new residential complex at ■. The activity area was 0.1 hectare in size and is situated on the same landform identified within the current CHMP activity area: the Blind Creek creekline. Ground surface visibility was generally very low (0.5%), due to the amount of construction works, artificial surfaces and lawn grass present, with the natural surface only visible at a small section situated towards the rear end of the property. Subsurface testing comprised a single 1x1 m test pit and four 0.4 x 0.4 m shovel test

Ground surface visibility was generally very low (0.5%), due to the amount of construction works, artificial surfaces and lawn grass present, with the natural surface only visible at a small section situated towards the rear end of the property. Subsurface testing comprised a single 1x1 m test pit and four 0.4 x 0.4 m shovel test pits. The basal clay was reached at a depth of 280 mm, with the overlying deposits largely comprised of a mixed clay fill; specifically: loose dark brown humic silt, over layer of introduced mixed fill (largely consisting of compact, brownish-yellow clay with frequent angular sedimentary stones), overlying a compact yellowish-brown sterile clay subsoil.

No Aboriginal cultural material was recorded during the CHMP assessment.

Surface and subsurface testing was conducted by Heritage Insight for Momentum Building [	Developments Pty
Ltd, prior to the construction of a new housing development at	located to
the of the activity area for this assessment The activity area for	was situated



within the alluvial landform of Blind Creek, with the eastern half of the activity covered by a gently sloping alluvial terrace and the west extending onto the natural floodplain of Blind Creek.

The standard assessment was hampered by the amount of vegetation and presence of built structures within the activity area, with an effective coverage of 5%. Subsurface investigations involved the excavation of a single 1x1 m manual test pit and eight 0.4 x 0.4 m shovel test pits. The basal clay was reached between depths of 200 to 500 mm in the eastern end of the activity area and was overlain by two alluvial silt contexts, the first of which was highly disturbed containing organic matter (tree and grass roots, gravel, glass, wire, shell material and animal bones (sheep and chicken). The underlying alluvial silt deposit appeared undisturbed and consisted of a compact layer of fine-grained alluvial silt with some charcoal inclusions. In contrast, the western floodplain deposits proved to be much shallower, consisting of a disturbed, loose, silty topsoil mixed with modern rubbish, overlying the clay base consisting of densely compacted reddish-yellow clay at depths of 100 and 150 mm

It was concluded by the author that the western section of the activity area would have been originally been a part of the Blind Creek floodplain and that the area would not have been conducive to Aboriginal occupation due to the swampy nature of the area. The terrace landform, also located in the western section of the activity area, was identified as an area of higher potential but had undergone substantial disturbance and was therefore considered unlikely to contain Aboriginal cultural material.

No Aboriginal cultural material was recorded throughout the course of these investigations.

Situated of the current a	activity area, surface and subsurface testing was carried out by AKWP
Heritage Consultants on behalf of Nic	cky Carusi in anticipation of the construction of a multi-unit residentia
development at	. The activity area encompassed 0.3 hectare and was located on the
edge of the Blind Creek corridor.	

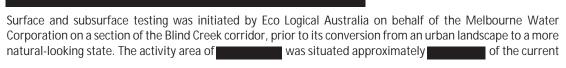
Ground surface visibility within the activity area was very poor (5%) and a high degree of ground disturbance noted from existing residential developments and no areas of archaeological sensitivity were located within the activity area during the standard assessment. A single 1x1 m test pit and six 0.4 x 0.4 m shovel test pits were excavated during the course of subsurface testing. The basal clay consisted of a very compact light brown clay that was reached at depths ranging from 200-600 mm. The overlying deposits were dominated by compact and very compact grey silts.

No Aboriginal cultural material was recorded in either stage of investigations.

Located of the current activity area, subsurface testing was conducted by AKWP Heritag
Consultants for Santa Monica (Melbourne) P/L, prior to the construction of four new residences at
The activity area covered 0.1 hectare and was situated within the Blind Creek corridor
Ground surface visibility within the activity area was 0% due to the amount of vegetation, leading investigator
to decide to forego a standard assessment.

Subsurface testing involved the excavation of a 1x1 m manual test pit and three 0.5 x 0.5 m shovel test pits and identified shallow alluvium soils that is consistent with previous studies and the mapped geology (Qa1). The sterile basal layer consisted of a compact, reddish-yellow clay that was reached at a depth of 340 mm. The overlying deposits consisted of a dark brown loam, over a compact brown, silty clay. Soil disturbances were noted in the uppermost 200 mm although the type of disturbance is not specified.

No Aboriginal cultural material was recorded within the activity area during the assessment.





activity area for this assessment and covered an area of 4.7 hectares. The activity area was situated within a single landform associated with the Blind Creek creekline, located within the broader low relief landscape of the Nillumbik Terrain.

Ground surface visibility was very low (2%) due to the dominance of introduced grasses on the landscape. Evidence of subsurface disturbance was attested to by the presence of stormwater drainage and telecommunications infrastructure. Additionally, the alignment of Blind Creek had been altered, reducing the potential for Aboriginal cultural heritage to be present. No Aboriginal cultural material was recorded through the standard assessment.

The complex assessment involved the excavation of one 1x1 m manual test pit on the northern bank of the floodway channel due to the presence of remnant vegetation indicating less disturbance. Fourteen  $0.5 \times 0.5$  m shovel test pits were also excavated as part of the complex assessment. The silty clay base was reached at depths between 150 mm to 450 mm and represented a classic alluvial floodplain soil profile. The soil profile was as follows:

- · Context One, disturbed topsoil likely to be introduced fill;
- Context Two, natural shallow silty floodplain deposit with an orange brown clay mottling (indication
  of multiple flood events);
- Context Three, natural silty floodplain deposit (no mottling indicating fewer flood events);
- Context Four, natural silty floodplain deposit with orange brown clay mottling (repeated flood events);
   and.
- · Context Five, natural compacted silty culturally sterile clay layer.

<b>G</b>	
Located	of the current activity area, surface and subsurface tests were conducted by Ochre Imprints
on behalf of the	Knox City Council. These investigations were conducted prior to the development of the
	. The activity area covered 40 hectares, with four landforms present: a
slope, a hill cres	st, a steep escarpment and the Blind Creek floodplain.
Ground surface	visibility was generally low during the standard assessment due to the amount of introduced

vegetation and the presence of extensive parkland infrastructure. Patches of increased exposure (60-80%) were present on eroded sections on the eastern and western extremities of the activity area, although no Aboriginal surface artefacts were recorded. The level of disturbance varied by landform, with the Blind Creek floodplain in particular being heavily modified by the construction of a floodway reserve, walking and bike paths, sports ovals, a car park, a skate park and various subsurface infrastructure. In contrast, the hill crest and slope landforms appeared to be relatively undisturbed.

A total of 11 1x1 m controlled test pits and ten 0.5 x 0.5 m shovel test pits were excavated as part of the complex assessment. The test pits were located on the slope, hill crest and floodplain landforms. The soil profile adjacent to the current alignment of Blind Creek on the floodplain consisted of fill over a culturally sterile clay base at depths between 300 mm and 1,100 mm. Deep silty deposits were identified further away from Blind Creek and were thought by the authors to represent the original land surface.



The results of the assessment indicate that Aboriginal people utilised the hill crest, which was an elevated area adjacent to Blind Creek. The absence of artefacts identified on the slope and floodplain suggest that the activity area may have been used more extensively in the wet season, that the floodplain was wet all year round and not conducive to occupation, or that the utilisation of the area was not at a level that could be identified through the complex assessment.
Surface and subsurface testing was executed by Extent Heritage for Mirvac Victoria Pty Ltd, prior to the establishment of a new residential subdivision at located of the current activity area for this assessment, and covered an area of 171 hectares. The activity area for was largely characterised by an open floodplain, with slight slopes along its eastern and south-eastern edges. A section of Blind Creek runs through the centre of the activity area, although this has been realigned from its natural course through post-contact channelling.
Disturbance was noted to be moderate to high throughout most of the activity area for CHMP 16890. Large sections were heavily modified through quarrying activity associated with the brickworks also present within its borders. Other agents of disturbance included the construction of vehicle tracks, dumping of construction material, excavation of dams, vegetation clearance and agricultural land use. Ground surface visibility was poor on the floodplains (10%) due to the level of vegetation and the presence of spoil heaps from onsite quarrying activity. Visibility was slightly higher on the slopes (30%) due to the presence of trees and patches of compact topsoil.
Complex testing encompassed four 1x1 m manual test pits and 37 2 x 1 m mechanical trenches. Pits excavated on the floodplain landform ranged from 150 mm to 770 mm in depth, with an average of 420 mm. Those excavated into the slope tended to be shallower, ranging from 220 mm to 480 mm, with an average depth of 310 mm. The soil profile was generally shallow and consisted of loamy clayey silt and compact clay, overlying a sterile, orangish-yellow clay with occasional coffee rock inclusions
Situated of the current activity area, surface and subsurface testing was carried out by AKWP Heritage Advisors for Giannino Talarico, prior to a new residential development in two adjoining lots at The activity area was 0.3 hectare in size and was situated adjacent to Blind Creek, within
the broader landscape of the Nillumbik Terrain.
Ground surface visibility during the standard assessment was consistently very poor, often reaching 0% due to the presence of extensive concrete and gravel surfaces, along with sections of overgrown vegetation. A heavy degree of disturbance was noted as the result of urban landscaping and the construction of the existing residential structures.
Subsurface investigations involved the excavation of a single 1x1 m controlled test pit and two 0.5 x 0.5 m shovel test pits. An impenetrable layer of claystone (clastic sedimentary rock) was reached at a depth of 150 mm in the case of the 1x1 m test pit, while the basal clay was reached at depths of 200 mm and 250-330 mm



in the case of the shovel test pits. The overlying deposits were a dark grey to grey fine silty loam overlying a light-yellowish-brown to brownish-yellow compact plastic clay in STP1 and fill over a very compact clay and claystone in STP2. All test pits showed a widespread distribution of modern material throughout them indicating a heavy degree of disturbance.

No Aboriginal cultural material was recorded through either the standard or complex assessments.

## 7.11 Victorian Aboriginal Heritage Register search

A search for Aboriginal cultural heritage places located within the geographic region and registered on the Victorian Aboriginal Heritage Register (VAHR) was undertaken on 5 October 2021 and updated on 17 October 2022. The results of the search are presented in Table 11.

A total of 43 registered Aboriginal cultural heritage places are located within the geographic region (Map 11). The majority of previously registered Aboriginal places within the geographic region are artefact scatters (n=19). The remaining Aboriginal places comprise low-density artefact distributions (n=13), scarred trees (n=8) and historical references (n=3).

The recording of LDADs was introduced in 2012. An LDAD is defined as the occurrence of stone artefacts at densities of up to 10 counted artefacts in any area of approximately 10 m by 10 m, or 100  $m^2$ , including within a single test pit of up to 1  $m^2$ . Many previously recorded artefact scatters would now be classified as LDADs under the revised recording scheme.

## 7.11.1 Previously registered places within the activity area

No Aboriginal cultural heritage places have been previously recorded within the activity area (Map 11).

#### 7.11.2 Summary of VAHR

The following salient points emerge from a review of the previously registered places within the geographic region:

- The majority of registered Aboriginal places within the geographic region are artefact scatters (52.8%), followed by scarred trees (25.0%) and LDADs (22.2%).
- No Aboriginal places have been registered within the activity area. The closest registered place to the activity area is

  of the activity area and consists of one silcrete distal blade and one rhyolite complete flake both found at depths between 100 mm and 200 mm. Component 1 (distal bladelet) was identified in an undisturbed floodplain silts that contain evidence of repeated flood events and is therefore not considered to be in situ. Component 2 (complete flake) was identified in a disturbed context of topsoil containing post-contact materials.
- A variety of raw flaked stone artefact materials are present within the artefact assemblages. Silcrete
  is present within most registered lithic assemblages (84.6%), with the next most commonly occurring
  types being opaque quartz (38.5%) and quartzite (30.8%). Raw materials present in smaller numbers
  of registered Aboriginal places include crystal quartz, chert, hornfels, basalt and glass.
- The landforms associated with registered places vary within the geographic region based on their primary component. Artefact scatters and LDADs are most commonly found in conjunction with slopes (35.0%), followed by hillcrests (30.0%), floodplains (30.0%) and alluvial terraces (10.0%). In contrast, scarred trees are almost always associated with floodplains along Blind Creek and Dandenong Creek, likely due to the increased degree of native vegetation preservation in these areas.

Three historical references are located within the geographic re	egion. The closest historical reference
to the activity area is located approximately	



. The remaining two historical references are located between of the activity area

Previously registered Aboriginal cultural heritage demonstrates a pattern of site distribution in the region that reflects the use of inland and riverine resources (Map 12). This aspect is apparent through the distribution of sites across a variety of landforms. Most registered place are located in close proximity to waterways, although this situation is likely partially due to the level of disturbance caused by urban development elsewhere in the geographic region.

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Table 11: Aboriginal cultural heritage places located within the geographic region

Landform	.5-1.5m) Hoodplain	5x20cm) Floodplain	0x20cm) Floodplain	5x10cm) Floodplain	0x20cm) Floodplain				7 17	1.6	akes, core Unrecorded. , bipolar	core. Hillcrest	ken flakes, Upper slope ants, s, bipolar aper, h, Bondi	ken flake. Middle slope	e. Floodplain	s, core Upper/Middle	core. Floodplain	
Contents	One shelter scar (0.5-1.5m)	One shield scar (85x20cm)	One shield scar (90x20cm)	One shield scar (105x10cm)	One shield scar (150x20cm)	One shield scar (105x27cm)	Core,	One shield scar (82x15cm)	Flakes, backed blades.	Complete flake, broken flake, bidirectional core, retouched flake, retouched fragment, bottle fragment.	Longitudinally split flakes, core rejuvenation flake, bipolar core, core fragment.	Multidirectional core.	Complete flakes, broken flakes, angular fragments, unidirectional cores, bipolar core, convex scraper, geometric mirrollith, Bondi point.	Complete flakes, broken flake.	Backed blade.	Complete blades, core rejuvenation flake, geometric microliths.	Multidirectional core.	
Contents (type)	Other box	Stringy bark	Stringy bark	Stringy bark	Stringy bark	Stringy bark	(s)	Uncertain species	(5, Q, Qt)	(5, 6)	(s, a)	(s)	(5, 0, 0t, H, C)	(s)	(s)	(s)	(s)	
Contents (number of stone artefacts)		x	7	4	-0-	1	1	1	16	9	9	ei .	89	£	1		t	
Subsurface depth range (mm)		y	-	î	1		÷		Unrecorded	0-100mm	0-100mm	0-100mm	0-300mm	0-250mm	0-200mm	0-200mm	0-200mm	
Surface/ Subsurface	÷	i		÷			Surface	·	Unrecorded	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	
Approximate Dimensions	Unrecorded	2.85m height	2.65m height	2.50m height	3.07m height	2.90m height	Unrecorded	159cm girth	10×20m	120x30m	130x50m	5x5m	400x200m	30x30m	5x5m	30x30m	1x1m	
Primary Component	Scarred tree	Scarred tree	Scarred tree	Scarred tree	Scarred tree	Scarred tree	Artefact scatter	Scarred tree	Artefact	Artefact scatter	Artefact scatter	Artefact	Artefact	Artefact	Artefact	Artefact scatter	Artefact	
Place Name	I											I		I				
VAHR				I								I					I	



Landform	Floodplain	Floodplain	Floodplain	Hillcrest	Unrecorded	Alluvial	Hillcrest	Unrecorded	Unrecorded	Unrecorded	Upper slope	Slope of ridgeline	Mid-slope of low hill	Creekline	Hillcrest	Floodplain, gentle slope	Ridgeline	Unrecorded
Contents	Complete flake.	Complete flake.	Core,	Complete flakes, proximal flakes, distal flakes, medial flakes, multidirectional cores, geometric miscoliths, thumbnail scraper, thumbnail scraper.	One scar (120x25cm)	Complete flakes, broken flakes, complete blades, angular fragments.	Medial flake.	Complete flake.	Angular fragments.	Proximal flakes, distal flakes, angular fragments.	Complete flakes, proximal flakes, distal flakes, medial flake, angular fragments.	Complete flakes, angular fragment	Distal flake, angular fragment.	Distal blade, complete flake.	Complete flakes, distal flakes, medial flakes, longitudinally split flakes, angular fragments, geometric microliths, Bondi points.	Complete flake, medial flake, multidirectional core.	Complete flake.	Complete flake, multidirectional core, proximal flake
Contents (type)	(s)	(s)	(s)	(S, Q, Qt, QC, B)	Unrecorded	(s, at, c)	(s)	(0)	(0)	(s, a)	(s)	(o's)	(at)	(S, R)	(s, a, at, ac)	(s, at)	(0)	(5)
Contents (number of stone artefacts)	1	1	1	187	3	6	ī	1	3	7	13	4	2	2	п	3	1	æ
Subsurface depth range (mm)	120-200mm	è.	٠	009-0	1	006-0	Unrecorded	- 1	œ.	200-330	90-180	100	120-180	50-150	100-400	200	100	
Surface/ Subsurface	Subsurface	Surface	Surface	Subsurface		Subsurface	Subsurface	Surface	Surface	Subsurface	Subsurface	Surface, subsurface	Subsurface	Subsurface	Subsurface	Surface, subsurface	Subsurface	Surface
Approximate Dimensions	1x1m	1x1m	1x1m	Unrecorded	2.5m girth	ш <u>6</u> х6	Unrecorded			ı	250m²	ì	î	i	2,712m²	γ.	t	Y
Primary Component	Artefact scatter	Artefact	Artefact	Artefact	Scarred tree	Artefact scatter	Artefact	LDAD	LDAD	LDAD	Artefact scatter	LDAD	LDAD	LDAD	Artefact Scatter	LDAD	LDAD	LDAD
Place Name						l	ŀ			ŀ								
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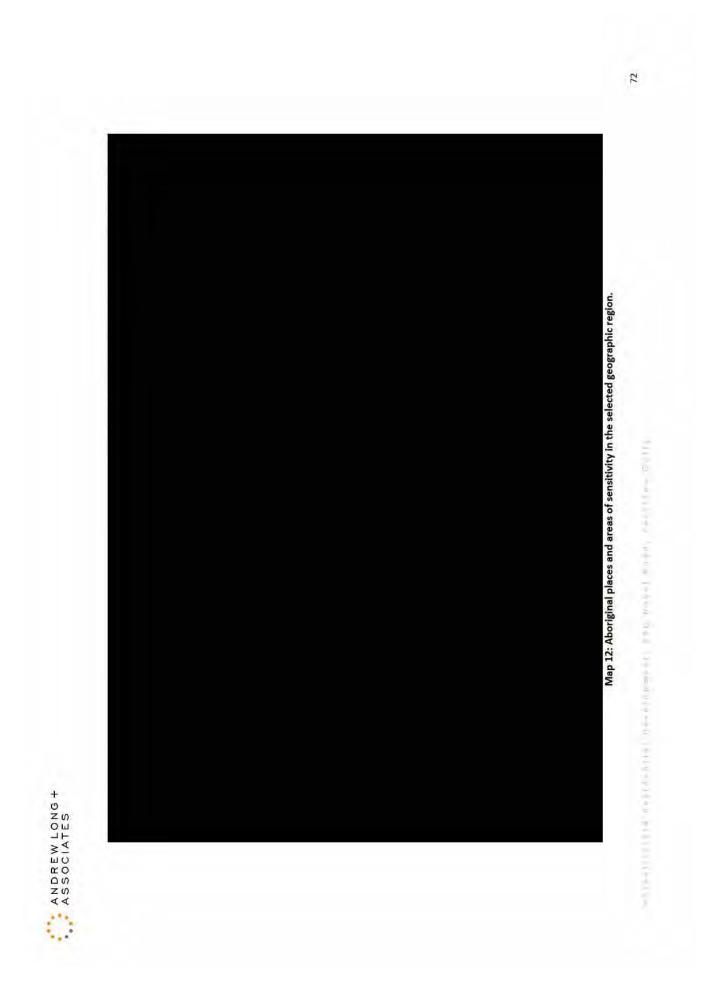
A.	lace Name	Primary Component	Approximate Dimensions	Surface/ Subsurface	Subsurface depth range (mm)	Contents (number of stone artefacts)	Contents (type)	Contents	Landtorm
		LDAD	ì	Surface	+	1	(s)	Medial flake	Unrecorded
		LDAD	7	Subsurface	300	1	(S)	Complete flake	Unrecorded

S = Stone, (S) = Silcrete; (Q) = Quartz, (Qt) = Quartzite, (QC) = Quartz Crystal, (FG) = Fine Grained Siliceous, (G) = Glass; (H) = Hornfels; (B) = Basalt; (C) = Chert; (M) = Mudstone; (Gr) = Greenstone; (Sa) = Sandstone (F) = Flint; (R) = Rhyolite

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ASSOCIATES







# 7.12 Conclusions

By comparing the results of the background research and the archaeological investigations previously undertaken within the geographic region, the following conclusions can be drawn regarding the nature of Aboriginal archaeological material within the activity area:

- There are no previously registered Aboriginal cultural heritage places within the activity area or within 200 m of the activity area.
   The closest registered Aboriginal place is an LDAD consisting of two
- 2. The closest registered Aboriginal place is an LDAD consisting of two flakes and is located approximately containing evidence of repeated flood events and is therefore not believed to be in situ. The second artefact was identified in a disturbed topsoil deposit containing post-contact materials and is also not considered to be in situ.
- 3. Aboriginal cultural heritage places have been recorded in each geomorphological unit within the geographic region, and it is therefore considered possible that Aboriginal cultural heritage places may be present within the activity area. The probability of these places being present is considered to be higher within elevated areas that are near Blind Creek; however, no works are proposed within the previously undisturbed areas along Blind Creek for this activity.
- 5. Previous assessments and background research suggest that that if Aboriginal cultural heritage is present within the activity area it is likely to be in the form of stone artefact distributions within a disturbed context.
- 6. Varying degrees of ground disturbance ranging from fill layers to extensive disturbance from residential development and channelling activities have been identified through previous assessments along Blind Creek (Report no. and CHMPs and .). The above demonstrated disturbance is likely to have impacted Aboriginal cultural heritage in the wider area.
- 7. The historic prior land use history of the activity area, which has included agropastoral land use, land clearing and the construction and backfilling of a quarry will have impacted upon the contextual integrity of Aboriginal cultural heritage materials that may be present within the activity area. Consequently, it is considered unlikely that in situ Aboriginal places will be present in disturbed areas within the activity area.
- 8. Given the prior land use history of the activity area, it is considered unlikely that Aboriginal scarred trees will be present within the activity area. It is also considered highly unlikely that shell middens, caves or rock shelters will be present within the activity area.
- 9. A total of 43 registered Aboriginal cultural heritage places are located within the geographic region. The majority of previously registered Aboriginal places within the geographic region are artefact scatters (n=19). The remaining Aboriginal places comprise low-density artefact distributions (n=13), scarred trees (n=8) and historical references (n=3).



10. There are no registered historical references within the activity area or within 2 km of the activity area.

The results of the desktop assessment have demonstrated that while it may have been reasonably possible that Aboriginal cultural heritage was present in the activity area, significant ground disturbance across the area of impact in the activity area (excluding the bushland reserve) has occurred. However, as the bushland reserve has not undergone significant ground disturbance and has a moderate potential to contain Aboriginal places due to its proximity to a waterway, it is reasonably possible that Aboriginal cultural heritage material is present in the activity area. Consequently, a standard assessment is required under Regulation 62(1) of the *Aboriginal Heritage Regulations 2018*.



# 8. STANDARD ASSESSMENT

# 8.1 Introduction

This section outlines the aims, methods and results of a standard assessment (field survey) undertaken for the activity area, including descriptions of individual survey areas.

The standard assessment was conducted over a one-day period and was conducted in accordance with proper archaeological practice as set out in Regulation 63 of the *Aboriginal Heritage Regulations 2018* (Vic).

## 8.2 Previously registered Aboriginal cultural heritage places

There were no previously registered Aboriginal cultural heritage places within the activity area at the time of the standard assessment.

#### 8.3 Method of assessment

#### 8.3.1 Aims

The aims of a standard assessment are:

- to undertake a ground survey of all or part of the activity area to detect the presence of Aboriginal cultural heritage in or associated with the activity area;
- to inspect all areas with ground surface visibility for Aboriginal archaeological places within the activity area;
- to examine mature indigenous trees and check for the presence of caves, rock shelters or cave entrances within the activity area;
- to undertake a general assessment of the overall archaeological potential of the activity area;
- to collect and review oral history relating to the activity area, if applicable.

## 8.3.2 Survey methodology

The standard assessment survey was undertaken over two non-consecutive days on 28 February and 23 November 2022. Participants in the field survey are listed in Table 13.

Due to the separate parts of the activity area, the area was divided into three investigation areas (IAs) (see Section 8.3.3) based on prior land disturbance and proposed impacts from the activity. A systematic pedestrian survey was undertaken of each IA, with each member of the field team spaced approximately 2 m apart. This spacing enabled each individual to examine surface exposures within the activity area in accordance with archaeological practice outlined in Burke, Morrison and Smith (2017: 87-94). The IAs were assessed in terms of the overall archaeological sensitivity and the overall disturbance of the area. The use of a differential GPS (dGPS) guided the systematic pedestrian survey. The survey results for each IA were recorded on survey recording forms which include information relating to landform, environment, Aboriginal cultural heritage, cultural sensitivity, and ground surface impacts. Each IA was documented and photographed accordingly. Pedestrian spacing was sufficient to identify any areas of significant ground exposure.



In accordance with Regulation 63(3) of the Aboriginal Heritage Regulations 2018 (Vic), the field survey included the examination of all mature indigenous trees within the activity area and checked for the presence of caves and rock shelters.

#### 8.3.3 Establishing Investigation Areas (IAs)

As a component of the field survey and as a means of informing the conduct of any subsequent complex assessment, the activity area was divided into three investigation areas numbered IA1, IA2 and IA3 (Map 13).

Each investigation unit that is present within the activity area is described in Section 8.7.

The three IAs were established on the basis of factors such as landform, location and levels of disturbance.

The IAs were established as follows:

IA1 encompasses the central and southern sections of the activity area, comprising the area that was used as a clay brick quarry. The impact area of the activity area is wholly contained within IA1. IA1 has a total land area of 74,582.94 m<sup>2</sup>.

IA2 is located at the northern end of the activity area and encompasses the undisturbed bushland reserve area of the activity area. IA2 will not be impacted by any ground disturbing works associated with the activity and has a total land area of 19,795.70 m<sup>2</sup>.

IA3 is the area at Castricum Place and that extending north along the western edge of the activity area where the proposed bike path connects to an existing path running along Blind Creek. Only a small section at the southern end of IA3 will be impacted by ground disturbing works associated with the installation of an emergency access point. IA3 has a total land area of 3,686.27 m<sup>2</sup>.

#### 8.3.4 Establishing archaeological sensitivity and levels of ground disturbance

As a component of the field survey and as a means of informing the conduct of the subsequent complex assessment, each investigation area was assessed in terms of the overall archaeological sensitivity, reflecting the environmental and cultural value of a location, and the overall disturbance of the area, including the compound impact of past and present land use (Table 12):

- Archaeological sensitivity ratings range from low to high, and are based on a variety of factors
  including proximity to water, landform, elevation, vegetation type, RAP representative viewpoints and
  the presence or absence of identified cultural heritage; the initial archaeological sensitivity rating is
  based on the outcomes of the desktop assessment, and it is subsequently modified as a result of
  observations made during the field survey;
- Disturbance ratings are based on a range from high to none, with the ratings values sequence reversed, based on factors including the extent of landscape modification by activities such as land clearing, grazing, quarrying and the installation of underground utilities.

Table 12: Archaeological sensitivity/disturbance ratings

Archaeological sensitivity	Rating	Disturbance
Low	1	High
Low-moderate	2	Moderate-high
Moderate	3	Moderate
Moderate-high	4	Low
High	5	None

At the completion of the survey, the sensitivity ratings and disturbance ratings are combined to determine an Archaeological Potential Rating (APR) for each IA.



### 8.3.5 Effective survey coverage (ESC)

Effective survey coverage is calculated by multiplying the proportion of the activity area surveyed by the percentage of the visibility. This calculation represents the actual effectiveness of the surface survey in detecting surface archaeological places and, accordingly, how much weight ought to be put on the results. The effective survey coverage was 6,201.63 m² (visibility was between 1% and 8%) of the total area surveyed (9.8 hectares). Effective survey coverage, based on ground surface visibility in each investigation area, is provided in Table 14 and Table 15.

### 8.4 Obstacles

The only obstacle impeding the standard assessment was the limited ground surface visibility present within the activity area due to the presence of medium-long grass and weeds across the majority of the activity area. The generally poor ground surface visibility did not prevent the examination of all accessible mature indigenous trees within the activity area, the ability to check for the presence of caves and rock shelters, or a characterisation of the level of disturbance and landforms present in the activity area.

### 8.5 Participants in the standard assessment

The participants in the standard assessment are listed in Table 11.

Table 13: Participants involved in the standard assessment

Participant	Organisation	Position	Component	Date(s)
Ashleigh Bentley	ALA	Assistant Archaeologist	Standard assessment	28-02-22
Hesper Andrew	ALA	Lead Archaeologist	Standard assessment	28-02-22
James Hughes	WWCHAC	Field Representative	Standard assessment	28-02-22
Shane Nicholson	WWCHAC	Field Representative	Standard assessment	28-02-22
Linda Sonego	ALA	Lead Archaeologist	Standard assessment	23-11-22
Oran Greenway	ALA	Assistant Archaeologist	Standard assessment	23-11-22
Naomi Zukanovic	WWCHAC	Field Representative	Standard assessment	23-11-22
Lara Wandin-Collins	WWCHAC	Field Representative	Standard assessment	23-11-22

### 8.6 RAP information

As set out in Regulation 63(2) of the *Aboriginal Heritage Regulations 2018* (Vic), the standard assessment may include the collection and review of oral history relating to the activity area.

Please note no oral information was collected during the standard assessment.

### 8.7 Results of the standard assessment

Summary descriptions of the surveyed IAs are presented in Table 14, Table 15 and Table 16 (see also Map 13).

The survey undertaken by ALA confirmed the results of the desktop assessment and identified one landform during the standard assessment: floodplain sloping slightly towards Blind Creek located at the north of the activity area.

All other mature trees within the activity area were inspected although none showed signs of cultural scarring. The landform is not conducive to the presence of caves or rock shelters.

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The ground surface visibility across the activity area was extremely poor during the standard assessment, due to thick grass and vegetation coverage across the area. Some small exposures were present intermittently throughout the activity area.

No Aboriginal cultural heritage was found during the standard assessment.

Table 14: Investigation Area 1 (IA1)

Investigation Area	74,582.94 m <sup>2</sup>	
Area surveyed	<b>74,582.94</b> m <sup>2</sup>	
Survey method	Pedestrian	
Sampling strategy	Systematic	
No. of participants	4	
Transect width	8 m	
Transect spacing	2 m	
Visibility		
Exposure type(s)	Bare patches where grass and weeds have died or not grown	
% area with exposure	10	
% surface visibility on exposure(s)	80	
% area without exposure	90	
% surface visibility off exposure(s)	0	
Average ground surface visibility of Investigation Unit	8%	
Effective survey coverage	5966.63 m <sup>2</sup>	
Environment		
Environmental settings	Inland	
Landform, land systems, elevations	Landscapes at low elevations	
Slope	Flat to Gently Inclined (0°-5°)	
Locality landforms	Floodplain	
Water	Located approx. 100 m north of the activity area boundary (Blind Creek)	
Disturbance	Impacts from the removal of clay during the quarrying process, market garden in the south eastern corner.	
Previous + current land use	Quarry and vacant block	
Vegetation		
Vegetation condition	Modified	
Vegetation type	Modified	
Major vegetation types	Non-native grasses and weeds, some regrowth of shrubs	
Aboriginal Place Identified	No	
Туре	-	
VAHR	-	
Ratings		
Archaeology sensitivity rating	Moderate (3)	
Disturbance rating	High (1)	
Archaeological potential rating	Low (5)	
Comments	The investigation area is characterised by a cleared and vacant block where non-native vegetation has grown along with some small shrubs. The landform is characterised by thick grass, shrub and weed cover (Plate 1 to Plate 3.)  GSV was poor due to the thick ground vegetation cover, with the only ground visibility in intermittent exposures throughout the investigation area. Exposures reveal land surface consistent with the backfilling of the prior quarry site with fill materials (Plate 3). No mature native trees were located within IA1. No Aboriginal places were identified during the standard assessment of IA1.	





Plate 1 View north across of the activity area from the southern end (Photo: 7/9/21)



Plate 2 (Left) Photo along the eastern side of the activity area, facing north-east. (Right) photo along the western side of the activity area facing north-east (Photo: 28/2/22)





Plate 3 (Left) Photo of a disturbed ground exposure. (Right) photo of the ground surface in IA1. Photo: 28/02/2022



Table 15: Investigation Area 2 (IA2)

Investigation Area	19,795.70 m <sup>2</sup>
Area surveyed	19,795.70 m <sup>2</sup>
Survey method	Pedestrian
Sampling strategy	Systematic
No. of participants	4
Transect width	8 m
Transect spacing	2 m
Visibility	
Exposure type(s)	Bare patches
% area with exposure	0
% surface visibility on exposure(s)	N/A
% area without exposure	>99%
% surface visibility off exposure(s)	<1%
Average ground surface visibility of Investigation Unit	<1%
Effective survey coverage	<1% (c. 200 m²)
Environment	A. 2000 I
Environmental settings	Inland
Landform, land systems, elevations	Landscapes at low elevation
Slope	Flat to Gently Inclined (0°-5°)
Locality landforms	Floodplain
Water	Blind Creek approx. 100 m from the northern extent of the area.
Disturbance	Small sections subject to stripping and grading from rehabilitation of the former quarry in untried areas and very minor impacts from water runoff and flooding. Evidence of clearing along the proposed maintenance track (eastern edge of IA2).
Previous + current land use	Bushland reserve
Vegetation	
Vegetation condition	Remnant native and modified
Vegetation type	Overstory is gum trees and understory is acacia bushes and weeds
Major vegetation types	Trees and shrubs
Aboriginal Place Identified	No
Туре	
VAHR	
Ratings	
Archaeology sensitivity rating	Moderate (3)
Disturbance rating	Moderate (3)
Archaeological potential rating	Low-moderate (10)
Comments	The investigation area is characterised by bushland.  The floodplain landform is characterised by slightly sloping land to the north towards Blind Creek and higher ground located along the eastern edge of the activity area. Thick vegetation, weeds and tree/plant debris cover the ground surface (Plate 4 and Plate 5). Very limited visibility, if any at all (Plate 5). Some remnant native vegetation (Plate 6). All trees were inspected for cultural scarring but no cultural scarring was identified. Evidence of past vegetation clearing was noted along the proposed maintenance track (Plate 7 and Plate 8).  No Aboriginal places were located during the standard assessment of IA2.  No ground disturbing works except underboring for the sewer main are proposed in IA2.





Plate 4 Photos showing the types of vegetation in the bushland reserve in the north, facing north-east (Photo: A. Bentley, 28/2/22)



Plate 5 Photos showing the thick ground cover in IA2, facing north (Photo: A. Bentley, 28/2/22)





Plate 6 Photos of representative examples of trees in IA2, facing south (left) and north-east (right) (Photo: A. Bentley, 28/2/22)



Plate 7: Cleared section along proposed maintenance track, facing north (Photo: L. Sonego 23/11/22)





Plate 8: Cleared section at entry of maintenance track at Agora Boulevard, facing east (Photo: L. Sonego 23/11/22)



Table 16: Investigation Area 3 (IA3)

Investigation Area	3,686.27 m <sup>2</sup>
Area surveyed	3,686.27 m <sup>2</sup>
Survey method	Pedestrian
Sampling strategy	Systematic
No. of participants	4
Transect width	8 m
Transect spacing	2 m
Visibility	
Exposure type(s)	None
% area with exposure	0
% surface visibility on exposure(s)	N/A
% area without exposure	100
% surface visibility off exposure(s)	0
Average ground surface visibility of Investigation Unit	<1%
Effective survey coverage	<1% (c. 35 m²)
Environment	
Environmental settings	Inland
Landform, land systems, elevations	Landscapes at low elevation
Slope	Flat to Gently Inclined (0°-5°)
Locality landforms	Floodplain
Water	Blind Creek approx. 50 m from the northern extent of the area.
Disturbance	Underground utilities, drainage, landscaping
Previous + current land use	Residential garden, open Council land
Vegetation	Manicured
Vegetation condition	Some remnant native and modified, grass and weed cover
Vegetation type	Eucalypt and wattle trees, introduced grass species
Major vegetation types	Trees and grass
Aboriginal Place Identified	No
Туре	_
VAHR	=
Ratings	
Archaeology sensitivity rating	low-moderate to moderate (2/3)
Disturbance rating	Moderate (2)
Archaeological potential rating	Low to low-moderate (4-6)
Comments	The investigation area is characterised by long grass with some native vegetation.  The landform is characterised by slightly sloping land to the north towards Blind Creek. Tall grass and weeds and some tree/plant debris cover the ground surface. There is evidence of drainage in the northern section near the existing path (Plate 9 and Plate 10) and landscaping at Castricum Place (Plate 11). Very limited visibility across IA3 (Plate 9 to Plate 11). One large mature tree present. All trees were inspected for cultural scarring but no cultural scarring was identified.  No Aboriginal places were located during the standard assessment of IA3.

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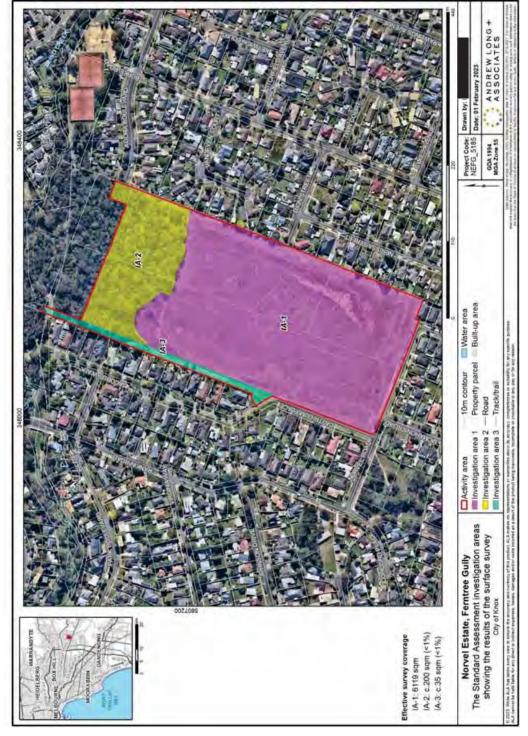
Plate 9: Northern section of IA3, facing south (Photo: 23/11/22)



Plate 10: Drainage in northern section of IA3, facing south (Photo: 23/11/22)



Plate 11: Southern section of IA3 at Castricum Place (Photo: 23/11/22)



Map 13 Map showing the standard assessment results for the activity area



### 8.8 Archaeological Potential Ratings

As a component of the standard assessment and as a means of informing the conduct of any subsequent complex assessment, the activity area was assessed in terms of its archaeological sensitivity and the level of overall disturbance. Previously identified places within the geographic region were generally located on plains and floodplains in association with water sources. Previous archaeological investigations within the geographic region have also indicated that stone artefact distributions and scarred trees are the most common site types in the area. On this basis, a higher sensitivity was expected where similar landforms occur within the activity area, more specifically at the northern end of the activity area.

The activity area was assigned an archaeological sensitivity rating and a disturbance rating (see Section 8.3.3). Archaeological sensitivity ratings range from low (1) to high (5) and are based on a variety of factors including proximity to water, landform, elevation and the presence or absence of Aboriginal cultural heritage. The disturbance ratings assigned were based on factors such as the extent of landscape modification and are rated 1 (high) to 5 (low).

The resulting APR is low for IA1, and low-moderate for IA2 and a mixed APR of low and low-moderate for IA3 (Table 17, Map 14).

Table 17: Archaeological sensitivity and disturbance ratings for each IA, with resulting APR

Investigation Area	Aboriginal place	Archaeological sensitivity rating	Disturbance rating	Archaeological Potential Rating
IA1	No	3	1	3
IA2	No	3	3	9
IA3	No	2/3	3	4 6

APR KEY		
Low	0-5	
Low-moderate	6-10	
Moderate	11-15	
Moderate-high	16-20	
High	21-25	

### 8.9 Conclusions

The standard assessment consisted of a pedestrian survey of the entirety of the activity area although the ground surface visibility across the activity area was poor due to high grass and other vegetation cover. The vegetation comprised native species of eucalypts and other native trees within the bushland reserve (IA2) with the majority of the former quarry (IA1) and IA3 covered with long grass, weeds and recent shrub growth, most notably in the middle of IA1.

All mature trees within the activity area were inspected for cultural modification but none was identified. Additionally no caves, rock shelters or cave entrances are present within the activity area.

The desktop assessment concluded that there was a large amount of ground disturbance across IA1 from the use of the land as a former brick quarry and the consequent rehabilitation of the area. Further disturbance was noted of tree clearing in IA2 and IA3. The disturbance from the quarry and tree clearing were confirmed during the standard assessment along with the presence of underground utilities noted along Castricum Place and near the existing bike path in the northern section of IA3. The desktop assessment also noted conclusions from previous assessments that the floodplain along Blind Creek was less likely to have been suitable for Aboriginal occupation with little Aboriginal cultural heritage other than scarred trees identified on the floodplain. This conclusion was also confirmed during the standard assessment with boggy ground conditions and pools of water visible on the ground surface across the floodplain.

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No Aboriginal cultural heritage places were identified within the activity area during the standard assessment. Given the assigned low archaeological potential rating and the high level of disturbance across the entirety of the construction impact area as demonstrated in the desktop assessment and confirmed during the standard assessment, it was deemed unnecessary to conduct further assessment as the area of impact has been extensively disturbed. Additionally, the areas that do not show evidence of previous extensive ground disturbance will not be impacted by the activity. Therefore, under Regulation 62 of the *Aboriginal Heritage Regulations 2018* (Vic), a complex assessment is not required for this activity.

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Map 14: Map showing the APR ratings for the activity area



# 9 ABORIGINAL CULTURAL HERITAGE ASSESSMENT

### 9.1 Introduction

No previously registered Aboriginal places were present within the activity area at the time of the CHMP assessment and no Aboriginal cultural heritage was identified within the activity area as part of the CHMP assessment.



### 10 SECTION 61 MATTERS

### 10.1 Introduction

In accordance with s.61 of the *Aboriginal Heritage Act 2006* (Vic), this section reviews particular matters to be considered in relation to the approval of a CHMP for the activity. Details of site-specific and general cultural heritage management requirements including areas permitted works within the area of 'No ground disturbing works' are presented in Section 1.

The evaluation undertaken as part of this CHMP has determined that it is unlikely that Aboriginal heritage values will be impacted by the activity; however, if Aboriginal cultural heritage is identified during the course of the activity or a dispute arises, contingencies in Part 1, Section 2 of this CHMP must be followed. Contingency measures relating to disputes, delays and other obstacles that may affect the conduct of the activity are presented in Section 2.2 to Section 2.4 of this CHMP. Contingency measures outlining requirements for the custody and management of Aboriginal cultural heritage during the course of the activity are presented in Section 2.5 to 2.7 of this CHMP.

Please note: The Cultural Heritage Management Requirements presented in Section 1 must be adhered to as a condition of approval of the CHMP.

## 10.2 Will the activity be conducted in a way that avoids Harm to Aboriginal heritage?

No Aboriginal cultural heritage was identified, or previously recorded, within the activity area. The treed area to the south of Blind Creek has been identified as an area of moderate cultural heritage potential; however, the design for the activity has been developed to avoid the removal of trees and other impacts to the ground surface in the treed area of the bushland reserve. It is therefore highly unlikely that the activity will harm Aboriginal cultural heritage (see Section 2.5 for Unexpected discovery of Human Remains and for the discovery of Aboriginal places or objects other than Human Remains).

# 103 Will the activity be conducted in a way that minimises harm to Aboriginal heritage?

No Aboriginal cultural heritage was identified, or previously recorded, within the activity area. The treed area to the south of Blind Creek has been identified as an area of moderate cultural heritage potential; however, the design for the activity has been developed to avoid the removal of trees and other impacts to the ground surface in the treed area of the bushland reserve. It is therefore highly unlikely that the activity will harm Aboriginal cultural heritage (see Section 2.5 for Unexpected discovery of Human Remains and for the discovery of Aboriginal places or objects other than Human Remains).



10.4 Specific measures required for the management of Aboriginal cultural heritage likely to be affected by the activity, before, during and after the activity

The results of the CHMP assessments have demonstrated that it is unlikely for Aboriginal cultural heritage to be present within the impact zone of the activity area. Due to this finding, no place specific management recommendations apply.

Standard contingency plans for the possible discovery of Aboriginal cultural heritage, as per Clause 13(1) Schedule 2 of the *Aboriginal Heritage Regulations 2018* are presented in Part 1 of this CHMP.

### 10.5 Cumulative Impact Statement

Increased and intensive land use such as residential, industrial, commercial, and civil developments impact upon surface and subsurface archaeological deposits. However, even within highly disturbed contexts, there remains the potential for Aboriginal cultural heritage material to exist. The cumulative effect of land use over time means that less disturbed or undisturbed land containing Aboriginal cultural heritage places become increasingly valuable in a local and regional context and from a cultural and scientific perspective.

The results of the desktop assessment indicate that the activity area and surrounding geographic region have been subject to urban development (primarily residential subdivisions), modifications to Blind Creek during construction of the stormwater floodway, and ground surface and subsurface impacts during construction, as well as the use of a large section of the activity area as a quarry. These land uses will have impacted on Aboriginal cultural heritage. Almost all of this development took place prior to the *Aboriginal Heritage Act 2006* (Vic), and as these developments were often not subject to archaeological investigation, the extent of previous harm and related impacts to Aboriginal heritage in the area is not well understood. However, given the large number of residential developments in the geographic region, it is likely that the archaeological record of the area has been substantially impacted.

Furthermore, the activity area will have been subject to inundation from flooding, and it is likely that this inundation combined with the land use disturbance history has impacted upon the intact nature of Aboriginal cultural heritage within the activity area. Previous assessments along Blind Creek recorded two LDADs with one artefact from one LDAD identified within a disturbed context. Additionally, previous assessments have documented the highly disturbed nature of the floodplain landform along Blind Creek. As such, the results of the desktop assessment demonstrated a low potential for the activity area to contain intact Aboriginal cultural heritage places.

Finally, no registered Aboriginal heritage places have been recorded within the activity area. The CHMP has determined that the likelihood of additional Aboriginal cultural heritage places being located within the activity area is very low. On this basis, the activity will not result in a contribution to cumulative impacts on Aboriginal cultural heritage within the geographic region.



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### LEGISLATION AND REGULATIONS

Aboriginal Heritage Act 2006 (Vic)

Aboriginal Heritage Regulations 2018 (Vic)



# APPENDIX 1: NOTICE OF INTENT TO PREPARE A CULTURAL HERITAGE MANAGEMENT PLAN FOR THE PURPOSES OF THE ABORIGINAL HERITAGE ACT 2006 (VIC)





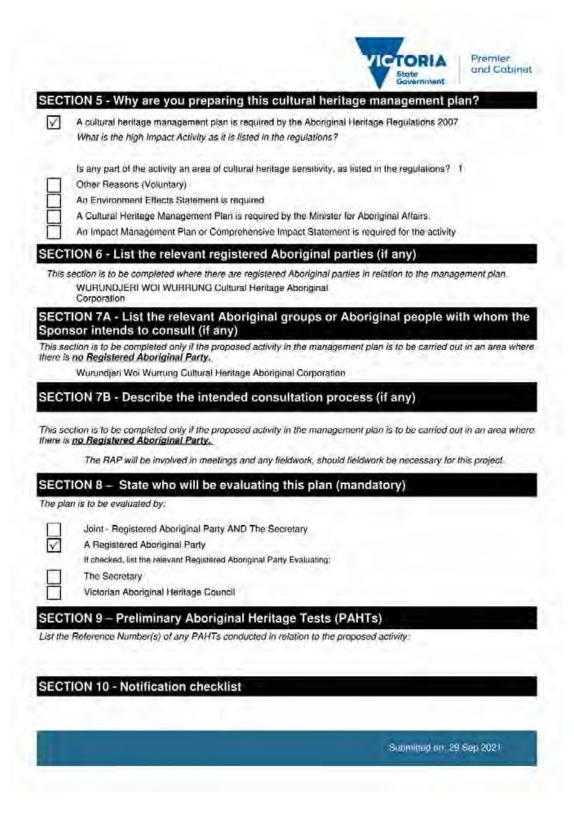
### Notice of Intent to prepare a Cultural Heritage Management Plan for the purposes of the Aboriginal Heritage Act 2006

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.

Sponsor:	Urbis		
ABN/ACN:	50 105 256 228 / 105 256 228		
Contact Name:			
Postal Address	Level 10 477 Collin's Street Melbourne VIC 3000		
Business Number:		Mobile:	
Email Address:			
Sponsor's agen	t (if relevant)		
Company:			
Contact Name:			
Postal Address			
Business Number:		Mobile:	
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Ensure that any relevant registered Aboriginal partylies 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 if intends to evaluate the management plan.)

In addition to notifying the Deputy Director and any relevant registerd Aboriginal party/les, 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.

Ensure any municipal council, whose municipal district includes an area to which the cultural heritage management plan relates, is also notified. A copy of this notice, with a map attached, may also be used for this purpose.

Submitted on: 29 Sep 2021





# **APPENDIX 2: RAP EVALUATION RESPONSE**



rvel Estate Residential Development, 290 Novel Road, Ferntree GUII



### **APPENDIX 3: PLANNING SCHEME**





### KNOX PLANNING SCHEME

### 05/11/2021 C180knox

### SCHEDULE 2 TO CLAUSE 37.01 SPECIAL USE ZONE

Shown on the planning scheme map as SUZ2.

### EARTH AND ENERGY RESOURCES INDUSTRY

### Purpose

To recognise or provide for the use and development of land for earth and energy resources industry.

To encourage interim use of the land compatible with the use and development of nearby land.

To encourage land management practice and rehabilitation that minimises adverse impact on the use and development of nearby land.

### 1.0 05/11/2021 C180knox

### Table of uses

### Section 1 - Permit not required

Use	Condition
Extensive animal husbandry	
Home based business	
Informal outdoor recreation	
Railway	
Tramway	
Any use listed in Clause 62.01	Must meet the requirements of Clause 62.01.

### Section 2 - Permit required

Use	Condition
Agriculture (other than Animal keeping, Animal training, Apiculture, Extensive animal husbandry, Horse stables, and Intensive animal husbandry)	
Animal keeping (other than Animal boarding)	Must be no more than four animals.
Caretaker's house	
Dependent person's unit	
Industry (other than Materials recycling, Refuse disposal, and Transfer station)	Must not be a purpose listed in the table to Clause 53.10.
Landscape gardening supplies	
Leisure and recreation (other than Informal outdoor recreation)	
Manufacturing sales	
Materials recycling	
Place of assembly (other than Amusement parlour and Nightclub)	
Refuse disposal	
Transfer station	

Page 1 of 2



### KNOX PLANNING SCHEME

Utility installation (other than Minor utility installation)	
Warehouse	Must not be a purpose listed in the table to Clause 53.10.
Any other use not in Section 1 or 3	

Accommodation (other than Caretaker's house and Dependent person's unit)

Amusement parlour

Animal boarding

**Animal training** 

Brothel

Cinema based entertainment facility

Horse stables

Intensive animal husbandry

Nightclub

Office

Retail premises (other than Landscape gardening supplies and Manufacturing sales)

Saleyard

Service station

Transport terminal

Veterinary centre

### 2.0 05/11/2021 C180knox

### Use of land

None specified.

### 3.0 05/11/2021 C180knox

### Subdivision

None specified.

### 4.0 05/11/2021 C180knox

### **Buildings and works**

No permit is required to construct a building or construct or carry out works for the following:

A modification necessary to comply with a direction or licence under the Dangerous Goods Act 1985 or a Waste Discharge Licence, Works Approval or Pollution Abatement Notice under the Environment Protection Act 1970.

### 5.0 05/11/2021 C180knox

### Signs

None specified.

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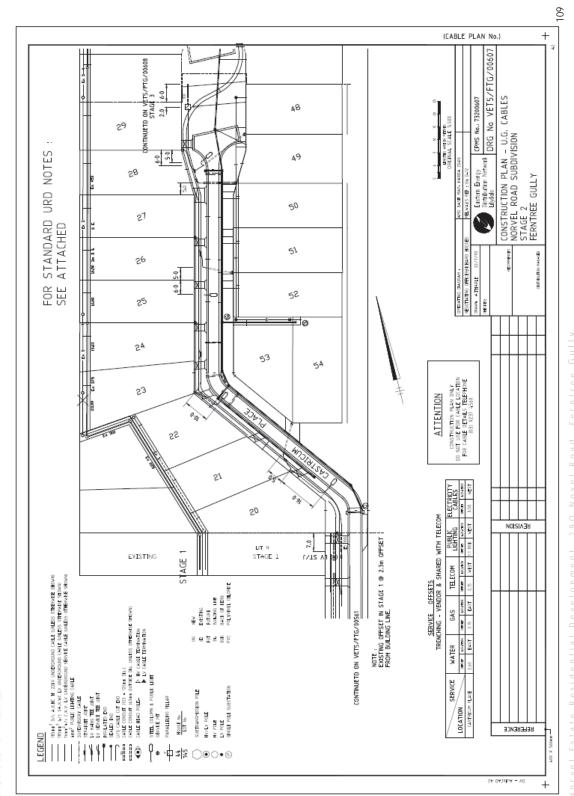


# APPENDIX 4: PRELIMINARY DEVELOPMENT PROPOSAL



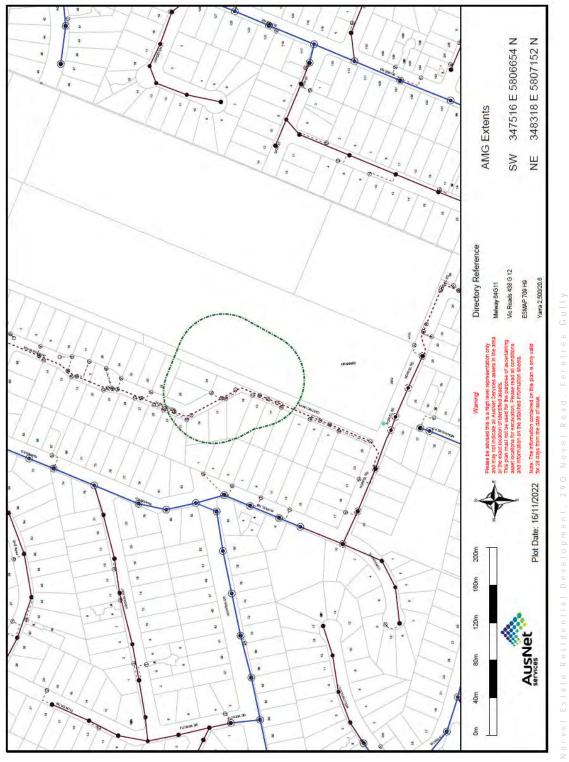


# APPENDIX 5: DBYD RESULTS AT CASTRICUM PLACE

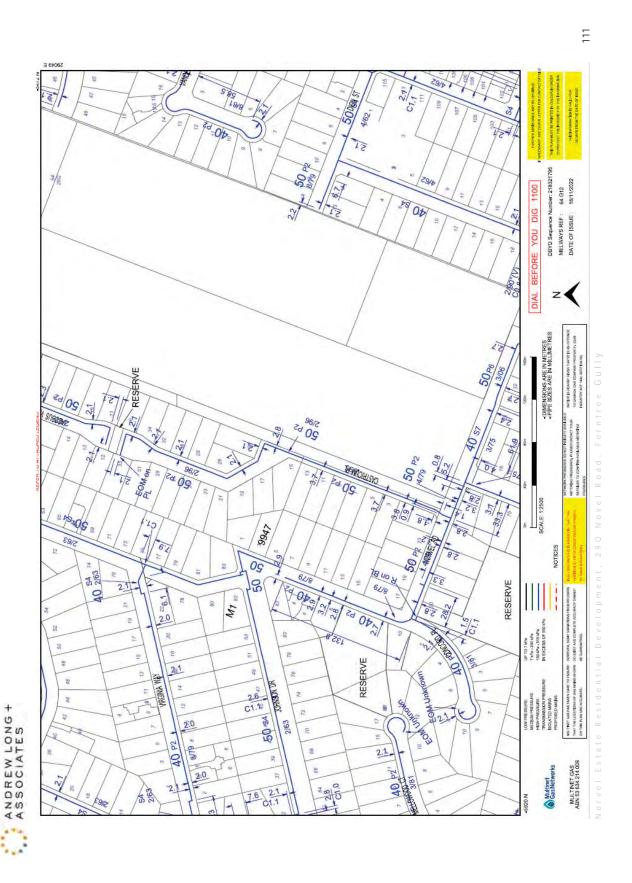


ANDREW LONG +

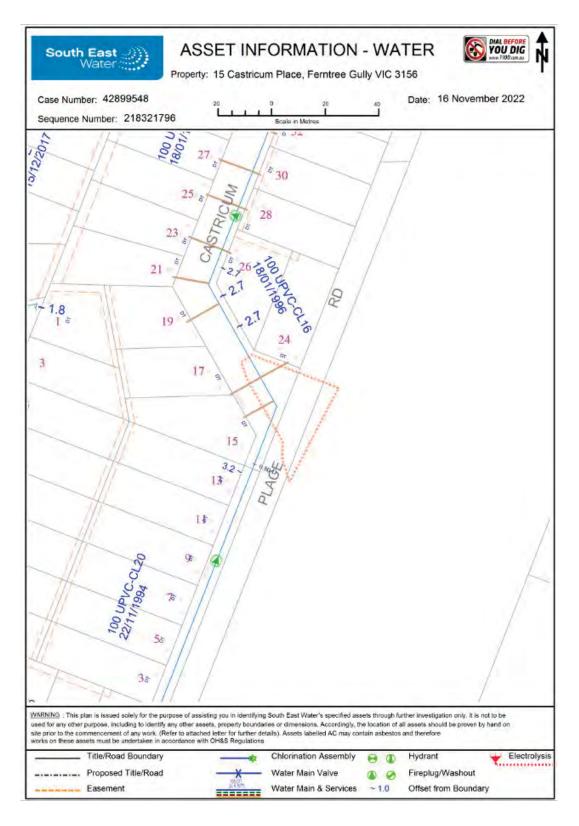




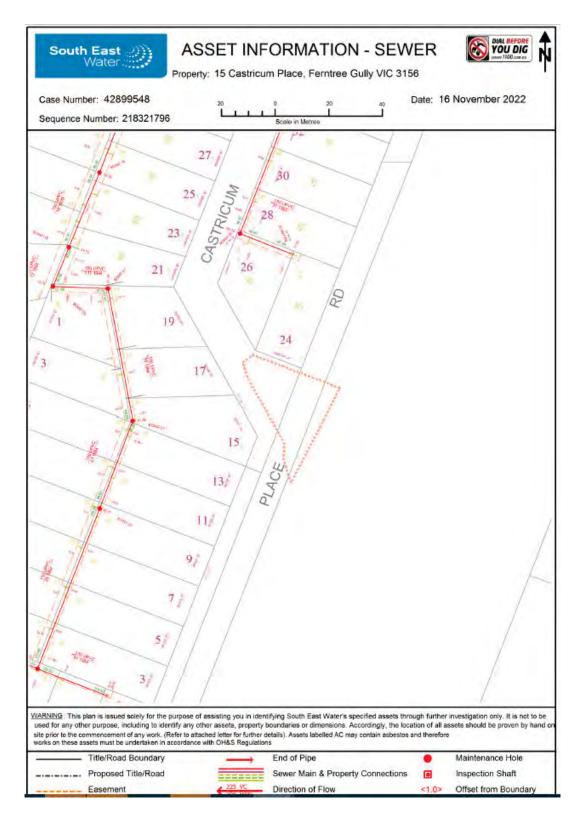
ANDREW LONG + ASSOCIATES



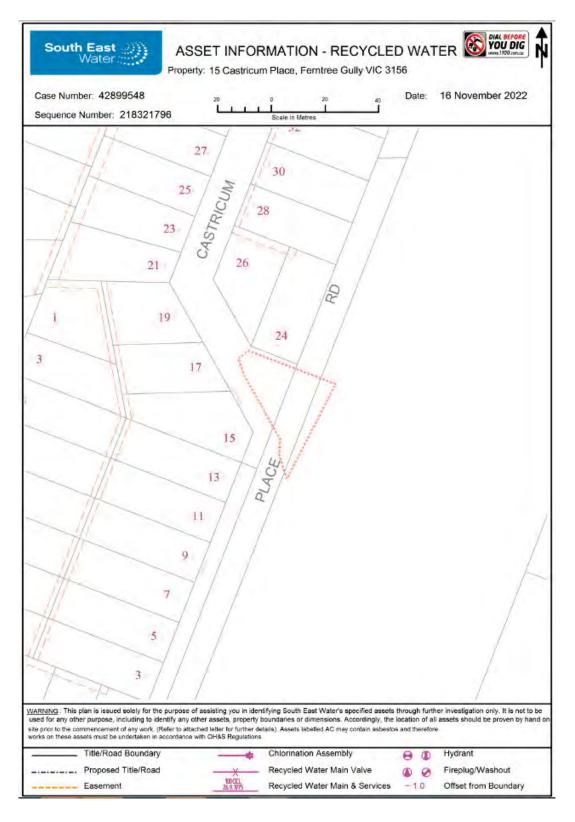




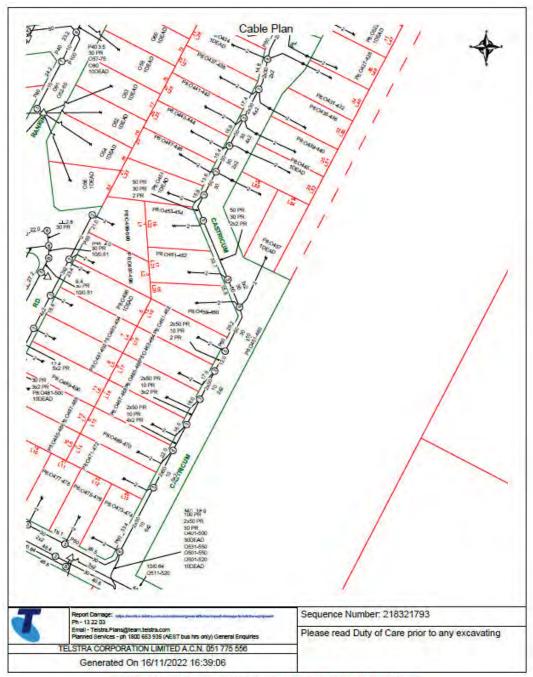












The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

IMARNINO
Testra plans and location information conform to Quality Level "D" of the Australian Standard AS 5458-Classification of Subsurface Utility Information.

As auch, Testra supplied location information is indicative only Spatial accuracy is not applicable to Quality Level D.

Refer to AS 5458 for further details. The exact position of Testra assets can only be validated by physically appointed in the applicable of the standard or the standard accepts no responsibility for any inaccuracy.

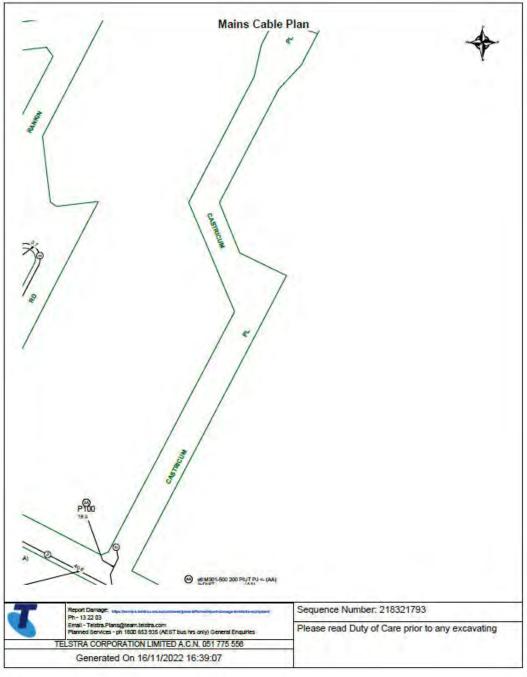
Purities on site investigation is required to validate the exact location of Testra plant prior to commencing construction work.

A Certified Locating Organization is an essential part of the process to validate the exact location of Teistra assets and to ensure the asset is protected during construction works.

See the Stepo-Teistra Duty of Care that was provided in the email response.

Page 1 of 2





WARNING
Testra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such, Testra suspiled location information is indicative only, Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exist position of Testra assets can only be validated by physically exposing it.
Testra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Partier on site investigation is required to validate the existic location of Testra partner on set investigation is required to validate the existic location of Testra assets and to ensure the asset is protected during construction works.

See the Steps-Testra Duty of Care that was provided in the email response.

Page 2 of 2



### **APPENDIX 6: GLOSSARY OF TERMS**



### **Terminology Used in this Report for Heritage Places**

### **General Terms**

Activity Area: The area or areas to be used or developed for an activity.

Registered Cultural Heritage Place: An Aboriginal place recorded in the Register.

### Types of Aboriginal Prehistoric Archaeological Sites

Artefact Scatter: A scatter of stone artefacts which is defined as being the occurrence of one (1) or more items of cultural material within 100 linear metres, with a distance of no greater than 20m between each item. Artefact scatters are often the only physical remains of places where Aborigines have camped, prepared and eaten meals and worked stone material.

**Burial**: A burial site is usually a subsurface pit containing human remains and sometimes associated artefacts.

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

**Scarred Tree**: Scars on trees may be the result of removal of strips of bark by Aborigines 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 climbers after possums, koalas and/or views of the surrounding area.

**Shell Midden**: A scatter and/or deposit comprised predominantly of shell, sometimes containing stone artefacts, charcoal, bone and manuports. These site types are normally found in association with coastlines, rivers, creeks and swamps - wherever coastal, riverine or estuarine shellfish resources were accessed and exploited.

### **Aboriginal Artefact Types**

Backing: Steep retouch on an artefact (e.g. backed blade).

Blade: A flake that is at least twice as long as it is wide.

**Block Fracturing Techniques**: These consist of bipolar flaking, bending and flaw propagation. These techniques do not result in concoidal flakes and can be difficult to identify.

**Blocky Piece**: A piece of stone showing no diagnostic evidence for concoidal or block fracturing techniques (e.g. flake scars, crushing). Typically these items are foreign to the area and occur in association with diagnostic flaked artefacts of the same material (see also Manuport).

**Concoidal flake**: A flake possessing a positive bulb of percussion which can be found on the ventral surface of the flake close to where it was struck from the core. Concoidal fracturing can also be produced by natural processes.

**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.

**Debitage**: Small unmodified flakes, flaked pieces and blocky pieces produced as part of the flaking process, but discarded unused.

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

**Flake Scar**: A negative impression on a piece of stone or rock surface from which a flake has been removed. Generally a flake scar will show the characteristics of a flake in reverse (i.e. negative bulb of percussion).

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



**Formal Tool**: An artefact which 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.

**Geometric Microlith**: A blade that has been trimmed on one or two margins to produce a symmetrical backed piece which is roughly triangular in plan.

**Hammerstone**: A piece of stone, often a creek/river pebble/cobble, which has been used to detach flakes from a core by percussion. During flaking, the edges of the hammerstone become 'bruised' or crushed by impact with the core.

Implement: An artefact that has been designed, but not necessarily utilised (Hiscock and Mitchell 1990, 26).

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

**Microlith**: 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 pieces are a feature of the 'Australian small tool tradition', dating from between 5,000 and 1,000 years ago in southern Australia (Mulvaney & Kamminga 1999: 234-236).

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

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

**Tool**: An artefact that shows evidence that it has actually been used (e.g. edge damage) (Hiscock and Mitchell 1990, 26).

Thumbnail Scraper: A thumbnail scraper is defined as a microlithic flake with regular unifacial retouch.

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

### Stone Artefact Raw Material Type

**Basalt**: A coarse grained basic volcanic material formed by the cooling of mafic lava at the earth's surface. Basalt generally does not generally fracture concoidally and is therefore rarely used for the manufacture of flaked stone artefacts. Basalt is more commonly used for the manufacture of ground edge axes.

**Chert**: A sedimentary rock type composed of amorphous silica which is extremely dense, compact, dull to semi-vitreous and cryptocrystalline. It is formed by silica crystallising from out of solution in ground water. Used for flaked stone artefacts.

**Flint:** A variety of chert which forms in limestone, characterised by a micro-crystalline texture (no grains visible), dull surface lustre and translucent appearance. Highly suitable for concoidal fracturing and the manufacture of flaked artefacts.

**Greenstone**: A rock type formed by the high grade action regional metamorphism of many different types of rocks, commonly mafic to intermediate volcanics and cherts. Greenstone is commonly used for ground edge axes.

**Hornfels**: A rock formed from the contact metamorphism of fine grained sediments, which are usually rich in silica. In appearance this rock type is dark grey to black, and can resemble basalt. Used for flaked stone artefacts.

**Quartz**: A mineral composed of silica with an irregular fracture pattern. Quartz used in artefact manufacture is generally semi-translucent, although it varies from milky white to glassy. Glassy quartz can be used for concoidal flaking, but poorer quality material is more commonly used for block fracturing techniques. Quartz can be derived from waterworn pebble, crystalline or vein (terrestrial) sources.



**Quartzite**: A very hard, sometimes almost glassy metamorphic rock formed from compression of sands or sandstones which consist entirely of quartz sand grains. It has a similar appearance to sandstone but can be distinguished by its crystalline structure as opposed to the granular structure of sandstone. It is generally coarse grained in texture. Used for flaked stone artefacts.

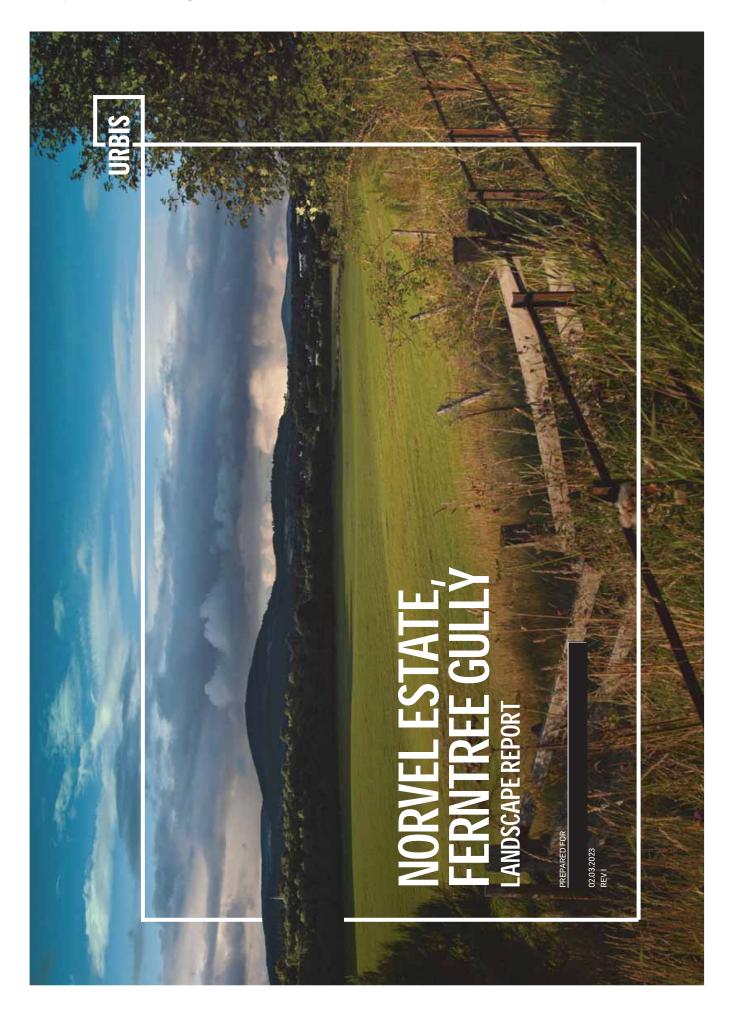
Silcrete: Soil, clay or sand sediments that have silicified under basalt through groundwater percolation. It ranges in texture from very fine grained to coarse grained (Sullivan and Simmons 1979, 56). At one extreme it is cryptocrystalline with very few clasts. It generally has characteristic yellow streaks of titanium oxide that occur within a grey and less commonly reddish background. Used for flaked stone artefacts.

### Glossary bibliography

Hiscock, P. and S. Mitchell. 1990. Type Profiles: Stone Artefact Quarries, Stone Reduction Sites and Ochre Quarries. Unpublished report to the Australian Heritage Commission.

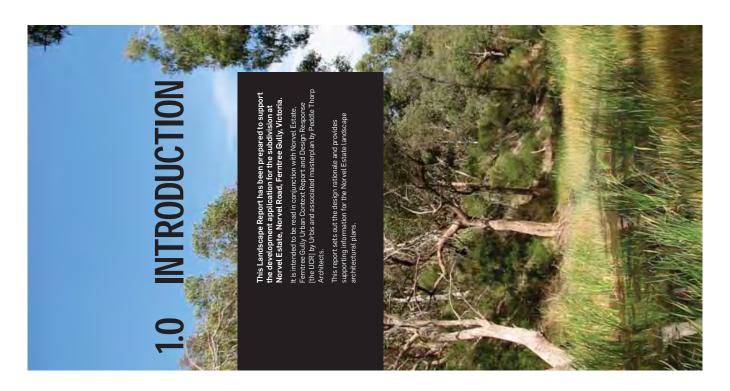
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# 2.0 DESIGN RATIONALE

The proposed landscape design for Norvel Estate seeks to preserve and enhance the leafy character of the area while referencing the history of the site.

It also preserves the high value remnant vegetation in the north of the site, and provides improved connectivity for pedestrians and cyclists. It offers a well considered response to treating stormwater run off and the potential risk of bushfires. The landscape creates a strong tree canopy framework for the streetscapes and the future built form.

## STREETSCAPE

### HARDSCAPE

- Brick and coloured concrete feature paving will be used in key nodes (Figure 2) and may incorporate etched custom graphics and/or text to interpret the site and its history (Figure 1).
- The site was formerly used as a quarry where clay was extracted for the production of Daniel Robertson bricks. In reference to this history, the bricks used for feature paving will be from the Daniel Robertson range.
  - For ease of maintenance, uncoloured, broom finished insitu concrete will be used for most footpaths outside of

### SOFTSCAPE

- As recommended in the Knox Green Streets Policy, nature
- include a mix of shrubs, groundcovers and tufting plants to Planting immediately adjacent to rear and side fences will provide some screening and visual interest. strips will be grassed.
  - Planting within the central pedestrian link will be kept below 1m in height to keep the space feeling open

### STREET TREES

- They have been located to satisfy minimum setbacks from Street tree species have all been specifically recommended by Council.
- Existing street trees on Norvel Road will be retained where possible, otherwise any new trees will be Acer platanoides 'Norwegian Sunset' to tie in with the existing dominant palette for the street. intersections (10m) and driveways (3m)
  - Deciduous trees will be planted on streets running east Callistemons, based on Council advice Eucalyptus Although Castricum Place is mostly planted with polyanthemos trees have been proposed instead.
- native trees while maximising opportunities for winter sun to west, and evergreen natives on streets running north to south. This approach balances a desire for mostly ingress using deciduous trees.
  - The trees' integration with underground services is
- less permeable than any of the street designs proposed for Norvel Estate. The proposed extent of pavement and wide nature strips in Norvel Estate are appropriate to support the growth of the proposed street trees. There are numerous examples are fully surrounded by paving. Such environments are of large canopy trees growing successfully in more consistent with the Streetworks Code of Practice.

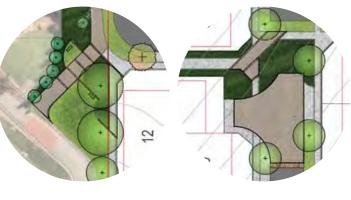
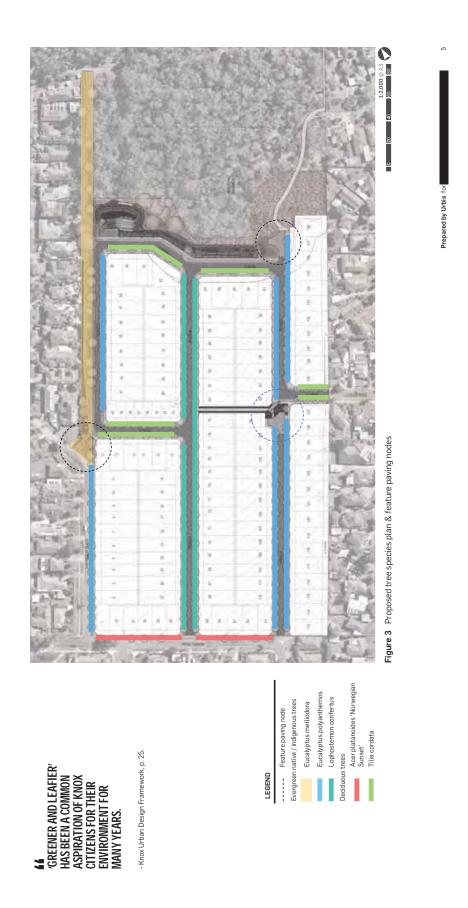


Figure 1 Example of etched custom graphics and text in feature paving

Figure 2 Feature pavement nodes in the proposed streetscape

Norvel Estate Landscape Report



## LINEAR RESERVE

A 10m wide x 150m long strip of land along Norvel Estate's western boundary connects Castricum Pleae with the Blind Cheer Trail. As identified in the Urban Context Report, and as recommended by Council, this space has opportunity for ehancement and to be formalised as a shared use path (SUP).

The proposed design incoporates a 3m wide SUP along its length. The alignment of the SUP avoids existing trees as much as possible, however the removal of two smaller trees will be necessary. They will be supplemented by new indigenous trees. Native understorey planting is proposed to help screen valsting fences in areas that are not adjacent to the bushland reserve or defendable area.

Pedestrians and cyclists will be welcomed to Norvel Estate and the SUP with a gateway landscape at the wider southern end, incorporating open grassed space with some seating, feature paving and indigenous canopy trees.

# **BUSHLAND RESERVE**

The northern end of the site is is densely planted with remnant indigenous vegetation. This will be preserved and handed over to Council in accordance with the Section 173 Agreement.

The proposed design will allow the community to safety enjoy this green space while minimising any degradation. As identified in the Urban Context Report, there is an opportunity to improve local connectivity for pedestrians by providing informal paths through areas that are already disturbed and the more sparsely planted portions of the reserve. Council's advice on the approximate path alignment and materials has been adopted in the design. The exact alignment will be refined in detailed design phases to minimise impacts on vegetation.

The paths will connect the Blind Creek Trail and Agora Boulevard (currently a dead end) with Norvel Estate wis the wetland area and Road F. In most cases, granitic sand will be used for the path to maintain a naturalistic appearance. In some portions where there may be risk of disturbing native vegetation (closer to the wetland), an at-grade or above-grade boardwalk will be instailed.

The Agora Boulevard to Road F connection has been sized to accommodate occasional vehicle access for maintenance or in the event of an emergency.

### WATER SENSITIVE URBAN DESIGN ELEMENTS

Stormwater from the residential lots and streets of Norvel Estate will be collected and treated using gross pollutant traps, a swale (Figure 6) and a wetland prior to being discharged into the Bushland Reserve and Blind Creek. Planting palettes have been selected for wetland, emergent and riperian zones within the swale and wetland. The plants in these palettes have been selected to suit the anticipated water conditions of the respective zones and all are indigenous.

Local coldstream rock ballast will be used for stabilisation where required.

# **BUSHFIRE SAFETY**

While preserving the integrity of the bushland reserve will be very positive ecologically, it does still present some risk of bushfire. The proposed design takes this into account and seeks to minimise dangers to life and property through the positioning of a road as a buffer, providing appropriate building setbacks, and by selecting appropriate plant species and

positioning of plants.

The streetscapes and the portion of the linear reserve which is adjacent to the Bushland Reserve and defendable area all consist of low grass and hardscape, with cleantrunked trees that are loosely positioned so they do not form a continuous canopy. The tree species proposed here are "frewise" according to the criteria set out in the Country Fire Association's (CFA's) resource "Landscaping for Bushfire-Garden Design and Plant Selection".

Plant species proposed within the WSUD areas (vegetated swale and wetland) are all below Im in height. This allows these areas to be classified as Shrubband which has a default minimum building setbask of 22m for the purposes of bushfire safety. However, this minimum could be increased through modelling last has already been applied to the Forested rees). The existing buildings to the west are all at least 23m away from the WSUD areas, while the proposed building setbacks within Norwel Estate allow from 25m to 22m of 22m





Figure 4 Timber slat bench

Figure 5 Boardwalk



Figure 6 Vegetated swale

Norvel Estate Landscape Report

# **TECHNICAL NOTES**

The following technical notes are proposed to guide the the protection of existing vegetation and the successful establishment of the landscape.

### TREE PROTECTION

All trees to be retained are to be suitably protected:

- Maintain existing ground levels at the interface between
  - Tree Protection Zone (TPZ) fence radius locations are calculated by  $12\,x$  the DBH @ 1.4m above ground level or the area beneath the canopy whichever is greater. The protected trees should be fenced prior to the commencement of the construction activities' the ground and the tree trunk.
- No excavation, filling, machinery or storage of materials shall occur within the fenced off area.

Install a maximum depth of 100mm approved organic mulch, e.g. woodchips, to the radius of the TPZs beneath the canopy (for grassed areas and garden beds-tapering mulch depth

cut with hand saw and kept moist. All roots over 30mm dia. and any roots within the fenced area should not be cut without Roots requiring severance beyond the tree TPZ shall be clean the approval from an experienced and approved arborist.

The area to be planted is to be thoroughly cleared of all building rubble and other debris, then ripped to a depth of

Only existing site soil is to be used.

### Garden beds

Evenly spread a minimum depth of 75mm approved clean, finely graded recycled wood mulch (20mm nom. Size) over topsoil. Ensure mulch is kept away from tree and shrub trunks.

### Levels/drainage/set-out

- Ground levels within all landscape areas should drain towards kerbs and pits in accordance with relevant
- properties with the surface level to be graded to smoothly transition between driveways, landings, access paths and Retaining walls in front yards are to be avoided between
  - All dimensions are to be verified on site prior to construction commencing. Any discrepancies are to be immediately reported to the Project Manager for further

### **PLANTING**

- All plants are to be true to species, healthy, free from pests disease and stress.
  - As per the Knox Genetic Integrity policy, all indigenous species are to be of demonstrated local provenance.
- approved slow release fertilizer such as 'Osmocote' native fertiliser. At the time of planting, fertilise all planting with an
- Ensure all plants are well watered in at the time of planting and as necessary for the first year until established. Apply 10 litres of water per plant immediately following planting.

Any change to plant species must have the approval of the All trees shall be planted in locations shown on the plan. Landscape Architect.

### Underground services

The locations of underground services should be proven on

Prepared by Urbis for

# 3.0 PALETTES

and by the billions         For size at method by the billions         Origin Foliage         Pot size at method by the billions         Common name         Origin Foliage         Pot size at method by the billions         Common name         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Origin Foliage         Pot size at method by the billions         Pot							NETW G	E LA ZA	Ind# Knox Landscape Plan Guidelines Ind# Other mdigenous plant Ntv Natve plant listed in Knox Landscape Plan Guidelines Ntv# Other Native plant Other Native plant	n Guidelines n Guidelines	* EG * EX	Exotic plant Recommended by Council for No rvel Estate Deciduous Evergreen	/ Council for	
Maje         Ex         Agg.         10x7m         as shown         5 BAN CHE         Banksian Changles         Cheery Chadles         Nh         150mm         05x 0.5m           Ind         EG         45g.         15x 10m         as shown         11         Dock Dust         20x 10m         15x 10m         05x 0.5m         150mm         05x 0.7m         05x 0.7m <th>ате</th> <th>Origin Follage</th> <th>Pot size</th> <th>Size at maturity (HxW)</th> <th>Density (per m²)</th> <th>ě.</th> <th>Code</th> <th>Botanical Name</th> <th>Common name</th> <th>Origin Follage</th> <th>Pot size</th> <th></th> <th>Density (per m²)</th> <th><b> </b></th>	ате	Origin Follage	Pot size	Size at maturity (HxW)	Density (per m²)	ě.	Code	Botanical Name	Common name	Origin Follage	Pot size		Density (per m²)	<b> </b>
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PLANTING SCHEDULE

STREET TREES



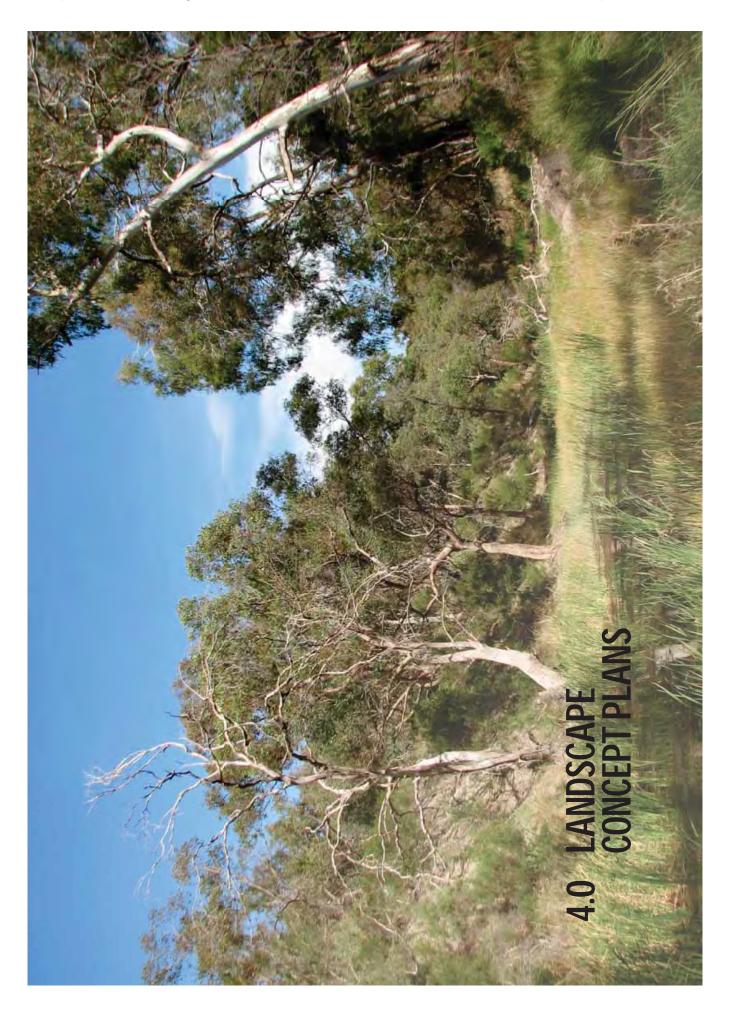
# **TUFTING PLANTS**

# GROUNDCOVERS & CLIMBERS

12 Norvel Estate Landscape Rep

RIPARIAN







Feature pavement - brick banding

Garden bed

Tree to be retained (not including bushland reserve and adjacent properties)

Tree to be removed

LANDSCAPE MASTER PLAN NORVEL ESTATE









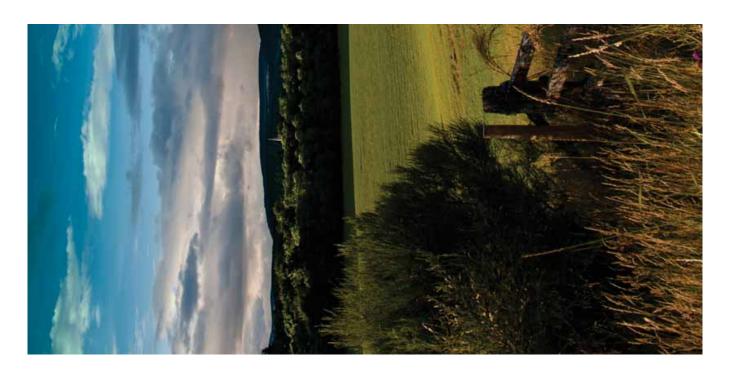




TYPICAL STREET SECTIONS
NORVEL ESTATE



Root zones (600mm depth)







### SOCIAL IMPACT ASSESSMENT

**NORVEL ESTATE** 

Prepared for

February 2021

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### 1 Introduction

Public Place was engaged by to prepare a Social Impact Assessment (SIA) relating to a proposal to rezone the old Norvel Road Quarry site to residential and for the subdivision of 140 residential lots on the site. This report presents the findings of the SIA.

### 1.1 The Requirement for an SIA

City of Knox has requested that a Social Impact Assessment be prepared that:

- Identifies social impacts that are likely to arise for individuals and the community as a result of the proposed development.
- Assesses the social impacts and determines the probability, scale and duration of the occurrence.
- Recommends measures to reduce negative impacts and enhance positive impacts.

### 1.2 Tasks

The following tasks were undertaken to support this SIA:

- Review of the plans for the proposed development.
- Review of relevant City of Knox policies and strategies.
- Demographic analysis of Ferntree Gully and Boronia.
- Mapping of community facilities in Ferntree Gully and Boronia.



### 2 The Proposal

### 2.1 The Site and Surrounds

The subject site comprises 9.24 hectares and is located in the suburb of Ferntree Gully, approximately 27 kilometres east from the Melbourne CBD. The subject site is a vacant, rehabilitated quarry generally bound by Blind Creek to the north, Norvel Road to the south, Castricum Place to the west and a row of residential properties to the east. The surrounding area is predominantly a low-density residential area, which provides a mix of single and double storey detached dwellings.

The suburb of Boronia is immediately to the north of the site, separated from the site by the Blind Creek open space corridor. Approximately 1 kilometre to the north of the site is the Boronia Activity Centre, including the Boronia Train Station.

### 2.2 The Proposal

The proposal it to rezone the site from SUZ2 to the Neighbourhood Residential Zone and subdivide the site for residential purposes. Specifically, the proposal is to subdivide 140 residential lots. The mix of dwellings that would ultimately be developed is not yet determined. However, for the purpose of the SIA it has been assumed that the lots will accommodate a mix of one and two storey townhouses, providing two to five bedrooms.

The proposal also includes a passive open space area (park/billabong), the preservation of 1.74 hectares of bushland (1.29 ha of which would be transferred into Council ownership), and the provision of a new informal path and boardwalk providing a connection between the site, the Blind Creek Trail and Agora Boulevard to the east (see Table 2-1).

Table 2-1: Schedule of Land Use and Development Outcomes

Land Use	Development Outcomes		
Residential Lots	2 to 5 Bedroom Town Houses	139	
Open Space	Bushland Reserve Transfer	1.29ha	
	Bushland Extension	0.45ha	
	Park/Billabong Area	0.29ha	

Source: Urbis 2021



### 3 Policy Context

### 3.1 Plan Melbourne

Plan Melbourne sets out the Victorian Government's vision for how Melbourne will grow to 2050. Plan Melbourne identifies a need to provide a diversity of housing in defined locations that caters for different households and is close to jobs and services. Urban renewal sites are identified as potentially making a major contribution to this objective.

Plan Melbourne also identifies community infrastructure as an important enabler of effective urban renewal. A particular focus of Plan Melbourne is to ensure that infill development is sequenced to encourage productive use of existing infrastructure.

### 3.2 Local Polices and Strategies

### 3.3 Knox Community and Council Plan (2017-2021)

The Plan sets a vision for the City of Knox and identifies eight community and council goals that will drive Council activities to 2021. Goals of particular relevance in the context of the SIA are:

- Goal 2: We have housing to meet our changing needs This goal recognises that the
  housing needs of the Knox community are changing and more diverse and affordable
  housing will be required to meet community needs into the future.
- Goal 6: We are healthy, happy and well This goal recognises that being active and
  participating in leisure, culture and sport can increase people sense of wellbeing and
  reduce anxiety, stress and the likelihood of illness. The plan seeks to mitigate lifestyle
  risks such lack of physical activity.

### 3.3.1 Knox Affordable Housing Action Plan 2015-2020

The focus of the Action Plan is to increase the supply of social housing in Knox to meet the needs of the most vulnerable and disadvantaged households in the City. The Plan estimates that an additional 860 social housing dwellings will be needed in Knox by 2036 to meet minimum requirements, as well as more diverse and affordable housing options generally.

The Plan indicates that Council will negotiate with developers for a voluntary contribution to social housing of approximately 5% of dwellings on larger-scale development sites.



## 3.3.2 Knox Open Space Plan 2012-2022

The Knox Open Space Plan outlines how City will Knox will manage open space in the City to ensure open space in Knox provides for a diversity of leisure activities, and enables people to enjoy nature, engage with others, learn and play. The Plan outlines a number of strategic directions, with Direction 1 being particularly relevant in the context of the SIA: Create healthy creek corridors that people love.

# 3.4 Summary

The policy context that applies to the Norvel Estate is one that encourages urban consolidation to meet the housing needs of the community in locations that are already provisioned with community infrastructure and open space. Development of urban renewal sites is to occur in a manner which respects and integrates with the existing physical and social environment, and leverages the opportunities created to improve social outcomes in the host area.



# 4 Social Conditions

## 4.1 Introduction

Demographic data are presented below for Ferntree Gully, Boronia and the City of Knox as a whole. The geographies used to report demographic data are consistent with those used by i.d. Consulting when preparing the Knox community profile. The proposed Norvel Estate is located in Ferntree Gully (see Figure 4.1).



Figure 4-1: Location of the Norvel Estate



## 4.2 Population Size and Growth

Table 4.1 shows existing and projected population levels for Ferntree Gully, Boronia and Knox as a whole. As can be seen, as at 2019 the population of Ferntree Gully was 27,626 people, a figure which is expected to grow incrementally to 30,842 people by 2039 (an average annual growth rate of 0.55%).

A slightly higher rate of growth (0.67% per annum) is projected for Boronia. However, growth in Ferntree Gully and Boronia is projected to occur at a lower rate than for the City of Knox as a whole.

Table 4-1: Existing and Project Population – Selected Areas

	2019	2029	2039	Change - 2019-2039	Annual Growth
Ferntree Gully	27,626	29,311	30,842	3,216	0.55%
Boronia	23,579	25,561	26,965	3,386	0.67%
City of Knox	164,889	177,779	190,414	25,525	0.72%

Source: i.d. consulting (2019)

Population forecasts prepared for Ferntree Gully on behalf of the City of Knox assume that the Norvel Road Quarry site will be developed for residential purposes between 2020-2027 and yield 197 dwellings. That is, Council's forecasts assume that the site would yield more dwellings than is proposed.

## 4.3 Age Profile

Table 4.2 shows 2016 Census data on age profile for the areas of interest. As the Table shows, at the time of the Census Ferntree Gully's age profile was similar to Boronia and Knox as a whole. However, in Ferntree Gully, Boronia and Knox there were fewer young adults aged 18 to 34 and more mature and older adults aged 50+ than observed across Greater Melbourne, resulting in a higher median age in Ferntree Gully (39 compared with 36 for Greater Melbourne).



Table 4-2: Age Profile

	Ferntree Gully	Boronia	Knox	Greater Melbourne
Babies and preschoolers (0 to 4)	6.2%	6.7%	5.8%	6.4%
Primary schoolers (5 to 11)	8.0%	7.5%	8.2%	8.5%
Secondary schoolers (12 to 17)	6.9%	5.8%	7.3%	6.7%
Tertiary student/independent (18 to 24)	8.4%	7.9%	9.3%	10.0%
Young workforce (25 to 34)	13.9%	16.0%	13.2%	16.3%
Parents and homebuilders (35 to 49)	21.5%	20.3%	20.6%	21.1%
Older workers/pre-retirees (50 to 59)	13.1%	12.1%	14.0%	11.9%
Empty nesters/retirees (60 to 69)	11.5%	11.8%	11.3%	9.3%
Seniors (70 to 84)	8.6%	9.7%	8.3%	7.7%
Elderly aged (85 and over)	1.8%	2.3%	2.0%	2.0%

Source: i.d. Consulting 2018

Population growth in Ferntree Gully will not be uniform across all age groups in coming years, with growth projected to be particularly strong in older cohorts (those aged 75+, see Figure 4-2). Notwithstanding, growth is projected in all age groups.

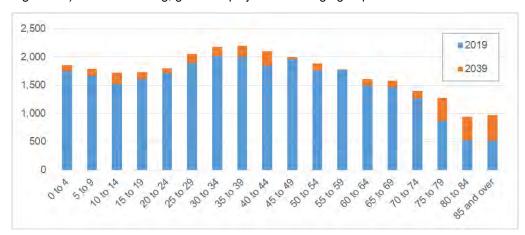


Figure 4-2: Population Growth by Age – Ferntree Gully (adapted from i.d Consulting 2019).



# 4.4 Other Demographic Characteristics

Table 4.3 shows a selection of demographic data for Ferntree Gully, Boronia and the City of Knox, as a well as Greater Melbourne. The following observation can be made with respect to the data:

- Housing stock in Ferntree Gully consists primarily of larger detached houses. Relatively
  few dwellings offer 0 to 2 bedrooms and high-density housing forms are virtually absent
  from the market. In contrast, medium density dwellings comprise almost a quarter of
  dwellings in Boronia and two bedrooms dwellings are relatively common in Boronia.
- A large proportion of households living in Ferntree Gully and Boronia are family households. However, lone person and group households are more common in Boronia compared with Ferntree Gully, reflecting Boronia's greater housing diversity.
- Educational attainment is slightly lower in Ferntree Gully and Boronia when compared
  with Knox and Greater Melbourne. Consistent with this, fewer Ferntree Gully residents
  are employed in managerial or professional occupations ('white collar'), compared with
  Melbourne as a whole.
- Median weekly personal and household income in Ferntree Gully was similar to that observed for Greater Melbourne and slightly higher than that observed for Boronia. A lower (although not insignificant) proportion of households and individuals in Ferntree Gully were earning a low income compared with Melbourne as a whole.
- Home ownership is more common in Ferntree Gully compared with Greater Melbourne.
   In contrast, a relatively high proportion of households in Boronia rent their dwelling, consistent with the housing profile of this suburb.
- There is less ethnic diversity in Ferntree Gully compared with Knox and Greater Melbourne as a whole, with fewer residents speaking language other than English, and relatively few residents have poor English language skills.
- The Ferntree Gully population is very stable, with a large proportion of residents
  reporting they have lived at their current address for 5 or more years. This observation is
  consistent with the presence of a large proportion of owner occupier and/or family
  households in the area.



Table 4-3: Selected Demographic Indictors

		FTG	Boronia	Knox	Greater Melbourne
	Separate house	89.1%	74.0%	84.5%	66.7%
DWELLINGS	Semi-detached, townhouse	10.2%	24.6%	14.7%	23.1%
	Flat, unit or apartment:	0.7%	1.3%	0.8%	10.2%
	0 to 1 Bedroom	1.8%	2.1%	2.0%	6.4%
	2 Bedrooms	13.9%	22.5%	12.6%	20.9%
	3 Bedrooms	54.2%	52.6%	47.4%	42.9%
	4 + Bedrooms	30.1%	22.7%	38.0%	29.8%
	Household Size	2.6	2.4	2.7	2.7
HOUSEHOLDS	Lone Person Household	23.3%	27.4%	20.2%	23.2%
	Group Household	2.6%	3.4%	2.4%	5.0%
	Family Household	74.2%	69.2%	77.4%	71.7%
	Couple family with no children	25.4%	25.7%	25.6%	24.7%
FAMILIES	Couple family with children	35.1%	29.2%	39.2%	34.8%
	One parent family	12.7%	13.2%	11.6%	10.8%
	Other Family	0.9%	1.1%	1.0%	1.4%
	Median Personal Income	\$665	\$658	\$664	\$673
INCOME	Personal Income <\$400	31.2%	30.3%	32.6%	33.2%
	Median Household Income	\$1,455	\$1,318	\$1,561	\$1,542
	HH Income <\$650	17.6%	19.8%	16.2%	18.4%
	Unemployment Rate	5.6%	5.9%	5.6%	6.8%
	Labour Force Participation	64.8%	62.5%	64.5%	61.9%
EMPLOYMENT	White Collar	30.0%	29.0%	33.4%	38.9%
AND TRAINING	Completed Year 12	53.3%	54.3%	58.3%	64.2%
	Bachelor Degree or Higher	18.7%	18.6%	22.3%	27.5%
	Fully owned	33.5%	32.4%	34.9%	31.3%
	Being purchased	45.2%	40.2%	43.5%	37.0%
TENURE	Rented	20.5%	26.9%	20.2%	30.8%
	Public/Social Housing	3.1%	3.0%	2.1%	2.8%
	Other Tenure	0.9%	0.6%	1.5%	0.8%
ETHNICITY	Born Overseas	24.4%	25.3%	31.5%	36.2%
	Speaks other language	16.5%	17.5%	26.2%	34.3%
	Speak English Poorly	2.2%	2.9%	4.0%	5.9%
CARS	Household Owns a Car	95.8%	94.3%	96.2%	91.0%
DICADII ITY	Needs Assistance	5.3%	5.3%	4.8%	4.9%
DISABILITY	Not Stated	4.3%	5.5%	4.4%	6.3%
0.11E 1000ECC	1 Year Ago	89.7%	86.4%	88.4%	83.6%
SAME ADDRESS	5 Years Ago	68.2%	62.0%	67.2%	57.2%

#### 4.5 SEIFA Index

Figure 4.4 below shows local variation in SEIFA Index of Disadvantage scores within the City of Knox. As can be seen, the proposal site is located within an area of considerable socio-economic advantage (Decile 7). Areas to east and west along the Maroondah Highway between Upper Ferntree Gully and Wantirna likewise score highly on the SEIFA Index. Immediately to the north of the site in Boronia (on the northern side of the Blind Creek) there is small area which ranks in Decile 3 on the SEIFA Index, reflecting a notable clustering of public housing in this location.

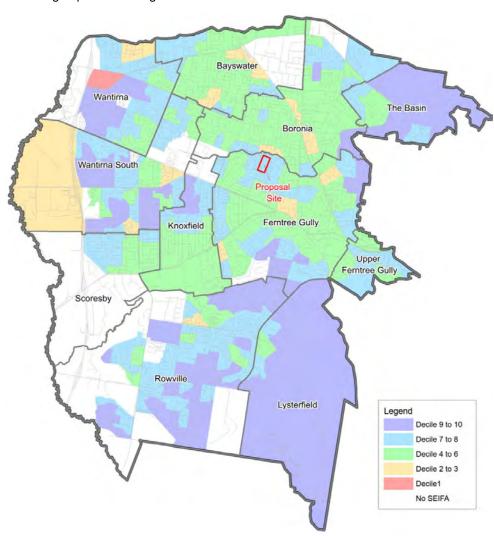


Figure 4-3: SEIFA Index of Disadvantage (Source Census 2016).



# 5 Community Facilities and Open Space

## 5.1 Introduction

This Section provides an assessment of community facilities and open space located in Ferntree Gully and Boronia (the Study Area).

## 5.2 Facilities

#### Early Years Facilities

There are numerous early years facilities located in close proximity to the proposed Norvel Estate (see Figure 5-1) and future residents would enjoy convenient access to these services. In the case of MCH and LDC, existing facilities have capacity to accommodate existing and projected growth in demand. With respect to sessional kindergarten, current supply is only just sufficient. However, projected growth in the four year old population is modest, and potential increases in demand will be offset by a trend of increasing utilisation of kindergarten programs imbedded within LDC programs. Moreover, Council has recently/is currently developing Early Years Hubs in Bayswater and Wantirna South. These facilities will increase supply of sessional kindergarten programs in Knox and assist in meeting demand generated in Ferntree Gully and Boronia.

Table 5-1: Early Years Services – Supply and Demand in Ferntree Gully and Boronia

Demand			Supply	
MCH (Nurse EFT)	2019	2.7	Two existing centers which can accommodate the	
	2039	2.8	required Nurse EFT for the foreseeable future	
Sessional Kindergarten	2019	485	There are 10 kindergartens located in Ferntree Gully a	
(Enrollments)	2039	476	Boronia which have a combined enrollment capacity of 484 (assumes group size are a multiple of 11 children to achieve optimal staffing ratios)	
LDC (Places)	2019	902	11 existing centers which provide LDC places at a rate of	
	2039	950	228 per 1,000 children aged 0 to 5. As at 2016, the rate of provision of LDC places in Metropolitan Melbourne was 214 places per 1,000 children aged 0-5. Data from mchild.gov indicate that all centers have vacancies.	

Source: ACECQA 2019

<sup>&</sup>lt;sup>1</sup> To illustrate, in 2006, 8.4% of children in Knox accessed kindergarten programs within a LDC setting, growing to 18.9% by 2015 (VCAMS 2019).

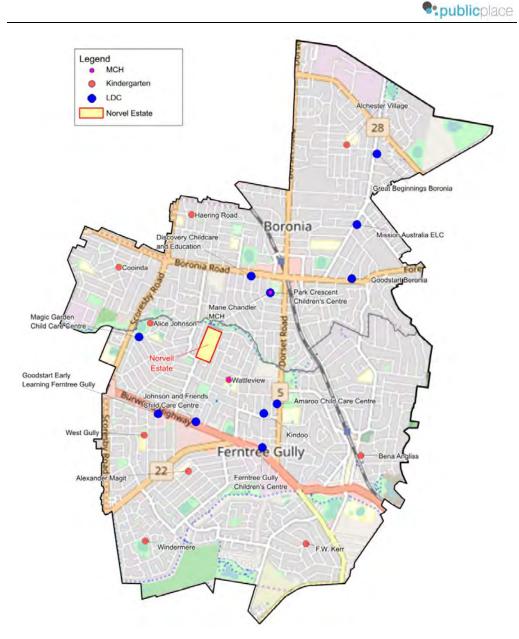


Figure 5-1: Early Years Services in Ferntree Gully and Boronia



#### 5.3 Schools

There is a well-developed network of primary and secondary schools in Ferntree Gully and Boronia (see Figure 5-2). Over the past two decades changes to the age profile of Boronia and Ferntree Gully have resulting in fewer primary and secondary school aged children living in these suburbs, despite overall population growth. In the past, schools in the area have accepted higher enrolment levels than those experienced currently, and have sufficient capacity to accommodate projected increases in demand.

Table 5-2: Schools– Supply and Demand in Ferntree Gully and Boronia

Den	nand		Supply
Gov. Primary	2019	3,471	10 primary schools and 2 secondary located in Ferntree
(enrollments)	2039	3,602	Gully and Boronia. The network operates well below
	2019	2,181	enrollment capacity and schools near the Norvel Estate
Secondary	2039	2,330	have previously accommodated 100-150 additional students compared with 2018 enrolment levels.

Source: DoT 2018; i.d. Consulting 2019; ABS Census 2016



Figure 5-2: Schools in Ferntree Gully and Boronia



# 5.4 Community Spaces

#### **Meeting Spaces**

There is a well-developed network of community meeting spaces in Ferntree Gully and Boronia, including halls, sports pavilions, spaces within primary schools and the Ferntree Gully Community Arts Centre. Collectively, these venues provide approximately 2,850 square metres of community meeting space, a level of supply that is consistent with planning standards applied in Melbourne's growth areas.

Overtime demand for community meeting space in the Study Area may grow in association with population growth and existing supply may need to be augmented.

Table 5-3: Schools- Supply and Demand in Ferntree Gully and Boronia

Demand			Supply
Meeting spaces (floor	2019	2,720	16 venues offering 25 meeting spaces of varying size
space)	2039	3,071	(approx. 2,850 sq.m)

Source: City of Knox 2019; i.d. Consulting 2019; ASR 2008

#### Libraries

There is an existing library in Boronia and in Ferntree Gully. These facilities have capacity to meet community needs for the foreseeable future.

Table 5-4: Demand for and Supply of Libraries in the Study Area

Demand			Supply
Libraries (1 per 30,000	2019	0.8-1.7	
to 60,000)	2039	1-1.9	2 existing libraries providing over 2,000 sq.m of floor
Library Floor Cross	2019	1,706	space.
Library Floor Space	2039	1,926	

Source: i.d. Consulting 2019; People and Places 2012; ASR 2008



Figure 5-3: Community Spaces – Ferntree Gully and Boronia

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# 5.5 Open Space

Figure 6.4 shows the distribution of open space in Ferntree Gully and Boronia. As the Figure shows there are numerous public open space areas in Ferntree Fully and Boronia, including parks, sports fields and natural and semi-natural areas.

The adequacy of an open space network can be judged in terms of its ability to ensure convenient access to a range of open spaces for the community. The City of Knox uses the benchmark of a maximum distance of 500 metres between a residential property and open space, when judging the adequacy of supply.<sup>2</sup> In this context it is noted that:

- All locations in Ferntree Gully and Boronia are within 500 metres of an open space.
- A number of existing open spaces are located within 500 metres of the proposal site's boundary, which provide for a variety of active and passive uses in close proximity to the subject site. These are:
  - Norvel Reserve: A local open space which includes a children's playground.
  - Unnamed a small passive open space area on Norvel Road, which contains the FTG 8<sup>th</sup> Scout Hall.
  - Blind Creek Linear Open Space Corridor a long linear open space corridor linking two municipal scale open spaces, Tim Neville Arboretum to the east and Lewis Park to the west. In close proximity to the proposal site, this corridor incorporates the Mountain Gate Tennis Club, the Blind Creek Billabong and Fair Park, all of which can be accessed using the Blind Creek shared trail.

<sup>&</sup>lt;sup>2</sup> See Open Space Plan 2012-2022



#### 5.6 Active Recreation

ABS data on sports participation indicate a trend away from traditional club based sports such as cricket and tennis, and greater participation in casual activities such as fitness classes, gyms and jogging. As a result, even though the population of Ferntree Gully and Boronia is growing, the data suggest that there would be a similar or even lower number of participants in activities such as AFL and cricket living in the Study Area in 2039 compared with 2006, due to lower participation levels (notwithstanding, participation in particular sports can be subject to rapid change, as indicated by the recent increase in participation in AFL football among women and girls).

In relation to other sports such as netball, notable increases in the total number of participants may occur. However, the greatest uplift in total number of participants can be expected in relation to activities such as fitness classes, gyms and jogging (see Table 5-5).

Table 5-5: Participation in Active Recreation in Ferntree Gully and Boronia (persons aged 15 or over).

		Particip	ation Rate		Participants	i	
				2006	2	031	
	2006	2009	2011	2031 (trend)		2011 rate	trend
AFL	3.3%	2.7%	2.0%	1.6%	1,246	960	768
Cricket	2.8%	1.9%	2.0%	1.5%	1,057	960	720
Lawn bowls	1.7%	1.3%	1.4%	1.2%	642	672	576
Soccer	1.9%	1.1%	1.9%	1.2%	717	912	576
Tennis	4.8%	4.7%	4.2%	4.0%	1,812	2,017	1,921
Netball	3.2%	3.0%	3.5%	3.4%	1,208	1,680	1,632
Basketball	2.6%	3.0%	3.2%	3.6%	982	1,536	1,728
Fitness/Gym	11.8%	14.4%	17.6%	20.2%	4,455	8,450	9,699
Jogging	4.2%	7.5%	7.8%	10.5%	1,586	3,745	5,041

Source: ABS Participation in Sport and Physical Recreation, Victoria (2011-12).



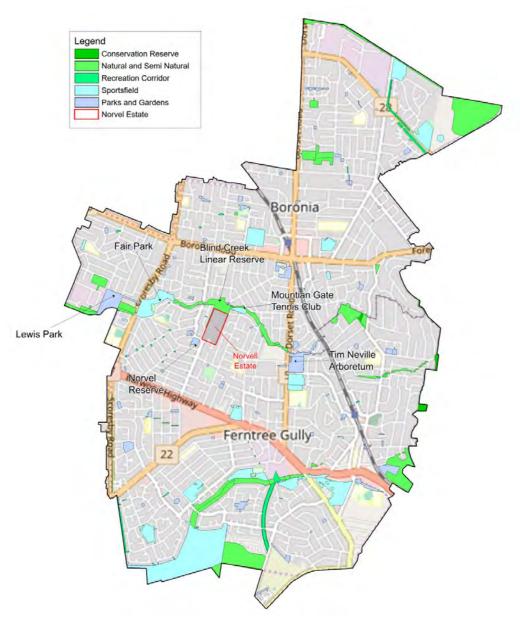


Figure 5-4: Open Space in Ferntree Gully and Boronia



# **6** Population of the Norvel Estate

The population of the Novel Estate is estimated below. In order to estimate the likely size and structure of the population of the development, Census data for 'Outer Melbourne' were used to establish trends. Specifically, the average household size and age profile of residents living in dwellings of different types and sizes was observed. These observations were then used to guide assumptions regarding the average household size and age profile of particular dwelling classes.

Based on the proposed dwelling mix and likely number of persons per dwelling by dwelling type, the population of the Norvel Estate would be approximately 599 persons once fully occupied (see Table 6-1). Due to the mix of proposed dwellings, when compared with the City of Knox age profile, the development would be home to:

- A larger proportion of children aged 0 to 9.
- A larger proportion adults aged 20 to 49.
- A lower proportion of older adults age 50+.

Notwithstanding the above, as the proposed mix of dwellings includes townhouses of varying size, the population of the Norvel Estate would consist of a broad range of households, including working singles and couples, families with children and empty nesters. It can also be expected that owner occupation would be common.

The Figures presented in Table 6.1 are an estimate only and the overall size of the population residing within the development at any particular time may differ. Notwithstanding, over time the population of the development can be expected to approximate that shown in 6-1.



Table 6-1: Likely Population Outcomes – Norvel Estate

	Population	Age Profile		
Dwellings	139	Norvel	Knox	
HH size	2.77			
Population	386			
0 to 4	31	8.0%	6.3%	
5 to 9	35	9.1%	8.2%	
10 to 14	26	6.7%	6.8%	
15 to 19	40	10.4%	8.5%	
20 to 29	69	17.9%	14.1%	
30 to 49	86	22.3%	21.1%	
50 to 69	73	18.9%	23.4%	
70+	25	6.7%	11.5%	

Source: ABS Census 2016; Public Place 2020

As explained in Section 4, population forecasts prepared on behalf of the City of Knox assume that 197 dwellings would be developed within the Norvel Estate. That is, Council's forecasts assume that the site would yield more dwellings than is proposed, and as a result Council may need to adjust down its forecasts for the local area.



# 7 Impact Assessment

# 7.1 Physical Integration

#### Interfaces

The proposed Norvel Estate would be developed on a vacant, rehabilitated quarry site embedded within a well-established residential area. While land within the quarry site is not publicly accessible, it provides an existing green backdrop for residences located on its boundary.

Development of the quarry site for residential purposes has the potential to result in a perceived reduction in amenity, particularly for occupants of dwellings whose property is set on the site boundary (those to the east of the site). However, the low-density form of the proposed Norvel Estate would limit changes to residential amenity for existing dwellings and is consistent with the suburban character of the surrounding neighbourhood.

Moreover, the proposal would improve connections between surrounding residential areas and the Blind Creek open space corridor by connecting internal roads with existing streets such as Dion Street, the improvement of an existing shared path along the western site boundary and development of new boardwalks and connections to the bushland reserve. These improved connections would offset perceived reductions in amenity by enhancing and improving access to the Blind Creek corridor.

#### Access to Services and Amenities

The Boronia Activity Centre is located approximately 1 kilometre to the north of the site and offers a wide range of retail, health and entertainment options, as well as the Boronia Train Station. Pedestrians and cyclists would enjoy direct access to the activity centre via the Blind Creek Trail and Springfield Street. While the activity centre is beyond the commonly applied 800 metre 'rule of thumb' for a 'longer walk', walking distance research from Australia and overseas shows that people will walk considerably further than 800 metres to access destinations such as train stations.<sup>3</sup> It can therefore be expected that the Boronia Activity Centre would be considered within walking range by many of the future residents of the Norvel Estate. For future residents wishing to access the Boronia Activity centre using public transport, bus route 753 can be accessed from Springfield Street approximately 250 metres from the Norvel Estate.

<sup>&</sup>lt;sup>3</sup> To illustrate, from the VISTA travel survey shows that a quarter of bus users in Melbourne walk more than 800 metres to their stop. The data also show that half of Melbourne's train travellers walk more than 800 metres and a quarter more than 1.3 kilometres to access a station.



The Mountain Gate Shopping Centre is located approximately 1 kilometre to the south of the site, and therefore future residents of the Norvel Estate would have multiple retail and service centres located in close proximity.

The Norvel Estate would result in changes to an existing residential environment. While future development will be appropriately scaled and would increase pedestrian connectivity to the Blind Creek Trail, some adjoining neighbours may consider that the proposal reduces their existing amenity. However, concerns about amenity impacts would dissipate quickly given the relatively low-density development form which would be allowed by the proposed planning controls.

The Norvel Estate would be located in a well-established urban area, in close proximity to a range of range of retail, health and entertainment options, as well as fixed rail transport.



# 7.2 Demography

The Novel Estate would yield 140lots which would be occupied by approximately 382 people, once developed. The mix of households and the age structure of the incoming residents would be slightly different to that which exists in the local area. However, as Figure 9.1 indicates, the Novel Estate would not fundamentally alter the demographic character of Ferntree Gully and the changes to the local demographic profile would occur over several years, meaning they would be barely perceptible.

Notwithstanding the above, as the Novell Estate incorporates a mix of medium density housing products, the estate may attract family households with children, and this would offset to a degree population ageing in Ferntree Gully, which is expected to be notable over the next two decades.

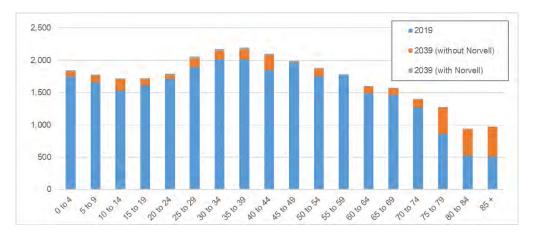


Figure 7-1: Age Profile of Ferntree Gully in 2019 and in 2039 with and without the Novell Estate.

The Norvel Estate would offset the current trend of population ageing in Ferntree Gully, and therefore would have a minor positive impact on the demographic character of Ferntree Gully.



# 7.3 Community Facilities and Open Space

## 7.3.1 Facilities

Population uplift associated with Norvel Estate has been accounted for in the population forecasts developed by City of Knox and the implications for future demand for facilities and services has been discussed in Section 5.

Table 7-1 shows demand for community facilities and services generated by the future population of the Norvel Estate. As the Table shows, the uplift in demand would be small and not sufficient to influence the service or facility planning decisions made by City of Knox, the State Government or the private sector.

Table 7-1: Demand for Community Facilities, Norvell Estate

	Benchmark	Norvel
MCH	1 Nurse EFT per 130 children aged 0	0.05
Sessional Kindergarten	75% of 4 year olds enroll	4.4
	1 licensed placed for every 2 enrollments	2.2
Childcare Places	220 licensed places per 1,000 children aged 0-5	9
Meeting Spaces	1 sq.m per 30 people	12
Primary	80% enrollments per 100 children aged 5-11	28
Secondary	65% enrollments per 100 children aged 12-17	17
1.21	1 per 30,000 to 60,000 residents	0.01-0.02
Library	1 sq.m. per 30 residents	13

Demand for community facilities and services generated by the Norvel Estate would be small, and this additional demand can be accommodated by the existing network of facilities and services. The impact of the additional demand would be negligible.



#### 7.3.2 Open Space

Section 5.6 the City of Knox's Open Space Strategy does not identify an open space deficit in the immediate surrounds of the Norvel Estate. This considered, future residents of the estate would enjoy convenient access to ample existing public open space in various forms.

The Knox Open Space Strategy includes the Strategic Direction to *create healthy creek corridors that people love*. Consistent with this direction, the proposed Norvel Estate includes a significant bushland buffer between the Blind Creek Corridor, comprising 1.29 hectares of bushland transferred into Council ownership, 0.45 of bushland within the Norvel Estate and a passive open space area comprising a park/billabong. A boardwalk would be constructed which traverses the bushland areas and which connects with the proposed park/billabong and Agora Boulevard. These open space areas combined comprise over 20% of the site and constitutes a significant extension to the public open space network in Knox. The proposed open spaces would create passive recreational opportunities for future residents of the Norvel Estate as well residents of adjoining areas and other users of the Blind Creek Corridor.

#### 7.3.3 Active Recreation

Some of the people who live within the Norvel Estate would participate in organised sport and generate demand for infrastructure such as sporting fields and pavilions. Estimates of the total demand for a selection of activities are provided in Table 7-2 based on data from the ABS. As with estimates of demand relating to community facilities, all uplift in demand has been accounted for previously in Section 5.

Table 7-2: Norvell Estate, Participation in Active Recreation (persons aged 15 and over).

	Participa	ition Rate	Norvel Participants		
	2011 rate	2031 (trend)	2011 rate	2031 (trend)	
AFL	2.0%	1.6%	6	5	
Cricket	2.0%	1.5%	6	5	
Lawn bowls	1.4%	1.2%	4	4	
Soccer	1.9%	1.2%	6	5	
Tennis	4.2%	4.0%	13	12	
Netball	3.5%	3.4%	11	10	
Basketball	3.2%	3.6%	10	11	
Fitness/Gym	17.6%	20.2%	54	62	
Jogging	7.8%	10.5%	24	32	

Source: ABS Participation in Sport and Physical Recreation, Victoria (2011-12).



The following observations are made with respect to Table 7-2:

- In relation to activities such as cricket and AFL football, the total number of participants who would live within the Norvel Estate would be modest and set against a trend of declining participation (see Section 5-6). As a result, increases in the total number of participants associated with the Norvell Estate would help local clubs and associations to sustain their membership levels over the longer term.
- Increases in the number of people living in Boronia and Ferntree Gully who would be involved in indoor sports such as netball and basketball will grow overtime, and the development of the Norvel Estate would add to this.
- Notable numbers of people living within the development would participate in activities such as jogging, fitness classes and gyms. However, in the context of the catchment size of a Council indoor aquatic centre/gym (approx. 40-60,000 people), the projected increase is small. Moreover, there is ample open space in the local area to support activities such as jogging and walking.

The Norvel Estate would be located to ensure future residents have access to abundant and diverse open space, with positive implications for their health and wellbeing. The Norvel Estate would also facilitate the expansion and enhancement of the Blind Creek Corridor, with positive implications for residents of surrounding areas and other users of this linear open space.

The Norvel Estate would generate some demand for active recreation. However, the demand generated would not be sufficient to influence the service or facility planning decisions made by City of Knox.



# 7.4 Affordable Housing

## 7.4.1 Housing Diversity

The Council's Affordable Housing Action Plan identifies the need to provide a range of housing in Knox to respond to the needs of people from across the socio-economic spectrum. The Norvel Estate will likely be developed to include a mix of two to five-bedroom townhouses. Housing delivered in this medium density form is typically more affordable than housing delivered in lower density forms, such as detached dwellings. Moreover, housing diversity and choice is very limited in Ferntree Gully at present.

The proposed housing would increase housing choice, be relatively affordable and as such assist in maintaining socio-economic diversity in Knox, consistent with Council policy.

#### 7.4.2 Social Housing

Notwithstanding the above, market forces will dictate the price of the townhouses (purchase and rent) and there can be no guarantee that the costs of the proposed housing will meet any particular standard of affordability. In order to guarantee that a particular affordability standard can be met, a component of the dwellings would need to be reserved for a registered housing provider (or prices would need to be controlled through some other mechanism).

To contribute to the supply of affordable housing in Knox it is proposed that approximately 10 of the lots be made available for social housing and provided to a registered housing provider/association, or approximately 7.2% of all lots. This approach is consistent with the Council's Affordable Housing Action Plan, and would contribute to ensuring a minimum supply of social/affordable housing in the City of Knox.

The Norvel Estate would increase housing diversity and the supply of housing units provided by a registered housing provider/association, consistent with Council Policy. In doing so the development would have a significant positive social impact.



# 8 Conclusions

The proposed development would produce a number of important social benefits:

- The development of the land for residential and related purposes accords with the State Government's urban consolidation initiatives.
- The proposal site is located within a well-established suburban area and therefore would deliver housing in close proximity to established facilities and services. A variety of community facilities, open spaces and retail opportunities could be accessed within walking distance of the site and an existing bus services connects future residents with the Boronia Activity Centre and beyond.
- The proposed mix of housing would contribute to housing diversity and affordability in the local area. Moreover, consistent with Council's Affordable Housing Action Plan, approximately 7.2% of the proposed lots would be used to accommodate social housing provided by a registered housing provider/association.
- The Norvel Estate would be located to ensure future residents have access to abundant and diverse open space, with positive implications for their health and wellbeing. The Norvel Estate would also facilitate the expansion and enhancement of the Blind Creek Corridor, with positive implications for residents of surrounding areas and other users of this linear open space.

Potential negative impacts such as perceived reductions in amenity for surrounding residential proprieties would likely be minimal and short lived, given the low-density form of the proposed Norvel Estate.

Demand for community facilities and services associated with the future population of the Norvel Estate would be minimal. Moreover, the community infrastructure audit shows that the area surrounding the subject site is well supplied with a diverse range of community facilities and open space.

# Stormwater Management Plan

Proposed Residential Development, Norvel Road, Ferntree Gully

V161919

Prepared for

25 May 2021







# **Document Information**

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# 1 Site Description

has engaged Cardno to prepare a Stormwater Management Plan for the proposed residential development of the site in Norvel Road, Ferntree Gully.

The Norvel Road site is located on the north side of Norvel Road and extends north to the Blind Creek reserve as shown in the figure below. The site is bounded to the east by existing residential development, and has frontage to Castricum Place for part of the western frontage, with the balance of the western boundary abutting a Council linear reserve at the rear of existing residential development. The total site is approximately 9.2 ha in area, with a development area of 7.5 ha. The remaining 1.7 ha is attributed to a nature reserve located at the north of the site. This area is part of the Blink Creek Reserve and is a protected bushland that has environmental and social significance.



Figure 1-1 Site Locality Plan (Red – Boundary & Green - Billabong Location)

Historically, this site was formerly a quarry and upon closure was filled and graded so that the site falls towards the bushland. There are minimal external flows into the site. The majority of runoff generated from the site passes through the bushland as overland/sheet flow prior to discharging into Blind Creek. Knox City Council has indicated that that these flows are critical to the health of the bushland.

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# 2 Development Proposal

The current masterplan for the site, prepared by the architects, is shown in Figure 2-1 below. This retains the existing vegetation at the northern end of the site as a 'Bushland Reserve'. It is the intention that all discharge from the development into the reserve will attempt to achieve the relevant water quality targets. As the remaining 1.7ha area of the site is classed as protected bushland, this area will largely remain undeveloped where vegetation exists. However, where no vegetation exists, it is the intention that this is where proposed flood controls and stormwater treatment assets will be located.



Figure 2-1 Subdivision Masterplan

It must be noted that this Stormwater Management Plan and the conceptual design presented as Appendix B in this document is not to be confused with mitigation controls approved in the flooding assessments which is provided in Appendix A.

The flooding mitigation assessments detailed in Section 4 of this report do not consider stormwater treatment aspects, while the stormwater conceptual design plans presented in Appendix B do not consider the flooding mitigation options directly.

It is intended that both the flooding mitigation and water quality objectives are met given the interaction and relativity of the two aspects.



# 3 Flooding and Proposed Mitigation

Flooding for the Norvel Road Development has been assessed by Cardno through multiple impact and mitigation assessments. These assessments have been undertaken to address key comments by Knox City Council. Upon completion of the assessments, Knox City Council has approved the flooding component of the development. The flooding assessments have been included as part of Appendix A. The key outcomes can be summarised as follows:

- > The assessments were undertaken to determine if the proposed development increases flooding in the 1% AEP event at the following locations:
  - Downstream of the site (bushland to the north)
  - o Blind Creek
  - Surrounding properties
- Initial flood assessment works identified that increased runoff would be generated as a result of the development due to an increase in impervious areas. This was expected to have a minor impact on some of the surrounding properties, but no impact downstream of the site and on Blind Creek.
- > Therefore, mitigation options were investigated at a high level to establish conceptual options that would mitigate flooding on the surrounding properties. These were later refined to ensure that they were feasible and feasible for the detailed design phase of the Project and addressed flooding concerns of the initial assessments.
- > The refined mitigation options were ultimately accepted by Council as flooding mitigation options demonstrated that the future detailed design of the mitigation controls can achieve alleviation of flood waters on the surrounding properties. This has been specified as conditions on the permit.
- > Approved mitigation options are shown Figure 3-1 and included:
  - A Proposed Raised Bicycle Path
    - Raised by more than 300m to ensure it effectively mitigates flood waters from entering the surrounding properties
    - Alignment slightly altered from proposed site layout to allow for a swale along the back of the property boundary to the extent of the raised section of the proposed bicycle path
  - Proposed Swale along the Property Boundary
    - Lowered and graded from the start of the raised section of the proposed bicycle path to the existing walking track, where the elevation ties in to the existing levels
  - Proposed Culvert under Existing Foot Path
    - A 300mm x 600mm box culvert with 300mm cover to the surface
    - Invert levels for upstream and downstream set at the proposed swale levels giving the culvert an approximate slope of 1 in 40
  - Proposed Bund between the Proposed Site Road and Localised High Point
    - Raised approximately 300mm to ensure that runoff from the site does not contribute any flows to the proposed swale along the rear of the properties
    - Uses the current site grading and localised high point



- > The 1% AEP Difference Plot for Existing (E03) and Mitigation (M03) Conditions are shown in Figure 3-2 and outcomes ultimately showed:
  - o There were no adverse impacts on or within the surrounding properties
  - o There was a very minor increase in flood depths of no greater than 5cm on the existing footpath;
  - There was a minor increase in flood waters of no greater than 10cm within the bushland downstream of the existing footpath;
  - There was an increase in flood depths of greater than 5cm within the reserve corridor, the bushland to the north of the site and on site; and
  - o There was no change in flood levels observed in Blind Creek



Figure 3-1 Approved mitigation options (M03)

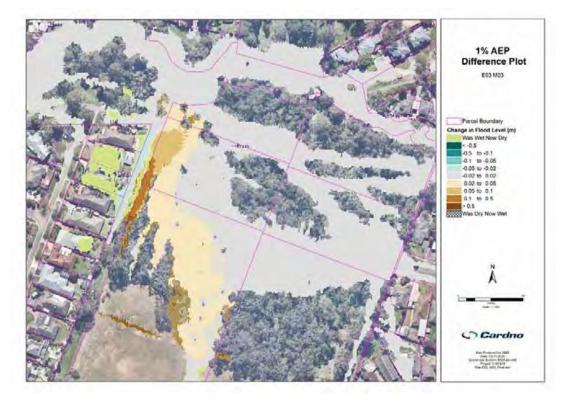


Figure 3-2 1% AEP Difference Plot for Existing (E03) and Mitigation (M03) Conditions



# 4 Stormwater Quality Management

#### 4.1 Background and Management Approach

An initial site inspection was undertaken with council drainage and water quality officers on the 4<sup>th</sup> of September 2017. During this site inspection, council officers indicated that they wanted to maintain the hydrology of the downstream billabong. This billabong is located in the council reserve near the northern edge near Blind Creek adjacent to the existing Blind Creek Trail. As a result, council confirmed that they would accept the use of the existing Billabong (See Figure 1-1) for detention and water quality treatment, with the condition that a sediment basin was to be constructed to pre-treat runoff. Additionally, it was identified that any flows into the billabong were to be dispersed throughout the bushland to ensure the environmental values were preserved.

Cardno used this initial information and conditions as the basis of the stormwater management plan for the Norvel Road development. However, after numerous conceptual designs, it was subsequently determined that there was no practical and feasible conceptual design that utilised the billabong. This is because all design options would ultimately impact the existing vegetation and be cost prohibitive given the location and characteristics of the billabong.

Given the extended timeframe, Cardno organised two meetings with Council on the 18<sup>th</sup> of November 2020 and 3<sup>rd</sup> of December 2020 to clearly identify the Council's requirements and water quality treatment objectives for the site. Also, we received the council's comments on the draft version of the stormwater report issued 09/02/2021. Outcomes from these meetings and the council responses were:

- > Council would prefer a low maintenance system with maintenance requirements similar to a shallow bioretention with no underdrain system;
- It is the Council's preference that bioretention assets with shallow filter media and no underdrain replaces the ephemeral waterway to achieve the maximum treatment efficiency with minimal demand for maintenance;
- > Gross Pollutant Traps (GPTs) are acceptable; however, these are to be considered economically and rationally given the high costs for maintenance. Rolca CDS units are preferred GPT types due to the familiarity of the council maintenance team with these assets;
- > Water quality targets must be met for Gross Pollutants (GP) and Total Suspended Solids (TSS);
- > Water quality targets for Total Phosphorous (TP) and Total Nitrogen (TN) will be assessed on merit given that council's preference for a low maintenance treatment system without filtration makes achieving targets challenging and limits options to achieve typical targets;
- > The proposed treatment system attempts to achieve the best possible water quality treatment given council's preferences, the constraints related to vegetation (including canopies and root zones) due to its protected status and that flows are to be distributed across the bushland reserve; and
- > The proposed treatment system in the submitted stormwater management plan is feasible and practical for community use.



#### 4.2 Water Quality Objectives

The water quality objectives for the site are based on "Best Practice Environmental Management Guidelines" (CSIRO 1999) and are consistent with the Knox City Council Stormwater Management Strategy (2010). Both of these documents provide best practice management targets for water quality and are outlined in Table 4-1.

Table 4-1 Best Practice Water Quality Targets

Pollutant	Target Reduction
Total Suspended Solids (TSS)	80%
Total Nitrogen (TN)	45%
Total Phosphorus (TP)	45%
Gross Pollutants (GP)	70%

## 4.3 Water Sensitive Urban Design

#### 4.3.1 Proposed Treatment Measures

The proposed treatment measures for the site are shown in Figure 4-1 and include the following:

- > Three Gross Pollutant Traps (GPTs)
- > Cascading raingardens separated by rock weirs
- > An ephemeral wetland

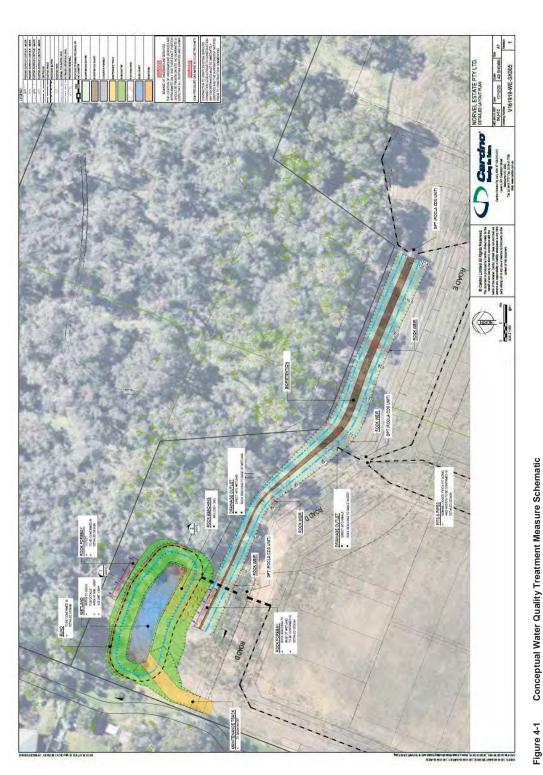
It must be noted that the conceptual design is a proof of concept for gaining the required approval for the Norvel Road development, and the treatment measures have been considered at the concept level.

It is intended that aspects will be redefined at the detailed design stage. The full conceptual design plans are provided in Appendix B. These have been selected and designed accordingly with the initial feasibility and practicability of construction considered.

Low flow and high flow bypasses for the treatment measure has to be estimated in alignment with the conceptual design, and this will require reassessment at the detailed design stage.

Cardno

25 May 2021



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Given, these have been considered only at a concept level, the following limitations are therefore applicable:

- > The stormwater controls and conceptual design are subject to detailed design and these treatment measures and associated stormwater controls may change. All changes to stormwater and flooding aspects must be updated within this document where and as required.
- The concept design featured in this document has been assessed for feasibility and practicality with respect to underground services such that a nominal cover, pipe sizing and invert levels has been considered although these have not been specified as they must be designed appropriately in detailed design.
- It must be noted that site characteristics such as road alignments, footpaths and landscaping has been considered where reasonably practical and detailed design will require amendments to one or more aspects to ensure that the water quality objectives are met.
- > The contributing catchments and drainage layout have been developed specifically for water quality treatment and may not be applicable for conveying and/or directing flows. It is the intent that appropriate sizing and layout will be redefined at detailed design. Adjustment of these layouts will need to be reassessed if changed.
- > Council is supportive of rock forebays because of their natural look in oppose to concrete forebays; the detailed design of these assets will be provided in the next phase.
- > The concept design includes the approximate location of two forebay dispersion flow controls to provide distributed flows to the wetland and bushland. It is expected that this will be appropriately refined in detailed design to deliver flows to the entire bushland. A bund has been included in the conceptual design, however, this is subject to detailed design.
- > A free draining is feasible for more than 85% of the wetland volume to the downstream bushland area through designated rock forebay and outlet. Details of the outlet will be provided in the detailed design phase.
- Previous submissions of the stormwater management plan (V1 to V8) included several variations for the location and mechanisms for site discharge. It must be noted that with the restrictions of works through the protected bushland that pipe jacking to outlet into the Melbourne Water asset and/or council network adjacent to Blind Creek is not practically feasible. Therefore, site discharge has been proposed through the forebay dispersion flow control and proposed low flow allowances from the swale. It is expected that high flows will discharge from the site similarly to those observed predevelopment.
- > The proposed treatment measure will require maintenance in alignment with best practice and will likely require the closure of community spaces to ensure appropriate maintenance. This is due to the site characteristics (road and footpath alignments, bushland reserve etc) and requirements for community safety. The dewatering area specified in the plans is not sufficient to meet best practice unless additional areas are closed to the community during this period.

In order to determine the effectiveness of the proposed treatment measure in achieving the water quality objectives, stormwater quality modelling was performed using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) Version 6.3.0.

## 4.3.2 MUSIC Model Setup

The MUSIC model requires the user to specify meteorological data (rainfall and evaporation), soil properties and pollutant generation parameters. MUSIC modelling was undertaken in accordance with the 2018 Melbourne Water MUSIC Modelling Guidelines.

The Melbourne Water Music Rainfall Templates data for the Narre Warren North station was adopted. This included 6min interval rainfall from 1984 to 1993 with the associated default evapotranspiration data applied to establish the meteoritical conditions.



As the development will only have residential properties i.e. no commercial or industrial areas, the residential MUSIC node was selected for each of the contributing subcatchments. The rainfall-runoff parameters adopted are detailed in Table 4-2.

Parameter	Source Node
Rainfall threshold (mm)	1
Soil storage capacity (mm)	120
Initial Storage (%)	25
Field Capacity (mm)	50
Infiltration Capacity Coefficient - a	200
Infiltration Capacity Exponent - b	1
Initial Depth (mm)	10
Daily Recharge rate (%)	25
Daily Baseflow Rate (%)	5
Daily deep Seepage Rate (%)	0

Table 4-2 MUSIC Rainfall Runoff Parameters

The 2018 Melbourne Water MUSIC Modelling Guidelines requires residential nodes to reflect the appropriate allotment sizes and therefore, subcatchments have been delineated accordingly as shown in Figure 4-2.





Figure 4-2 MUSIC Subcatchment Delineation

The subcatchments and their parameters used in the MUSIC model are further detailed in Table 4-3 below.

Subcatchment ID	Assigned Description (MW MUSIC Modelling Guidelines - 2018)	Area (ha)	Assigned Imperviousness (MW MUSIC Modelling Guidelines - 2018)
А	Standard densities. (Allotment size $300\text{m}^2-600\text{m}^2$ )	0.173	0.75
В	Standard densities. (Allotment size $300\text{m}^2-600\text{m}^2$ )	2.450	0.75
С	Standard densities. (Allotment size $300\text{m}^2-600\text{m}^2$ )	0.290	0.75
D	Standard densities. (Allotment size $300\text{m}^2-600\text{m}^2$ )	2.719	0.75
D.1	High densities. (Allotment size <300m²)	0.107	0.85



E	Standard densities. (Allotment size 300m² – 600m²)	1.504	0.75
E.1	High densities. (Allotment size <300m²)	0.014	0.85

Table 4-3 MUSIC Subcatchment Parameters

These subcatchment parameters and the proposed treatment measures were implemented in the MUSIC model as shown below in Figure 4-3.

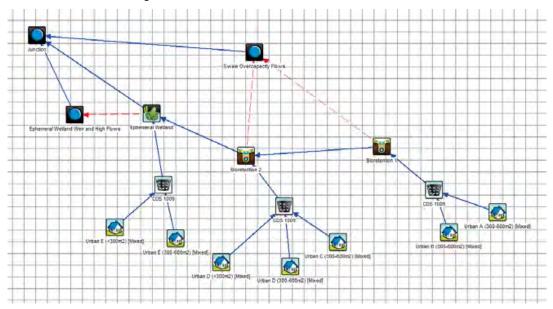


Figure 4-3 MUSIC Model Layout

## 4.3.2.1 Gross Pollutant Trap (GPT) Parameters

A Rocla CDS unit node was selected for MUSIC Modelling and obtained directly from the manufacturer's website. Parameters were adjusted in accordance with the Melbourne Water Music Modelling Guidelines (2018) and Council specifications such that the GPT node does not remove any Total Nitrogen (TN) or Total Phosphorus (TP). All remaining parameters, including the capacities, inlet properties, the target elements and their concentration based capture efficiency (gross pollutants and total suspended solids) were left as default.

Three nodes were implemented in the MUSIC modelling to represent the GPTs for the site. This did not require any sizing or determination of which Rocla CDS unit model is appropriate for the site as this will be undertaken in detailed design. The high and low flow parameters were left as specified by the manufacturer. It must be noted that this will require an update for detailed design.

## 4.3.2.2 Bioretention Parameters

It is the intention that the bioretention will be separated by rock weirs to form a long cascading bioretention. The bioretention will convey flows from the location of GPTs to the proposed ephemeral wetland. It must be noted that a forebay has been included at the end of the raingarden to ensure that flows are dispersed into the ephemeral wetland.

Council have specified that the raingardens be modelled assuming no underdrain and minimal-to-no filer medium depth. For the purposes of this Stormwater Management Plan, these have been modelled using bioretention nodes separately and can be identified by their respective surface area, filter area and unlined



filter media perimeter as shown below in **Error! Reference source not found.** and Figure 4-5, respectively. It must be noted that each of these sections have been designed to treat the incoming flows from contributing subcatchments, as seen in the concept design plans (Appendix B).

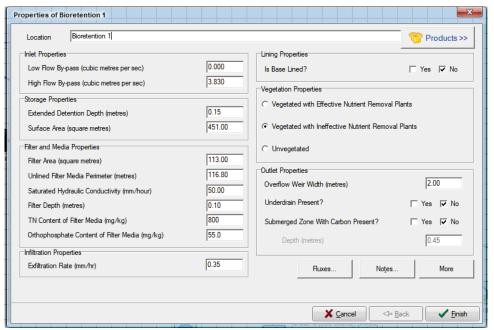


Figure 4-4 Bioretention 1 - MUSIC Model Parameters

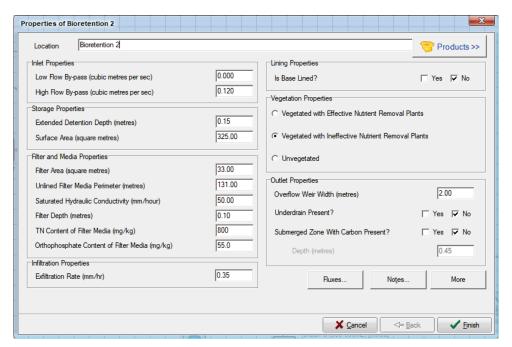


Figure 4-5 Bioretention 2 - MUSIC Model Parameters



## 4.3.2.3 Ephemeral Wetland Parameters

The ephemeral wetland was conceptually developed for the site using 12D. This again considered site topography and vegetation restrictions to ensure that the feasibility of the proposed treatment measure was practical and constructible for the detailed design phase. It must be noted that while Council has a preference towards minimal maintenance, this asset will require a dewatering area and has been specified in the plans. This will require refinement at detailed design given the current area is only 90m², and best practice approximates a required area of at least 140m². An access path has also been specified in the conceptual design.

As specified by best practice for this treatment type, it is the intention that this ephemeral wetland will meet the recommended Extended Detention Depth (EDD) with a proposed EDD of 0.35m while also attempting to meet best practice such that the detention time of flows is within the 48 to 72 hours specified for the best treatment in a wetland. Detailed design will provide the specific detention time for the system; however, to achieve this, a bund has been proposed on the northern side of the asset to hold and treat flows within the asset. It must be noted that a second forebay will distribute the flows leaving the ephemeral wetland to the bushland. The location of both the bunding and forebay is adequate for conceptual design, however, will need to be refined for detailed design.

This has conceptually been designed to perform similarly to a detention basin whereby runoff will be temporarily stored within the asset until it evaporates. This asset will specifically experience ponding when rainfall events occur and will typically dry out in summer between rain events. As a result, the vegetation specified in the submitted landscaping plan will require further refinement upon detailed design to ensure its health is maintained during both periods.

A conservative approach for ponding has been adopted to reflect the dry season in the modelling, although this could alternatively have been modelled for the rain events which would ultimately see a greater performance. There has been no low flow bypass specified as this will be determined in detailed design while the high flow bypass was calculated using the 63.2 AEP event (1-year ARI) flow for the developed site. A nominal outlet size has been specified but will require sizing in detailed design. The modelled specifications for the ephemeral wetland are shown in Figure 4-6.

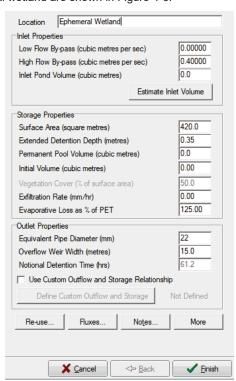




Figure 4-6 Ephemeral Wetland Parameters

## 4.3.3 MUSIC Modelling Results

The results of the MUSIC modelling are shown in Table 3-4. Results indicate that with the implementation of the proposed treatment measure that Gross Pollutants (GP), Total Suspended Solids (TSS) and Total Phosphorous (TP) water quality objectives for the site are met. However, as expected, the water quality objectives for Total Nitrogen (TN) are not met and is approximately 15% below the target. To meet TN targets, there would need to be consideration of alternative treatment measures that are not preferred by Council or Norvel Estate Pty Ltd.

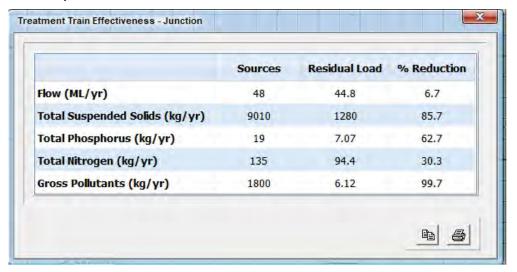


Table 4-4 Water Quality Modelling Results



## 5 Summary

Cardno has prepared this Stormwater Management Plan for Norvel Estate Pty Ltd for the proposed residential development of the site in Norvel Road, Ferntree Gully.

The current masterplan for the site intends to retain the 1.7ha protected bushland to the north of the site (adjacent to Blind Creek) while identifying a residential development for the remaining 7.5ha. The protected bushland has been identified as environmentally and socially valuable.

A flooding assessment for the proposed development was undertaken by Cardno through multiple impact and mitigation assessments. These assessments were undertaken to address flooding concerns by Knox City Council. A final flood mitigation assessment was approved by Council which included significant detail of proposed flood mitigation controls. Council were satisfied that all flooding related concerns could be addressed via conditions in the permit with the intention that mitigation measures were subject to detailed design.

Previous Stormwater Management Plans were submitted to Council, although these were not approved due to Council's concerns related to maintenance and/or not meeting target requirements. Given the extended timeframe over which these submissions occurred, Cardno had two meetings with Council (18<sup>th</sup> of November 2020 and 3<sup>rd</sup> of December 2020). These meetings clearly identified Council's requirements and water quality treatment objectives for the site.

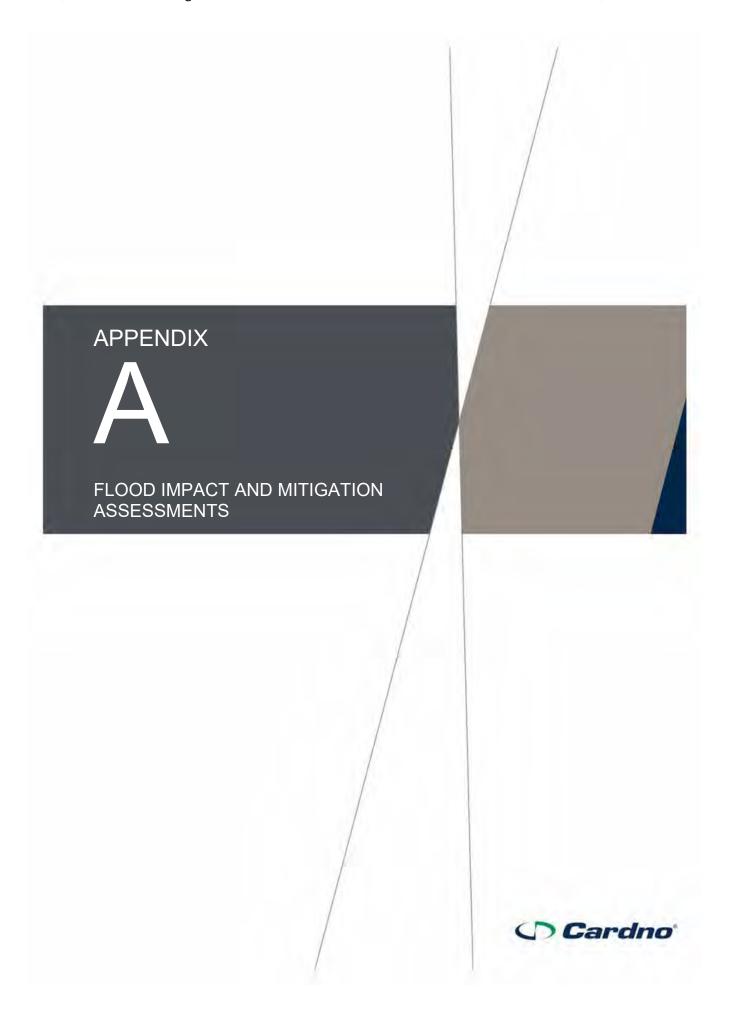
Following the meetings with Council, and the received comments from Council, Cardno established a revised concept design for achieving the newly specified outcomes. The concept design was firstly assessed for feasibility and practicality across several aspects and ultimately determined that the most appropriate for the site through a proposed treatment measure that included:

- > Three Gross Pollutant Traps (GPTs)
- > A raingarden
- > An ephemeral wetland

The aim of this concept design was to achieve the water quality objectives set out by best practice, while considering site constraints and Council's preferences. The intention is that the entire system has low maintenance requirements and behaves such that it will act as a dry system in summer between rain events, while during rain events and in the wetter months, it will treat runoff from the development. It must be noted that in this concept design, consideration towards maintaining the dispersed flows entering the bushland predevelopment will also occur post development.

In order to assess the effectiveness of the proposed treatment measures, stormwater quality modelling was performed using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) Version 6.3.0. Modelling was undertaken in accordance with the 2018 Melbourne Water MUSIC Modelling Guidelines and physical parameters (ie. treatment measure dimensions) in the model were consistent with the concept design.

Results from the modelling indicate that the proposed treatment measures will meet Gross Pollutants (GP), Total Suspended Solids (TSS) and Total Phosphorous (TP) water quality objectives, although as expected, will not meet the water quality objectives set out for Total Nitrogen (TN).





## Technical Memorandum

Title Norvel Road Estate

**High Level Flood Impact Assessment** 

Client Norvel Estate Pty Ltd. Project No V161919

Date 22/07/2020 Status Draft

Author Dillon Van Heer Discipline Water

Reviewer Rob Swan Office Melbourne

## 1.1 Background

Cardno has been engaged to undertake a high-level flood impact assessment of Norvel Road Estate, a proposed residential development that is adjacent to Blind Creek, Ferntree Gully.

The aim of the assessment is to determine if the proposed development increases flooding in the 1% AEP event at the following locations:

- > Downstream of the site (bushland to the north)
- > Blind Creek
- > Surrounding properties

## 1.2 Modelling Approach

Cardno has been provided with an approved council TUFLOW model for the site. This model extends approximately 1.5 km upstream of the site and 2 km downstream of the site. It has been most recently updated by Engeny with Water Technology originally developing the model.

It must be noted, that this model did not run when provided to Cardno by Engeny, and was not supplied with a hydrological model or corresponding report. Therefore, changes were made to the model to ensure it was operational and fit-for-purpose. These changes therefore make this model only applicable to this project.

Our assessment identified that several changes to the model were required to appropriately model the existing conditions at the Norvel site. These were undertaken to ensure the modelling was reflective of existing conditions and included:

- > Updating the site topography with the latest LiDAR available (2017)
- > Adjustment of Rainfall factors to match those of similar open spaces (the council modelling assumes the site is fully developed)
- > Manning's Roughness (n) to match 2020 aerial imagery

To represent developed conditions, Cardno made two major changes to the new existing model which included:

- > Applying the original rainfall factors provided with the original model
- > Modifying the Mannings 'n' value to be representative of faster flow down roads, outside of the proposed reserve areas.

The proposed development is in the planning stages and does not yet have a design surface. The modifications to the roughness values and fraction imperviousness are intended to be representative of the sites developed conditions for assessment purposes. These results are indicative only and are appropriate for a high-level assessment.



## 1.3 Results

The models were run for both the existing and developed conditions and the water surface elevations compared. The difference plot for the 1% AEP event is shown below in Figure 1-1.

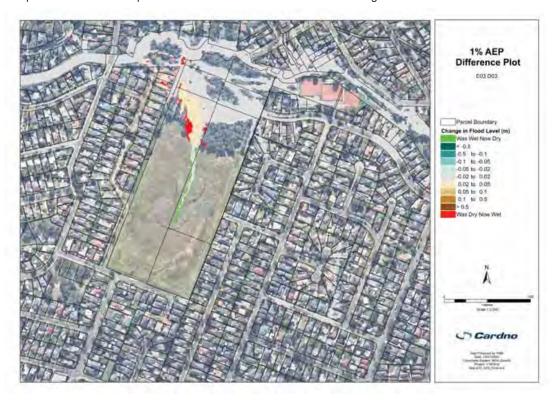


Figure 1-1 1% AEP Difference Plot for Existing (E03) and Developed (D03) Conditions

From these results, it can be determined that:

- > There is an increase in flood waters downstream of the site (bushland to the north), attributable to the increased flows from the development
- > There is no change in flood level in Blind Creek
- > There is an increase in flood waters on two surrounding properties in the north west corner. This appears to be caused by two main factors:
  - The model topography has these two houses included as slight depressions
  - Some of the additional flows generated on the development site flow towards these properties

There is some additional flow direct towards Blind Creek as a result of the development, however, flood impacts associated with this extra flow are negligible once the effect of the larger Blind Creek catchment is considered. Cardno notes that these flows are also concentrated along the existing valley line, as the underlying model topography is not changed in the model. Cardno also understands that the proposed development (latest site plans) will be distributed outflows along the bushland sections, to ensure more even flooding of the remnant billabong and limit the erosion potential.

The impacts indicated on the two surrounding properties in the north west corner is due to flood waters backing up along the swale and entering these properties from a low point. Cardo has identified that there is likely to be a culvert at the end of this swale, however, this is missing in the provided TUFLOW model.

The impacts are likely related to some of the assumptions made in the model, however there are some simple mitigation options available to reduce and remove any impact. These include the implementation of

V161919\_M001\_Flood\_Impact\_Assessment.docx



some minor earthworks and a culvert, as well as raising the proposed footpath along the western boundary to contain site flows.

Minor earthworks will be required to create a new swale at the point at which the current swale turns towards the site and allow flood waters to travel directly north towards Blind Creek with the new culvert under the existing footpath. An increase in 300 mm above current surface levels along the proposed footpath (seen in the latest site plans) to act as a levee will likely redirect these flows and ensure that flood waters generated from the site will not impact the properties.

An indicative mark-up of this potential mitigation option is shown in Figure 1-2.



Figure 1-2 Proposed Mitigation Options and Indicative Locations

Cardno has also undertaken an assessment of the potential change in the maximum hazard classification of the flooding along the Blind Creek Trail. The hazard classification was assessed against Melbourne Water's latest Technical Specifications for Flood Mapping. The results of the assessment indicate that for existing and developed conditions, there is no change and the maximum hazard classification along the Trail remains within Category 1.

This assessment was completed at a high level and will need to be re-assessed when modelling the design surface and potential mitigation option previously mentioned. The existing conditions (E03) maximum hazard plot is shown in Figure 1-3, while the developed conditions (D03) maximum hazard plot is shown in Figure 1-4



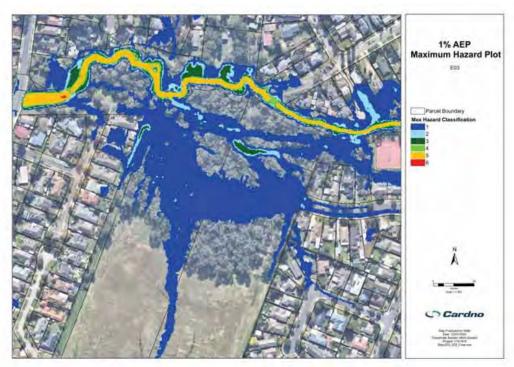


Figure 1-3 Existing Conditions 1% AEP Maximum Hazard Plot

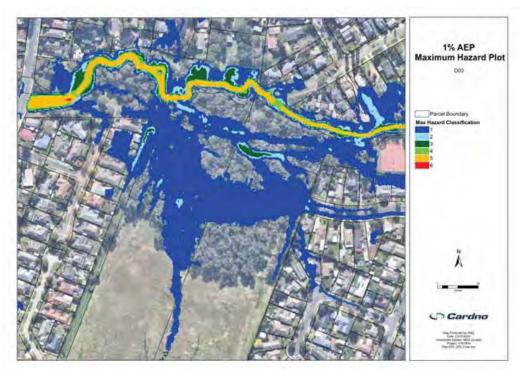


Figure 1-4 Developed Conditions 1% AEP Maximum Hazard Plot

V161919\_M001\_Flood\_Impact\_Assessment.docx



## 1.4 Conclusions and Recommendations

The flood modelling results show that there are some impacts downstream of the site and on two surrounding properties in the north west corner but no impacts on Blind Creek.

All flooding impacts are indicative only as no design surface for the development has been modelled, and modelling of a design surface will confirm that flows will be dispersed rather than concentrated.

The offsite flood impacts are minor in nature and are likely to be easily mitigated through some minor surface and drainage modifications. Flows discharged through the formal drainage network of the proposed site will not have any impact on flood levels associated with Blind Creek. Cardno notes that the existing Council model has assumed that the site is fully developed.

A high-level assessment has indicated that the maximum hazard classification along Blind Creek Trail remains within Category 1 for existing and developed conditions.



## **Technical Memorandum**

Title Norvel Road Estate

**Flood Mitigation Assessment** 

Client Norvel Estate Pty Ltd. Project No V161919

Date 03/09/2020 Status Draft

Author Dillon Van Heer Discipline Water

Reviewer Rob Swan Office Melbourne

## 1.1 Background

Cardno has been engaged to undertake a flood mitigation assessment for Norvel Road Estate, a proposed residential development that is adjacent to Blind Creek, Ferntree Gully.

Potential mitigation options were identified as part of the previous Flood Impact Assessment (reference V161919\_M001\_Flood\_Impact\_Assessment.pdf) completed by Cardno and has been provided in Appendix A.

The aim of this assessment is to determine if the potential mitigation options address the potential flood impacts of the 1% AEP storm event observed in the previous modelling at the following locations:

- > Surrounding properties
- > Existing footpath (Blind Creek Trail)
- > Bushland between properties and Blind Creek

The proposed mitigation options from the previous Tech Memo is shown below in Figure 1-1.

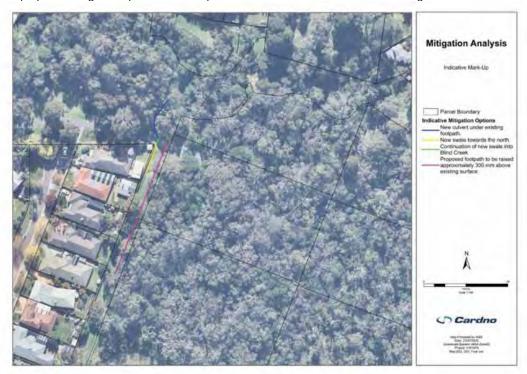


Figure 1-1 Proposed Mitigation Options and Indicative Locations



## 1.2 Modelling Approach

The flood model developed as part of the previous analysis was adopted as the base case conditions for this assessment. This model was then adapted to include the proposed mitigation options to crease a mitigation conditions model.

The most recent site plan as shown in Figure 1-2 below was provided to Cardno and was used to implement the mitigation options into the model at the most appropriate locations.

The specific model parameters for each of the mitigation options implemented are further detailed below:

- > Proposed Raised Bicycle Path
  - Raised by more than 300m to ensure it effectively mitigates flood waters from entering the surrounding properties
  - Alignment slightly altered from proposed site layout to allow for a swale along the back of the property boundary to the extent of the raised section of the proposed bicycle path
- > Proposed Swale along the Property Boundary
  - Lowered and graded from the start of the raised section of the proposed bicycle path to the existing walking track, where the elevation ties in to the existing levels
- > Proposed Culvert under Existing Foot Path
  - o A 300 mm x 600 mm box culvert with 300 m cover to the surface
  - Invert levels for upstream and downstream set at the proposed swale levels giving the culvert an approximate slope of 1 in 40
- > Proposed Swale Downstream of the Proposed Culvert
  - o Lowered and graded from the outlet of the proposed box culvert into Blind Creek
  - Alignment has been chosen to avoid a low point in the LiDAR so that an existing flow path does not worsen

The four specific model parameters mentioned above were the only changes made to the previously submitted development conditions (D03) model.

It should be noted that the modelling of these mitigation options is conceptual only to provide a proof of concept on the ability of these mitigation options to reduce the flood impacts. Detailed design and modelling will be required in order to confirm the design intent.



Figure 1-2 Latest Site Plan (reference TP\_MASTER PLAN\_LOT DIVISION-LOT SUBDIV 1.1000.pdf)



## 1.3 Results

## 1.3.1 Flood Impacts

The flood model was run for the mitigation conditions (M01) as well as the existing (E01) conditions. A water surface elevation difference plot for the 1% AEP event is shown below in Figure 1-3 which shows the impacts of the proposed conditions.

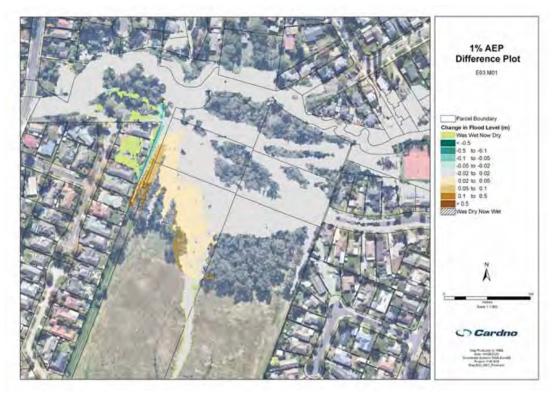


Figure 1-3 1% AEP Difference Plot for Existing (E03) and Mitigation (M01) Conditions

From these results, it can be determined that the mitigation options alleviate the 1% AEP flood impacts observed from previous modelling in the adjacent properties, the existing footpath and majority of the bushland between the properties and Blind Creek.

It must also be noted that:

- > There is a small increase in flood waters downstream of the site (bushland to the north), attributable to the increased flows as a result of the development
- > There is no change in flood level in Blind Creek as a result of the proposed mitigation options
- > There is a negligible increase in flood waters is a small area of the bushland between the properties and Blind Creek, however, this is only 100mm and is in a location where no people or assets will be located
- > There is an increase in flood waters on property boundaries at the upstream side of the swale

The modelling undertaken and the results shown above identifies that the mitigation options are appropriate to alleviate the flood impacts as a result of the development. Cardno acknowledges that the property swale must be designed to extend along the entire western boundary next to the bicycle footpath to ensure there is adequate storage for flood waters from the properties. Ultimately, this impact assessment shows that if the swale is implemented, there will be a reduction in flood waters within the private properties.



As mentioned in the previous Technical Memorandum provided by Cardno, there is some additional flow directed towards Blind Creek as a result of the development. However, the flood impacts associated with this extra flow are negligible once the effect of the larger Blind Creek catchment is considered.

Similarly, Cardno notes that these flows are also concentrated along the existing valley line, as the underlying model topography is not changed in the comparison of the existing and mitigation conditions. Cardno also understands that the proposed development (latest site plans) will distribute outflows along the bushland sections, to ensure more even flooding of the remnant billabong and limit the erosion potential.

Cardo again can identify that there is likely to be a culvert at the end of the existing swale along the property boundary, however, this is missing in the provided hydraulic model. This may also provide additional mitigation.

## 1.3.2 Flood Hazard

Cardno has assessed the potential change in the maximum hazard classification of the flooding along the Blind Creek Trail for the mitigation results. Again, the hazard classification was assessed against Melbourne Water's latest Technical Specifications for Flood Mapping.

The results of the assessment indicate that for the mitigation conditions, there is no change to the flood hazard, with the maximum hazard classification along the Trail remaining within Category 1. Cardno notes that there is an increase in hazard along the eastern side of the bicycle footpath as a result of the proposed swale. It is recommended that appropriate safety considerations are therefore incorporated into the design as required. The existing conditions (E03) maximum hazard plot is shown in Figure 1-4 while the mitigation conditions (M01) maximum hazard plot is shown in Figure 1-5.

It must be noted that this assessment was completed at a high level and will need to be re-assessed once the design surface of the development has been finalised along with detailed designs of the mitigation options.

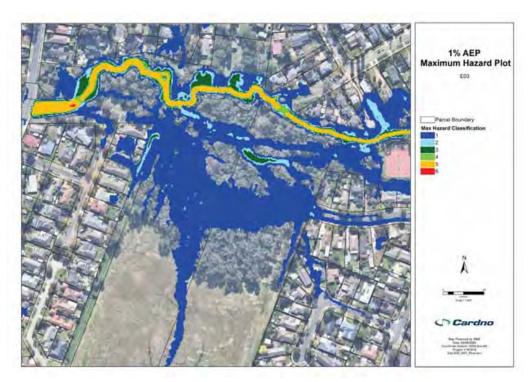


Figure 1-4 Existing Conditions 1% AEP Maximum Hazard Plot



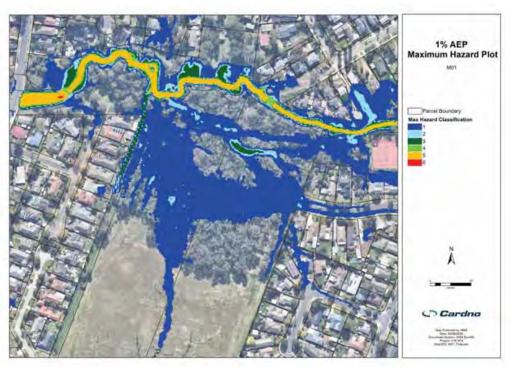


Figure 1-5 Mitigation Conditions 1% AEP Maximum Hazard Plot



## 1.4 Conclusions and Recommendations

Flood modelling results show that there is a reduction in flooding to the adjacent properties as a result of the implementation of the proposed flood mitigation options. The results also show that there are some small flood impacts in the downstream areas of the site, however, there are no impacts within Blind Creek itself.

Results also show some impacts on surrounding properties at the upstream end of the proposed swale. As a result of this, Cardno recommends that the final design must include a swale along the entire western boundary between the bicycle footpath and properties.

All flood impacts are indicative only as no design surface for the development has been modelled and the mitigation options modelled are conceptual only. Modelling of a design surface will confirm that flows will be dispersed rather than concentrated while modelling of the designed mitigation options will confirm that the there is no impact on the adjacent properties.

It is recommended that modelling of the design surface, detailed mitigation option designs and the proposed billabong be undertaken in order to confirm that there is no adverse flood impacts to the surrounding properties as a result of the development.



## **Technical Memorandum**

Title Norvel Road Estate

**Updated Flood Mitigation Assessment** 

Client Norvel Estate Pty Ltd. Project No V161919

Date 05/11/2020 Status Draft

Author Dillon Van Heer Discipline Water

Reviewer Rob Swan Office Melbourne

## 1.1 Background

Cardno has been engaged to update a flood mitigation assessment for Norvel Road Estate, a proposed residential development that is adjacent to Blind Creek, Ferntree Gully.

Potential mitigation options were identified as part of the Flood Impact Assessment (reference V161919\_M001\_Flood\_Impact\_Assessment.pdf) and modelled indicatively as part of the previous Flood Mitigation Assessment (reference V161919\_M002\_Flood\_Mitigation\_Assessment.pdf).

The previous Flood Mitigation Assessment was submitted to council for approval, however, the Council provided the following feedback:

- "The proposal to include a swale downstream of the footpath is a concern as the no details of the size of the swale and the impact on existing trees. This point requires detail that can be worked through postpermit. Council disagrees."
- "The predicted impacts within the lots on Jacobus Walk identified mapped as >0.5m are not considered acceptable. The comment that the swale can be extended up to these properties to mitigate these impacts is questions due to existing trees and the lack of details of the swale dimensions. Cardno are confident that they can mitigate this issue and will deal with it via condition. Council disagrees."
- "The hazard mapping will also be impeded by the lack of using the ultimate land shape. The identification of high hazard along the western edge within the swale is potentially a concern due to limited space within this corridor to add in safety considerations between the trees, swale and path. Cardno have advised that the land shape will have a significant impact on the modelling and will not fundamentally change the outcomes. Whilst this modelling can be done, it is submitted that this is significant detail that could be dealt with post-permit, via a condition. Council disagrees."

To address these comments, Cardno have undertaken further modelling of the mitigation options in greater detail and updated the flood mitigation assessment based on these new modelling outcomes.

## 1.2 Modelling Approach

The previous mitigation model (M01) was modelled to demonstrate that the mitigation options proposed would be likely to meet Councils requirements. Typically, the proposed stormwater management regime will be subject to detailed design whereby further assessment would occur to ensure that the detailed design is appropriate.

Council have requested some additional clarity on the performance of the proposed options, which requires some additional concept design to be incorporated into the model. The previous mitigation option has been further refined with additional site design components and amendments based on Council's feedback made the following changes to represent an updated mitigation model (M03):

- The swale downstream of the footpath was removed completely from the model. This means
  everything downstream of the proposed mitigation pipe is the exact same as the existing model (E03)
  with changes only located within the site and reserve along the rear of the properties on the western
  boundary.
- The swale located along the rear of properties on the western side of the site (reserve corridor) was redefined and resized (shortened) to ensure that no flood waters were accumulating the rear of properties in localised low points.



- 3. The raised bicycle footpath adjacent to the swale was redefined and resized (shortened) to ensure that flooding waters from the reserve were contained within the bushland reserve.
- 4. A section of the proposed site roads was implemented to ensure that flows from the south western edge reflected the developed site conditions such that flows will remain within the site.
- 5. A small bund located between the existing large bund on the site and the section of proposed site roads was implemented to ensure that runoff from the site does not contribute any flows to the swale along the rear of the properties.

The M03 model updates are shown below in Figure 1-1.



Figure 1-1 Updated Mitigation Model (M03)



## 1.3 Results

## 1.3.1 Flood Impacts

The flood model was run for both the existing (E03) and updated mitigation conditions (M03). A water surface elevation difference plot for the 1% AEP event is shown below in Figure 1-2 and provides an indication of the impacts of the proposed conditions after mitigation.

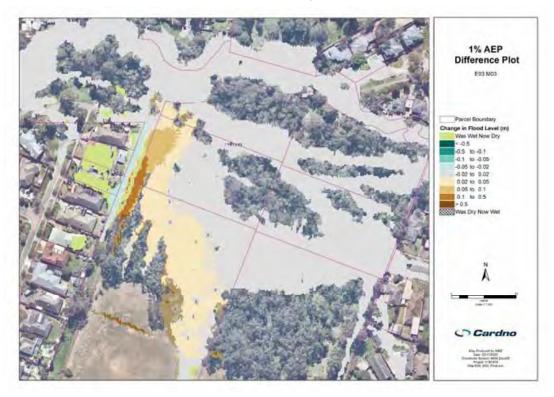


Figure 1-2 1% AEP Difference Plot for Existing (E03) and Mitigation (M01) Conditions

From these results, it can be determined that:

- > There are no adverse impacts on or within the lots on Jacobus Walk
- > There is a very minor increase in flood depths of no greater than 5cm on the existing footpath
- > There is a minor increase in flood waters of no greater than 10cm within the bushland downstream of the existing footpath
- > There is an increase in flood depths of greater than 5cm within the reserve corridor, the bushland to the north of the site and on site
- > There is no change in flood levels observed in Blind Creek as a result of the updated proposed mitigation options

The modelling undertaken and the results shown above again confirms that the modelled mitigation options are appropriate to alleviate the flood impacts as a result of the development. The removal of the downstream swale for the updated model demonstrates that no design or works is required downstream of the existing footpath. The refinement and resizing of the swale and bicycle path show that these two mitigation options are appropriate and will be designed accordingly when detailed design is required. The inclusion of a section of the site road and small bund indicate that the site detailed design will contributing to alleviating flood waters on the surrounding properties.



While there are increases in flood depths on the site and in the bushland north of the site (north west corner), it is likely that the site roads and drainage, along with the newly proposed rainwater garden will ensure that the flood waters are adequately contained within the site.

The increases in flood depths observed in the reserve corridor and over the existing footpath have been assessed according to the hazard classification as detailed in the section that follows.

## 1.3.2 Flood Hazard

Cardno has undertaken an assessment of maximum hazard classifications for the development. The existing conditions (E03) maximum hazard plot is shown in Figure 1-3 while the updated mitigation conditions (M03) maximum hazard plot is shown in Figure 1-4.

Specifically, these results demonstrate that the even though there is an increase in flood depth along the existing path, the maximum hazard classification along the entirety of the existing footpath remains a Category 1. This confirms that there is no additional risk to the community as a result of the development at this location.

Similarly, these results also show that even though there is an increase in flood depth within the reserve corridor, there in no increase to the maximum hazard classification and it remains a Category 3. The Category 3 observed in the existing conditions is approximately 20m in length while the mitigation conditions show this to be 30m. This can be considered to be low risk to the community given the fact that this is already a Category 3 and an extension in length of Category 3 will not impact on the community. The proposed bicycle path is flood free. The swale, which is not intended to be accessed by pedestrians or cyclists in the 1% AEP event, remains at hazard class 3, consistent with the existing conditions.

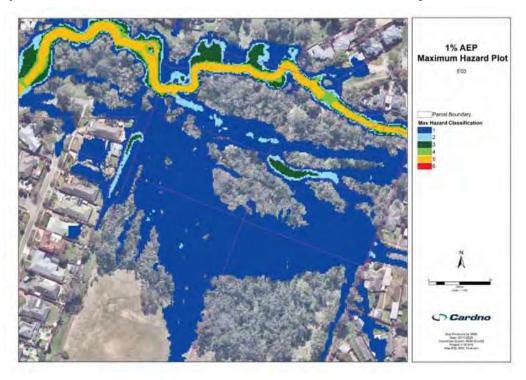


Figure 1-3 Existing Conditions 1% AEP Maximum Hazard Plot



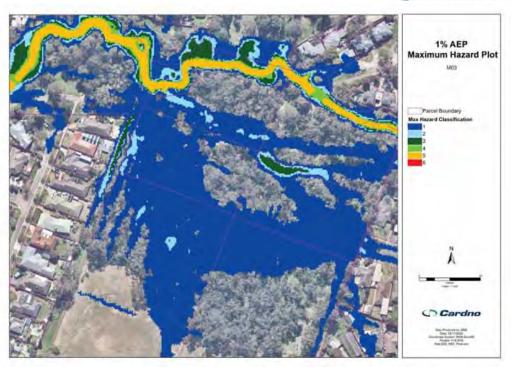


Figure 1-4 Mitigation Conditions 1% AEP Maximum Hazard Plot



## 1.4 Conclusions and Recommendations

The current modelling includes consideration of design elements that will be included in the future works at the site. These features serve to limit the flood waters that cross the western site boundary. The lengths of the raised bike path is reduced and the existing swale is slightly realigned to facilitate the connection of the bike path to the existing footpath at the northern boundary of the development site. Relevant sections of road have been included in the model to reflect the intended grading of overland flows along the western boundary of the site.

The results indicate that:

- There is a decrease in flooding on all neighbouring residential properties as a result of the development
- The flood hazard is unchanged along the existing footpath at the northern boundary of the site.
- The proposed bike path is flood free.
- Flood hazard class 3 is shown in the modified swale this is identical to the existing flood hazard in the swale.
- There are small increases in flood depth through the existing nature reserve.

## With regard to Council's Comments:

- > A swale downstream of the existing footpath is no longer required drainage outfall is provided for the properties in Jacobus Walk that drain to the swale along the existing reserve via a pipe under the footpath and a bubble-up pit. In all likelihood, as part of the detailed design, this swale would be connected to the Melbourne Water Main drain.
- > There are no impacts on neighbouring properties due to the modifications to the design of the bike path and the changes made on the site to reflect the development conditions. There are no increases in flood depth on properties in Jacobus Walk, in fact, flood levels are reduced on all impacted properties.
- > The proposed swale realignment along the rear of properties on Jacobus Walk is intended as a minor upgrade to the exiting swale, consisting of an increase in depth of approximately 100-200mm. The alignment of the swale will typically follow the existing alignment, except where it interferes with the proposed bike path at the northern intersection with the existing footpath. The flood reduction along Jacobus Walk is mostly caused by limiting flows from the development site from entering and flowing down the reserve. As such the upgrades to the swale may not be required. The hazard class in the swale is 3, consistent with the existing swale.

It is considered that this modelling should provide Council with enough certainty that the flood related issues can be adequately dealt with via conditions on the permit.

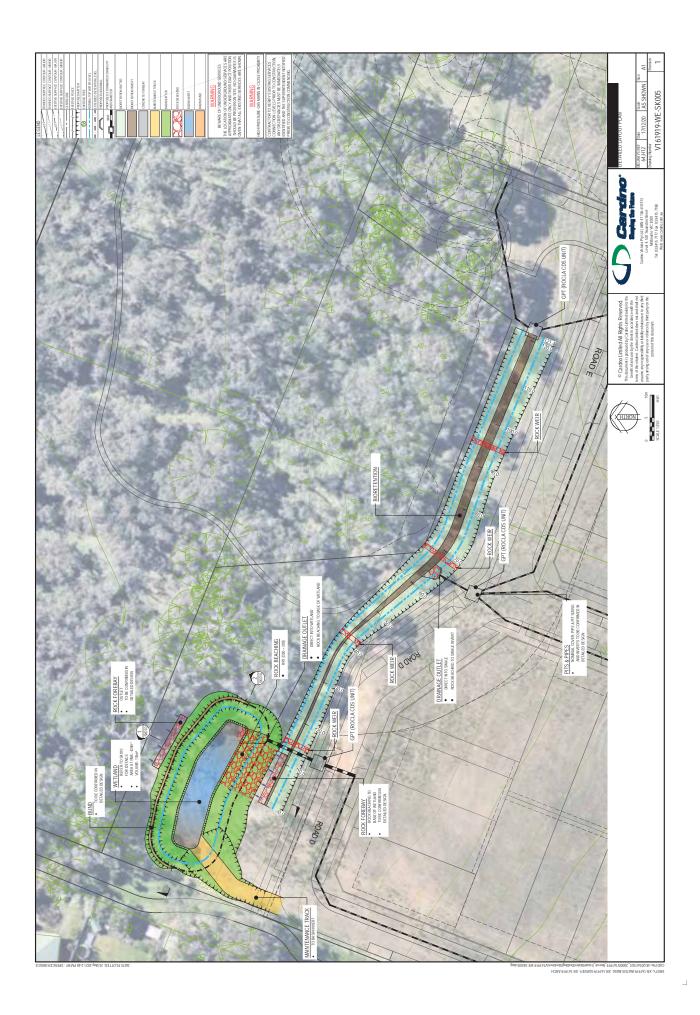
## **APPENDIX** CONCEPTUAL STORMWATER ASSET PLANS

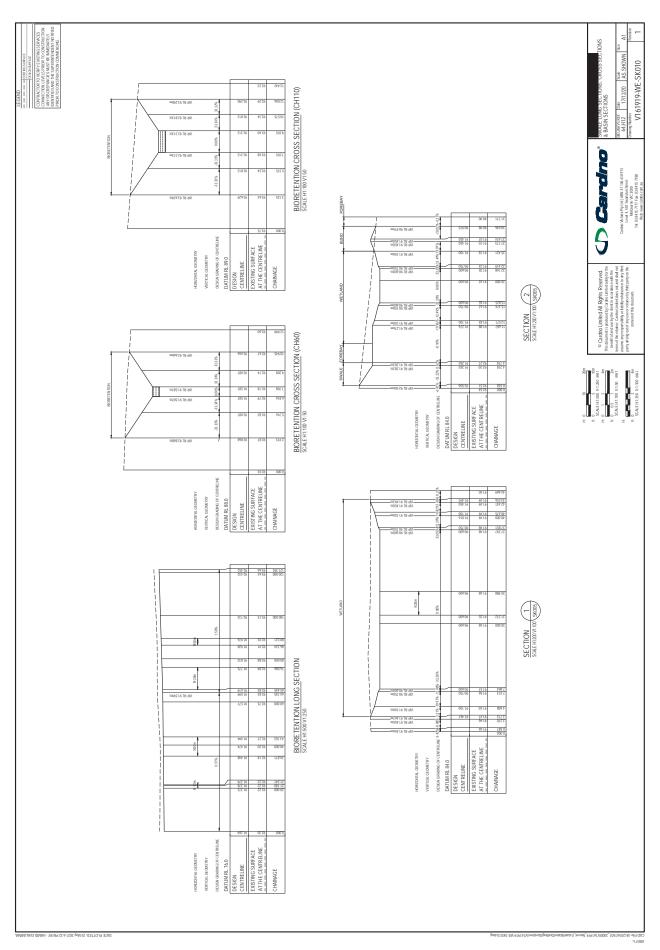
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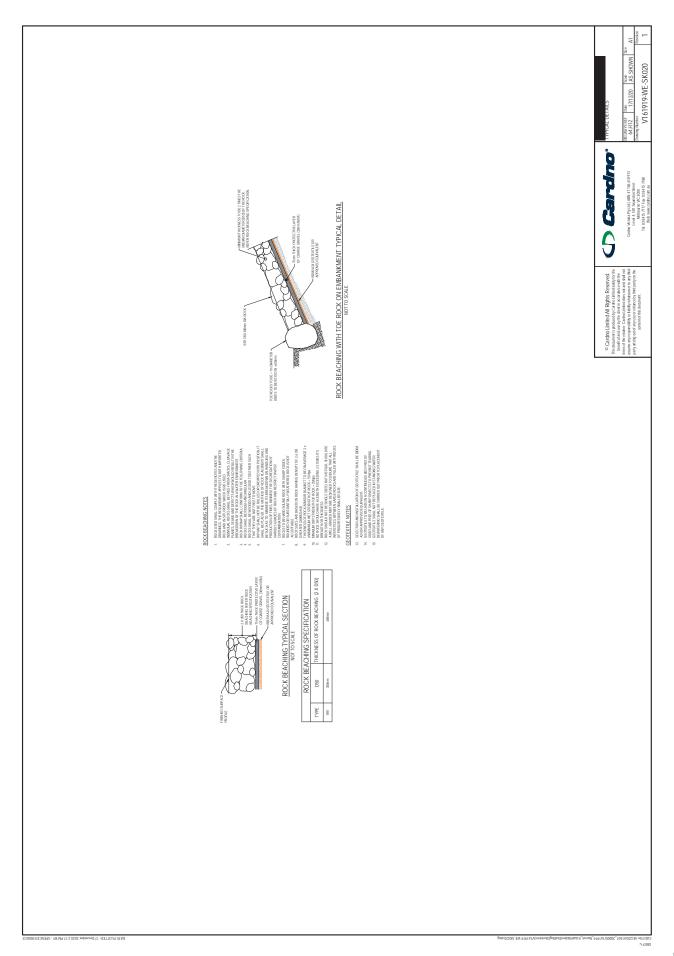


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## Traffic and Transport Assessment

Norvel Estate Residential Development

V161919

Prepared for

24 March 2023







Traffic and Transport Assessment Norvel Estate Residential Development

## **Document Information**

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## **Document Control**

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24 March 2023 Cardno ii



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## 1 Introduction

Cardno has been retained by to prepare the following Traffic and Transport
Assessment for the proposed subdivision of land at 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X), Ferntree Gully.

In the course of preparing this assessment the subject site and its environs have been inspected, plans of the development examined, and all relevant traffic data collected and analysed.



## 2 Background and Existing Conditions

## 2.1 Location and Land Use

## 2.1.1 Site Location

The subject site has an approximate area of 9.22 hectares and is located on land addressed as 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X), Ferntree Gully.

The site is rectangular in shape and is partially bound by Castricum Place to the west and Norvel Road to the south. Dion Street intersects the eastern boundary of the site.

Figure 2-1 shows the location of the site and the surrounding road network.

Figure 2-1 Site Locality Plan



The site has approximately 175 metres frontage to Norvel Road along the southern site boundary and 150 metres frontage to Castricum Place along the western site boundary. The remainder of the western and northern site boundaries abut Council owned reserves.

The subject site most recently operated as a quarry but is currently vacant.

Notable land uses in the vicinity of the site include Wattleview Primary School and Fairhills Primary School, which are located approximately 270 metres south-east of the site and 500 metres west of the site respectively. Mountain Gate Shopping Centre is located approximately 1,200 metres south of the site and Boronia Central Shopping Centre is located approximately 1,200 metres north-east of the site.

The site is situated within City of Knox Council and is located approximately 27 kilometres east of the Melbourne CBD.



## 2.1.2 <u>Existing Vehicle and Pedestrian Access Arrangements</u>

Vehicular access to the site is currently provided via:

- > A 14-metre wide crossover to Castricum Place, located just prior to the kink in the Castricum Place alignment approximately 130 metres north of Norvel Road; and
- > A 21-metre wide crossover to Norvel Road located approximately 25 metres east of McMahons Road.

Dion Street intersects the eastern boundary of the site where a chain wire fence along the site boundary currently restricts vehicular access.

A 1.4-metre wide footpath extends eastward from Castricum Place along the southern boundary of the site, terminating approximately 20 metres east of the Norvel Road crossover.

The aerial photograph at Figure 2-2 illustrates the existing vehicle and pedestrian access arrangements at the site.

Figure 2-2 Existing Site Conditions





## 2.2 Planning Zones

Figure 2-3 shows the location of the site as defined by the Knox City Council Land Zoning Maps.

Figure 2-3 Knox Planning Scheme Land Zoning Map Extract



Figure 2-3 demonstrates that the subject site is located within a Special Use Zone (SUZ2).

The permitted uses within the Special Use Zone are listed at Clause 37.01 of the Knox Planning Scheme.

#### 2.3 Road Network

### 2.3.1 Norvel Road

Norvel Road is a local street that extends in an approximately east-west alignment along the southern boundary of the site, bending to the south approximately 40 metres from the eastern site boundary and terminating at a hammerhead treatment.

To the west of the site, Norvel Road forms part of a link route that along with McMahons Road to the south and Rankin Road to the north, provides a connection from Burwood Highway at its southern end to Boronia Road at its northern end.

Norvel Road at the site frontage accommodates a single two-way carriageway of approximately 7 metres width which narrows to 5.5 metres width towards the east of the site. No on-street car parking restrictions are applicable. A pedestrian footpath is partially provided along the site frontage and along southern side of the road reservation.

To the west of the site, Norvel Road accommodates speed humps and Local Area Traffic Measures (LATM) to control through vehicle movements in the area.

The default speed limit along Norvel Road is 50km/h.

The photographs at Figure 2-4 and Figure 2-5 illustrate the existing road configuration along Norvel Road at the south of the site.

Figure 2-4 Norvel Road, looking east along the southern site frontage



Figure 2-5 Norvel Road, looking west from the south-western corner of the site



## 2.3.2 <u>Castricum Place</u>

Castricum Place is a local street under the jurisdiction of Knox City Council that extends northward from Norvel Road along the western boundary of the site. The street kinks to the west approximately 150 metres north of Norvel Road and continues to the north, where it terminates in a hammerhead arrangement.

Castricum Place accommodates a single two-way carriageway of approximately 5 metres width with no onstreet car parking restrictions. A footpath is provided along the western side of the road reservation only.

The default speed limit along Castricum Place is 50km/h.



The photograph at Figure 2-6 illustrates the existing roadway formation of Castricum Place at the west of the site.

Figure 2-6 Castricum Place, looking south along the site boundary



A Council reservation extends along the western boundary of the site from the kink in the Castricum Place alignment, as shown in the photograph at Figure 2-7 below.

Figure 2-7 Council Reservation along Western Boundary



## 2.3.3 Dion Street

Dion Street is a local street under the jurisdiction of Knox City Council that extends in an approximate east-west alignment from the subject site at its western end to Burke Road at its eastern end.

Dion Street accommodates a single two-way carriageway of approximately 7.5 metres width, which permits parallel kerbside parking on both sides of the carriageway. Pedestrian footpaths are provided along both sides of the road reservation.

The default speed limit along Dion Street is 50km/h.



The photograph at Figure 2-8 illustrates the existing roadway configuration of Dion Street.

Figure 2-8 Dion Street, looking west towards the subject site.



#### 2.3.4 McMahons Road

McMahons Road is a local street under the jurisdiction of Knox City Council that along with Norvel Road and Rankin Road forms a through link from Burwood Highway at its southern end to Boronia Road at its northern end.

McMahons Road accommodates a single two-way carriageway of approximately 8.5 metres width which permits parallel kerbside parking in locations and provides LATM measures such as splitter islands and speed cushions to control through vehicle movements.

The default speed limit along McMahons Road is 50km/h.

The photograph at Figure 2-9 illustrates the existing roadway configuration of McMahons Road.



Figure 2-9 McMahons Road, looking south from Norvel Road





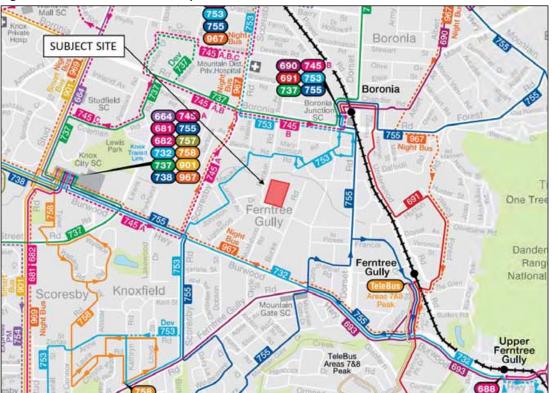
## 2.4 Public Transport

Bus services form the primary mode of public transport available in the area. Figure 2-10 illustrates the bus services near to the site, which are summarised in Table 2-1 below.

Table 2-1 Proximate Public Transport Services

Service	Route No	Route Description	Nearest Stop	Approximate Walking Distance & Walking Time
Bus	732	Box Hill – Upper Ferntree Gully	Burwood Highway	850 metres (10 mins)
	745	Knox City - Bayswater	Scoresby Road	1,500 metres (18 mins)
	753	Glen Waverley - Bayswater	Rankin Road	650 metres (9 mins)
	755	Bayswater – Knox City	Dorset Road	1,200 metres (15 mins)

Figure 2-10 Proximate Public Transport Services



The nearest train station is Boronia Railway Station, which is located approximately 2.1km walking distance or approximately a 25-30 minute walk from the site.



## 3 Proposed Development

#### 3.1 General

It is proposed to subdivided the land for the purposes 138 residential lots, and an additional lot that has been nominated as bushland reserve at the northern end of the site.

A development plan for the proposal, SK050, has been prepared by Peddle Thorp Architects which is attached at Appendix A, dated January 2023. An extract from the plan is presented at Figure 3-1 below.

Figure 3-1 Development Plan (Extract)



An internal road network of public roads will be constructed to provide access to most of the dwellings, although 21 dwellings will have direct access to either Norvel Road or Castricum Place and will not rely upon the internal road network.

## 3.2 Car Parking

Car parking for residents of individual lots will be provided within their title, with additional parking available within the local road network, as per existing residential areas surrounding the site. It is estimated that onstreet parking of up to 150 spaces is achievable.

## 3.3 Access Arrangements

#### 3.3.1 <u>Vehicular Access</u>

Vehicular access to the site is proposed via three connections to the external road network, comprising:

- > A new roadway connection to Norvel Road at the south of the site, slightly east of the site's existing crossover to Norvel Road;
- > A new connection from Norvel Road at the site's eastern boundary, converting the previous bend in Norvel Road into a T-intersection; and
- > The extension of Dion Street into the site at the eastern site boundary.

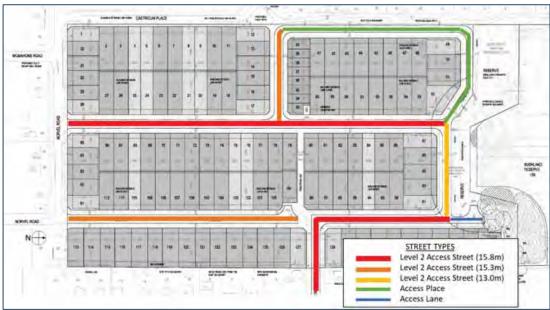
No public vehicular access is proposed to Castricum Place at the west of the site, however a pedestrian connection with bollards is proposed at that location to provide emergency access if required.



#### 3.3.2 <u>Internal Vehicular Circulation</u>

Vehicular circulation throughout the site is proposed via the construction of a public road network. The street types proposed throughout the subdivision are illustrated at Figure 3-2 below.

Figure 3-2 Proposed Internal Street Types



A review of the above figure indicates:

- > Access Streets (Level 2) are proposed throughout the majority of the subdivision. The cross sections of these vary, but all are provided with 7.3 metre carriageways to ensure consistent function.
- > Access Places are proposed abutting reserves in the north-west corner of the site where dwellings are only located on one side of the road; and
- > An Access Lane is proposed to provide access to three dwellings at the north-east corner of the site.
- > Hammer head treatments will be provided at the end of two roads to facilitate vehicles turning.



## 3.3.3 Pedestrian Access & Circulation

Pedestrian footpaths are proposed to be constructed along all streets with residential frontages, including the northern side of Norvel Road and eastern side of Castricum Place adjacent to the site.

In addition to the above, a shared path is proposed to be constructed along the Council reserve at the west of the site.

These arrangements will link the subject site to the Blind Creek Trail, the existing pedestrian network provided at Norvel Road to the south, Dion Street to the east, and both Springfield Road and Agora Boulevard to the north.



## 4 Traffic Considerations

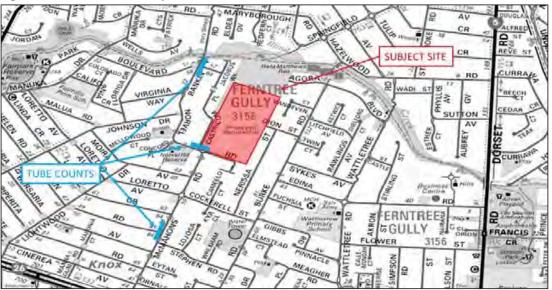
## 4.1 Site-Generated Traffic Volume

## 4.1.1 <u>Traffic Generation Rates</u>

Cardno commissioned TransTraffic Surveys to install counting tubes in the three (3) locations illustrated at Figure 4-1 over the 7-day period from Thursday 31st August 2017 to Wednesday 6th September, 2017.

The tubes were installed to determine the existing trip generation rate of stand-alone dwellings in the immediate vicinity of the site.

Figure 4-1 Tube Count Surveys



The tube count locations were chosen as they formed the only point of vehicular access to catchments of dwellings due to the existing road layout (truncations and court bowls). In all, the trip generating characteristics of eighty-four (84) dwellings were captured as outlined in Table 1, below.

**Table 1: Surveyed Trip Generation Rates** 

Street	Location	No. of Dwellings Served
Castricum Place	Immediately north of Norvel Road	24 no.
Park Street	Immediately east of Rankin Road	21 no.
Helen Road	Immediately west of McMahons Road	39 no.
Total		84 no.

The survey data indicated the following:

- > The average weekday trip generation rate was 8.29 vehicle movements per dwelling; and
- > The average daily trip generation rate (including weekends) was 8.17 vehicle movements per dwelling.



#### 4.1.2 <u>Site Generated Traffic Estimate</u>

The subdivision plan indicates provision of 138 residential lots.

To allow for a conservative estimate of site-generated traffic a daily trip generation rate of 9 vehicle movements per dwelling has been adopted. This rate is consistent with the stand-alone dwelling trip generation rate outlined in the RTA publication "Guide to Traffic Generating Characteristics" (October 2002).

Based on the above, the subject site is anticipated to generate in the order of 1,242 vehicle movements per day.

Peak hour traffic typically accounts for around 10% of the daily traffic volume, which equates to around 124 vehicle movements during both the AM and PM peak periods.

#### 4.2 Internal Traffic Volumes

The subdivision plan indicates that of the 138 dwellings proposed on the site:

- > 117 lots are accessed from the internal street network; and;
- > 21 lots have frontages to either Norvel Road at the south of the site or Castricum Place at the west of the site.

Therefore the traffic volume generated by the dwellings internal to the site is estimated at 1,053 vehicle movements a day.

On this basis, and given there will be little desire for outside traffic to cut through the site, no street within the subdivision will carry a daily traffic volume in excess of 1,000 vehicle movements a day.

To estimate the traffic volume along each length of street, the following assumptions have been made:

- > 29 dwellings have access via Road H, which is a dead end and provides no through connectivity to the remainder of the site.
- > Of the balance of the development utilising internal roads (88 dwellings), it is estimated that approximately 30% will arrive and depart the site to the east via Dion Street, with 70% utilising the main Norvel Road Access (Road A).

Based on the above, the likely daily traffic volume at each of the subdivision access points is illustrated at Figure 4-2.



Figure 4-2 Anticipated Development Traffic Volumes at Subdivision Access Points



Whilst there are likely to be variations to this distribution of vehicle movements on a daily basis, it is evident that no length of street within the development is anticipated to carry a daily traffic volume in excess of 1,000 vehicle moments per day.

These daily traffic volumes are within the environmental capacities suggested for these carriageway widths at Section 5.3 of this report and therefore, the internal street network has been designed appropriately for this form of development.

## 4.3 External Peak Hour Traffic Impact

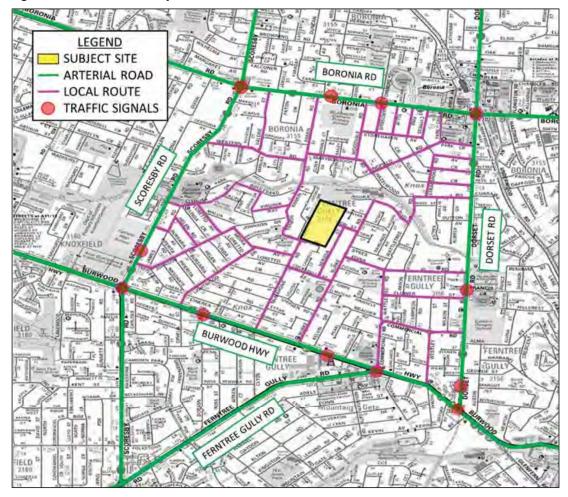
## 4.3.1 Site Location

The subject site is located in the approximate centre of an arterial grid network, which is formed by Boronia Road to the north, Burwood Highway to the south, Dorset Road to the east and Scoresby Road to the west.

Figure 4-3 illustrates the location of the site proximate to these roads and highlights several of the local routes available from the subject site to the external road network. It is evident that there are numerous routes that drivers may choose to access the site, depending upon their origin/destination and their preference.



Figure 4-3 Location of Subject Site to Arterial Road Network



## 4.3.2 <u>Peak Hour Directional Splits</u>

Section 4.1 indicates that the development is likely to generate in the order of 124 vehicle movements during each of the AM and PM peak commuter periods.

Residential peak hour traffic is typically split 20% inbound and 80% outbound during the morning peak period and 60% inbound and 40% outbound during the afternoon / evening peak period.

Based on this split, the peak hour traffic volume anticipated to be generated by the site is presented at Table 4-1 below.

Table 4-1 Development Traffic Generation and Distribution

Period	In	Out	Total
AM Peak (vehicle movements per hour)	25	99	124
PM Peak (vehicle movements per hour)	74	50	124
Daily (vehicle movements per day)	621	621	1,242



#### 4.3.3 Peak Hour Distribution

The Victorian Integrated Survey of Travel and Activity (VISTA) is an ongoing survey of household travel activity conducted across Greater Melbourne, Geelong and, periodically, in selected regional centres. The information collated from the survey is used to inform transport and land-use planning decisions.

The survey indicates that morning and afternoon trips in outer metropolitan areas, such as the subject site, are typically generated by the purposes listed at Table 4-2.

Table 4-2 VISTA Trip Generation

Period	Work	Shopping	Education	Recreation	Other	Total
AM	52%	6%	28%	2%	12%	100%
PM	45%	18%	11%	5%	21%	100%

Based on the above, Cardno has distributed the peak hour traffic generated by the above categories based on the following principles:

- 'Work' generated traffic has been weighted in accordance with employment locations and distributed between the subject site and arterial intersections based upon GPS route guidance. To inform the distribution of 'Work' generated traffic, Cardno sourced data from the 2016 ABS Census for the employment location (municipality) of resident workers that live within the City of Knox;
- 'Shopping' generated traffic has been distributed 50% to the south-west (Westfield) 30% to the north-east (Boronia Central) and 20% to the south-west (Mountain View S.C.), with an even number of vehicles approaching and departing the arterial intersections along the bounding arterial roads illustrated in Figure 4-3:
- 'Education' generated traffic has been distributed evenly to the north-east, south-east and south-west arterial intersections based on the location of State and Religious Secondary Schools to the site. Around half the education generated traffic volume (30 vehicle movements during the AM period and 12 movements during the PM period) is assumed to be internal to the arterial grid due to the location of 3 Primary Schools (2 State and 1 Catholic) within the grid;
- 'Recreation' and 'Other' generated traffic has been distributed evenly to all four (4) arterial intersections with an even number of vehicles approaching / departing the arterial intersections along the bounding arterial roads.

Based on the preceding, the approach and departure volumes from each of the four (4) arterial intersections proximate to the site during the AM and PM peak commuter periods are illustrated at Figure 4-4 and Figure 4-5.



Figure 4-4 Estimated Site-Generated Traffic Volumes at Proximate Arterial Intersections – AM Peak

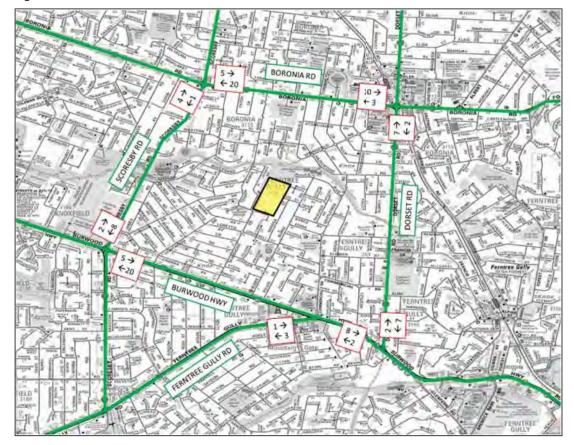
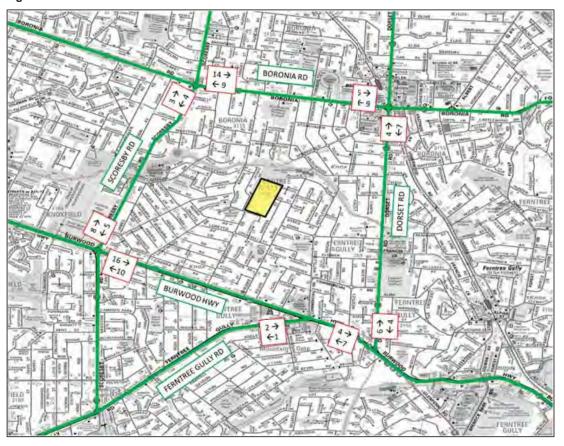




Figure 4-5 Estimated Site-Generated Traffic Volumes at Proximate Arterial Intersections – PM Peak



Based on the preceding, Table 4-3 summarises the forecast increases in traffic volume at the four (4) major arterial intersections proximate to the site as a result of the development during both peak periods.

Table 4-3 Forecast Increase in Traffic Volumes at Proximate Intersections

	Intersection				
Peak Period	Boronia Rd / Scoresby Rd	Boronia Rd / Dorset Rd	Burwood Hwy / Scoresby Rd	Burwood Hwy / Dorset Rd	
AM Peak	+30 vph	+22 vph	+35 vph	+19 vph	
PM Peak	+30 vph	+26 vph	+39 vph	+21 vph	

The above table indicates that there will be an increase of around 19 to 39 vehicle movements at each of the arterial intersections proximate to the site during the AM and PM peak periods. This is equivalent to less than one vehicle movement (inbound and outbound combined) every minute, which is considered low in a traffic engineering context.



For comparison, Cardno has sourced approach volume data for the four (4) intersections from the VicRoads Open Data Portal. The existing approach volumes, and the percentage increase as a result of the development is presented at Table 4-4, below

Table 4-4 Percentage Increase at Proximate Intersections

AM Peak			PM Peak			
Intersection	Existing Approach Volume	Net Increase	% Increase	Existing Approach Volume	Net Increase	% Increase
Boronia Rd / Scoresby Rd	3,381vph*	+30	0.9%	3,750vph*	+30	0.8%
Boronia Rd / Dorset Rd	3,488vph*	+22	0.6%	4,250vph*	+26	0.6%
Burwood Hwy / Scoresby Rd	4,531vph*	+35	0.8%	4,913vph*	+39	0.8%
Burwood Hwy / Dorset Rd	5,838vph	+19	0.3%	5,933vph	+21	0.4%

Note: There are no inductive loops installed under the left-turn slip lanes at these intersections to count vehicles and therefore the existing approach volumes are likely to be considerably higher. As a result, the percentage increases as a result of development are likely to be overstated.

The above table indicates that the additional traffic generated by development of the site will cause no perceptible increases to approach movements at each of the arterial intersections. As a result, no adverse impacts are anticipated across the wider road network.

With regard to localised traffic impacts, Figure 4-3 illustrates that the road network immediately surrounding the site is highly connective, allowing motorists to approach and depart the site via many routes to/from the arterial road network. As a result, vehicle movements generated by the site are likely to be diluted throughout the local road network and form minor increases to turning volumes at several minor intersections along the arterial roads.



## 5 Design Considerations

### 5.1 Site Access

Vehicular access to the site is proposed via three (3) connections to the existing external road network, comprising:

- > A connection to Norvel Road at the south of the site. This connection is located in a similar location to the existing site access;
- > A secondary access to Norvel Road, adjacent to where Norvel Road makes a 90 degree bend. This connection provides access to 29 dwellings, and ends prior to Dion Street to prevent vehicles utilising it as a through route; and
- > The continuation of Dion Street into the site, which will replicate the existing carriageway and verge alignment.

No connection to Castricum Place at the west of the site has been provided as requested by Council, other than a bollarded access which can be utilised by emergency vehicles when required.

The number of connections to the external road network will allow traffic to conveniently approach and depart the site in all directions and are considered appropriate for the development.

### 5.2 Road Hierarchy

The general hierarchy of the internal road network has been based upon the design principles at Clause 56.06 of the Knox Planning Scheme.

The main determinant of street types for a subdivision is daily traffic volume. The likely Average Weekday Traffic Volumes (AWDT) for each length of street within the subdivision has been determined using typical traffic generation rates from the immediate area and are presented in Section 4.

No single stretch of internal road is anticipated to carry more than 1,000 vehicle movements per day. Based on these daily traffic volumes, Clause 56.06 of the Knox Planning Scheme states that the use of 5.5-metre wide carriageways would be adequate to accommodate the estimated daily traffic loadings throughout the entire subdivision, in accordance with the guidelines for the design of Access Places. However, it has been determined through consultation with Council that 7.3 metre carriageways are considered more practical for the majority of the site.

As such, the subdivision layout has been based around 7.3 metre carriageways in accordance with the guidelines for the design of Level 2 Access Streets. This road class is designed to carry traffic volumes in the order of 2,000 to 3,000 vehicle movements per day, which is much greater than the anticipated traffic generation levels associated with the proposal.

Roads abutting reserves will be constructed as Access Places, providing a 5.5 metre carriageway. These roads are expected to carry less than 200 vehicle movements per day, which is well within the indicative capacity of 1,000 to 2,000 vehicles per day for a Level 1 Access Street.

Three dwellings in the north-east corner of the site will be accessible via an Access Lane, which can accommodate up to 300 vehicle movements per day. The anticipated traffic generation of these three dwellings is likely to be in the order of 30 vehicle movements per day, which is more than adequately accommodated by an Access Lane, as set out in the Knox Planning Scheme.

Therefore, the proposed subdivision typically provides street types that are greater than those required by the Knox Planning Scheme.

#### 5.3 Road Cross Sections

Cross sections for each of the proposed road reservations have been prepared and are attached at Appendix B. The general provision of these road cross sections is shown in Figure 3-2.

Three road cross sections are proposed to facilitate access to lots within the development, and have been determined to reflect the intended purpose and anticipated traffic volumes throughout the site.



The following sub-sections summarise the road types that are proposed throughout the development.

#### 5.3.1 <u>Level 2 Access Streets</u>

This is the primary street type provided throughout the subdivision, and in terms of function is in accordance with the guidelines for "Access Street – Level 2" as set out in the Knox Planning Scheme.

The road reservation on the Level 2 Access Streets vary slightly, depending upon the required verge width for services, but consistent 7.3 metre wide carriageways ensure that the function of these roads is not compromised. A 7.3 metre carriageway is consistent with many streets in the surrounding road network, and enables unrestricted parking on both sides of the carriageway with sufficient room for a vehicle to pass between two parked vehicles if needed.

Footpaths will be provided along both sides of the road, although along Road E, the footpath will be located within the adjacent reserve rather than within the road reservation.

The forecast daily traffic volumes for these roads are 567 vehicle movements per day at the southern end of Road A and 243 vehicle movements per day at the continuation of Dion Street (Road G). These volumes will be more than adequately catered for by the proposed cross section.

Figure 5-1 shows the proposed cross section for the majority of the subdivision, classed as Level 2 Access Streets in accordance with Clause 56 of the Knox Planning Scheme.

Figure 5-1 Indicative Level 2 Access Street Cross Section

### 5.3.2 Access Place

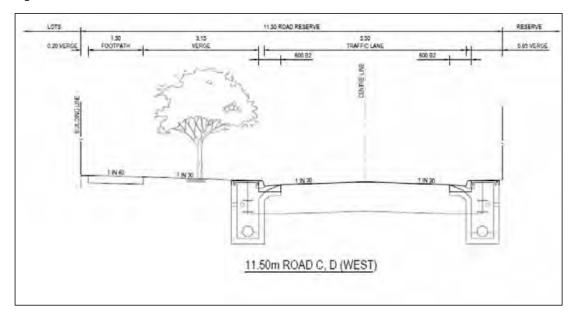
Roads abutting the reserves in the north-west corner of the site will be designed as Access Places, generally in accordance with the Knox Planning Scheme.

Carriageways of 5.5 metres width will accommodate two-way traffic flow, with parking permitted along one side. This will prevent vehicles from parking on both sides of the carriageway and blocking through traffic. Traffic volumes are anticipated to be low along these roads, as there is no network connectivity through this section of the site, and as such a 5.5 metre carriageway is considered acceptable.

Figure 5-2 shows the cross section of the proposed Access Places.



Figure 5-2 Indicative Access Place Cross Section



#### 5.3.3 Access Lane

Three dwellings at the north-east corner of the site will obtain access to and from their homes via a short Access Lane.

With only three dwellings utilising this short section of road, it is anticipated that traffic volumes will not exceed approximately 30 vehicle movements per day, which is very low and will more than adequately be accommodated by the proposed lane.

#### 5.3.4 Crossover Design

Vehicular crossovers are to be designed in accordance with the requirements of the City of Knox. Access to each of the lots is proposed via the construction of a vehicle crossover, in accordance with the Development Plan.

## 5.4 Intersections

The majority of roads within the site intersect at 90 degrees, creating T-intersections or bends in alignment that will slow vehicles on approach. The exception is the intersection of Roads A, D and E, at the northern end of the site. Road D intersects on an angle, however given the low traffic volumes anticipated to access the north-west corner of the site, this intersection is expected to operate adequately.

These intersection arrangements, combined with the provision of on-street car parking on both sides of the 7.3 metre wide carriageways and one side of the 5.5-metre wide carriageways will serve as a traffic calming measure to keep vehicle speeds low throughout the development and create a movement network where the carriageway can be shared by motorists and cyclists alike.

Corner splays measuring 3.0m wide by 3.0m long have been provided at all intersecting corners in accordance with the pedestrian sightline requirements at Clause 56.06 of the Knox Planning Scheme. The 90-degree intersections proposed throughout the site and the relatively consistent downward slope from south to north should allow horizontal and vertical sightlines to be provided in accordance with the AustRoads Guidelines.

Swept path diagrams have been prepared to demonstrate that concurrent opposing vehicle movements can pass one another at each of the internal intersections and are attached in Appendix C.



#### 5.5 Pedestrian Links

Pedestrian access throughout the subdivision is proposed via the construction of dedicated footpaths along all sides of roads fronted by residential development. These footpaths, and the road reservations that they are within, will follow the general topography of the land. Pram ramps will be provided in accordance with DDA requirements.

Along the northern extent of the residential component of the site, a footpath will be constructed within the adjoining reserve adjacent to Roads D and E.

Several additional pedestrian facilities are also proposed, including the construction of a 3.0-metre wide shared path from the bend in the Castricum Place alignment to the existing pathway through the Blind Creek Reserve.

The pedestrian measures will link all houses within the site to the external footpath network and also provide access from the site to several recreational trails while improving local amenity by facilitating access through the site

## 5.6 Car Parking

On internal roads with a functional width of 7.3m, parallel kerbside parking will be permitted on both sides of the carriageway. Where vehicles are parked opposite one another, adequate width is maintained for one vehicle to pass at a time, which additionally acts as a traffic calming measure to slow vehicle speeds throughout the subdivision.

On internal roads with a functional width of 5.5m, parallel kerbside parking will be permitted on one side of the carriageway, to ensure that traffic flow is not hindered. This complies with the design guidelines at Clause 56.06 of the Knox Planning Scheme. 'No Stopping' signs could be installed at street corners and along the lengths of kerbside which parking is proposed to be banned if considered necessary to control the parking of vehicles.

It is estimated, that the internal roads could accommodate in the order of 150 on-street parking spaces, depending upon user behaviour with regards to vehicle spacing. A plan has been prepared to show the availability of visitor parking on the internal road network, and is attached at Appendix D. It is noted that this plan is indicative only, as it is not intended that car parking should be linemarked, as per the norm in standard residential streets. Additional parking would also be available on the road network surrounding the site for those lots who face either Norvel Road or Castricum Place.

The availability of on-street parking is considered more than adequate for the proposed development and exceeds the requirement for one space for every two dwellings.

## 5.7 Refuse Collection

Cardno has been advised by Leigh Design Pty. Ltd. that City of Knox Council uses side-lift refuse collection vehicles with a nominal length of 9.6 metres.

Cardno has prepared swept path diagrams through each of the internal intersections using a slightly larger (9.8m length) waste collection vehicle, which are attached in Appendix C.

Hammer head treatments will be provided at dead ends, in order to ensure that the waste collection vehicle is able to turn around. Swept path diagrams have been prepared to demonstrate that the Council waste vehicles can adequately utilise the hammer head treatments.

The diagrams demonstrate that an adequate refuse collection service can be provided via Council kerbside collection vehicles.

#### 5.8 Emergency Access

The CFA document 'Requirements for Water Supplies and Access for Subdivisions in Residential 1 and 2 and Township Zones (October 2006)' provides guidelines for providing emergency access throughout developments such as the subject proposal.



The document states that Access Places with parking provided on one side of the carriageway may have a width of 5.5 metres, and Level 2 Access Streets constructed with rollover kerb may have a width of 7.0 metres with rollover curbs or 7.3 metres with non-rollover kerbs. The subject proposal satisfies both of these minimum carriageway requirements.

The document further states that a standard fire pumper appliance has a length of 7.7 metres. This vehicle is smaller than the refuse collection vehicle used to prepare swept paths throughout the subdivision confirming that the site layout has been designed appropriately for emergency vehicle access.

It is noted that an additional vehicle access will be available from Castricum Place, with lockable bollards preventing access to the site at this location for other road users. It is anticipated that the use of this connection would be very rare, however having the connection there allows flexibility for emergency services needing access to the site.



## 6 Conclusions

Norvel Estate Pty. Ltd. proposes to subdivide land located at 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X), Ferntree Gully to allow for the development of 138 residential lots, plus an additional lot for a bushland reserve.

The proposal is summarised in a traffic engineering context as follows:

- > The internal road network has been designed appropriately for this form of development. Notably:
  - The internal road types proposed throughout the site will accommodate the daily traffic volumes likely to be generated by the subdivision at full development;
  - The internal roads will accommodate traffic volumes that will allow the carriageway to be shared by both motorists and cyclists;
  - Footpaths have been proposed on all sides of the carriageway fronting residential development;
  - Adequate verge widths are provided to accommodate underground services;
  - No cross intersections are proposed, and a tight geometry is provided at all 90-degree intersections and bends in alignment to control vehicle speeds;
  - Appropriate carriageway widths are provided to allow on-street car parking, refuse collection and emergency vehicle access.
- > The subject proposal is estimated to generate a daily traffic volume in the order of 1,242 vehicle movements, comprising a peak hour component of around 124 vehicle movements during the AM and PM peak commuter periods;
- > The local road network in the immediate vicinity of the site is highly connective, allowing vehicles to approach and depart the site via multiple routes, mitigating the impact of the development on the local road network;
- > The distribution of vehicle movements generated by the site, based on the location of employment, education and shopping precincts, will have a negligible impact on the arterial intersections proximate to the site.

Norvel Estate Residential Development

APPENDIX



**DEVELOPMENT PLAN** 





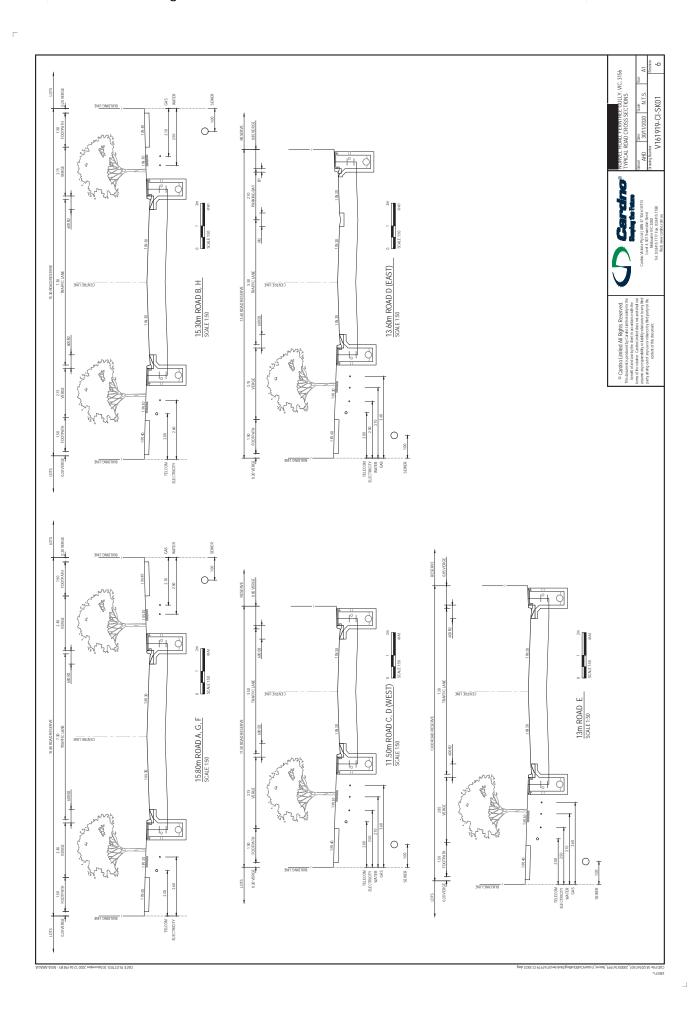
Norvel Estate Residential Development

APPENDIX

В

**CROSS SECTIONS** 





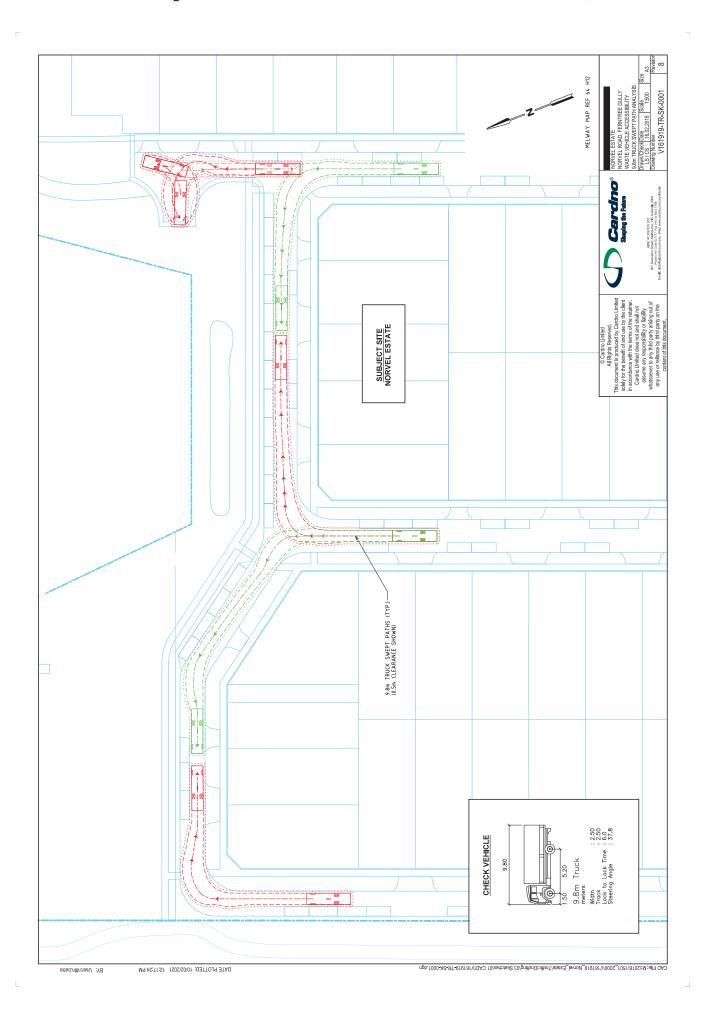
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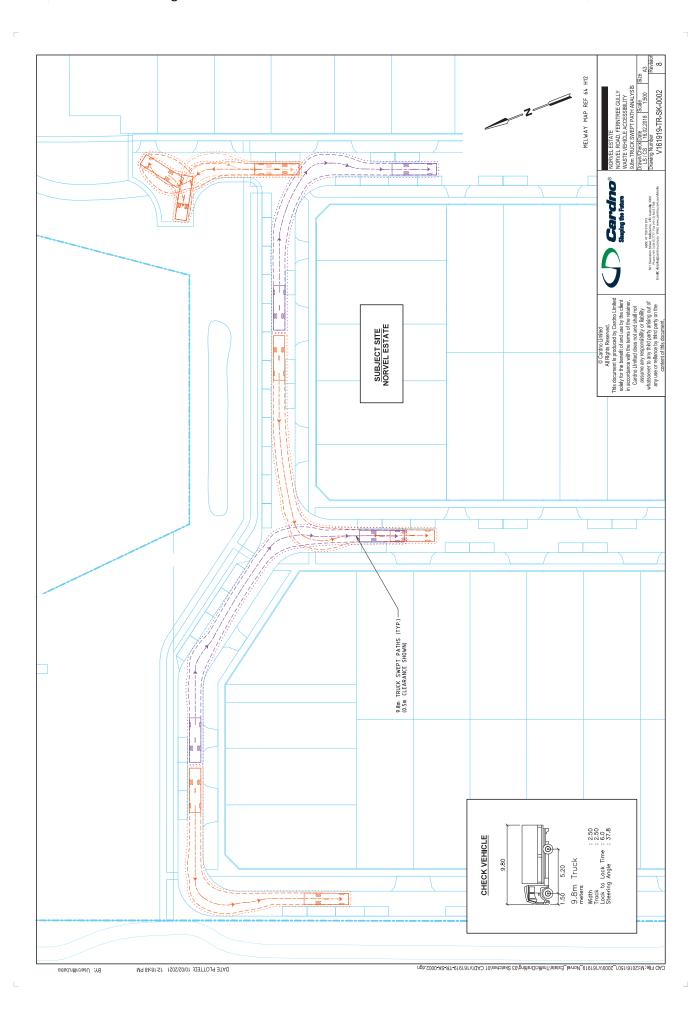
# **APPENDIX**

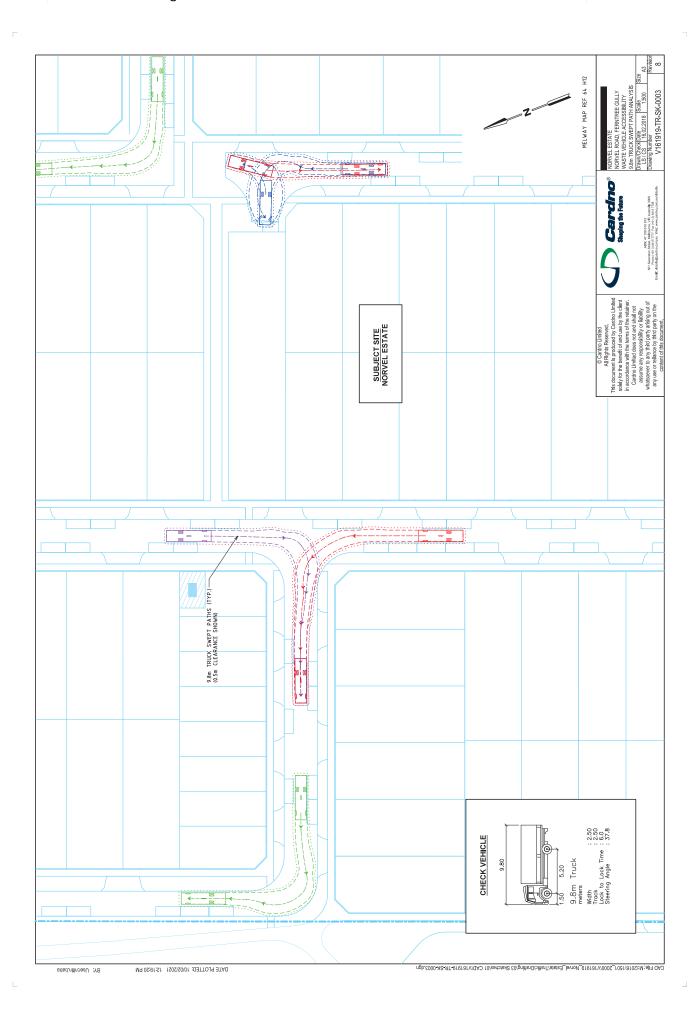
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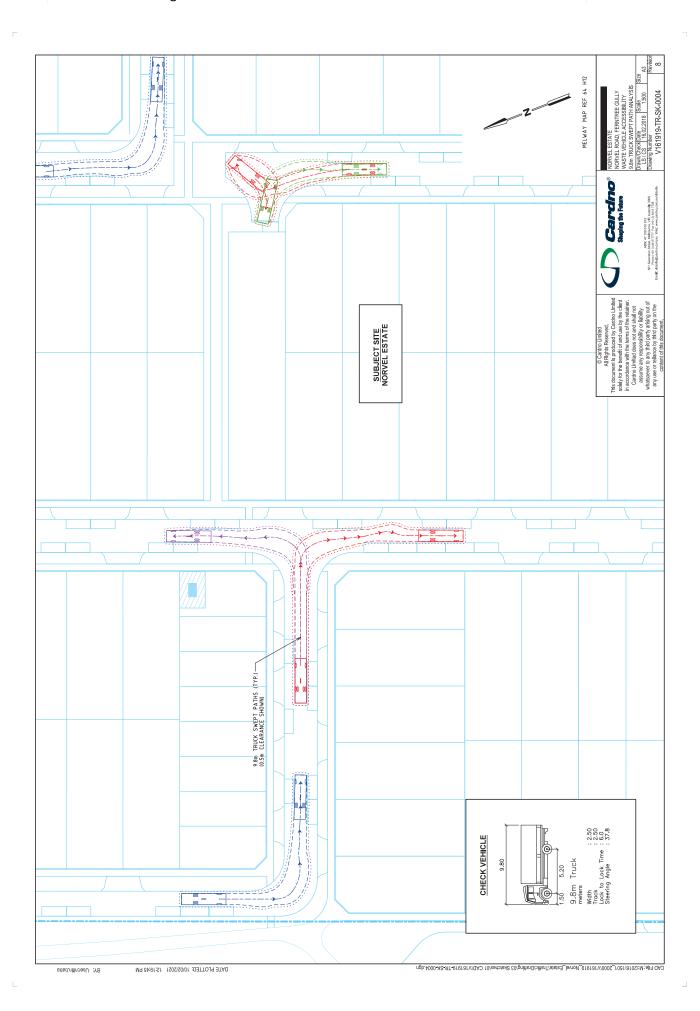
SWEPT PATH DIAGRAMS

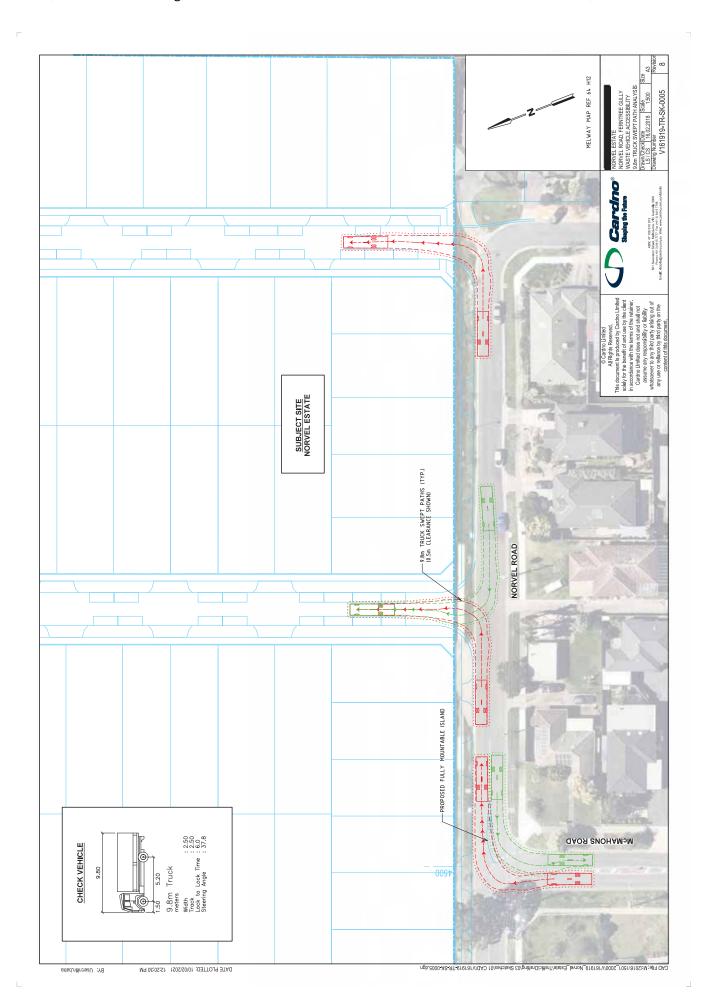


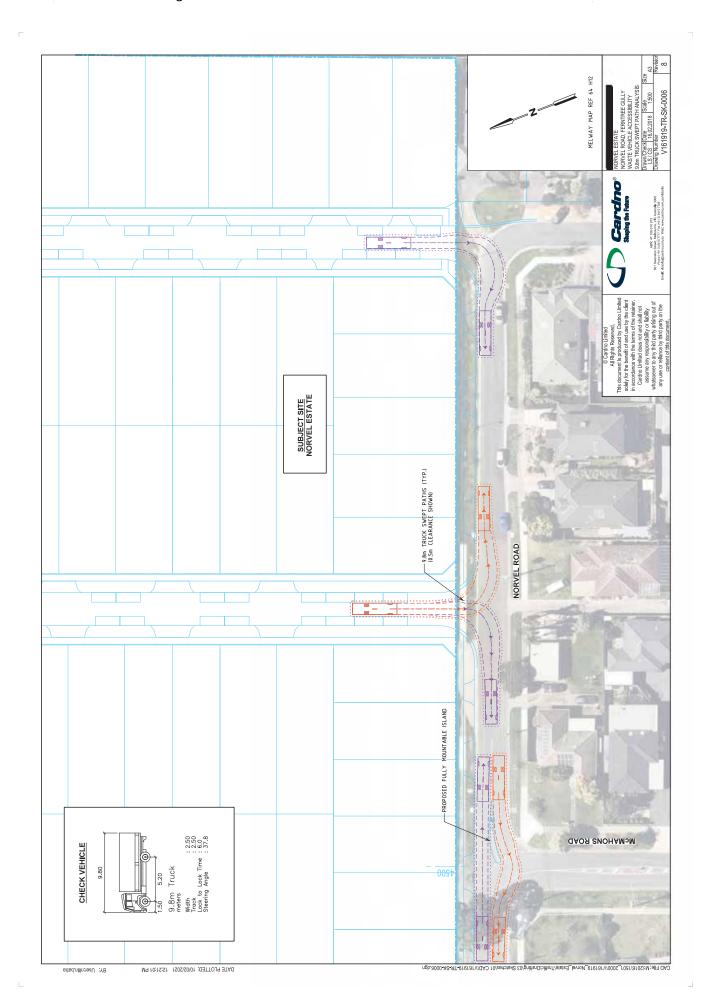


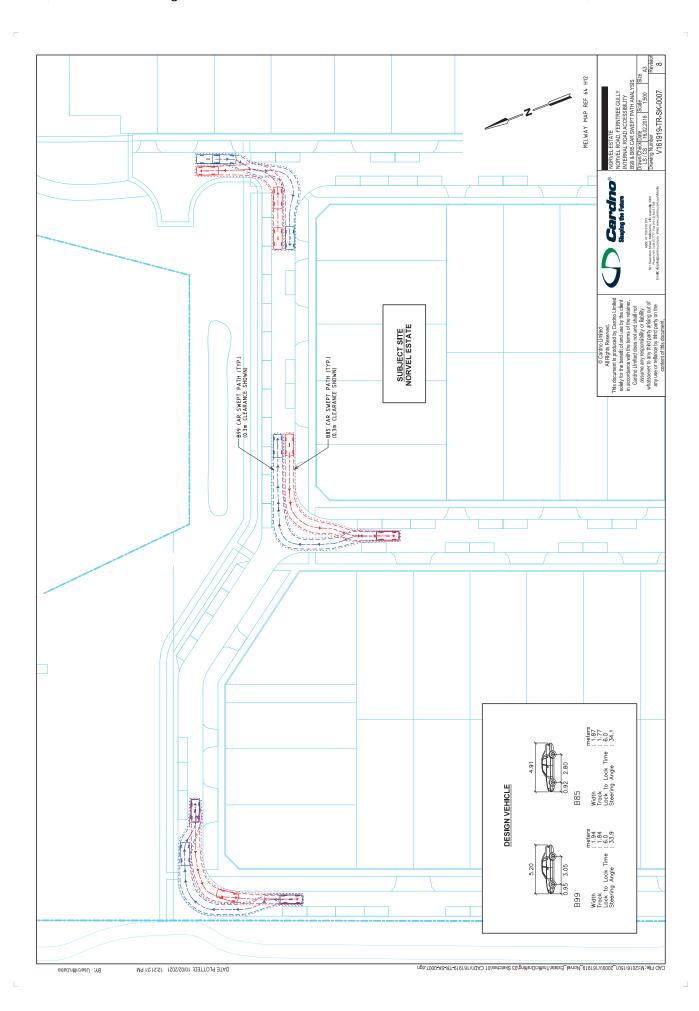


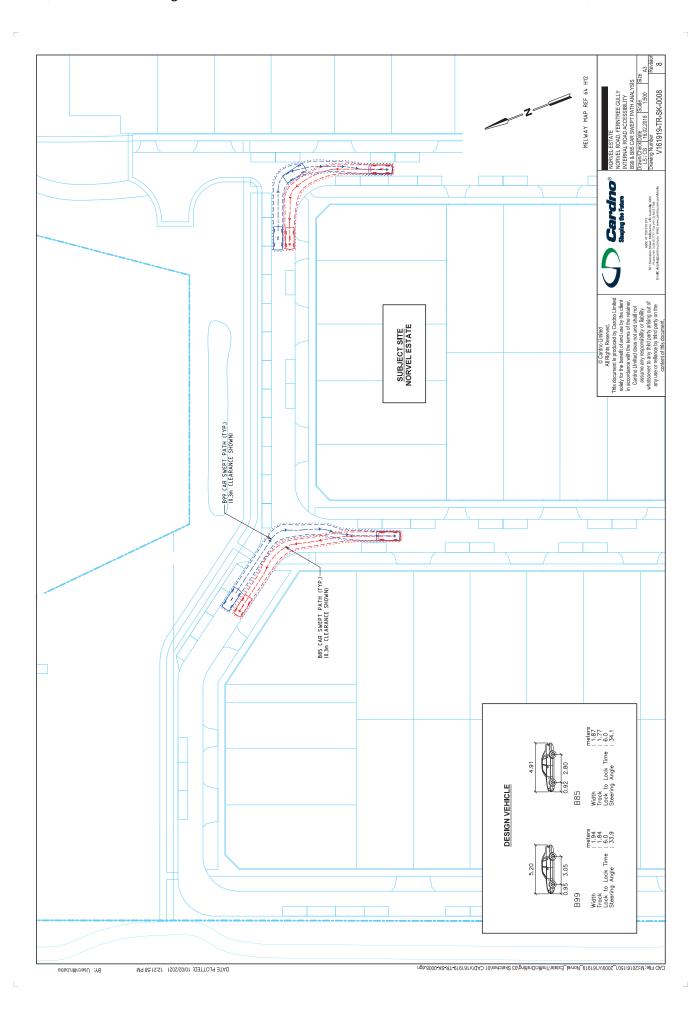


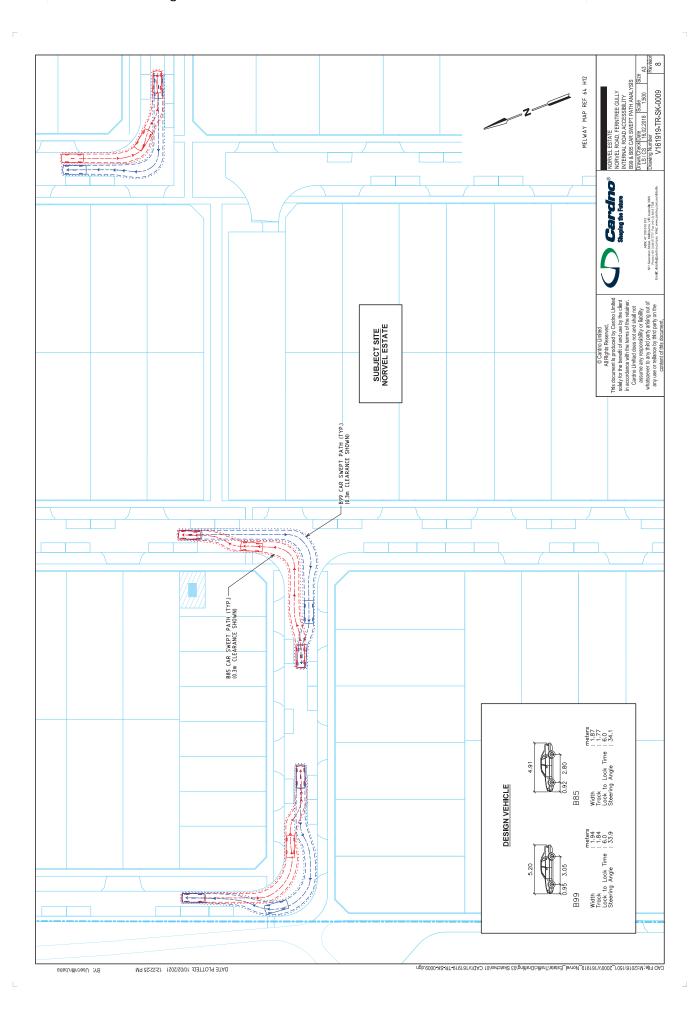


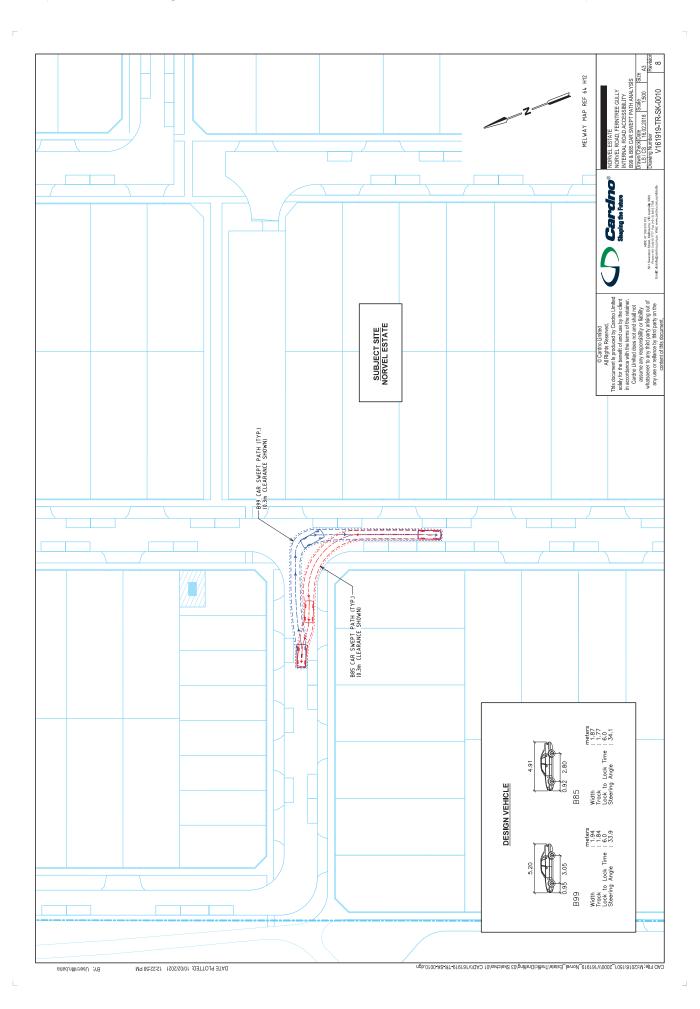


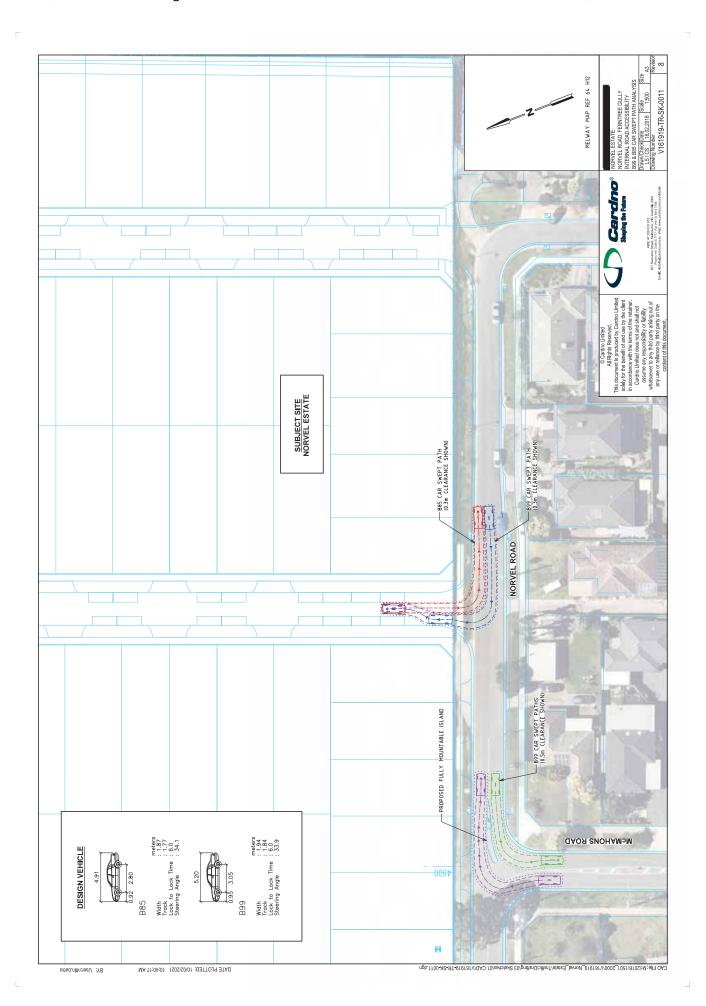


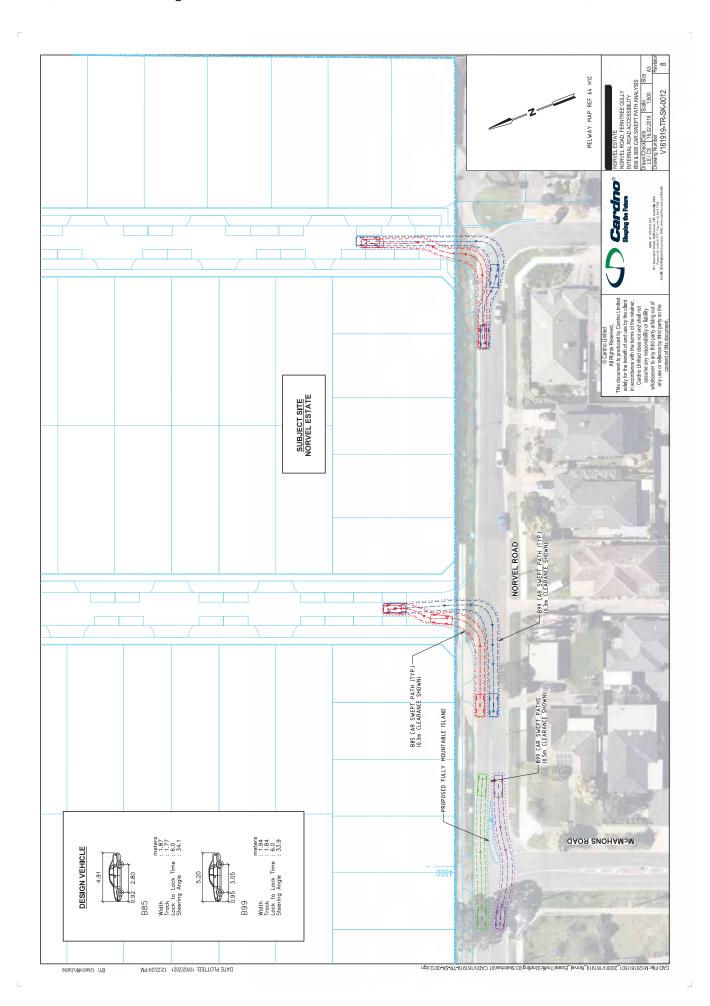


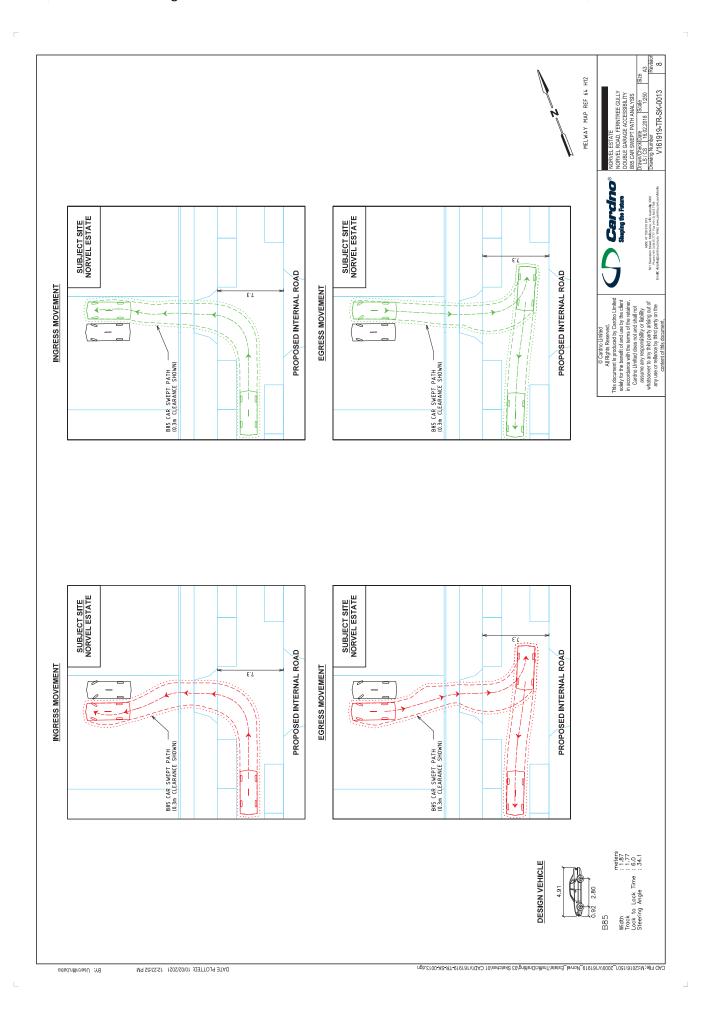


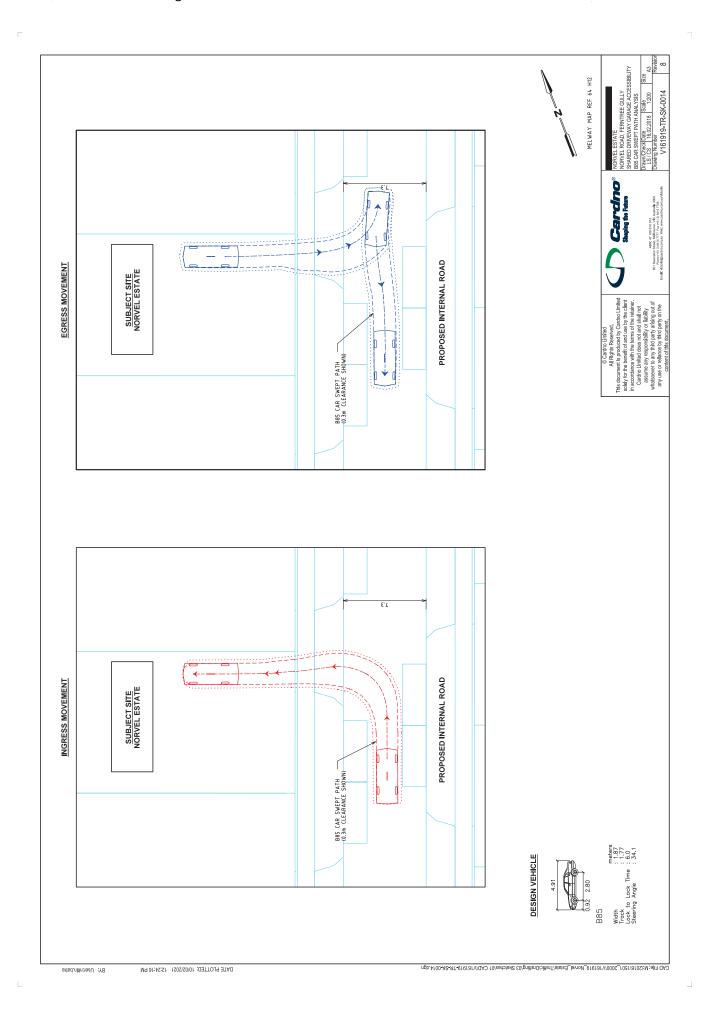


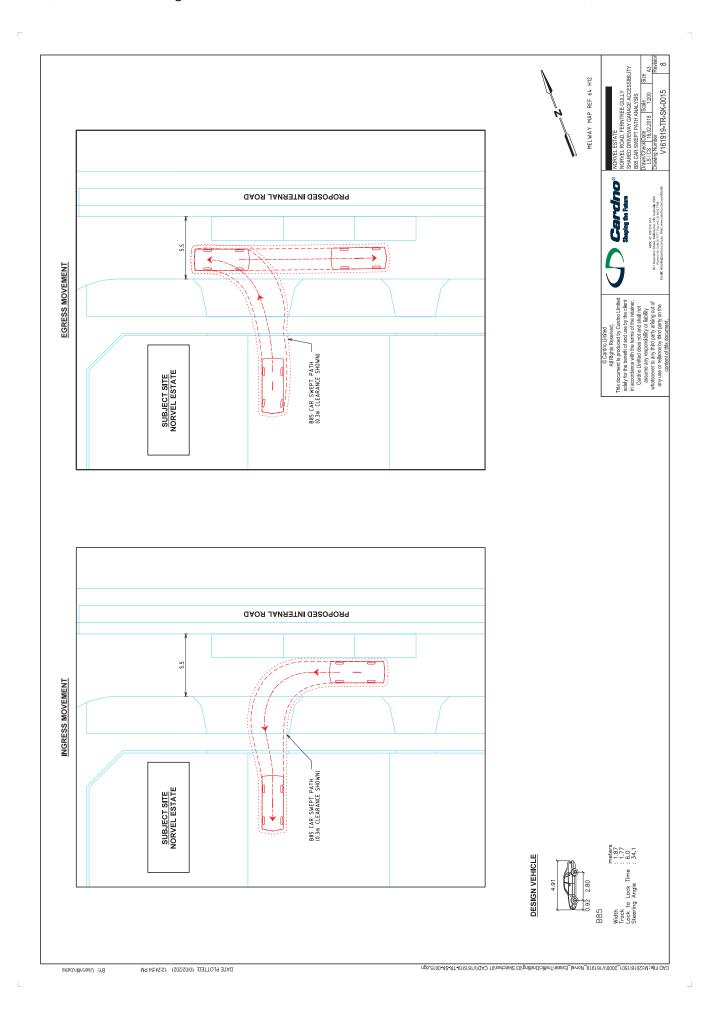


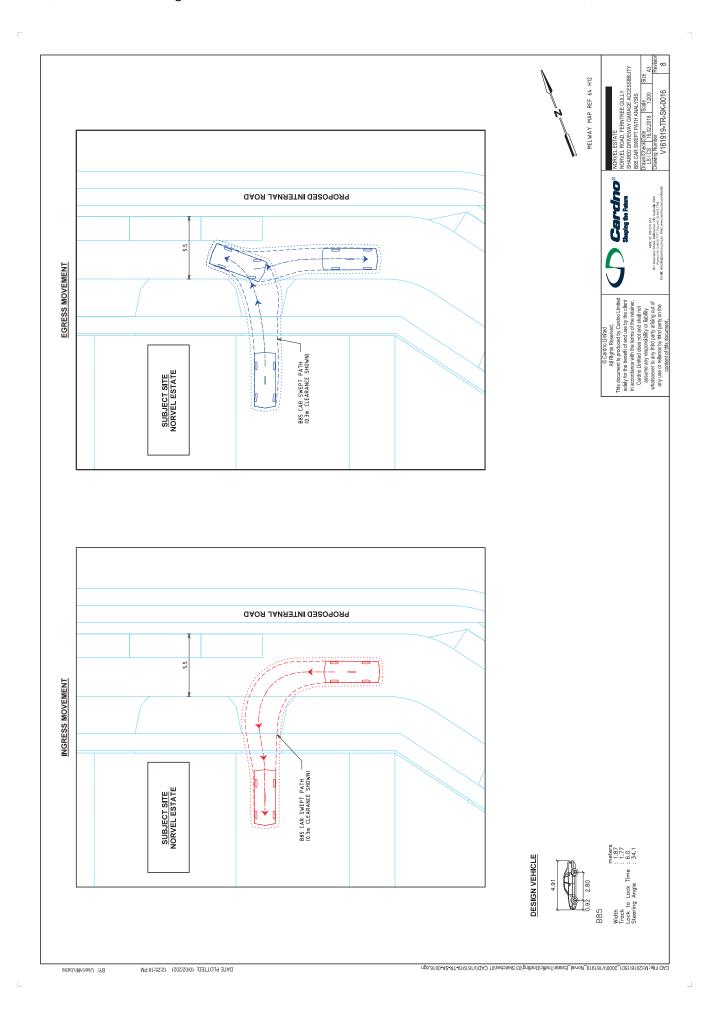










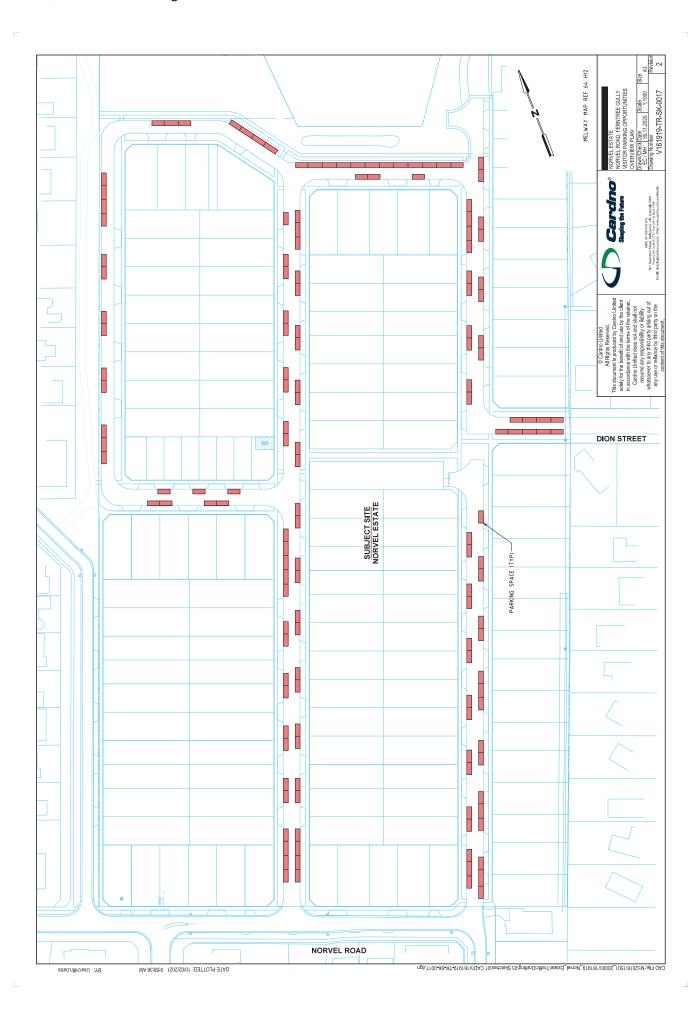


Norvel Estate Residential Development

# **APPENDIX**

ON-STREET PARKING OPPORTUNITIES





# NORVEL ESTATE, NORVEL ROAD, FERNTREE GULLY **TOWN PLANNING REPORT**

# URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

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Consultant

MA10554

Project Code Report Number

REP04

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# **EXECUTIVE SUMMARY**

This planning report has been prepared by Urbis Pty Ltd on behalf of application pursuant to Section 96A of the *Planning and Environment Act 1987* for a combined planning scheme amendment, subdivision and vegetation removal application associated with 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X).

Specifically, the proposal includes:

- Rezoning of the site from the Special Use Zone Schedule 2 (SUZ2) to the:
  - o Neighbourhood Residential Zone (Schedule 7)
  - Public Conservation and Resource Zone
  - Public Park and Recreation Zone
- Subdivision of the land into 140 lots comprising:
  - o 138 residential lots
    - Inclusive of 8 residential lots (5.8%) provided for social housing
  - a bushland lot and
  - o a public park reserve.
- Removal of three (3) trees, all of which require a planning permit for removal (Trees 164, 167 and 169)

The site is subject to a Section 173 Agreement which amongst other things, specifies urban design guidelines that apply to the future redevelopment of the site. These guidelines were originally prepared in 2004 and are proposed to be updated as part of this application.

The proposal triggers planning approval under the following provisions of the Planning Scheme:

- Clause 37.01-3 A planning permit is required to subdivide land.
- Clause 42.01-2 A planning permit is required subdivide land and remove, destroy, or lop vegetation including dead vegetation.
- Clause 52.17 A planning permit is required to remove, destroy or lop native vegetation, including dead
  native vegetation.

This report provides an overview of the site's context and the relevant planning controls and policies of the Knox Planning Scheme and provides an assessment of the proposal against these considerations. In summary, the report concludes that:

- The proposal complies with the Planning Policy Framework and Local Planning Policy Frameworks, and particularly the proposed Neighbourhood Residential Zone.
- The proposal will positively contribute to Knox's housing stock by providing for a diversity of lot sizes
  including 8 lots provided for social housing.
- The proposal responds to the Environmental Significance Overlay Schedule 2 (ESO) applying to the northern portion of the land by minimising and avoiding vegetation removal where possible and ensuring the protection of the Blind Creek Corridor and associated bushland reserve.
- The proposed stormwater management approach has demonstrated that the proposed mitigation controls can achieve alleviation of flood waters to the surrounding properties.
- The proposal will improve existing connections, and provide new connections, to the Blind Creek Corridor.
- The proposed landscaping design response will make a significant contribution to the site and surrounding area and positively contributes to the garden character of Knox's residential areas.
- The proposal will not result in any unreasonable amenity impacts to existing dwellings.

URBIS TOWN PLANNING REPORT - MARCH 23

EXECUTIVE SUMMARY

The proposal will ensure appropriate measures are undertaken to mitigate bushfire risk.

### SITE AND SURROUNDING CONTEXT 1.

### THE SITE 1.1.

The subject site comprises a vacant, rehabilitated quarry generally bound by Blind Creek to the north, Norvel Road to the south, Castricum Place to the west and a row of residential properties to the east. The site formally comprises 29Q Norvel Road (Lots 1 & 2 on TP963860L & Lot 1 on TP297137X).

A copy of the Certificates of Title are provided at Appendix A.

The site has an area of approximately 9.2 hectares and features a fall of 1:20 from south to north. The northern portion of the site comprises dense vegetation which is associated with the Blind Creek Corridor.

### **HISTORY 1.2**.

The site was previously known as the Norvel Road Quarry (owned by Robertson Industries) and was used for clay extraction to manufacture bricks under the Daniel Robertson brand from 1996 until circa 2009. During this time, a Section 173 Agreement (the "Original Agreement") was applied to the site and sought to (amongst other things) facilitate its rehabilitation along with a land swap between Robertson Industries and

Since the termination of the use of the site as a quarry, the site has undergone extensive rehabilitation through a filling and levelling process that has involved the deposit of clean-fill and the clearing of vegetation on the site. A retarding basin associated with the quarry was located in the north-west corner of the site. This was also filled as part of the site's rehabilitation.

The ultimate residential redevelopment of the site has been contemplated for several of years (although no approvals have been secured) and is evident with the rehabilitation of the quarry and the preparation of urban design guidelines in 2006 to facilitate this form development.

In 2006, Council resolved to prepare a planning scheme amendment to facilitate the residential development of the site subject to a Section 173 Agreement (the "S173 Agreement") being introduced to provide for a land exchange between Council and Robertson Industries.

The S173 Agreement was introduced to the site 2009 and includes but is not limited to:

- The Northern Parcel of the site being transferred to Council as the Public Open Space contribution that would otherwise be required under Clause 52.01 of the Planning Scheme for the subdivision of the balance of the site.
- The Schedule to the Development Plan Overlay that would be applied to the development of the site 'should generally reflect the principles of the Urban Design Guidelines to the extent possible having regard to the form of development and use of the Robertson Land proposed by the Owner at the time of preparation of the Amendment.'
- The Urban Design Guidelines referenced in the Agreement relate to the Norvel Road Quarry, Ferntree Gully Urban Design Guidelines, prepared for the Knox City Council by Jones & Whitehead Pty Ltd (amended by Council, Draft May 2006). It is proposed to replace these guidelines with updated Urban Design Guidelines prepared by Urbis. This is discussed in more detail in Section 5.3 of this report.

A copy of the Agreement and 2006 Urban Design Guidelines are provided at Appendix B

A future Planning Scheme Amendment will require land to be rezoned to the Residential 1 Zone (now known as General Residential Zone) and be included within an Environmental Audit Overlay if deemed necessary.

Figure 1 – Aerial Map of Subject Site



Source: [Nearmap]

= Subject Site

 $2\,$  site and surrounding context

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### 1.3. SURROUNDING CONTEXT

The site is located approximately 890 metres south of the Boronia Activity Centre and 1 kilometre north of Mountain Gate Shopping Centre. These centres provide key "hubs" for the outer Melbourne region and comprise a broad range of retail, commercial and community uses.

The surrounding area is predominantly located in the General Residential Zone (except for Blind Creek which is located within the Special Use and Urban Floodway Zone) and comprises single and double storey dwellings.

The site has good access to several key public transport links including:

- Boronia Train Station (1.33km north east)
- Bus route 755 (860m east)
- Bus route 732 (836m south west)
- Bus route 737 and 753 (940 metres north)

The site's specific interfaces are described as follows:

# 1.3.1. North

To the north is the Blind Creek Corridor and associated bushland reserve beyond which are predominantly single and double storey dwellings and the Mountain Gate Tennis Club. Land in this vicinity is located within the Public Park & Recreation Zone, Urban Floodway Zone or General Residential Zone.



Picture 1 - Northern Interface

# 1.3.2. East

To the east the subject site abuts single and double storey dwellings located within the General Residential Zone. These dwellings predominantly comprise a mix of weatherboard and brick buildings with various material, finishes and roof forms.



Picture 2 - Eastern Interface

# 1.3.3. South

To the south the site abuts Norvel Road which is a local street providing a two-way carriageway and onstreet car parking. Over Norvel Road land comprises single and double storey dwellings located within the General Residential Zone, as well as Norvel Reserve. Further south are some commercial tenancies and Burke Road Reserve.



Picture 3 - Southern Interface

# 1.3.4. West

To the west the subject site partly abuts Castricum Place which is a local street providing a two-way carriageway and on-street car parking. A footpath is only provided along the western side of this road reserve. Over Castricum Place are single and double storey dwellings.



Picture 4 – Western Interface

# 2. EXISTING PLANNING CONTROLS

# **2.1. ZONE**

The subject site is located within the Special Use Zone Schedule 2 ("SUZ2") pursuant to Clause 37 of the Planning Scheme. The SUZ2 specifically relates to the 'Earth and Energy Resources Industry" and seeks:

- To recognise or provide for the use and development of land for earth and energy resources industry.
- To encourage interim use of the land compatible with the use and development of nearby land.
- To encourage land management practice and rehabilitation that minimises adverse impact on the use and development of nearby land.

Pursuant to this Clause use of land for "accommodation" is prohibited.

It is considered that the SUZ2 is no longer appropriate for the site as:

- The use of the site as a quarry has ceased and the site has since been rehabilitated.
- The surrounding zoning largely constitutes the General Residential Zone and adopts conventional lot sizes.
- The site has the capacity to accommodate a larger number of dwellings and make a positive contribution to Knox's housing stock.

# 2.2. EXISTING OVERLAYS

The northern portion of the site (relating to the Bushland Reserve Blind Creek Corridor) is affected by Schedule 2 to the Environmental Significance Overlay ("ESO2") pursuant to Clause 42.01.

This Clause specifically relates to 'Sites of Biological Significance' and seeks to (amongst other things) 'ensure buildings, works or subdivisions are compatible with the long-term protection and enhancement of biological significance.'

The Statement of Environmental Significance identifies that 'the area covered by this schedule includes a range of sites of biological significance identified in 'Sites of Biological Significance in Knox – 2nd Edition,' 2010. Their protection and appropriate management is of particular importance for the maintenance of both Knox's and Victoria's biodiversity, as well as for liveability and the health and wellbeing of the community. The area covered by this overlay is 26.42 square kilometres or 23.12% of the Knox municipality.'

Pursuant to this Clause, a permit is required to:

- Construct a building or construct or carry out works.
- Construct bicycle pathways and trails.
- Subdivide land.
- Remove, destroy or lop any vegetation, including dead vegetation (with certain exceptions).

This Clause contains a range of decision guidelines to be considered in the assessment of this proposal.

It is proposed to retain this Overlay as it applies to the northern portion of the site.

Figure 2 – Zoning Map of Subject Site





Paton Co ESO2 Donald Ct Wells AV ESO2 ESO2 ESO2 ESO2 ESO2

Figure 3 – Environmental Significance Overlay Map of Subject Site



# 3. PROPOSAL

# 3.1. PLANNING SCHEME AMENDMENT

The proposed planning scheme amendment involves the following changes to the Knox Planning Scheme:

- Rezone the balance of the subject site from the SUZ2 to the Neighbourhood Residential Zone Schedule ("NRZ7").
- Rezone the existing bushland at the northern portion of the site to the Public Conservation and Resource Zone (PCRZ)
- Rezone the proposed new parkland area to the Public Park and Recreation Zone (PPRZ)

A copy of the proposed Schedule 7 to the NRZ is provided at **Appendix C**.

These controls accord with the S173 Agreement applying to the site, accord with the relevant practice notes and are considered appropriate in the context of the subject site (see Section 5.3 of this report for further details).

# 3.2. URBAN DESIGN GUIDELINES

The S173 Agreement applying to the site includes reference to urban design guidelines which are specifically defined as the Norvel Road Quarry, Ferntree Gully Urban Design Guidelines, prepared for the Knox City Council by Jones & Whitehead Pty Ltd (amended by Council, Draft May 2006) or as amended from time to time with the consent of the Responsible Authority and the Owner.'

The wording of the S173 Agreement allows the urban design guidelines to be amended without the need to amend the Agreement itself.

It is therefore proposed to amend the urban design guidelines to make them more relevant to the current context, noting that the guidelines were originally prepared over 14 years ago and are somewhat outdated.

The appropriateness of the proposed guidelines is discussed in further detail in Section 5.3 of this report.

# 3.3. SUBDIVISION

The proposal involves the subdivision of the 9.2-hectare site into 138 residential lots including:

- 8 residential lots provided for social housing
- Lot sizes ranging in size from 116 square metres to 581 square metres.
- Vehicle access via three connections to the external road network comprising:
  - A new connection to Norvel Road at the south of the site (located approximately in the same location as an existing crossover).
  - The extension of Norvel Road running north to south into the site at the southern boundary.
  - The extension of Dion Street into the site at the eastern site boundary.

Vehicle access is not proposed to Castricum Place.

- · Creation of local roads to service the new dwellings. The hierarchy of roads proposed include:
  - Access Street 7.3m carriageway
  - Access Place 5.5m carriageway
- · Pedestrian footpaths along all streets with a residential frontage.

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# 3.4. AFFORDABLE HOUSING

An Affordable Housing Strategy has been prepared by Affordable Development Outcomes and is enclosed with this submission. The Strategy responds to Knox City Council's 'Affordable Housing Action Plan 2015-2020' which sets a policy objective for a voluntary contribution to social housing of approximately 5%. This subdivision application proposes to gift 8 titled and serviced lots to a Registered Housing Agency for development and management as affordable housing.

The design of the affordable housing lots will be in accordance with the relevant Rescode requirements and Design guidelines.

The provision of 8 lots comprises 5.8% of the total 138 residential lots proposed and will accommodate the development of 8 high quality two to three-bedroom dwellings to cater for a diversity of households. This number exceeds the 5% objective in Council's *Affordable Housing Action Plan* and will allow for quality affordable housing other than apartment typologies to be delivered within the municipality.

The Affordable Housing Strategy has been prepared following significant negotiation with Council and it is understood that Council is in agreement with the proposed gifting of lots on the condition that the landowner must procure the Housing Association that will deliver the built form on the 8 lots.

A Section 173 agreement will be prepared with continued negotiation with Council on the particulars of the agreement.

For further information on the affordable housing agreement, please refer to the Affordable Housing Strategy prepared by Affordable Development Outcomes, dated February 2021.

# 3.5. INFRASTRUCTURE

The proposal includes the construction of a wetland and heavily vegetated swale in the northern portion of the site for stormwater purposes. Further, several flood mitigation systems are proposed within this section of the site as well.

In addition to this, underground reticulated utility services, typically in shared trenches are proposed along with sewerage and gas connections.

# 3.6. VEGETATION AND LANDSCAPING

It is proposed to remove 3 trees as part of the proposal, all of which require a planning permit for removal.

The three (3) trees are street trees. The location and type of trees proposed for removal are specified in the accompanying arborist report prepped by Treemap.

As part of the proposal 108 existing trees will be retained and 173 new street trees are proposed. Of the proposed street trees, streets running east to west are proposed to have deciduous trees and streets running north to south will have evergreen trees. This will complement each other by providing a balance between a high proportion of native trees and maximising opportunities for winter sun into properties.

In addition, there are a range of hardscape and softscape materials proposed throughout the site that includes feature paving with custom graphics (alluding to the history of the site as a quarry), grassed nature strips and a range of design guidelines that seek to both persevere and enhance the vegetated character of the surrounding area.

# 3.7. OPEN SPACE

The public open space contribution required by Clause 52.01 is satisfied by the land swap with Council. This land is made up of the Bushland Reserve (Lot 139) and the Reserve (Lot 140) shown and the plan of subdivision and comprises 2.07 hectares of land.

In addition to this, additional improvements are proposed as follows:

 Improvement of the existing informal shared path abutting the western site boundary, connecting Castricum Place and the Blind Creek Trail.

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# 3.8. STAGING

It is proposed to undertake the subdivision in a single stage.

# 4. PLANNING POLICY CONTEXT

The planning policy context for assessment of the proposal is summarised below.

# **4.1. PLAN MELBOURNE 2017-2050**

Plan Melbourne 2017-2050 ("Plan Melbourne") seeks to guide the future growth and development of Metropolitan Melbourne over the next 35 years. Plan Melbourne estimates that Melbourne's population growth is projected to grow by 3.4 million by 2051. In turn, this will 'require another 1.6 million dwellings and 1.5 million jobs.'

An ongoing challenge faced by Melbourne, and consequently the City of Knox, is where to accommodate the continual population growth.

The overarching objectives in Plan Melbourne seek to deal with this challenge and include directions to:

- Manage the supply of new housing in the right locations to meet population growth and create a sustainable city (Direction 2.1)
- Deliver more housing closer to jobs and public transport (Direction 2.2)
- Increase the supply of social and affordable housing (Directions 2.3)
- Facilitate decision-making processes for housing in the right locations (Direction 2.4)
- Provide greater choice and diversity of housing (Direction 2.5)

Plan Melbourne also recognises that that 'middle-ring suburbs are well serviced with hubs and services and can provide greater housing choices in these locations' however, development will need to be carefully planned and managed to ensure the city's liveability.

The City of Knox is located within the "eastern region" and has an "aspirational" housing distribution of 190,000 dwellings to be wholly provided within established areas.

# 4.2. PLANNING POLICY FRAMEWORK

The following Clauses of the Planning Policy Framework ("PPF") are considered relevant to the proposal.

Clause 11 (settlement) recognises that planning is to anticipate and respond to the needs of existing and future communities through provision of zoned and serviced land for (amongst other things) housing. Further, this Clause specifies that planning should recognise the need for, and as far as practicable contribute towards diversity of choice, a high standard or urban design and amenity and protection of environmentally sensitive areas and natural resources.

Clause 11.02-1S (supply of urban land) seeks to 'ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses'. Further, this Clause recognises that planning for urban growth should consider 'opportunities for the consolidation, redevelopment and intensification of existing urban areas.'

Clause 12 (environment and landscape values) seeks to protect sites and features of nature conservation, biodiversity, geological or landscape value. Specifically, Clause 12.01 (biodiversity) seeks to assist the protection and conservation of Victoria's biodiversity through existing information and relevant planning tools. The Clause further states that planning should assist in the establishment, protection and re-establishment of links between important areas of biodiversity.

Clause 12.01-2S (native vegetation management) seeks to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.

Clause 13 (environmental risks and amenity) seeks to (amongst other things) minimise environmental degradation and recognises that planning should function in a manner that adheres to best practise environmental management, including risk management.

Clause 13.02-1S (Bushfire Planning) seeks to ensure that bushfire hazards and risks are mitigated within communities and settlements and to strengthen resilience to bushfires in at risk areas to protect human life.

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Clause 14 (natural resource management) seeks to assist in the conservation of a broad spectrum of natural resources. Specifically, Clause 14.02 relates to water and seeks to assist the protection and or restoration of existing catchments and waterways.

Clause 15 (built environment and heritage) states that planning should ensure all new land uses respond appropriately to its contextual conditions. Further, this Clause recognises that urban design and architecture should contribute positively to the local character and sense of place, whilst minimising detrimental impacts on neighbouring properties.

Clause 15.01-3S (subdivision design) seeks 'to ensure the design of subdivisions achieve attractive, liveable, walkable, cyclable, diverse and sustainable neighbourhoods'.

Clause 16.01 (residential development) seeks to provide a 'housing market that meets community needs' and to 'increase the supply of housing in existing urban areas by facilitating increased housing yield in appropriate locations, including under-utilised urban land.'

Clause 18.02-3S (road system) seeks to "manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure".

Clause 19.03-3S (integrated water management) seeks to 'sustainably manage water supply, water resources, wastewater, drainage and stormwater through an integrated water management approach'.

# 4.3. LOCAL PLANNING POLICY FRAMEWORK

# 4.3.1. Municipal Strategic Statement (MSS)

**Clause 21.01 (municipal profile)** recognises that Knox's population is expected to grow by 24,156 persons by 2036 and forecasts that an additional 12,658 dwellings will be required to accommodate this increase.

Further, this Clause recognises the following key issues and influences affecting the municipality include (selected):

# **Environment and landscape values**

- Protecting the Dandenong Foothills, Sites of Biological Significance and other areas of significant biological and landscape value from inappropriate development.
- Loss of vegetation, tree canopy and habitat eroding Knox's 'green and leafy' image.

# Built environment and heritage

- Facilitating a strong City character, identity, sense of place and culture.
- Incorporating safer design principles.
- · Achieving environmentally sustainable development.

### Housing

- A growing population requires increased housing supply in Activity Areas, Local Living areas and some Strategic Investigation Sites outside of the Dandenong Foothills.
- Knox's community is ageing and diversifying, requiring more diverse and accessible housing options.
- Knox's supply of social housing is below the Melbourne Metropolitan average.

### **Transport and Infrastructure**

- · Linking and providing quality infrastructure for walking and cycling.
- Improving efficiency,

Clause 21.02 sets out the "Vision" for the municipality and includes a Strategic Framework Plan that identifies the subject site as a "residential strategic investigation site".

Clause 21.03 (Environmental and landscape values) relates to environment and landscape values and includes objectives and strategies relating to a treed city, biodiversity and native vegetation, natural corridors and significant landscapes.

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PLANNING POLICY CONTEXT 13

Clause 21.04-1 (Bushfire) seeks to identify areas prone to bushfire and ensure that 'new development responds to bushfire risk to life and property.'

Clause 21.05 (Built environment and heritage) includes objectives and strategies relating to local character, identity and sense of place, urban design, design for safety and environmentally sustainable development. Relevant objectives include (selected):

- To create vibrant local areas with a strong character, identity and sense of place.
- To create high quality, well-designed places that respect and strengthen the local context and landscape qualities of Knox.
- To create places that increase personal safety and perceptions of safety and reduce opportunities for crime and antisocial behaviours.

Clause 21.06 (Housing) recognises that the City of Knox has adopted a "scaled approach to residential development" and that some areas of the City will need to accommodate greater change than others. This Clause identifies the subject site as a "strategic investigation area" surrounded by a "Knox Neighbourhood" residential area.

Guidance for such strategic development sites is provided in the *Knox Housing Strategy 2015* and the *Knox Affordable Housing Action Plan 2015-2020*, discussed further below.

Clause 21.09 (Transport and infrastructure) recognises the importance of providing and maintaining infrastructure and water management.

# 4.4. REFERENCE DOCUMENTS

There are several reference documents of which, are relevant to the subdivision proposal. Noted in the following section are all documents with said relevance, with several being extrapolated upon due to their high level of relevancy.

- Knox City Plan (incorporating the Council Plan) 2013-17, Knox City Council, 2013 (or as amended).
- Knox Urban Design Framework 2020, Planisphere, 2003
- Knox Affordable Housing Action Plan 2015-2020, Knox City Council, 2015
- Knox Housing Strategy 2015, Knox City Council, 2015
- Sites of Biological Significance in Knox 2nd Edition, G.S. Lorimer, 2010

# 4.4.1. Knox Community and Council Plan (2017-2021)

Goal 2 within this plan seeks to provide housing that meets the changing needs of the community. A Council target is to increase the number of new housing developments in well located areas. Cognisant with strategy within the municipality the document seeks to facilitate the development of sustainable dwellings and environments that work in with the existing and emerging built form.

# 4.4.2. Knox Urban Design Framework 2020, Planisphere, 2003

The vision specified within the plan seeks to further bolster the existing natural significance of the municipality. This seeks to support creek corridors, natural landscapes and native habitats. It is a pursuit of the document to facilitate safe and attractive neighbourhoods that have resolved and distinctive identities and character. The development of paths along creek corridors with good linkages to streets is sought by the document

# 4.4.3. Knox Affordable Housing Action Plan 2015-2020, Knox City Council, 2015

The plan seeks to capitalise on existing underutilised land that is suitable for residential development and estimates that 'an additional 860 social housing dwellings will be needed in Knox by 2036 to meet minimum requirements". The strategy highlights the location of the site within a 'Strategic Investigation Site'. Such sites are identified as potential opportunities for social housing dwellings.

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# 4.4.4. Knox Housing Strategy 2015, Knox City Council, 2015

The Knox Housing Strategy 2015 sets out Council's plan for managing residential development to respond to the current and future needs of the Knox community. The document seeks to act upon the changing demographic and needs of the community through directing new housing (and its typology) accordingly. The subject site borders 'Knox Neighbourhood' and 'Bush Suburban' residential area types. These types include: detached dwellings, dual occupancy and villa units.

The subject site is identified as a strategic redevelopment site that is 'suitable for residential use only, with development at a range of densities.' The redevelopment of the site must have regard to the following:

- Protect the most significant vegetation at the northern end of the site.
- Incorporates a central park linked to the creek corridor
- Keep housing densities consistent with the surrounding area on the interfaces, with increased densities located internally, toward the centre of the site (facing public open space)
- Housing facing the creek or any creek corridor frontage road, creating opportunities for passive surveillance of public areas.

This strategy indicates that likely future housing types on the site include 'detached dwellings, dual occupancies, villa units, townhouses'. Moreover, this strategy has estimated a capacity of 100 dwellings on the site however, notes that this estimation is 'preliminary and indicative only.'

# 4.4.5 Sites of Biological Significance in Knox - 2nd Edition, G.S. Lorimer, 2010

The Norvel Road Reserves, which are located in the northern portion of the site and along the Blind Creek Corridor are identified as State sites of biological significance in Knox (Site 35).

# 5. PLANNING CONSIDERATIONS

# 5.1. PLANNING SCHEME AMENDMENT

The proposed planning scheme amendment has been considered having regard to the Strategic Assessment Guidelines established by the Department of Environment, Land, Water and Planning ("DELWP"). We have also considered the relevant Clauses of the PPF and LPPF.

In summary, there is strong strategic justification for the proposed planning scheme amendment.

# 5.1.1. Strategic Assessment Guidelines

Why is the amendment required?

The amendment is required to facilitate the redevelopment of the site with 138 residential lots, a bushland reserve and a parkland reserve within an already established residential environment. Clause 21.02 of the Knox Planning Scheme outlines the subject site as a 'strategic investigation site' for residential uses. The proposal will assist with providing residential housing lots for the growing population within the municipality.

Currently, dwellings are prohibited under the SUZ2 applying to the site. It is proposed to rezone the site to the NRZ and to subdivide the site in accordance with updated urban design guidelines as required by the S173 Agreement applying to the land.

The existing ESO is proposed to be retained as it applies to the Blind Creek Corridor and associated bushland to ensure this area of environmental significance is protected.

## How does the amendment implement the objectives of planning in Victoria?

The proposal responds to the objectives of planning in Victoria by providing for the orderly development of the underutilised land parcel whilst ensuring the protection of the Blind Creek Corridor. This is achieved by rezoning the site to the NRZ which will allow for suitable infill of dwellings within an established residential area in the future. Further, the proposal provides for an extended bushland reserve and buffer zone to ensure that the protection of the bushlands associated with the Blind Creek Corridor. This responds to objectives seeking the fair, orderly, economic and sustainable use and development of the land.

# How does the amendment address any environmental, social and economic effects?

It is considered that the proposed amendment will have a positive environmental and net community benefit for the following reasons:

- · Extending and protecting the bushland reserve.
- Improving the quality of water entering Blind Creek as well as the hydrology of the existing billabong
  through the proposed stormwater approach and vegetated swale in the northern portion of the site and
  the adoption of several flooding mitigation measures.
- Ensuring that no threatened flora or fauna species are impacted by the proposal.
- Requiring high quality landscape treatments throughout the development.
- Providing the retention of 107 existing trees
- · Providing vegetation offset in accordance with Clause 52.17 and the relevant requirements.

The proposal will also have positive economic impacts by providing 138 residential lots to support the housing industry and will facilitate a further land swap with Council.

In terms of social effects, the proposal will enable the development of 138 residential lots of varying sizes (including 8 residential lots to be provided as social housing) in a location that is serviced by retail, community and commercial services. Further, it ensures that adequate areas of private open space to each dwelling can be accommodated in the future facilitates the provision of additional pedestrian and bicycle links through the bushland reserve and to the Blind Creek Trail.

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#### Does the amendment address relevant bushfire risk?

The subject site is not located within the Bushfire Management Overlay, however, is located within a designated bushfire prone area. With appropriate mitigation measures, the proposal will not unduly increase the risk to life, property, infrastructure, or the natural environment from bushfire.

Extensive consultation with the CFA and Council has been undertaken to ensure there will be no unreasonable increased risk from bushfire as a result of the proposal.

#### Does the amendment comply with all relevant Minister's Directions?

The proposal is consistent with the relevant Ministerial Directions being Directions 1, 9 and 11 as follows:

- Ministerial Direction 1 Potentially Contaminated Land
  - We have assumed that the rehabilitation of the site utilised clean fill and therefore has been successfully rehabilitated with respect to contamination. Please refer to the geotechnical reports prepared by Civil Test Pty Ltd for further details.
- Ministerial Direction 9 Metropolitan Planning Strategy
  - The proposal is consistent with the current Metropolitan Planning Strategy as it provides for 138 diverse lots to cater for forecasted population growth within an established residential are proximate to jobs, services and transportation routes.
- Ministerial Direction 11 Strategic Assessment of Amendments
  - This assessment has been prepared in accordance with these assessment requirements

## How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

In relation to the State PPF, the proposal responds as follows:

- The amendment is in accordance with Clause 11 (settlement) as it will facilitate the rezoning of the site
  to a residential zone. In turn, this will allow for the redevelopment of the site in the future and the
  protection and retention of the Blind Creek Corridor and associated bushland reserve.
- This amendment also responds to the objectives of Clause 11 by providing for the consolidation, redevelopment and low scale intensification of existing urban areas and by providing new walking and cycling trails and links to the Blind Creek Corridor (Clause 11.02-1S – supply of urban land).
- The proposal responds to the objectives of Clause 12 (environmental and landscape values) by
  extending the bushland reserve and minimising vegetation removal. Further, vegetation and biodiversity
  offsets have been calculated which considers the subdivision of the site and vegetation management
  (Clause 12.01-2S native vegetation management).
- The proposal responds to Clause 13 (environmental risks and amenity) by preventing inappropriate
  future development within the bushland reserve and extending the bushland reserve and buffer zone.
- The proposal responds to Clause 14.02 (water) by incorporating a sophisticated stormwater system and flood mitigation methods.
- The amendment is in accordance with Clause 15 (built environment and heritage) as it provides
  guidelines for an attractive design outcome that responds to its contextual contact including, landscape
  and built form context. Further, the proposed rezoning to the NRZ is consistent with the residential
  nature of the surrounding area and its environmental characteristics and will not result in any
  unreasonable amenity impacts on the surrounding area.
- The proposal is consistent with Clause 16 (housing) as it provides 138 new residential lots within a
  strategically advantageous location proximate to identified activity centres, providing access to jobs and
  services. The proposal will provide for an increase the supply of housing in an existing urban area on an
  underutilised piece of land. Further, the proposal includes several lot sizes, positively contributing to
  residential diversity.

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- The proposal accords with the objectives of Clause 18 (transport) and includes the creation of a new road network to accommodate the new residential lots and provides appropriate linkages to the wider road network.
- The proposal is consistent with the objectives of Clause 19 (infrastructure) as is provides adequate infrastructure and utility provision for the site.

How does the amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?

The proposal is consistent with the following Clauses of the LPPF, including the MSS:

- Clause 21.01 (Municipal profile)
- Clause 21.02 (Vision)
- Clause 21.03 (Environmental and landscape values)
- Clause 21.05 (Built environment and heritage)
- Clause 21.04 (Environmental risks)
- Clause 21.09 (Transport and Infrastructure)

The proposal responds to these Clauses by responding to estimated population forecasts and providing 138 new residential lots within an established residential area with good access to jobs and services. Moreover, the proposal minimises vegetation removal and improves the interface with the Blind Creek Corridor and bushland by extending the buffer zone and activating the interface through proposed subdivision pattern. The proposal also includes a new trail through the corridor to facilitate interaction whilst protecting the corridor from intrusive development. A flora and fauna assessment has also been prepared and has established the appropriate native vegetation offsets associated with the proposal.

The proposal will facilitate the vibrant redevelopment of the site to positively contribute to the residential and landscape character.

For these reasons, it is considered that the proposed rezoning supports the relevant clauses of the LPPF.

#### Does the amendment make proper use of the Victorian Planning Provisions?

The proposed rezoning of the land to the NRZ, PCRZ and PPRZ and retention of the ESO as it applies to the northern part of the site, is an appropriate use of the Victorian Planning Provisions given the surrounding zoning pattern and land use context.

#### How does the amendment address the views of relevant agencies?

The proposal has stemmed from multiple discussions and consultations with Council and the CFA and is not anticipated to affect any other relevant agencies.

#### Does the amendment address the requirements of the Transport Integration Act 2010?

The proposal is considered to have minimal impact on the existing transport infrastructure and network, and therefore satisfactorily addresses the *Transport Integration Act 2010*.

## What impact will the new planning provisions have on the administrative cost of the responsible authority?

The amendment is not expected to result in any unreasonable resource or administrative costs for the responsible authority.

#### **5.2. SUBDIVISION**

The proposed subdivision has been considered against the relevant provisions of the Knox Planning Scheme including Clause 56.

A full assessment against Clause 56 is contained at **Appendix D**. In summary, the proposal provides a high level of compliance with the objectives and standards of this Clause as the proposal:

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- Provides for a range of lot sizes to meet community needs for housing, whilst responding to the existing subdivision pattern of the surrounding area.
- Provides for the orderly development of the area.
- Ensures that appropriate infrastructure and services are provided, including a reserve at the north-west corner of the site.
- Is well connected to a range of services and facilities given its proximity to Boronia Activity Centre (approximately 850 metres away) and Mountain Gate Shopping Centre (approximately 1.2 km away).
- Provides for a walkable and well-proportioned neighbourhood through pedestrian pathways on streets
  with residential interfaces and appropriately sized road carriageways in accordance with Clause 52.06 of
  the Knox Planning Scheme. Moreover, the proposal provides for the improvement of the existing shared
  path along the western site boundary.
- Will facilitate increased residential densities and development of the site in the future, consistent with the character and identity of the surrounding residential area.
- Provide for lots that will allow future dwellings to be oriented to the proposed street or bushland reserve.
   This will ultimately provide for the public surveillance of the area.
- Provides appropriate connections to the external road network and for an internal road layout in accordance with Clause 52.06 of the Knox Planning Scheme.

#### **5.3. URBAN DESIGN GUIDELINES**

Since the preparation of the original urban design guidelines in 2006, the subject site and the surrounding area has undergone significant change. Specifically, the use of the site as a quarry for clay extraction has ceased and the site has been filled. In addition, vegetation on the site has been cleared outside of the bushland reserve (refer Figures 5 and 6 below).

Figure 4 – 2007 Subject Site



Figure 5 – 2017 Subject Site (current)



There is also an emerging trend towards further subdividing older lots (of approximately 750 square metre) to accommodate multiple dwellings on sites that originally contained singles, detached dwellings. This

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coupled with a change in policy direction seeks to deliver increased housing opportunities on underutilised land in established residential areas.

For these reasons, it is considered that the 2006 urban design guidelines should be updated.

The table below (which has been extracted from the accompanying Urban Design Guidelines prepared by Urbis) provides an outline of the 2006 objectives and their current status.

Table 1 - Review of General Objectives from 2004 Urban Design Guidelines

OBJECTIVE	CURRENT STATUS
Ensure that development is complementary to surrounding residential neighbourhoods.	<ul> <li>At a high level the objective is still valid, but requires some refinement</li> </ul>
Allow for development on quarried areas of the site at a higher density and with varied building types relative to surrounding areas	<ul> <li>'Quarried' areas have been filled in, but still valid in principle.</li> </ul>
Protect and restore significant indigenous vegetation communities including canopy trees, understorey and herbaceous elements.	Still valid in principle, however the specifics of public access have changed
Create an interface between development and the flora and fauna reserve that helps to protect the ecological values of the reserve while allowing benefits to residents and the broader community.	The high level objective is valid, however many of the guidelines are no longer supported. Based on previous advice from Council, the guideline to "support fenced outdoor spaces with minimal plantings next to the reserve" is no longer correct.
Create links with parkland along Blind Creek.	Still valid
Minimise the impacts of construction during, and as a result of, development of the site.	Still valid
Follow best practice in design, construction and operation of drainage systems.	Still valid
Support energy-efficient buildings and landscapes.	Still valid
Plan streets within the site as an integral part of the local street network.	<ul> <li>Most points still valid</li> <li>Guideline to "Design streets with a character similar to streets in adjoining areas (width, pavement materials)" is limited in some respects by the need to provide a finer grain of subdivision in order to be commercially viable.</li> </ul>
Create an attractive public interface between the new housing and other public open spaces.	<ul> <li>At a high level the objective is still valid</li> <li>Some of the specific guidelines for achieving the objective are questionable and may not be in line with the most recent Urban Design Framework for Knox.</li> </ul>

The proposed Urban Design Guidelines ("UDGs") have been prepared in response to the above review and will provide a contemporary design response which will be sympathetic to and add value to the character of the surrounding neighbourhood when the site is redeveloped in accordance with the proposed subdivision layout in the future.

#### 5.3.1. Design Requirements

Based on the urban design guidelines and ongoing negotiations with Council, design requirements for future residential development have been prepared. The design requirements ensure that built form will be consistent with Council's Neighbourhood Character Policy, the proposed UDGs to be agreed to in the Section 173 Agreement and other site-specific controls that have come about over the development of the subdivision design.

For the most part, it is considered that ResCode and the relevant building code requirements are sufficient mechanisms to ensure appropriate built form outcomes at the Norvel Estate. It is sought to keep design intervention to a minimum and additional controls have only been incorporated where necessary.

With regard to the mechanism to implement these controls, a Section 173 agreement with a 10-year sunset clause is proposed. The Section 173 can be required via a condition on permit and the agreement can subsequently be prepared at this stage.

#### 5.3.1.1. Proposed Design Requirements

The following design requirements are proposed to be included on the Section 173 agreement:

- 1. The rear setback of all lots bordering the east property boundary to be:
  - a. At least 5 metres from the east property boundary if not on a corner lot

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b. At least 3 metres from the east property boundary if on a corner lot

Any encroachment into the setback must be limited to structures such as porches, pergolas, verandahs, balconies, landings, stairways, ramps, pergolas, shade sails and decks that are less than 3.6 metres in height, and Eaves, window hoodings, sunblinds, awnings, eaves, fascias, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks, and heating or cooling equipment or other services, which may encroach into this setback.

- 2. The front setback to be a minimum of:
  - a. 5.5 metres for lots facing Castricum Place
  - b. 4.0 metres for lots on the northern side of Road B (Lots 33 40(townhouse lots))
  - c. 4.5 metres for all other lots

Any encroachment into the front setback must be limited to structures such as porches, pergolas, verandahs, balconies, decks, terraces, landings, stairways, ramps and pergolas that are less than 3.6 metres in height, and Eaves, window hoodings, sunblinds, awnings, eaves, fascias, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks, and heating or cooling equipment or other services, which may encroach not more than 2.0 metres into the front setback.

- 3. A new building not on or within 200mm of a boundary must be set back from side or rear boundaries, 1 metre, plus 0.3 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres from the finished natural ground levels. Sunblinds, verandahs, porches, eaves, fascias, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks, and heating or cooling equipment or other services may encroach not more than 0.5 metres into these setbacks. Landings having an area of not more than 2 square metres and less than 1 metre high, stairways, ramps, pergolas, shade sails and carports may encroach into these setbacks.
- 4. Garage doors must be set back a minimum of 5.4 metres from the front boundary and at least 0.5 metres behind the building line. This requirement does not apply to the lots on the northern side of Road B (Lots 33-40 (townhouse lots)).
- 5. Each lot must have a maximum of one (1) crossover.
- 6. Provision for at least one (1) small canopy tree with a mature height of 5-8 metres must be provided within the front setback of each lot. Any encroachments into the minimum front setback e.g. eaves, verandah etc, must not inhibit on the survival of the tree. This requirement does not apply to the lots on the northern side of Road B (Lots 33-40 (townhouse lots)).
- 7. The Lot 138 building envelope must be set back by at least:
  - a. 2.0 metres from the west property boundary
  - b. 3.8 metres from the north property boundary
- 8. The building on Lot 138 should be single storey. If a double storey building is proposed, the upper level must be set back by at least 3 metres behind the ground floor north and west façade to ensure a recessive second storey element.
- 9. Where a dwelling faces a nature strip with a width of less than 2.4 metres and a boundary offset of 0.2 metres (properties facing Road A, Road F and Road G), no front fence may be constructed.

#### 5.3.1.2. Variations to Rescode via Schedule 7 to the NRZ

In addition to the design requirements, a variation to ResCode Standard A10 and B17 (Side and Rear Setbacks) is proposed. This variation relates to side setbacks on corner lots as the minimum 2 metre standard requirement cannot be achieved with the proposed subdivision layout.

It is proposed that Standard A13 and B20 (North Facing Windows) is not applicable to future development due to the impact that it will have on the developable width of lots. As this is a new development, removing this requirement will not create any unexpected amenity impact to neighbouring properties.

The Walls on Boundaries Standard (A11 and B18) is proposed to be updated to allow an average wall height of 3.6 metres and maximum height of 4.0 metres. The height is proposed to be increased from the general ResCode requirement for the following reasons:

• Given the slope of the land, there will be insufficient height at 3.2 metres to allow for a garage wall on boundary. If the Standard is not varied, it is likely that the future owners will require a dispensation to

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achieve the required garage dimensions. A garage height of greater than 3.2 metres was previously accepted by Council in the now amended development and subdivision application.

- As the lots have been designed for a volume builder, the additional height will allow for the standard garage with minimal modifications or dispensations, to be provided.
- The walls on boundary will be within a new development and will therefore create no unreasonable or unexpected detriment to neighbouring properties.

Schedule 7 to the NRZ is proposed include variations to the following:

- Standard A10 and B17 (Side and Rear Setbacks):
  - Side walls of new development on a corner site should be set back the same distance as the setback of the front wall of any existing building on the abutting allotment facing the side street or 1.5 metres, whichever is the lesser.
- Standard A11 and B18 (Walls on Boundaries):
  - The height of a new wall constructed on or within 200mm of a side or rear boundary or a carport constructed on or within 1 metre of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall.
- Standard A13 and B20 (North Facing Windows):
  - o Standard does not apply.

#### 5.4. PLANNING CONSIDERATIONS

# 5.4.1. Does the proposal comply with applicable planning controls and policies?

The proposed built form responds to the objectives, provisions and decisions guidelines of the General Residential Zone and the PPF and LPPF for the following reasons:

- The proposal provides for a range of lot sizes that can facilitate a range of different housing options to contribute to dwelling diversity and includes the provision of 8 residential lots allocated to social housing.
- The subject site has been established as a prime opportunity for housing growth and more intensive, low
  scale development. The proposed lot sizes can accommodate single and double storey dwellings
  (including villa units, attached dwellings and townhouses where appropriate) and contribute to this
  preferred character of the area.

Compliance with the Environmental Significance Overlay and its decision guidelines is detailed in Section 5.5 of this report. Suffice to say, the proposal complies with the objectives and decision guidelines of this Overlay.

#### 5.4.2. Will the proposal result in any unreasonable amenity impacts?

The proposal has two external road abuttals to the south and west with the Blind Creek Corridor abutting the site to the north.

The lot sizes have been carefully considered so that any proposed development along the eastern interface will have no unreasonable amenity impacts occur to existing dwellings.

To the east, the lot abuts the rear yards of dwellings facing Nerrissa Street and Vandeven Court. To ensure that the open character of these rear yards is retained, additional setback requirements stipulated in Section 5.3.1.1 above will ensure that new dwellings are appropriately set back from their rear boundary, allowing for landscaping and back garden space within this setback.

To the west, the site will abut the proposed Road C, reserve and Castricum Place. As the dwellings to the west are separated by a road and reserve, new development will not place any unreasonable amenity impact on these properties.

Traffic impacts are discussed in Section 5.6 of this report.

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### 5.5. VEGETATION, LANDSCAPING AND OPEN SPACE

#### 5.5.1. Arboricultural Assessment

An Arborist Assessment has been undertaken by Treemap Arboriculture with regard to the subject site and immediately adjacent areas. The assessment confirms that a very small number of trees are influenced by the proposal with 4 trees proposed to be removed, all of which require planning permission.

This includes three (3) street trees (tree 164, 167 and 169) to allow the installation of crossovers.

The report notes that the trees proposed to be removed are of poor to fair health and of low retention value. No other trees are expected to be impacted by the proposal with any TPZ encroachments limited in accordance with the relevant Australian Standards to ensure their retention.

Given this and given the proposed landscaping approach (as discussed further below), the proposed tree removal is considered acceptable and will be appropriate off-set.

#### 5.5.2. Biodiversity Assessment

A Biodiversity Assessment has been prepared by Ecolink Consulting in support of the proposal. The assessment assesses and maps the ecological values and constraints within the subject site.

The assessment confirms that the proposal has avoided the removal of native vegetation wherever practicable and will minimise impacts to biodiversity.

Specifically, two remnant patches of vegetation occur within the northern portion of the site and are of high quality. Other native vegetation, that is not classified as remnant, was recorded in the southern portion of the site however, as this vegetation comprises regrowth less than 10 years old (associated with the rehabilitation of the quarry) it is not required to be offset. In addition, "green scentbark" (which is a threatened flora species) was found within the site and three scattered indigenous trees were found adjacent to the western site boundary, along an existing shared pathway (see Figure 6 below).



Figure 6 - Extract from Biodiversity Assessment

To assess the vegetation removal currently proposed, the proposal has been assessed under the low risk-based pathway in accordance with *the Guidelines for the removal, destruction or lopping of native vegetation* and the requirements of Clause 52.17.

In accordance with Clause 52.17, the proposal has been designed to avoid and minimise impacts to native vegetation. Specifically, this has been achieved by:

- Ensuring the identified areas of remnant vegetation as well as other high quality vegetation are protected.
- Ensuring the identified threatened flora species is protected by siting the proposed development on the
  previously disturbed areas of the site.
- Ensuring the proposed improvements to the existing shared path along the western site boundary will
  not adversely impact the three scattered indigenous trees in this location.
- The future preparation of a land management plan and construction management plan that will minimise construction related impacts and ongoing management of ecological values.

Overall, 1.129 hectares of native vegetation will be impacted by the proposed development. However, 0.738 hectares of this vegetation comprises regrowth and is therefore exempt from requiring offsets under Clause 52.17. Offsets will be required for the remaining 0.391 hectares of native vegetation to be removed.

To ensure no net loss to Victoria's biodiversity as a result of the proposal, specific offsets have been identified. A biodiversity offset of 0.126 General Habitat Units with a minimum Strategic Biodiversity Score of 0.202 will be provided as required by the Biodiversity Impact and Offset Requirements Tool (Refer to appendix 3 of the Biodiversity report). This will be located within the Port Phillip and Westernport Catchment Management Authority area, or Knox City Council.

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URBIS TOWN PLANNING REPORT - MARCH 23 This demonstrates that the proposal has avoided and minimised native vegetation removal and the removal required will be appropriate offset in accordance with the requirements of Clause 52.17 to ensure net gain to Victoria's biodiversity.

#### 5.5.3. Response to Environmental Significance Overlay Schedule 2

ESO2 relates to Sites of Biological Significance and seeks to protect and appropriately manage their importance for the maintenance of Knox's and Victoria's biodiversity, as well as for the liveability and the health and wellbeing of the community.

The proposal responds to the objectives of ESO as the proposal:

- Minimises the amount of vegetation required to be removed to facilitate the development.
- Ensures that the identified indigenous scattered trees are not adversely impact by the proposed improvements to the existing shared path along the western site boundaries.
- Does not adversely impact on identified threatened flora or fauna species.
- Improves the quality of water entering Blind Creek as well as the hydrology of the existing billabong.

Overall, the proposal will provide for the long-term protection of the bushland reserve and will result in a net community benefit.

#### 5.5.4. Landscaping and Open Space

The accompanying landscape report outlines the design rationale for the proposed street trees, the linear reserve and bushland and wetland reserve.

The design rationale has stemmed from the residential and landscape character of the surrounding area and creates a strong canopy tree framework that will provide a link to the adjoining bushland reserve. Key themes include (selected):

- Providing a mix of deciduous and evergreen trees to ensure there is little or no risk that they will
  overshadow nearby windows during the winter months.
- Avoiding the overlapping of trees to ensure that there is adequate space for the roots of each tree to develop.
- Retaining existing street trees where possible.
- Planting of deciduous trees along east-west streets and evergreen natives on north-south streets to balance the desire for native trees whilst maximising opportunities for winter sun.
- Utilising a mix of concrete and brick feature paving for wayfinding.

A total of 173 street trees are proposed as part of the subdivision. Additional canopy trees will also be required within the front gardens of each lot. Only 3 trees are proposed to be removed. Overall, the proposed landscaping design response will make a significant contribution to the site and surrounding area and positively contributes to the garden character of Knox's residential areas.

In addition to the above it is proposed to:

- Upgrade the existing informal shared pathway along the western boundary of the site, which provides a
  link between Castricum Place and the blind creek trail. The proposed improvements will incorporate a
  3m wide formalised shared use path ("SUP") as well as new indigenous canopy trees and low level
  native vegetation to be planted along its length.
- Extending the Bushland Reserve further to the south and incorporating new reserves at the north-east
  and north-west corners of the site which will also function as an integrated element within a passive
  recreation space.

These improvement works will provide positive connections between the subject site, surrounding area and the Blind Creek Corridor and associated bushland, and will result in net community benefit.

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#### **5.6. PARKING, TRAFFIC AND MOVEMENT**

A traffic assessment of the site was undertaken by Cardno and accompanies this report.

#### 5.6.1. Parking

In relation to car parking, a total of up to 122 on-street car parking spaces is achievable.

This provides ample space for on street parking for residents, visitors and external visitors to the bushland and parkland area. Furthermore, complies with the design guidelines of Clause 56.06 of the Knox Planning Scheme with regard to provision of kerbside parking and carriageway widths.

#### 5.6.2. Traffic and Movement

The proposal provides for an internal road network based on estimated daily traffic volumes and predominantly provides for 15.8m, 15.3m and 13.0m road reserves with a 7.3m carriageway. These streets provide car parking on both sides of the street.

Other street types include access lanes and places to provide access to certain lots with parking on one side of the street

Based on the above, the proposal provides for street types that are greater than those required by the Planning Scheme and is a positive outcome.

The traffic assessments undertaken took a conservative estimate with respect to traffic generation and estimates that the proposal will generate 9 vehicle movements per dwelling a day (1,260 vehicle movements per day for the site). Traffic generation at AM and PM peak hours is expected to be 10% of the daily traffic volume of 126 vehicle movements.

Of the 138 residential lots proposed, 119 of these are proposed to be accessed via the internal road network and 21 will have direct access to Norvel Road or Castricum Place. Based on this, the internal traffic generation will be approximately 1,071 vehicle movements per day. This will be split between the three (3) streets within the subdivision and therefore no street will carry a daily traffic volume greater than 1,000 vehicle movements per day.

The anticipated daily traffic volumes are within the capacities of the proposed carriageway widths and are therefore an acceptable outcome for the site. Moreover, whilst there will be an increase in vehicle movements at arterial intersection during the AM and PM peak periods, the increase is considered low from a traffic engineering context.

Overall, the proposal will result in appropriate parking and traffic outcomes for the site and often exceeds the minimum requirements of Clause 52.06 of the Knox Planning Scheme.

#### 5.7. UTILITIES

#### 5.7.1. Stormwater Management

The proposed stormwater management approach relies on the existing billabong to the north-west of the site for detention and water quality mitigation and the construction of a wetland which will disperse overflow into adjoining bushland reserve.

Specifically, the proposed strategy proposes:

- A raised bike path
- A swale along the property boundary
- A culvert under the existing foot path
- A bund between the proposed site road and localised high point

Overall, the proposed stormwater management will improve the quality of water entering Blind Creek as well as the hydrology of the wetland. Further details are outlined within the Stormwater Management Plan prepared by Cardno.

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#### 5.7.2. Other Utilities

The proposal utilises underground reticulated utility services, typically in shared trenches in accordance with standard industry practice.

#### Specifically:

- An existing sewer along the site's western boundary and a new sewer along the Council reserve will be
  utilised to service the proposal and will ensure that existing infrastructure is not overloaded.
- Water supply will occur via an existing 150mm dia water main in Norvel Road. Further, an existing 100mm dia water main will be updated to 150mm dia so that it can extend into the development as the primary source of water supply.
- Connections to existing mains in Castricum Place and Dion Street will also be required to service the proposal.
- The proposal will incorporate the construction of a high voltage cable from the existing high voltage line in McMahons Road to the south to a new kiosk station within the site.
- There is sufficient capacity in the existing gas reticulation network in the vicinity of the site to provide gas supply to the proposal.
- The proposal will require the installation of a telecommunications pit and infrastructure, with the installation of fibre optic cable to be carried out by NBN Co.

Please refer to the Utility Services Infrastructure Report prepared by Cardno for further details.

#### **5.8. BUSHFIRE ASSESSMENT**

A bushfire development report has been prepared by Terramatrix. This report was prepared after extensive consultation with Council and the CFA. The report assesses the bushfire risk and demonstrates how the development can respond to the relevant policy. A summary of the report is as follows:

 The subject site is partially within a Bushfire Prone Area (BPA) (however is not within a Bushfire Management Overlay).

Figure 7 Extract from Bushfire Development Report indicating brown areas as Bushfire Prone Areas



Part of the western boundary of the site is eligible to be removed from the BPA due to the recent removal
of trees along this boundary.

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- Appropriate setbacks from vegetation is provided to all lots to ensure a Bushfire Attach Level (BAL) 12.5
  construction standard is achieved.
- Knox City Council has agreed to undertake part of the management of the reserve which includes monthly visits during the declared fire danger period.
- A range of objectives have been agreed upon for fire management regime.
- Lot 138 will be the closest to the bushland reserve and additional requirements will be in place to support the BAL-12.5 construction standard.
- The proposed landscaping within the drainage reserve will be largely outside the BPA and is therefore not discussed within the report. Additionally, the proposed vegetation / street trees are as recommended by Knox City Council.
- The report concludes that bushfire risk can be mitigated to an acceptable level and the development can appropriately prioritise the protection of human life.
- The existing and proposed road network provides good access and egress for emergency management vehicles and residents in the event of a bushfire.

It is expected that this report will be referred to the CFA and any requirements will be enforced via condition on the permit.

## 6. CONCLUSION

The proposed subdivision of the site with 138 residential lots, a bushland reserve and a parkland reserve, appropriately responds to overarching state and local planning policies which seeks to provide for increased housing densities on under-utilised urban land and protect and enhance significant environments. The proposal takes advantage of the site's designation as a large strategic investigation site and provides for a low scale intensive development that will positively contribute to dwelling diversity and housing stock within the City of Knox.

The proposed Urban Design Guidelines provide for the future development of the site whilst ensuring that the high level of amenity of the surrounding residential area is maintained. Further, the proposal provides substantial landscaping opportunities which will positively contribute to the garden character of the area and the adjoining Blind Creek Corridor and associated bushland reserve.

Overall, the proposal has had appropriate regard to the characteristics of the site, the broader context and adjoining properties to minimise the potential for off-site amenity impacts and should be supported.

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# **APPENDIX A** CERTIFICATES OF TITLE

# **APPENDIX B** EXISTING SECTION 173 AGREEMENT AND URBAN DESIGN GUIDELINES

# **APPENDIX C** PROPOSED NEIGHBOURHOOD RESIDENTIAL ZONE SCHEDULE 7

# **APPENDIX D** CLAUSE 56 ASSESSMENT



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Objectives	Standard (Summary)	Assessment
	<ul> <li>Shows the layout of the subdivision in relation to the surrounding area.</li> <li>Is designed to be accessible for people with disabilities.</li> </ul>	
Clause 56.03-2	Standard C3	Not applicable
Activity centre objective To provide for mixed-use activity	A subdivision should implement any relevant activity centre strategy, plan or policy for the area set out in this scheme.	No activity centres are proposed as part of this subdivision.
centres, including neighbourhood	Subdivision should be supported by activity centres that are:	
activity centres, of appropriate area and location.	<ul> <li>Accessible by neighbourhood and regional walking and cycling networks.</li> </ul>	
	<ul> <li>Served by public transport that is connected to the regional public transport network.</li> </ul>	
	<ul> <li>Located at public transport interchange points for the convenience of passengers and easy connections between public transport services.</li> </ul>	
	<ul> <li>Located on arterial roads or connector streets.</li> </ul>	
	<ul> <li>Of appropriate size to accommodate a mix of uses that meet local community needs.</li> </ul>	
	<ul> <li>Oriented to support active street frontages, support street-based community interaction and pedestrian safety.</li> </ul>	
Clause 56.03-3	Standard C4	Complies
Planning for community facilities	A subdivision should:	The proposal includes the provision of a
objective To provide appropriately located sites	<ul> <li>Implement any relevant regional and local community facility strategy, plan or policy for the area set out in this scheme.</li> </ul>	wetland and parkland area at the north-west corner of the site which will provide an
for community facilities including	<ul> <li>Locate community facilities on sites that are in or near activity centres</li> </ul>	active recreation space for future residents.  It is proposed to upgrade an existing shared
childcare, health services, police and	and public transport. School sites should:	pathway along the site's western boundary.
facilities.	<ul> <li>Be integrated with the neighbourhood and located near activity centres.</li> </ul>	
	<ul> <li>Be located on walking and cycling networks.</li> </ul>	
	<ul> <li>Have a bus stop located along the school site boundary.</li> </ul>	

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Objectives	Standard (Summary)	Assessment
	<ul> <li>Have student drop-off zones, but parking and on-street parking in addition to other street functions in abutting streets.</li> </ul>	
	<ul> <li>Adjoin the public open space network and community sporting and other recreation facilities.</li> </ul>	
	<ul> <li>Be integrated with community facilities.</li> </ul>	
	<ul> <li>Be located on land that is not affected by physical, environmental or other constraints.</li> </ul>	
	Schools should be accessible by the Principal Public Transport Network in Metropolitan Melbourne and on the regional public transport network outside Metropolitan Melbourne.	
	Primary schools should be located on connector streets and not on arterial roads.	
	New State Government school sites must meet the requirements of the Department of Education and Training and abut at least two streets with sufficient widths to provide student drop-off zones, bus parking and onstreet parking in addition to other street functions.	
Clause 56.03-4	Standard C5	Complies
Built environment objective	The built environment should:	The proposed subdivision will contribute
To create urban places with identity and character.	<ul> <li>Implement any relevant urban design strategy, plan or policy for the area set out in this scheme.</li> </ul>	towards the creation of a distinctive residential character and identity for the site.
	<ul> <li>Provide living and working environments that are functional, safe and attractive.</li> </ul>	It is proposed to update the urban design guidelines applying to the site to guide the
	<ul> <li>Provide an integrated layout, built form and urban landscape.</li> </ul>	tuture development of the site and to ensure that the site provides functional, safe and
	<ul> <li>Contribute to a sense of place and cultural identity.</li> </ul>	attractive environments for future residents.
	An application should describe the identity and character to be achieved and the elements that contribute to that identity and character.	
Clause 56.03-5	Standard C6	Not Applicable
Neighbourhood character objective	Subdivision should:	This application contains more than 60 lots and is therefore not subject to this clause.

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Objectives	Standard (Summary)	Assessment
To design subdivisions that respond to neighbourhood character.	<ul> <li>Respect the existing neighbourhood character or achieve a preferred neighbourhood character consistent with any relevant neighbourhood character objective, policy or statement set out in this scheme.</li> </ul>	
	<ul> <li>Respond to and integrate with the surrounding urban environment.</li> <li>Protect significant vegetation and site features.</li> </ul>	
CLAUSE 56.04: Lot Design		
Clause 56.04-1	Standard C7	Complies
Lot diversity and distribution objectives	A subdivision should implement any relevant housing strategy, plan or policy for the area set out in this scheme.	The layout of the proposed development utilises a range of housing densities, to
To achieve housing densities that support compact and walkable	Lot sizes and mix should achieve the average net residential density specified in any zone or overlay that applies to the land or in any relevant	provide for the needs of differing groups of people.
neighbourhoods and the efficient	policy for the area set out in this scheme.	138 residential lots are provided as part of
provision of public transport services.  To provide higher housing densities	A range and mix of lot sizes should be provided including lots suitable for the development of:	this proposal ranging between 116 to 581 square metres in size. All lots will be
within walking distance of activity centres.	■ Single dwellings.	capable of accommodating a single or double storey dwelling.
To achieve increased housing	■ I wo dwellings or more.	Further the site has good access to several
densities in designated growth areas.	■ Higher density housing.	key public transport links including:
To provide a range of lot sizes to suit	<ul> <li>Residential buildings and Retirement villages.</li> </ul>	<ul> <li>Boronia Train Station (1.33km north</li> </ul>
a variety of dwelling and household	Unless the site is constrained by topography or other site conditions, lot	east)
types.	distribution snould provide for 95 per cent of dwellings to be located no more than 400 metre street walking distance from the nearest existing or	<ul> <li>Bus route 755 (860m east)</li> </ul>
	proposed bus stop, 600 metres street walking distance from the nearest	<ul> <li>Bus route 732 (836m south west)</li> </ul>
	existing or proposed tram stop and 800 metres street walking distance from the nearest existing or proposed railway station.	<ul> <li>Bus route 737 and 753 (940 metres north)</li> </ul>
	Lots of 300 square metres or less in area, lots suitable for the	The site is also located approximately 890
	development of two dwellings of more, lots suitable for Herisity housing and lots suitable for Residential buildings and Retirement villages should be located in and within 400 metres street walking distance of an	and 1 kilometre north of Mountain Gate Shopping Centre
	activity centre.	
Clause 56.04-2	Standard C8	Complies



Assessment	All allotments have been designed to accommodate a single or double storey	<ul><li>dwelling and to achieve:</li><li>Appropriate solar access.</li></ul>	<ul> <li>An appropriate area of secluded privopen space.</li> </ul>	<ul> <li>Safe vehicle access and adequate or</li> </ul>	<ul><li>site parking.</li><li>Access to a full range of utilities.</li></ul>	Urban Design guidelines apply to the sit and are enforced via a Section 173 Agreement applying to each title. These quidelines will guide the final form of the	building envelopes where appropriate.					
Standard (Summary)	An application to subdivide land that creates lots of less than 300 square metres should be accompanied by information that shows:	<ul> <li>That the lots are consistent or contain building envelope that is consistent with a development approved under this scheme, or</li> </ul>	<ul> <li>That a dwelling may be constructed on each lot in accordance with the requirements of this scheme.</li> </ul>	Lots of between 300 square metres and 500 square metres should:	<ul> <li>Contain a building envelope that is consistent with a development of the lot approved under this scheme, or</li> </ul>	<ul> <li>If no development of the lot has been approved under this scheme, contain a building envelope and be able to contain a rectangle measuring 10 metres by 15 metres, or 9 metres by 15 metres if a boundary wall is nominated as part of the building envelope.</li> </ul>	If lots of between 300 square metres and 500 square metres are proposed to contain dwellings that are built to the boundary, the long axis of the lots should be within 30 degrees east and 20 degrees west of north unless there are significant physical constraints that make this difficult to achieve.	Lots greater than 500 square metres should be able to contain a rectangle measuring 10 metres by 15 metres, and may contain a building envelope.	A building envelope may specify or incorporate any relevant siting and design requirement. Any requirement should meet the relevant standards of Clause 54, unless:	<ul> <li>The objectives of the relevant standards are met, and</li> </ul>	<ul> <li>The building envelope is shown as a restriction on a plan of subdivision registered under the Subdivision Act 1988, or is specified as a covenant in an agreement under Section 173 of the Act.</li> </ul>	Where a lot with a building envelope adjoins a lot that is not on the same plan of subdivision or is not subject to the same agreement relating to the relevant building envelope:
Objectives	Lot area and building envelopes objective	To provide lots with areas and dimensions that enable the	appropriate siting and construction of a dwelling, solar access, private open	space, venicle access and parking, water management easements and	the retention of significant vegetation and site features.							



Objectives	Standard (Summary)	Assessment
	<ul> <li>The building envelope must meet Standards A10 and A11 of Clause 54 in relation to the adjoining lot, and</li> <li>The building envelope must not regulate siting matters covered by Standards A12 to A15 (inclusive) of Clause 54 in relation to the adjoining lot. This should be specified in the relevant plan of subdivision or agreement.</li> <li>Lot dimensions and building envelopes should protect:</li> <li>Solar access for future dwellings and support the siting and design of dwellings that achieve the energy rating requirements of the Building Regulations.</li> <li>Existing or proposed easements on lots.</li> <li>Significant vegetation and site features.</li> </ul>	
Clause 56.04-3 Solar orientation of lots objective To provide good solar orientation of lots and solar access for future dwellings.	<ul> <li>Standard C9</li> <li>Unless the site is constrained by topography or other site conditions, at least 70 percent of lots should have appropriate solar orientation. Lots have appropriate solar orientation when:</li> <li>The long axis of lots are within the range north 20 degrees west to north 30 degrees east, or east 20 degrees north to east 30 degrees south.</li> <li>Lots between 300 square metres and 500 square metres are proposed to contain dwellings that are built to the boundary, the long axis of the lots should be within 30 degrees east and 20 degrees west of north.</li> <li>Dimensions of lots are adequate to protect solar access to the lot, taking into account likely dwelling size and the relationship of each lot to the street.</li> </ul>	Complies  The vast majority of allotments have been designed to satisfy the solar orientation standard.
Clause 56.04-4 Street orientation objective To provide a lot layout that contributes to community social	Standard C10 Subdivision should increase visibility and surveillance by:  Ensuring lots front all roads and streets and avoid the side or rear of lots being oriented to connector streets and arterial roads.	Complies A number of features are proposed in the subdivision to enable the creation of a safe



Objectives	Standard (Summary)	Assessment
interaction, personal safety and property security.	<ul> <li>Providing lots of 300 square metres or less in area and lots for 2 or more dwellings around activity centres and public open space.</li> <li>Ensuring streets and houses look onto public open space and avoiding sides and rears of lots along public open space boundaries.</li> <li>Providing roads and streets along public open space boundaries.</li> </ul>	community and to promote interaction between residents including:  • Lots proposed generally have primary frontage to a road.  • The open space network offers an opportunity for residents to play, relax and interact together.  • Roads are generally proposed along public open space boundaries.
Clause 56.04-5 Common area objectives To identify common areas and the purpose for which the area is commonly held. To ensure the provision of common area is appropriate and that necessary management arrangements are in place. To maintain direct public access throughout the neighbourhood street network.	Standard C11  An application to subdivide land that creates common land must be accompanied by a plan and a report identifying:  The common area to be owned by the body corporate, including any streets and open space.  The reasons why the area should be commonly held.  Lots participating in the body corporate.  The proposed management arrangements including maintenance standards for streets and open spaces to be commonly held.	Not applicable  No common land is created as a result of this subdivision.
CLAUSE 56.05: Urban Landscape		
Clause 56.05-1 Integrated urban landscape objectives	Standard C12 An application for subdivision that creates streets or public open space should be accompanied by a landscape design.	Complies The primary public areas within the subdivision that require landscape design
To provide attractive and continuous landscaping in streets and public open spaces that contribute to the character and identity of new neighbourhoods and urban places or	<ul> <li>The landscape design should:</li> <li>Implement any relevant streetscape, landscape, urban design or native vegetation precinct plan, strategy or policy for the area set out in this scheme.</li> </ul>	will be the superscapes and open space areas.  The design rationale has stemmed from the residential and landscape character of the surrounding area and create a strong



Objectives	Standard (Summary)	Assessment
to existing or preferred neighbourhood character in existing	<ul> <li>Create attractive landscapes that visually emphasise streets and public open spaces.</li> </ul>	canopy tree framework that will provide a link to the adjoining bushland reserve.
urban areas. To incorporate natural and cultural	<ul> <li>Respond to the site and context description for the site and surrounding area.</li> </ul>	Further, 173 street trees are proposed to contribute to the garden character of Knox's
features in the design of streets and	<ul> <li>Maintain significant vegetation where possible within an urban context.</li> </ul>	residential areas.
To protect and enhance native habitat	<ul> <li>Take account of the physical features of the land including landform, soil and climate.</li> </ul>	Please refer to section 5.5 of the town planning report for future details.
and discourage the planting and spread of noxious weeds.	<ul> <li>Protect and enhance any significant natural and cultural features.</li> </ul>	
To provide for integrated water	<ul> <li>Protect and link areas of significant local habitat where appropriate.</li> </ul>	
management systems and contribute to drinking water conservation.	<ul> <li>Support integrated water management systems with appropriate landscape design techniques for managing urban run-off including wetlands and other water sensitive urban design features in streets and public open space.</li> </ul>	
	<ul> <li>Promote the use of drought tolerant and low maintenance plants and avoid species that are likely to spread into the surrounding environment.</li> </ul>	
	<ul> <li>Ensure landscaping supports surveillance and provides shade in streets, parks and public open space.</li> </ul>	
	<ul> <li>Develop appropriate landscapes for the intended use of public open space including areas for passive and active recreation, the exercising of pets, playgrounds and shaded areas.</li> </ul>	
	<ul> <li>Provide for walking and cycling networks that link with community facilities.</li> </ul>	
	<ul> <li>Provide appropriate pathways, signage, fencing, public lighting and street furniture.</li> </ul>	
	<ul> <li>Create low maintenance, durable landscapes that are capable of a long life.</li> </ul>	
	The landscape design must include a maintenance plan that sets out maintenance responsibilities requirements and costs	



Objectives	Standard (Summary)	Assessment
Clause 56.05-2	Standard C13	Complies
Public open space provision	The provision of public open space should:	The proposed subdivision provides
objectives  To provide a variety of open spaces	<ul> <li>Implement any relevant open space plan, strategy or policy for the area set out in this scheme.</li> </ul>	appropriate open space for the needs of residents.
with links to other open spaces and regional parks where possible.	<ul> <li>Provide a network of well-distributed regional and local open space that includes:</li> </ul>	Appropriate linkages with the Blind Creek
To ensure that public open space of appropriate quality and quantity is	<ul> <li>Regional public open space where appropriate, including along foreshores, streams and permanent water bodies.</li> </ul>	residents with a variety of recreational opportunities to help achieve a healthy
provided in convenient locations to meet the recreational and social	- Regional parks of at least 3 hectares, combining passive and active use, within 2 kilometres of all dwellings.	lifestyle and active community.
To support active and healthy	<ul> <li>Large local parks of at least 1 hectare for active and passive use, within 500 metres safe walking distance from all dwellings.</li> </ul>	
	<ul> <li>Small local parks within 150 metres to 300 metres safe walking distance of all dwellings, where appropriate.</li> </ul>	
	<ul> <li>Include land used for drainage control or stream and floodway purposes if generally available for recreational use.</li> </ul>	
	<ul> <li>Be integrated with urban water management systems including watercourses and water bodies.</li> </ul>	
	<ul><li>Incorporate natural and cultural features where appropriate.</li></ul>	
	<ul> <li>Encourage shared use of active open space.</li> </ul>	
	<ul> <li>Adjoin schools and other community facilities where practical.</li> </ul>	
	<ul> <li>Meet the social, cultural, recreational and sporting needs of the community including different age groups and abilities.</li> </ul>	
	<ul> <li>Be linked to existing or proposed future public open spaces where appropriate.</li> </ul>	
	<ul> <li>Include publicly owned plazas or parks in activity centres where</li> </ul>	
	appropriate. I and provided for public open space should be:	
	Fally ploylded for public open space should be.	



Objectives	Standard (Summary)	Assessment
	<ul> <li>Of a quality, quantity and character that makes it fit for its potential functions.</li> </ul>	
	<ul> <li>Located so that every lot in the subdivision is within 500 metres street walking distance of existing or proposed public open space.</li> </ul>	
	<ul> <li>Related to the street and lot layout in a manner that promotes personal safety and surveillance of users of the public open space from streets along public open space boundaries.</li> </ul>	
	<ul> <li>Of an area and dimensions to allow easy adaptation to different uses in response to changing community sport and recreational preferences.</li> </ul>	
CLAUSE 56.06: Access and Mobility Management	Management	
Clause 56.06-1	Standard C14	Complies
Integrated mobility objectives  To achieve an urban structure where compact and walkable neighbourhoods are clustered to support larger activity centres on the Principal Public Transport Network in Metropolitan Melbourne and on the regional public transport network outside Metropolitan Melbourne.  To provide for walking (including persons with impaired mobility), cycling, public transport and other motor vehicles in an integrated manner.  To contribute to reduced car dependence, improved energy efficiency, reduced greenhouse gas emissions and reduced air pollution.	An application for a subdivision must include a plan of the layout of the neighbourhood that meets the objectives of:  Clause 56.06-2 Walking and cycling network.  Clause 56.06-4 Neighbourhood street network.	The traffic report prepared by Cardno details the capacity of the roads and access points, the walking and cycling network and the neighbourhood street network.  The walking and cycling network includes the upgrade of the existing shared path along the western boundary of the site. This assists in supporting sustainable transport options.



Objectives	Standard (Summary)	Assessment
Clause 56.06-2	Standard C15	Complies
Walking and cycling network objectives To contribute to community health	The walking and cycling network should be designed to:  Implement any relevant regional and local walking and cycling strategy, plan or policy for the area set out in this scheme.	Pedestrian and shared paths will be provided as described above and will provide connections to the surrounding
and well being by encouraging walking and cycling as part of the daily lives of residents, employees and visitors	<ul> <li>Link to any existing pedestrian and cycling networks.</li> <li>Provide safe walkable distances to activity centres, community facilities, public transport stops and public open spaces.</li> </ul>	All pedestrian and shared paths will be constructed to accommodate persons of limited mobility
To provide safe and direct movement to provide safe and direct movement through and between neighbourhoods by pedestrians and	<ul> <li>Provide an interconnected and continuous network of safe, efficient and convenient footpaths, shared paths, cycle paths and cycle lanes based primarily on the network of arterial roads, neighbourhood streets and regional public open spaces.</li> </ul>	
To reduce car use, greenhouse gas emissions and air pollution.	<ul> <li>Provide direct cycling routes for regional journeys to major activity centres, community facilities, public transport and other regional activities and for regional recreational cycling.</li> </ul>	
	<ul> <li>Ensure safe street and road crossings including the provision of traffic controls where required.</li> </ul>	
	<ul> <li>Provide an appropriate level of priority for pedestrians and cyclists.</li> </ul>	
	<ul> <li>Have natural surveillance along streets and from abutting dwellings and be designed for personal safety and security particularly at night.</li> </ul>	
Clause 56.06-3	Standard C16	Objective and standard achieved
Public transport network	The public transport network should be designed to:	The site has good access to several key
objectives	<ul> <li>Implement any relevant public transport strategy, plan or policy for the</li> </ul>	public transport links including:
To provide an arterial road and neighbourhood street network that	<ul><li>area set out in this scheme.</li><li>Connect new public transport routes to existing and proposed routes to</li></ul>	<ul> <li>Boronia Train Station (1.33km north east)</li> </ul>
supports a direct, efficient and safe	the satisfaction of the relevant public transport authority.	<ul> <li>Bus route 755 (860m east)</li> </ul>
To encourage maximum use of public	<ul> <li>Provide for public transport links between activity centres and other</li> </ul>	<ul> <li>Bus route 732 (836m south west)</li> </ul>
transport.	locations triat attract people using trie Principal Public Hansport	<ul> <li>Bus route 737 and 753 (940 metres north)</li> </ul>



Objectives	Standard (Summary)	Assessment
	Network in Metropolitan Melbourne and the regional public transport network outside Metropolitan Melbourne.  Locate regional bus routes principally on arterial roads and locate local bus services principally on connector streets to provide:  Safe and direct movement between activity centres without complicated turning manoeuvres.  Direct travel between neighbourhoods and neighbourhood activity centres.  A short and safe walk to a public transport stop from most dwellings.	No public transport services are proposed within the site.
Clause 56.06-4  Neighbourhood street network objective  To provide for direct, safe and easy movement through and between neighbourhoods for pedestrians, cyclists, public transport and other motor vehicles using the neighbourhood street network.	<ul> <li>Standard C17</li> <li>The neighbourhood street network must: <ul> <li>Take account of the existing mobility network of arterial roads, neighbourhood streets, cycle paths, cycle paths, footpaths and public transport routes.</li> <li>Provide clear physical distinctions between arterial roads and neighbourhood street types.</li> <li>Comply with the Roads Corporation's arterial road access management policies.</li> <li>Provide an appropriate speed environment and movement priority for the safe and easy movement of pedestrians and cyclists and for accessing public transport.</li> <li>Provide safe and efficient access to activity centres for commercial and freight vehicles.</li> <li>Provide safe and efficient access to all lots for service and emergency vehicles.</li> <li>Provide safe movement for all vehicles.</li> <li>Provide safe movement for all vehicles.</li> <li>Incorporate any necessary traffic control measures and traffic management infrastructure.</li> </ul> </li> <li>The neighbourhood street network should be designed to:</li> </ul>	Complies  The neighbourhood street network will be constructed in accordance with the requirements of Clause 52.06 of the Knox Planning Scheme.  All carriageways will be constructed to accommodate emergency vehicles and where appropriate, service vehicles.  Please refer to the traffic report prepared by Cardno and Section 5.6 of the town planning report for further details.
		12



Objectives	Standard (Summary)	Assessment
	<ul> <li>Implement any relevant transport strategy, plan or policy for the area set out in this scheme.</li> </ul>	
	<ul> <li>Include arterial roads at intervals of approximately 1.6 kilometres that have adequate reservation widths to accommodate long term movement demand.</li> </ul>	
	<ul> <li>Include connector streets approximately halfway between arterial roads and provide adequate reservation widths to accommodate long term movement demand.</li> </ul>	
	<ul> <li>Ensure connector streets align between neighbourhoods for direct and efficient movement of pedestrians, cyclists, public transport and other motor vehicles.</li> </ul>	
	<ul> <li>Provide an interconnected and continuous network of streets within and between neighbourhoods for use by pedestrians, cyclists, public transport and other vehicles.</li> </ul>	
	<ul> <li>Provide an appropriate level of local traffic dispersal.</li> </ul>	
	<ul> <li>Indicate the appropriate street type. Provide a speed environment that is appropriate to the street type.</li> </ul>	
	<ul> <li>Provide a street environment that appropriately manages movement demand (volume, type and mix of pedestrians, cyclists, public transport and other motor vehicles). Encourage appropriate and safe pedestrian, cyclist and driver behaviour.</li> </ul>	
	<ul> <li>Provide safe sharing of access lanes and access places by pedestrians, cyclists and vehicles.</li> </ul>	
	<ul> <li>Minimise the provision of cul-de-sacs.</li> </ul>	
	<ul> <li>Provide for service and emergency vehicles to safely turn at the end of a dead-end street.</li> </ul>	
	<ul> <li>Facilitate solar orientation of lots.</li> </ul>	
	<ul> <li>Facilitate the provision of the walking and cycling network, integrated water management systems, utilities and planting of trees.</li> </ul>	
	<ul> <li>Contribute to the area's character and identity.</li> </ul>	



Objectives	Standard (Summary)	Assessment
	<ul> <li>Take account of any identified significant features.</li> </ul>	
Clause 56.06-5	Standard C18	Complies
Walking and cycling network detail objectives	Footpaths, shared paths, cycle paths and cycle lanes should be designed to:	All pedestrian and shared paths will be constructed to a high-quality standard and will be
To design and construct footpaths,	<ul> <li>Be part of a comprehensive design of the road or street reservation.</li> </ul>	accessible by persons of immed mobility.
shared path and cycle path networks	<ul> <li>Be continuous and connect.</li> </ul>	
unat are sale, comiortable, well constructed and accessible for people with disabilities	<ul> <li>Provide for public transport stops, street crossings for pedestrians and cyclists and kerb crossovers for access to lots.</li> </ul>	
To design footbaths to accommodate	<ul> <li>Accommodate projected user volumes and mix.</li> </ul>	
wheelchairs, prams, scooters and	<ul> <li>Meet the requirements of Table C1.</li> </ul>	
other footpath bound vehicles.	<ul> <li>Provide pavement edge, kerb, channel and crossover details that support safe travel for pedestrians, footpath bound vehicles and</li> </ul>	
	cyclists, perform required drainage functions and are structurally sound.	
	<ul> <li>Provide appropriate signage.</li> </ul>	
	<ul> <li>Be constructed to allow access to lots without damage to the footpath or shared path surfaces.</li> </ul>	
	<ul> <li>Be constructed with a durable, non-skid surface.</li> </ul>	
	Be of a quality and durability to ensure:	
	<ul> <li>Safe passage for pedestrians, cyclists, footpath bound vehicles and vehicles.</li> </ul>	
	- Discharge of urban run-off.	
	- Preservation of all-weather access.	
	- Maintenance of a reasonable, comfortable riding quality.	
	- A minimum 20 year life span.	
	Be accessible to people with disabilities and include tactile ground surface indicators, audible signals and kerb ramps required for the	
	movement of people with disabilities.	



Clause 56.06-6  Public transport network detail objectives  Public transport network detail objectives  To provide for the safe, efficient and the existing or proposed Principal Public Transport Network in Metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside metropolitan Metropolitan Melbourne and the regional public transport network outside metropolitan Metropolitan Melbourne and the regional public transport network outside metropolitan Metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network in Metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside metropolitan Melbourne and the regional public transport network outside authority.  Road alignment and geometry along bus routes should provide for the efficient, unimpeded movement of buses and the safety and comfort of passengers.  Bus and trans stops should have:  Surveillance from streets and adjacent lots.  Safe pedestrians.  Safe pedestrians and cyclists.  Safe pedestrian crossing conditions for pedestrians and cyclists.  Safe pedestrians and cyclists.	arterial roads forming part insport Network in the site. It impede the movement of and at schools including and at schools including and at schools including are arterial roads are proposed within the site.  Not Applicable  Not Applicable  Not Applicable  No tapplicable  No tapplicable
etail and the aublic ops that	f de f
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Roa efficiency ops that efficiency pass pass ped	he safety and comfort of timpede the movement of timpede the movement of and at schools including
pedd Bus	impede the movement of ans and cyclists.
<ul> <li>Bus and tram stops should have:</li> <li>Surveillance from streets and adjacent lots.</li> <li>Safe street crossing conditions for pedestrians and cyclists</li> <li>Safe pedestrian crossings on arterial roads and at schools the provision of traffic controls as required by the roads aut</li> <li>Continuous hard pavement from the footpath to the kerb.</li> <li>Sufficient lighting and paved, sheltered waiting areas for fo volume at neighbourhood centres, schools and other locaties expected high patronage.</li> <li>Appropriate signage.</li> </ul>	ans and cyclists. and at schools including
<ul> <li>Surveillance from streets and adjacent lots.</li> <li>Safe street crossing conditions for pedestrians and cyclists</li> <li>Safe pedestrian crossings on arterial roads and at schools the provision of traffic controls as required by the roads aut</li> <li>Continuous hard pavement from the footpath to the kerb.</li> <li>Sufficient lighting and paved, sheltered waiting areas for fo volume at neighbourhood centres, schools and other locaties expected high patronage.</li> <li>Appropriate signage.</li> </ul>	ans and cyclists. and at schools including
<ul> <li>Safe street crossing conditions for pedestrians and cyclists</li> <li>Safe pedestrian crossings on arterial roads and at schools the provision of traffic controls as required by the roads aut</li> <li>Continuous hard pavement from the footpath to the kerb.</li> <li>Sufficient lighting and paved, sheltered waiting areas for fo volume at neighbourhood centres, schools and other locaties expected high patronage.</li> <li>Appropriate signage.</li> </ul>	ans and cyclists. and at schools including
<ul> <li>Safe pedestrian crossings on arterial roads and at schools the provision of traffic controls as required by the roads aut</li> <li>Continuous hard pavement from the footpath to the kerb.</li> <li>Sufficient lighting and paved, sheltered waiting areas for fo volume at neighbourhood centres, schools and other locatiexpected high patronage.</li> <li>Appropriate signage.</li> </ul>	and at schools including
<ul> <li>Continuous hard pavement from the footpath to the kerb.</li> <li>Sufficient lighting and paved, sheltered waiting areas for fo volume at neighbourhood centres, schools and other locaties expected high patronage.</li> <li>Appropriate signage.</li> </ul>	by the loads authority.
<ul> <li>Sufficient lighting and paved, sheltered waiting areas for fo volume at neighbourhood centres, schools and other location expected high patronage.</li> <li>Appropriate signage.</li> </ul>	th to the kerb.
<ul> <li>Appropriate signage.</li> </ul>	ting areas for forecast user and other locations with
Public transport stops and associated waiting areas should be accessible to people with disabilities and include tactile ground surface indicators, audible signals and kerb ramps required for the movement of people with physical disabilities.	areas should be accessible ound surface indicators, e movement of people with
Clause 56.06-7 Standard C20	Complies
street network Th	The neighbourhood street network will be constructed in accordance with and often
•	
To design and construct street access places, and access streets do not comply with the requirements carriageways and verges so that the	omply with the requirements   52.06 of the Knox Planning Scheme.



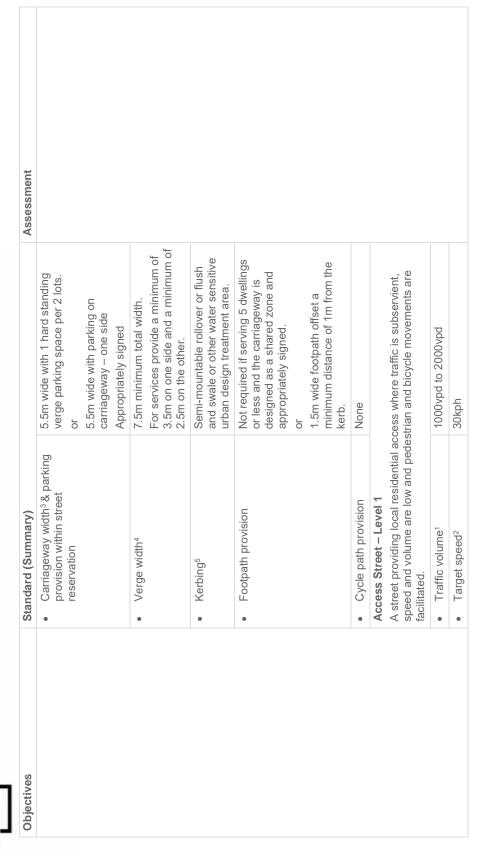
<ul> <li>Ensure streets are of sumicient strength to:</li> <li>Enable the carriage of Vehicles</li> </ul>
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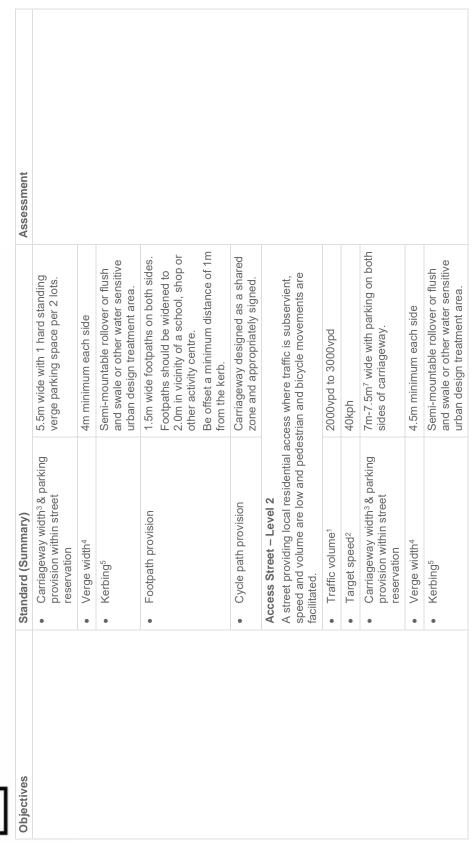
Objectives	Standard (Summary)	Assessment
	<ul> <li>Ensure carriageways of planned arterial roads are designed to the requirements of the relevant road authority.</li> </ul>	
	<ul> <li>Ensure carriageways of neighbourhood streets are designed for a minimum 20 year life span.</li> </ul>	
	<ul> <li>Provide pavement edges, kerbs, channel and crossover details designed to:</li> </ul>	
	- Perform the required integrated water management functions.	
	- Delineate the edge of the carriageway for all street users.	
	<ul> <li>Provide efficient and comfortable access to abutting lots at appropriate locations.</li> </ul>	
	- Contribute to streetscape design.	
	<ul> <li>Provide for the safe and efficient collection of waste and recycling materials from lots.</li> </ul>	
	<ul> <li>Be accessible to people with disabilities.</li> </ul>	
	A street detail plan should be prepared that shows, as appropriate:	
	<ul> <li>The street hierarchy and typical cross-sections for all street types.</li> </ul>	
	<ul> <li>Location of carriageway pavement, parking, bus stops, kerbs, crossovers, footpaths, tactile surface indicators, cycle paths and speed control and traffic management devices.</li> </ul>	
	<ul> <li>Water sensitive urban design features.</li> </ul>	
	<ul> <li>Location and species of proposed street trees and other vegetation.</li> </ul>	
	<ul> <li>Location of existing vegetation to be retained and proposed treatment to ensure its health.</li> </ul>	
	<ul> <li>Any relevant details for the design and location of street furniture, lighting, seats, bus stops, telephone boxes and mailboxes.</li> </ul>	
Clause 56.06-8	Standard C21	Complies
Lot access objective	Vehicle access to lots abutting arterial roads should be provided from service roads, side or rear access lanes, access places or access streets	The proposed road reservation widths are wide enough to accommodate the pavement and



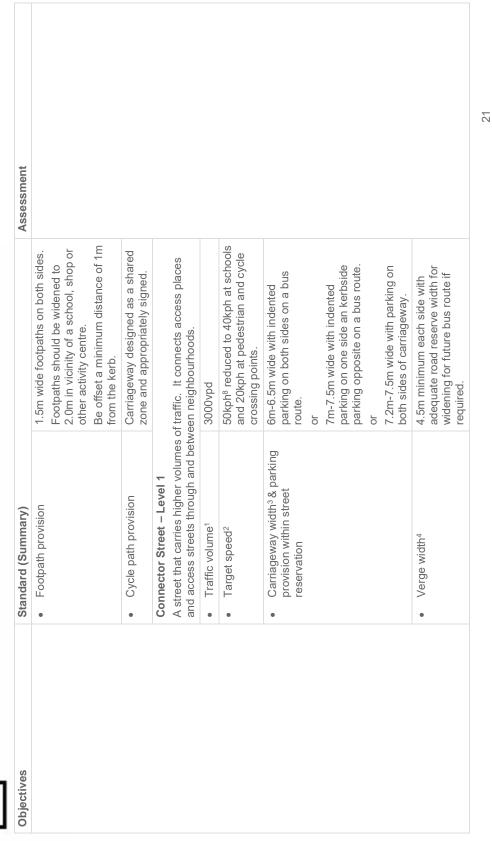
Objectives	Standard (Summary)		Assessment
To provide for safe vehicle access	where appropriate and in accordance with the access management requirements of the relevant roads authority.	with the access management withority.	verge widths for the different category roads as specified in Table C1 (Cl. 56.06-8).
between roads and lots.	Vehicle access to lots of 300 square metres or less in area and lots with a frontage of 7.5 metres or less should be provided via rear or side access lanes, places or streets.	access to lots of 300 square metres or less in area and lots with a e of 7.5 metres or less should be provided via rear or side access places or streets.	Please refer to the traffic report prepared by Cardno for more details.
	The design and construction of a crossover should meet the requirements of the relevant road authority.	ssover should meet the requirements	
	Table C1 Design of roads and neighbourhood streets	hbourhood streets	
	Access Lane		
	A side or rear lane principally providing access to parking on lots with another street frontage.	ng access to parking on lots with	
	<ul> <li>Traffic volume¹</li> </ul>	300vpd	
	<ul> <li>Target speed<sup>2</sup></li> </ul>	10kph	
	<ul> <li>Carriageway width<sup>3</sup> &amp; parking provision within street reservation</li> </ul>	5.5m <sup>6</sup> wide with no parking spaces to be provided	
	<ul> <li>Verge width<sup>4</sup></li> </ul>	No verge required.	
	Kerbing <sup>5</sup>		
	<ul> <li>Footpath provision</li> </ul>	None	
		Carriageway designed as a shared zone and appropriately signed.	
	<ul> <li>Cycle path provision</li> </ul>		
	Access Place		
	A minor street providing local residential access with shared traffic, pedestrian and recreation use, but with pedestrian priority.	tial access with shared traffic, th pedestrian priority.	
	<ul> <li>Traffic volume¹</li> </ul>	300vpd to 1000vpd	
	<ul> <li>Target speed<sup>2</sup></li> </ul>	15kph	



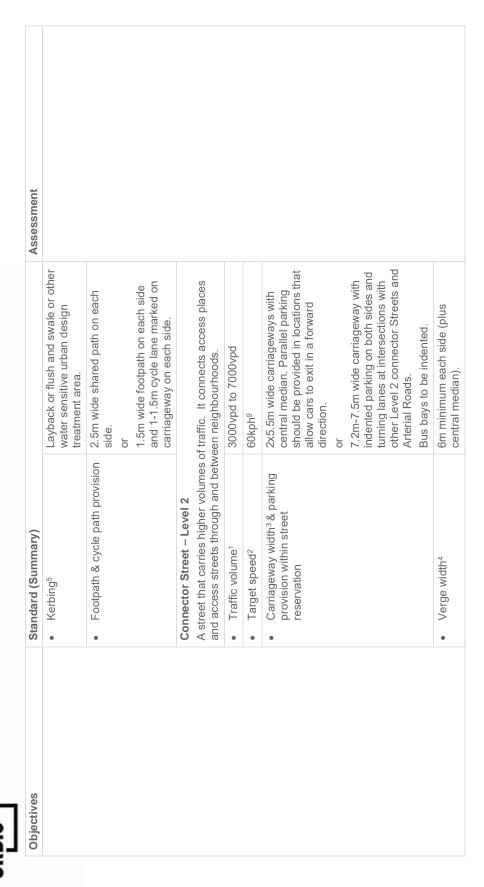
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JRBIS





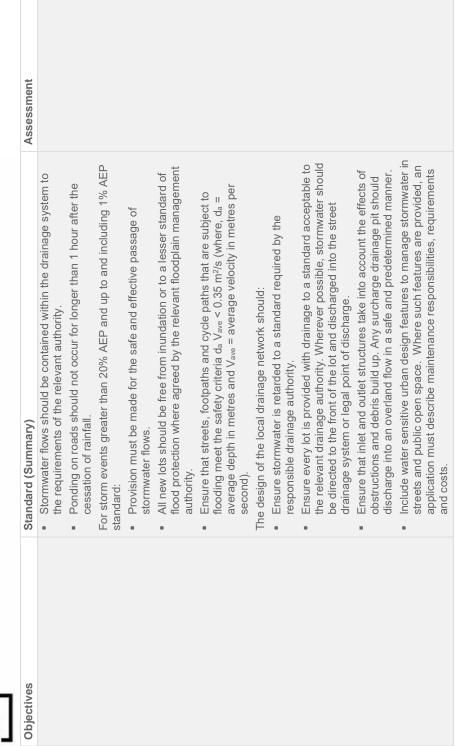
Objectives	Standard (Summary)		Assessment
	<ul> <li>Kerbing<sup>5</sup></li> </ul>	Layback or flush and swale or other water sensitive urban design treatment area.	
	Footpath & cycle path provision	2.5m wide shared path on each side.	
		1.5m wide footpath on each side and 1-1.5m cycle lane marked on carriageway on each side appropriately signed.	
	Arterial Road		
	<ul> <li>Traffic volume¹</li> </ul>	Greater than 7000vpd	
	<ul> <li>Target speed<sup>2</sup></li> </ul>	Arterial road design as required by the relevant roads authority.	
	<ul> <li>Carriageway width<sup>3</sup> &amp; parking provision within street reservation</li> </ul>	Arterial road design as required by the relevant roads authority.	
	<ul> <li>Verge width<sup>4</sup></li> </ul>	Arterial road design as required by the relevant roads authority.	
	• Kerbing <sup>5</sup>	Arterial road design as required by the relevant roads authority.	
	<ul> <li>Footpath &amp; cycle path provision</li> </ul>	2.5m wide shared path on each side or as otherwise required by the relevant roads authority.	
	Key to Table C1  1. Indicative maximum traffic volume for 24-hour  2. Target speed is the desired speed at which m  3. The maximum width within the range should b Widening may be required at bends to allow function of bends serving as slow points.	Key to Table C1  1. Indicative maximum traffic volume for 24-hour period. These volumes depend upon location. Generation rates may vary between existing and newly developing are  2. Target speed is the desired speed at which motorists should travel. This is not necessarily the design speed and is not greater than the marked legal speed limit.  3. The maximum width within the range should be used when bus use is anticipated or when upright kerbs are used. Width is measured from kerb invert to kerb invert. Widening may be required at bends to allow for wider vehicle paths using appropriate Australian Standards for on street and off-street parking but should not negatifunction of bends serving as slow points.	Key to Table C1  1. Indicative maximum traffic volume for 24-hour period. These volumes depend upon location. Generation rates may vary between existing and newly developing areas.  2. Target speed is the desired speed at which motorists should travel. This is not necessarily the design speed and is not greater than the marked legal speed limit.  3. The maximum width within the range should be used when bus use is anticipated or when upright kerbs are used. Width is measured from kerb invert to kerb invert. Widening may be required at bends to allow for wider vehicle paths using appropriate Australian Standards for on street and off-street parking but should not negate the function of bends serving as slow points.



Objectives	Standard (Summary)	Assessment
	<ol> <li>Verge width includes footpaths. Additional width may be required to accommodate a bicycle path.</li> <li>Where drainage is not required a flush pavement edge treatment can be used. Layback kerbs are preferred for safety reasons. Upright kerbs may be considered for drainage purposes or in locations where on-street parking should be clearly defined and parking within the verge is not desired.</li> <li>Gunnian cocess and eggess parking on abutting lots may require additional carriageway width. The recommended carriageway width of 5.5m will provide adequate access to a standard 3.5m wide single garage built to the property line.</li> <li>7.7m-7.5m widths should be used when parking is required on each side.</li> <li>8.50kph is the default urban speed limit in Vidoria.</li> <li>9. Target speed must not exceed the legal speed limit.</li> </ol>	d for safety reasons. Upright kerbs may be considered for e verge is not desired. dth. The recommended carriageway width of 5.5m will provide
CLAUSE 56.07: Integrated Water Management		
Clause 56.07-1 Drinking water supply objectives To reduce the use of drinking water. To provide an adequate, costeffective supply of drinking water.	<ul> <li>Standard C22</li> <li>The supply of drinking water must be:</li> <li>Designed and constructed in accordance with the requirements and to the satisfaction of the relevant water authority.</li> <li>Provided to the boundary of all lots in the subdivision to the satisfaction of the relevant water authority.</li> </ul>	Complies  Water supply will occur via an existing 150mm dia water main in Norvel Road. Further, an existing 100mm dia water main will be updated to 150mm dia so that it can extend into the development as the primary source of water supply. Connections to existing mains in Castricum Place and Dion Street will also be required to service the proposal.
Clause 56.07-2 Reused and recycled water objective To provide for the substitution of drinking water for non-drinking purposes with reused and recycled water.	Standard C23  Reused and recycled water supply systems must be:  Designed, constructed and managed in accordance with the requirements and to the satisfaction of the relevant water authority, Environment Protection Authority and Department of Human Services.  Provided to the boundary of all lots in the subdivision where required by the relevant water authority.	Complies Reused and recycled water supply systems will be provided to the boundary of all lots where required by the relevant water authority.
Clause 56.07-3 Waste water management objective	Standard C24 Waste water systems must be:	Complies Waste water systems will be designed, constructed and managed in accordance



Assessment	with the requirements of the relevant water authorities. Reticulated waste water systems will be provided to the boundary of	all lots where required by the relevant water authority.	ary of all vrity.	Complies	The proposed stormwater management	and to approach relies on the existing billabong to the north-west for detention and water	0		stives for Management Report prepared by Cardno for further details.		site are re		providing	he overall works	dence
Standard (Summary)	<ul> <li>Designed, constructed and managed in accordance with the requirements and to the satisfaction of the relevant water authority and the Environment Protection Authority.</li> </ul>	<ul> <li>Consistent with any relevant approved domestic waste water management plan.</li> </ul>	Reticulated waste water systems must be provided to the boundary of all lots in the subdivision where required by the relevant water authority.	Standard C25	The stormwater management system must be:	Designed and managed in accordance with the requirements and to the entire action of the relevant drainage authority.	<ul> <li>Designed and managed in accordance with the requirements and to</li> </ul>	ure satisfaction of the water authority where reduce of stormwarproposed.	Designed to meet the current best practice performance objectives for stormwater quality as contained in the <i>Urban Stormwater – Best</i>	Practice Environmental Management Guidelines (Victorian Stormwater Committee 1999).	<ul> <li>Designed to ensure that flows downstream of the subdivision site are restricted to pre-development levels unless increased flows are</li> </ul>	approved by the relevant drainage authority and there are no detrimental downstream impacts.	<ul> <li>Designed to contribute to cooling, improving local habitat and providing attractive and enjoyable spaces.</li> </ul>	The stormwater management system should be integrated with the overall development plan including the street and public open space networks and landscape design.	For all storm events up to and including the 20% Average Exceedence
Objectives	To provide a waste water system that is adequate for the maintenance of public health and the management of	effluent in an environmentally friendly manner.		Clause 56.07-4	Urban run-off management	objectives To minimize damage to properties	and inconvenience to residents from stormwater.	To ensure that the street operates	adequately during major storm events and provides for public safety.	of minimise increases in stormwater and protect the environmental values	and physical characteristics of receiving waters from degradation by	Stormwater .  To encourage stormwater	management that contributes to cooling, local habitat improvements	and provision of attractive and enjoyable spaces.	







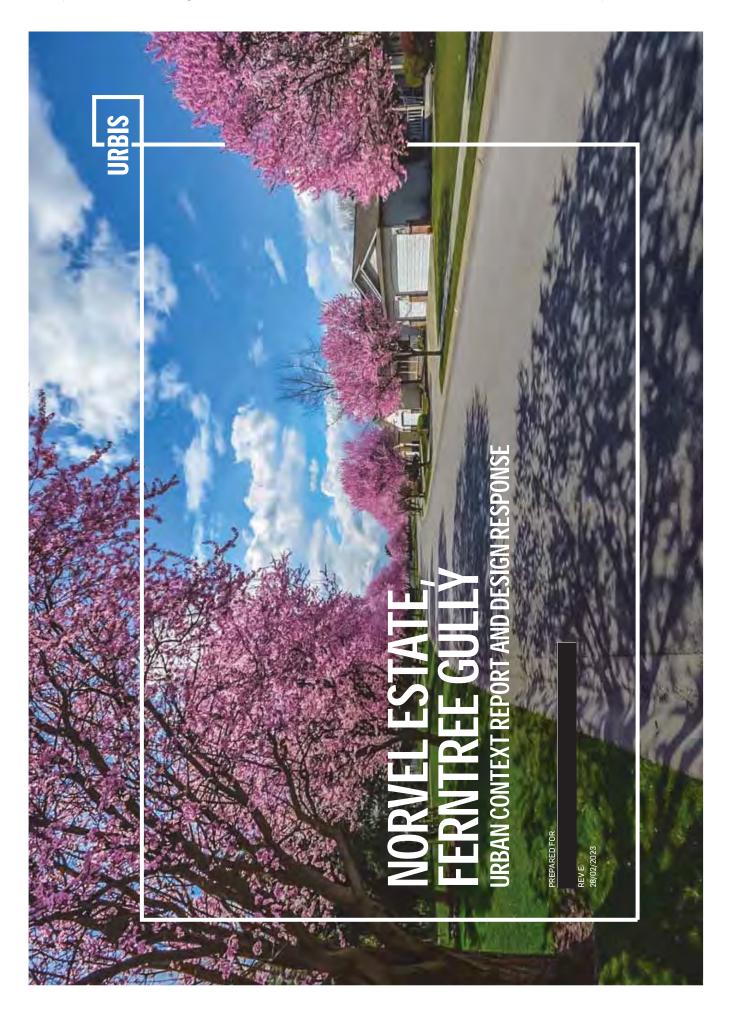
	Assessment	Any flood mitigation works must be designed and constructed in accordance with the requirements of the relevant floodplain management authority.		Complies	A subdivision application must describe how the site will be managed prior to and during the construction period and may set out requirements for and during the construction period and may set out requirements for managing:  Erosion and sediment.  Dust.  Litter, concrete and other construction wastes.  Chemical contamination.  Vegetation and natural features planned for retention.  Recycled material should be used for the construction of streets, shared paths and other infrastructure where practicable.		Standard C27  Reticulated services for water, gas, electricity and telecommunications should be provided in shared trenching to minimise construction costs and allocation for underground services.  Please refer to the utility services infrastructure report prepared by Cardno for further details.
	Standard (Summary)	Any flood mitigation works mus accordance with the requiremen authority.		Standard C26	A subdivision application must describe how the site will to and during the construction period and may set out recmanaging:  Erosion and sediment.  Dust.  Litter, concrete and other construction wastes.  Chemical contamination.  Vegetation and natural features planned for retention. Recycled material should be used for the construction of paths and other infrastructure where practicable.		Standard C27 Reticulated services for water, gas, elect should be provided in shared trenching t land allocation for underground services.
]	Objectives		CLAUSE 56.08: Site Management	Clause 56.08-1	Site management objectives  To protect drainage infrastructure and receiving waters from sedimentation and contamination.  To protect the site and surrounding area from environmental degradation or nuisance prior to and during construction of subdivision works.  To encourage the re-use of materials from the site and recycled materials in the construction of subdivisions where practicable.	CLAUSE 56.09: Utilities	Clause 56.09-1 Shared trenching objectives To maximise the opportunities for shared trenching. To minimise constraints on landscaping within street reserves.



Objectives	Standard (Summary)	Assessment
Clause 56.09-2	Standard C28	Objective and standard achieved
Electricity, telecommunications and gas objectives  To provide public utilities to each lot in a timely. efficient and cost effective	The electricity supply system must be designed in accordance with the requirements of the relevant electricity supply agency and be provided to the boundary of all lots in the subdivision to the satisfaction of the relevant electricity authority.	The proposal will incorporate the construction of a high voltage cable from the existing high voltage line in McMahons Road to the south to a new kiosk station
manner. To reduce greenhouse gas emissions	Arrangements that support the generation or use of renewable energy at a lot or neighbourhood level are encouraged.	within the site. The proposal will require the installation of a
by supporting generation and use of electricity from renewable sources.	The telecommunication system must be designed in accordance with the requirements of the relevant telecommunications servicing agency and should be consistent with any approved strategy, policy or plan for the	telecommunications pit and people infrastructure with the installation of fibre optic cable to be carried out by NBN Co.
	provision of advanced telecommunications infrastructure, including fibre optic technology. The telecommunications system must be provided to the boundary of all lots in the subdivision to the satisfaction of the relevant telecommunications servicing authority.	Please refer to the utility services infrastructure report prepared by Cardno for further details.
	Where available, the reticulated gas supply system must be designed in accordance with the requirements of the relevant gas supply agency and be provided to the boundary of all lots in the subdivision to the satisfaction of the relevant gas supply agency.	
Clause 56.09-3	Standard C29	Objective and standard achieved
Fire hydrants objective	Fire hydrants should be provided:	Fire hydrants will be installed to satisfy this
To provide fire hydrants and fire plugs in positions that enable fire fighters to	<ul> <li>A maximum distance of 120 metres from the rear of the each lot.</li> <li>No more than 200 metres apart.</li> </ul>	standard.
access water safely, effectively and efficiently.	Hydrants and fire plugs must be compatible with the relevant fire service equipment.	
Clause 56.09-4	Standard C30	Objective and standard achieved
Public lighting objective	Public lighting should be provided to streets, footpaths, public telephones,	Public lighting will be provided within the
To provide public lighting to ensure the safety of pedestrians, cyclists and vehicles.	public transport stops and to major pedestrian and cycle paths including public open spaces that are likely to be well used at night to assist in providing safe passage for pedestrians, cyclists and vehicles.	street network, to help contribute towards a safe movement network.

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Objectives	Standard (Summary)	Assessment
pedestrians with a sense I safety at night.	Public lighting should be designed in accordance with the relevant Australian Standards.	
To contribute to reducing greenhouse gas emissions and to saving energy.	Public lighting should be consistent with any strategy, policy or plan for the use of renewable energy and energy efficient fittings.	





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# 2.0 STRATEGIC CONTEXT

Norvel Estate [the Site] is situated in an area which is not subject to a Structure Plan. Therefore development is largely controlled by the local Alanning Scheme. Additional guidance, particularly for the public realm, is provided in various policy plans and frameworks by Knox City Council.

### 1 ZONII

The Site is currently zoned Special Use. Apart from Urban Floodway and Public Park & Recreation zones on the northern boundary (along Blind Creek), the Site is fully surrounded by Residential Zones (refer to Figure 1).

## 2 OVERLAY

The Site is subject to an Environmental Significance Overlay -Schedule 2 (ESO2) on the northern end, covering the area of indigenous remnant vegetation (refer to Figure 2).

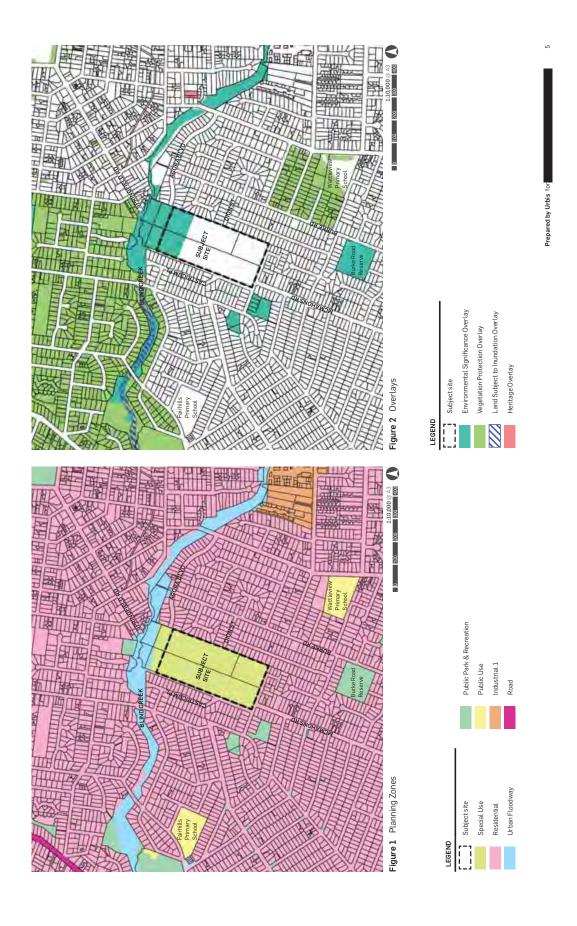
This overlay aims to protect sites and vegetation of biological significance within the Knox City Council municipality from extinction, and to maintain and improve habitat corridors and connectivity.

There was previously a Vegetation Protection Overlay I (VPOI) over part of the site but it has since been removed since that area has now been cleared of vegetation.

area has how been toeared in vegeration.

There are no heritage overlays in close proximity and the portion of Blind Creek immediately adjacent to the Site does not have a land Sulject to inundation Overlay.

# This Urban Design Report has been propared by the support of the support of the design report of the correct of the design report of



Adjacent to creek corridor open space, encourage

Notable guidelines include:

- public access to creek corridor path.

- medium density

#### -RAMEWORK KNOX URBAN DESIGN

#### Garden Suburb

- retain the traditional arrangement of sealed footpaths on

- traffic calming where appropriate Improve the amenity of roads with:

avenue tree planting

Use a single dominant tree species for the whole street.

both sides of the street.

Retain existing indigenous trees.

The Knox Urban Design Framework divides the council area into different Residential Environments with specific guidance provided for each. Norvel Estate is situated within a "Garden Suburb" character area. The key objective for Garden Suburbs

#### FREQUENT STANDS OF LARGE **DWELLINGS SET WITHIN AN** NATIVE AND EXOTIC TREES. **ENCOURAGING LOW SCALE** OPEN LANDSCAPE WITH

# Increase connectivity between Garden Suburbs and activity centres.

Creek Corridors

Corridor. Notable strategic directions and actions include: The subject site is also immediately adjacent to a Creek

- Provide frequent connections to adjoining streets that provide a reasonable range of choice between paths.
- Extending local streets to and along the edges of the creek corridors where space permits.
  - Better integrate creek corridors with transport routes
- Manage the creeks to allow water to be seen as a feature rather than treating them as engineered and sanitised Creeks as nature:
- Utilise detention and retarding basins as a positive feature
- Prioritise indigenous vegetation.
- Protect & retain remnant vegetation.
- "Encouraging functional, contemporary landscape designs to provide attractive and useful park spaces"

# **KNOX GREEN**

The Green Streets Policy is also based on the character areas described in the Knox Urban Design Framework. Guidelines STREETS POLICY relating to streetscapes in "Garden Suburban" areas (p.23),

- Gardens are frequently low level with small shrubs and occasional tall trees, usually native varieties.
  - Street trees are generally medium height and may be formally or informally arranged.
    - Retention of native and indigenous canopy trees is
- Retain existing high canopy trees wherever possible. If removal is necessary, replace with a tree of an equivalent encouraged.

#### Nature Strips

As a general rule, landscaping to nature strips (i.e. a treatment other than grass) is only permitted in special circumstances (e.g. erosion prevention, public safety, resident incapable of maintaining grass, service requirements etc.)

## DESIGN RESPONSE TO 2.3 & 2.4

- Remnant vegetation subject to the ESO2 overlay is protected and retained.
- Corridors guidelines and desired characters. Refer to The design of the public realm offers a particularly strong response to the Garden Suburbs and Creek The key objective of Garden Suburbs is met with: the Norvel Estate Landscape Report for details.
  - being preserved, and high densities of new trees proposed in the public - large expanses of green space and existing trees

# **EISURE PLAN**

A key area of focus in the Leisure Plan is "'Active leisure', and of their daily routine" (p.7). Active leisure is defined here as opportunities for residents to become more active as part "Leisure activities that involve physical activity"

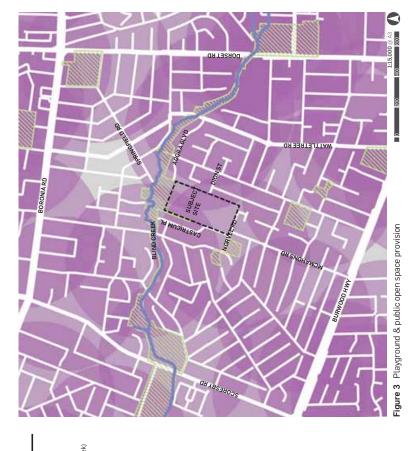
Some key observations and actions from the leisure plan include:

- facilities, safe road crossings, seats, trails/footpaths) that "There is also a need to acquire additional open space for encourage residents to incorporate physical activity into "It is important to provide facilities (e.g. bike storage daily work, school, and family routines" (p.19)
- sport and leisure activities previously unplanned for, such as dog off leash activities" (p.48)
  "Explore opportunities for the establishment of outdoor
  - gyms" (p.39).

## Design Response to 2.5

reserve will support active leisure and active transport (walking & cycling to local destinations) boundary and access paths through the bushland Providing a formalised SUP along the western

Norvel Estate Urban Context Report



#### Playground 500m radius from playground Watercourse (Blind Creek) Public open space LEGEND

## According to the Knox Play Space Plan "All residents should ideally have access to a park (of any category) within an approximate 10 minute walk or up to approximately 5000". By these standards, Norvel Estate has excellent access to existing playgrounds and public open space (refer to Figure 3). Knox City Council has approximately one playground per 740 people, the highest in the region with exception of the City of Manningham.

PLAY SPACE PLAN

## Design Response to 2.6

- Recognising that the area is already well serviced by playgrounds with proprietary equipment, the public realm offering draws upon other opportunities identified in the Leisure Plan through the following actions:
   the development of passive, local open space, the provision of safe road crossings, seats and footpaths.



# 3.0 BROAD CONTEXT

# 3.1 LAND USES

Norvel Estate is located within an established low scale residential area, bounded to the north by Blind Creek. It is located approximately 30 kms east of Melbourne CBD.

It is well serviced by primary schools and open green spaces, with three schools and three parks located within a walkable 800m radius.

Just beyond this radius, the site has access to a variety of retail outlets in two Major Activity Centres - Boronia and Mountain Gate. These activity centres contain supermarkets, a Khartt, major pharmacies and retail strips including many food and beverage outlets.

# 3.2 TRANSPOR

The site has access to several public transport routes. The main connection is provided by the 753 bus route, a 5-10 minute walk from the site, with a short connection to Bornia Station. Bornia Station is on the Belgave line with an approximate 50 minute commute to the CBD or 10 minutes station, as Righyaodo. In addition, six bus routes connect with the train station, as depicted in Figure 4.

The site has almost direct access to the Principal Bicycle Network via the Blind Greek Trail which meets the Dandenong Creek Trail to the west and the Belgrave Rail Trail to the east.

## DESIGN RESPONSE TO 3.1 & 3.2

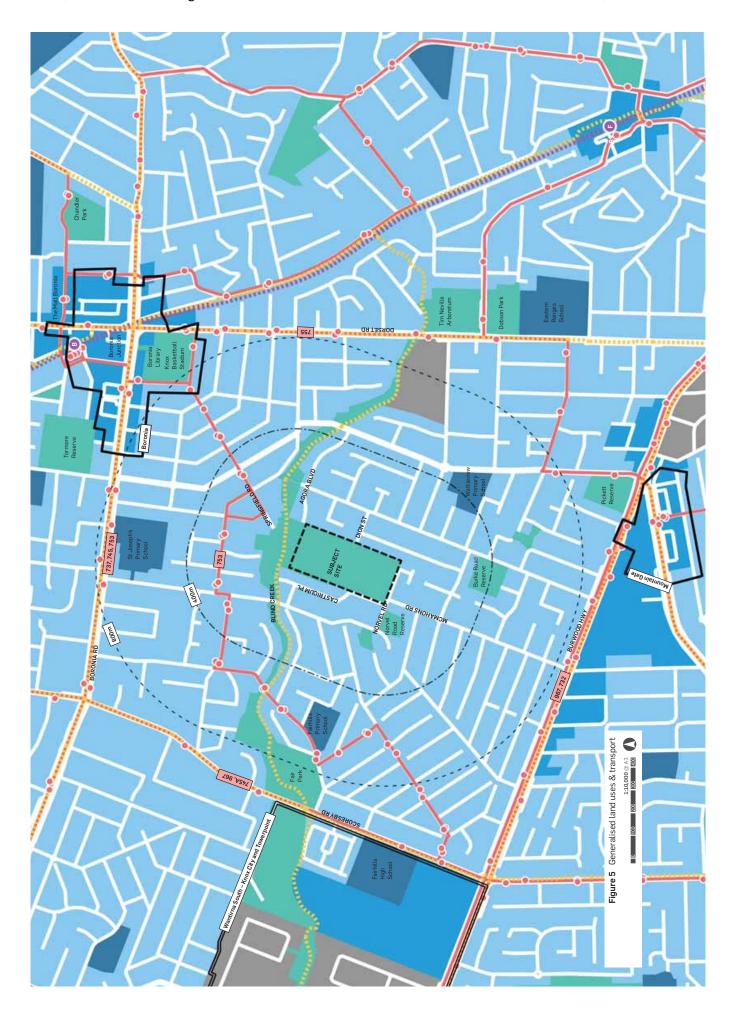
Recognising that conveniences and transport connections are generally not within a very walkable distance, there is an appropriate provision of onstreet parking.



LEGEND

Subject site

Norvel Estate Urban Context Report



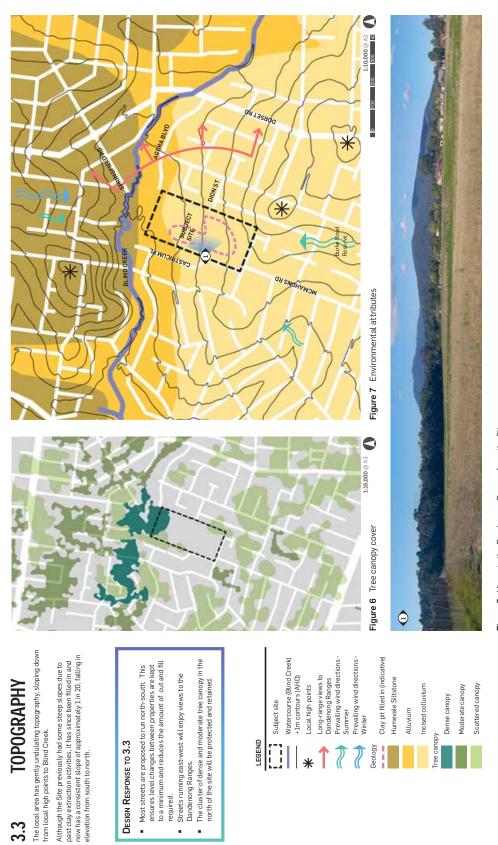


Figure 8 Views to the Dandenong Ranges from the Site

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### JRBAN FORM & CHARACTER

frequent culs-de-sac / dead end roads and few local connector roads. The nearest main roads are about a kilometre from the In the area surrounding Norvel Estate, the residential streets are laid out in a generally rectilinear arrangement with subject Site.

subdivision from the outset avoids the less desirable outcome of larger lots being later subdivided with private lanes to service dwellings at the rear. expectations of the market. Offering this scale of

directions as the existing surrounding streets to The design has a finer grain of subdivision than the surrounding areas, responding to changing

The proposed streets are oriented in the same provide continuity and aid navigation.

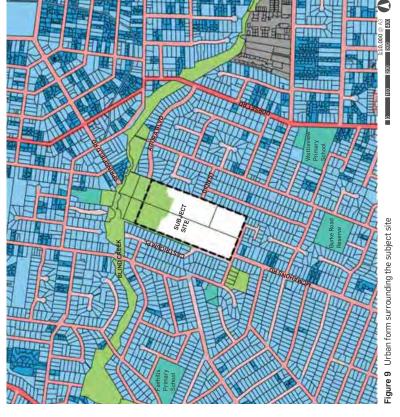
DESIGN RESPONSE TO 3.4

dwellings on sites that would have originally contained a single the time many decades ago when the land was first developed around 750m² in area and contain single detached dwellings of 1-2 storeys in height. However, there is a trend towards detached dwelling. This is reflective of changing home buyer expectations and housing affordability pressures, relative to Residential lots in the surrounding area are most commonly further subdividing older lots to accommodate multiple

up the built edge of the street. This is explored in more detail in vary noticeably within a street. Occasionally houses are even rotated at different angles to their lots which further breaks Apart from residential, this area also has a few 'pavilions in The front setback depths and articulation of houses often Section 5.0 Interfaces and Section 6.0 Local Case Studies.

some industrial buildings further to the south east of generally low architectural quality, surrounded by paved areas but also a buildings which are surrounded by a generous amount of open space and can easily be viewed in the round. There are also a park' - i.e. mostly larger institutional or community-use

guidelines, this council area is known for having a leafy character. Tree canopy cover is especially dense immediately north of the subject site. As is regularly noted in Knox City Council strategies and



Typical residential lots Green space Subject site LEGEND

Pavilions in a park

Minor road Dead-end minor road

Local road Industrial

(mostly with single low scale detached dwelling) Finer-grain subdivided residential lots

Prepared by Urbis fo

779 of 915

# 4.0 SITE & IMMEDIATE CONTEXT

**HISTORY** 

Norvel Estate was previously known as the Norvel Road Quarry. It was owned by Robertson Industries and was used for clay extraction to manufacture bricks under the Daniel Robertson brand. Within the past decade, the clay pit has been filled so the site has a relatively consistent, gentle slope and the vegetation south of the most densely vegetated remnant woodland area has been cleared



Figure 10 Site in Feb 2007

.... Although 18 threatened flora and fauna species have been previously recorded within three kilometres of the study area within the last thirty years, only one was recorded during the current assessment. [Green Scentbark

- Biodiversity Assessment, Norvel Road, Ferntree Gully, Ecolink, Dec 2020, p. 4

vegetation is of high quality in the north of the study area,

(Dec 2020) observes the following:

with Habitat Scores ranging from 26 to 55 (out of 100). Other native vegetation, that is not classified as remnant

was recorded in the south of the study area.



(Source: Sites of Biological Significance In Knox Vol.2, p.180)

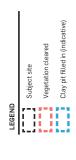












of major changes)

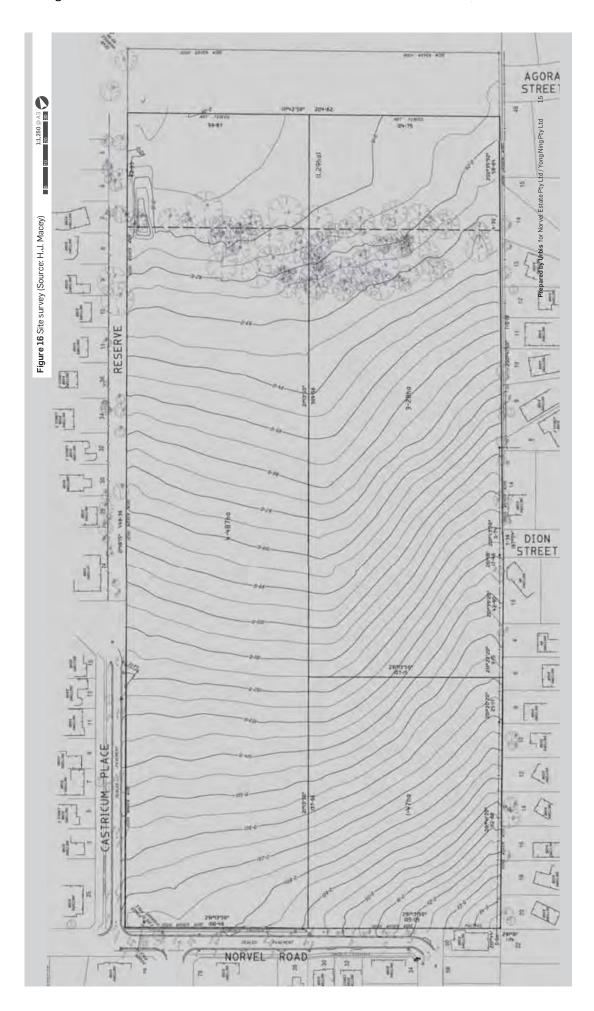
Norvel Estate Urban Context Report 12 Design Response to 4.1 & 4.2











# **MOVEMENT &**

so it is not as clear and direct as the linear reserve, particularly reinforced. While the Blind Creek trail can also be accessed via Castricum Place and Jacobus Walk, this route has an interruption in the middle and inconsistent footpath provision and cyclists. The local feeder paths to access the trail are via high levels of foot traffic since it is a largely residential area, The area around Norvel Estate would not generally attract however the Blind Creek trail attracts recreational walkers to the west. These desire lines to and from the Site will be Springfield Rd and Castricum Place and the linear reserve for cyclists.

pedestrians and cyclists to the Blind Creek trail, and onwards to Boronia Activity Centre. Creating logical site entry points and an internal road network that is legible and responsive with the

surrounding urban context.

reserve provides more legible and direct access for New shared use path (SUP) along the linear

Providing a welcoming entry point at the junction of Castricum Place and the linear reserve, including a

rest spot and way-finding.

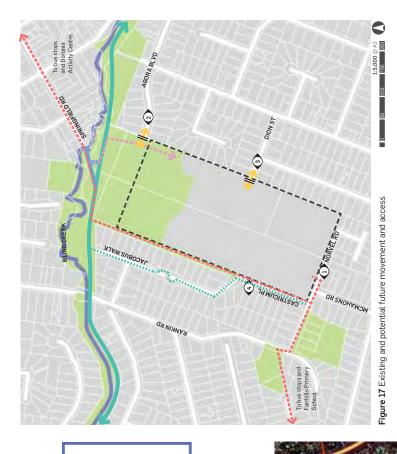
DESIGN RESPONSE TO 4.4

connector streets (e.g. Norvel, Rankin, Mcmahons, Edina and Burke Roads) stitched together by secondary streets with The surrounding street network is formed by a number of

three entry points off Norvel Road, Castricum Place, and Agora Boulevard (refer to plans in Section 5.0 Interfaces). Potential entries at Dion Street and Norvel Road provide an Vehicles are currently able to access Norvel Estate via

## opportunity for the site to be more legibly embedded within the surrounding street network.

Figure 18 Heat mapping of pedestrian/cyclist movement surrounding site (Source: Strava Labs)





Blind Creek trail

Indirect feeder path via Jacobus St Dead ends

connections (schematic)
Potential new connections
with existing roads

Desire lines to-from the subject site once developed Potential new pedestrian

Opportunities



1:5,000 @ A3

Figure 19 Interfaces key plan

Castricum Place

4 Norvel Road

Eastern boundary & Dion

2 Bushland reserve

Linear reserve

Subject site

# 5.0 INTERFACES

The following sections describe the immediately surrounding conditions of the site, as defined in Figure 19 Interfaces Key Plan.

#### BUNNORRO BUNNOR

## Design Response to 5.1

There are currently fifteen trees of varying species and concitions scattered along the length of the reserve, including there f. fugens. The sparseness of the trees along the linear reserve creates a clear visual link between Castricum Place and the Blind Creek corridor.

As described in Section 4.4 Movement and Access, the linear reserve along the western boundary of the site can be used to access the Blind Creek trail. The linear reserve is currently confined by full height rear fenning of the abutting properties.

along Castricum Place, and wire fencing on the western perimeter of the Site. At present it is a grassed area with no

**LINEAR RESERVE** 

5.1

- Extends the green character, with additional tree and under-storey plantings along the SUP and entry point. Also softens the inactive edge of the back fences.
- ALSO SOTTERS THE MACHINE BLACK HINGES.

  A Mignment of the SUP minimises the need for tree removal as much as possible (including preservation of the E. fulgens specimens).
- of the E. futgens speciationens),

  Road is aligned immediately adjacent to the linear reserve and houses face towards it. This ensures the space does not feet too enclosed and provides a more pleasant frontage with passive surveillance along one side.

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#### Adjacent building footpr ess densely planted Full height fence Blind Creek trail LEGEND The bushland reserve contains some swampy vegetation toward the creek and some Valley Heatty, Forest within the subject site. Generally throughout the reserve there is a groundcover of **BUSHLAND RESERVE** accordance with relevant bushfire safety guidelines to minimise The northern perimeter of the site is bordered by the bushland reserve and the Blind Creek corridor containing the Blind Creek Trail shared use path. The linear reserve provides a buffer between the rear fencing of allotments belonging to Jacobs Walk and the bushland reserve The reserve between the subject site and the Blind Creek trail is generally densely vegetated. The asphalt shared path is flanked by wire fencing restricting access to the bushland reserve. Side and rear fences of properties belonging to Vandeven Court and Agora Boulevard abut the north-eastern perimeter of the site, some with full height timber fenoes and others with wire fencing offering views into the bushland reserve. the bushland are intended to minimise impacts on existing tree protection zones (TPZs) and minimise bushfire risks from overhanging tree canopies and designed to minimise disruption to remnant vegetatior Pedestrian access through the reserve, connecting to Agora Boulevard, is provided via paths that are positioned The landscape concept for the wetland reserve and swale (south of the bushland) have been designed as 'shrubland so that they do not require any additional building setback for bushfire safety purposes beyond that which is already Setbacks proposed for Lot 140 at the southeast corner of development adjacent must be designed and maintained in providing passive surveillance and visual access toward the reserve and Blind Creek Trail. The bushland reserve presents some risk of bushfire. Any A road is proposed to separate residential development

Figure 21 Bushland reserve interface

Norvel Estate Urban Context Report

The street trees and nature strips along the road have been designed in accordance with the CFA guidelines "Landscaping for Bushfire - Garden Design and Plant Selection" or based on CFA advice.

required for the bushland reserve.

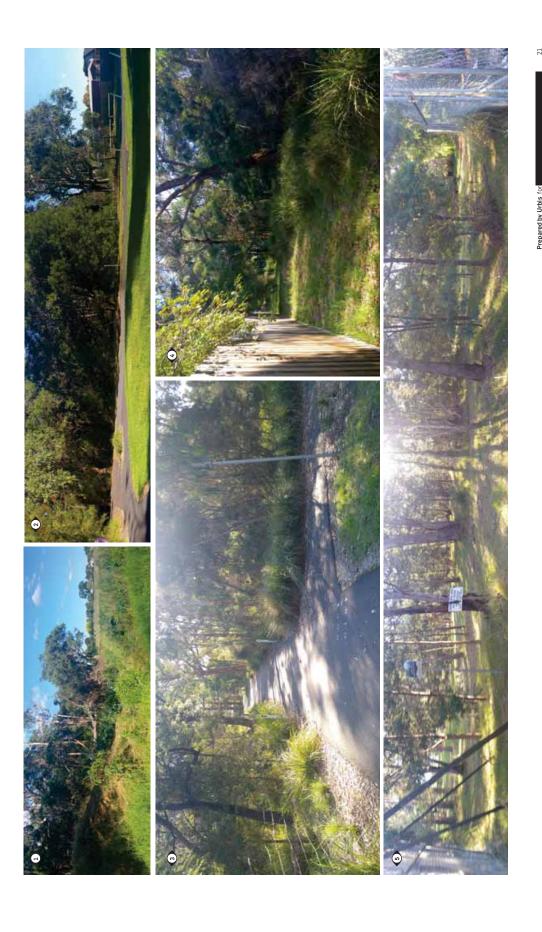
20

dense grasses and sedges.

All but one of the adjacent lots front on to the reserve,

DESIGN RESPONSE TO 5.2

from the reserve, providing a fire break.



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# **EASTERN BOUNDARY**

Apart from the intersection with Dion Street, the entire eastern boundary of the subject site consists of the side or rear fences (usually wire mesh) of the adjacent houses. These neighbouring houses are almost entirely one storey.

Rear setbacks from this boundary to the main dwelling are generous, ranging from approx. 9m and 22m. However the majority of these lots also contain outbuildings and garages at the rear which have much smaller setbacks. Therefore, an open rear yard character is currently not maintained among these existing dwellings.



### STREETSCAPE

Street width is approx 15.2m.

**@** 

- Street trees are few, sparsely scattered and usually Callistemons. They do not form a strong, consistent street scape.
  - Grass nature strips and concrete footpaths.

## **BUILT FORM & SETBACKS**

- The building setbacks vary significantly, ranging from a carport and a house, which are both set back 2.5m at their closest, up to a house which is set back at least
- The houses at the eastern end have side fences facing onto Dion Street.

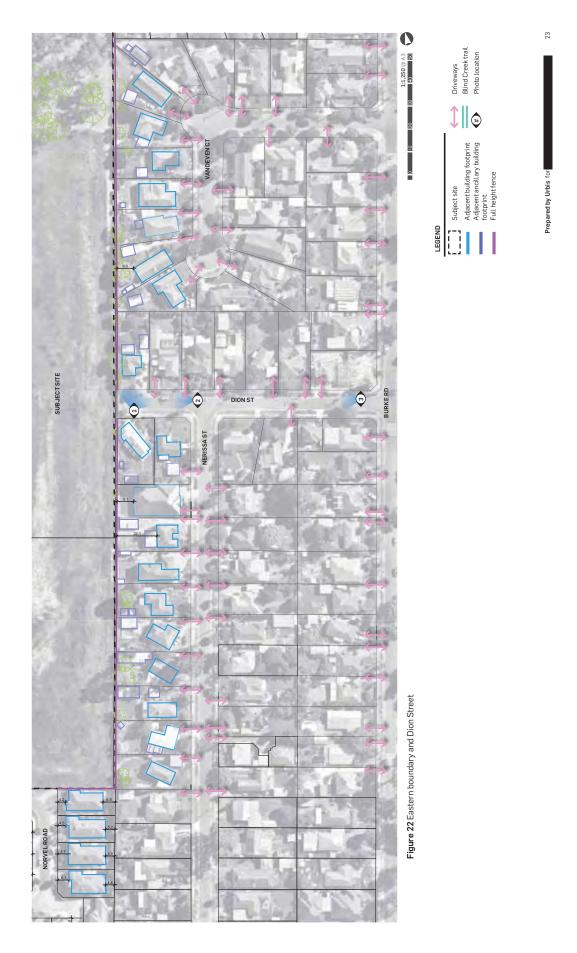
## DESIGN RESPONSE TO 5.3 AND 5.4

- New allotments will sit back-to-back with the existing lots, separated by new solid fencing to replace the
  - Dwellings bordering the east property boundary will have minimum 5m selbasks to allow for at least one canopy tree and flexibility of built form at the rear. This allows for a variety of highly articulated forms, existing wire fencing.
- also maintain a similar pattern to the existing lots to the south of the site, at 54, 56, 58 and 60 Norvel Road. Deciduous street trees are proposed for the extension The proposed lot widths and rear building setbacks



MoiC

- including some larger setbacks.
- to Dion Street to mark the entry to the developmen and maximise winter sun ingress for the adjacent



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# **NORVEL ROAD**

Norvel Road borders the subject site to the south, before terminating in a double-ended court.

**BUILT FORM & SETBACKS** 

#### STREETSCAPE

- Both sides of the street have a median strip with a mix of

#### most consistent at the eastern end of the street where there is a series of Acer platenoides Norwegian Surset: Few of the abutting houses have front fences, creating an open setting with private vegetation contributing to the streetscape amenity. mature and young street trees. The planting scheme is Street width is approx 15.2m to 16m.

Houses with frontages to Norvel Road have a broad range of front setbacks. The largest front setback, belonging to one of the older homes, is 10.7m. The smallest front setback is 3.8m. Many of the newest homes on the street have front sebacks of around 4,2-4.8m.
 Buildings with a side frontage to Norvel Road have short setbacks of 3.3m and 2.1m.

## Design Response to 5.5

- New allotments within the estate along Norvel Road will front onto the existing street. They will have a minimum 4.5m front setback which is consistent with the range of setbacks currently existing along Norvel
- As is the case for most properties on Norvel Road, new allotments will not have front fences, maintaining the openness of the street.
  - The existing street tree palette will be reinforced with more A. platanoides 'Norwegian Sunset' proposed along Norvel Road.

Adjacent building footprint Full height fence Driveways

LEGEND

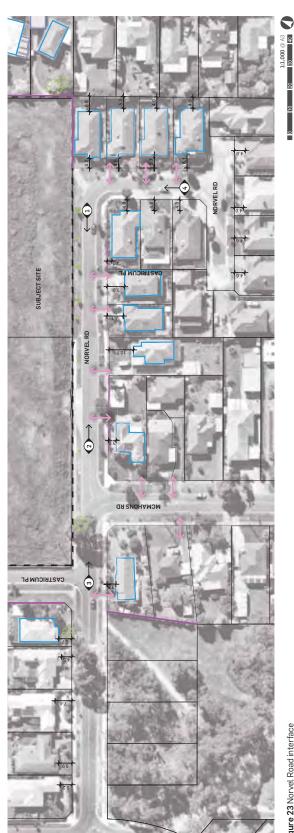


Figure 23 Norvel Road interface

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# CASTRICUM

Castricum Place borders the Site's western perimeter, south of the linear reserve. Aside from the property at the Norvel Road corner, houses have a frontage to Castricum Place facing west towards the subject site.

### STREETSCAPE

CSSA

- Street width is approx 16.5m.
   There is a relatively consistent lining of street trees on the western side of the street, with 1-2 trees between on the nature strip between vehicle crossovers.
  - Few of the abutting houses have front fences creating an open setting with private vegetation contributing to the streetscape amenity. A dense lining of vegetation visible on the eastern side of the street within the subject site has been cleared since

### **BUILT FORM & SETBACKS**

the image was taken.

There is a range of building setbacks from the street, with
the shortest being 4.4m and the furthest being 8.9m.
 There is one double storey residence amidst the row of

detached single storey brick homes.

- New allotments along the western perimeter of the site will have frontage and vehicle access to Castricum Place, consistent with the existing street Design Response to 5.6
  - Street trees to be maintained where possible or planted between the proposed crossovers.
- Buildings are proposed to have minimum 5.5m front setbacks which is consistent with the range of setbacks currently existing along Castricum Place.

### Adjacent building footprint Full height fence Subject site Driveways LEGEND





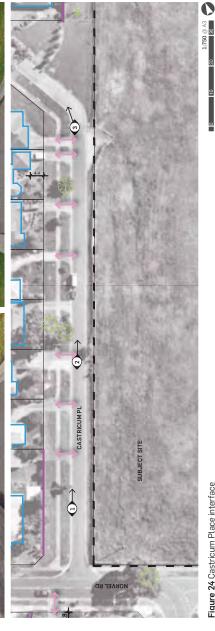
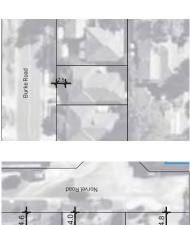
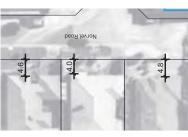
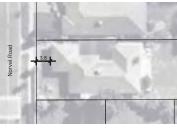


Figure 24 Castricum Place interface

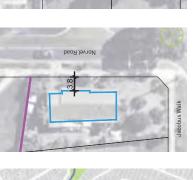
Norvel Estate Urban Context Report











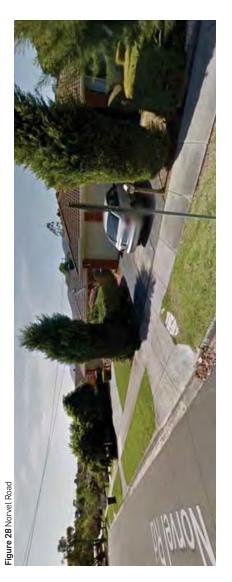


The variations in front setbacks are not restricted to just the streets immediately adjacent Norvel Estate. Within the local area there are minerous examples of homes which have relatively small setbacks and some which incorporate generously sized trees and shrubs.



Figure 26 Jacobus Walk





Norvel Estate Urban Context Repo







# 7.0 DESIGN RESPONSE SUMMARY

Gully, bounded to the north by Blind Creek. It is located approximately 30kms east of Norvel Estate is located within an established low scale residential area of Ferntree Melbourne CBD. The site is most directly accessible via Rankin Road and Mcmahons Road which respectively intersect with Boronia Road and Burwood Highway.

much of its vegetation being cleared, particularly in its southern half. Dense bushland eserve abutting the creek trail. The site has a gentle slope running north towards the toward its northern interface serves as a buffer between the site and the bushland Originally used as a quarry, the site is now vacant. Its former use has resulted in

At present the surrounding area is largely made up of low density detached dwellings. typically of single or double storeys often with generously sized yards.

consultation with Council and the CFA (Country Fire Association) to mitigate potential bushfire risks, provide enough space for landscaping, and to help ensure the built form

While the current proposal for Norvel Estate does not include designs for individual dwellings, high-level design guidance including minimum setbacks is provided in

the masterplan and Urban Design Guidelines. These have been developed in close

the surrounding neighbourhood character. They will allow for yards that are of a comparable depth to others along Norvel Road and Castricum Place, and throughout the local neighbourhood (see "5.5 Norvel Road", "5.6 Castricum Place" and "6.0 Local Case Studies"). Inward facing lots will also feature front setbacks with similar depths Garages are to be set back further than other portions of the frontage so they are not Dwellings bordering the east property boundary will have generous rear setbacks to

The proposed minimum front setbacks of outward facing lots are appropriate for

character is appropriate for its setting.

However much has changed since the area was first developed as detached dwellings on single allotments. The Knox Municipal Strategic Statement outlines a demand for different types of housing as well as an undersupply of affordable housing. Housing composition in the surrounding area is changing and becoming more diverse, with many existing blocks that once contained a single home now being subdivided into

# PROPOSED DESIGN

### STREETS

The street network proposed for Norvel Estate has been designed to integrate well with the surrounding grid in terms of its form and connectivity.

widths. The narrowest roads run alongside open green spaces, so they will not appear The proposed new streets are laid out parallel to surrounding streets and use similar

Most streets are proposed to run north-south. This ensures level changes between

The road layout allows for long sightlines and is simple to navigate. Road H has been designed as a no-through-road in response to Council concern that allowing a direct connection from Norvel Road to Dion Street (via Road G) would result in its use as a properties are kept to a minimum and reduces the amount of cut and fill required. busy shortcut for the wider community wanting to travel between the two points.

The road reserves provide ample opportunities for the establishment of canopy trees which is consistent with the character of the surrounding area and the broader

An appropriate number of on-street car parks have been provided to service the

Norvel Estate Urban Context Report

30

density of residential lots to cater to present-day challenges and buyer expectations Compared to the older subdivisions in surrounding areas, this design offers a higher

RESIDENTIAL LOTS

while maintaining the green character that is so valued in Knox. It includes a mix of

different tot depths and sizes, including some that are appropriate for affordable housing. This caters to the needs of a variety of potential buyers and allows for a

variety of different building types and enough space for leafy front yards.

**BUILT FORM & SETBACKS** 

ndigenous vegetation will be preserved and handed over to Council in accordance In the north of the site, 2.18 hectares of land that is densely planted with remnan with the Section 173 Agreement.

from the estate will be collected and treated using gross pollutant traps, a swale and an ephemeral wetland prior to being discharged into to Bushland Reserve and Blind reserve, providing a green outlook to residents and some passive surveillance. No rees are proposed to be removed in the bushland reserve, and the proposed paths wilt generally be positioned in already disturbed areas and adopt materials and construction techniques to minimise visual and physical disturbance. Stormwater The proposed design will allow the community to safely enjoy this green space while minimising any degradation. Nearly all the adjacent lots front on to the

to minimise dangers to life and property through the positioning of a road as a buffer providing appropriate building setbacks, and by selecting appropriate plant species present some bushfire risk. The proposed design takes this into account and seeks While establishing this bushland reserve will be very positive ecologically, it does and positioning of plants.

### LANDSCAPE

The proposed landscape design for Norvel Estate seeks to preserve and enhance the leafy character of the area while referencing the history of the site and providing a well considered response to potential bushfire threats.

cyclists. Areas of feature paving are proposed at this junction and in a number of other locations throughout the site. The feature paving will include Daniel Robertson bricks A feature landscape with seating is provided at the junction of the SUP and Castricum Place to enhance local amenity and provide a welcoming entry for pedestrians and to reference the history of the site as a clay quarry for this company.

linear reserve and four exotic trees along Norvel Road to accommodate the driveways canopy trees are provided along all roads and the shared use path. Species that have The design has been developed to preserve as many existing trees as possible. Two will need to be removed in the linear reserve to accommodate the the SUP in the and the road reserve. In addition to those preserved, a generous number of new been specifically recommended for this site by Council are proposed.

> minimal disturbance to existing trees and the green character will be reinforced with Proposed paths through the bushland reserve will connect Norvel Estate with Agora

Boulevard. These paths will be designed to have a naturalistic character and make use of already disturbed areas within the bushland reserve. They will allow the community to experience the remnant forest evironment while reducing the risk of

additional disturbance to the site.

site will allow pedestrians and cyclists to easily access the bicycle trail along Blind

New pedestrian and shared use paths will provide improved connectivity for the A formalised shared use path (SUP) in the easement on the western edge of the Creek and also Boronia town centre via Springfield Road. It is designed to have

PEDESTRIAN AND BICYCLE MOVEMENT

residents and neighbours of Norvel Estate through the green spaces.

respect the open rear yard character of the development along this interface.

given visual prominence and to provide articulation in the frontage.

stormwater and are also below 1m height. This allows the wetland & swale area to be considered a 'Shrubland', which requires building setbacks that are well below what is already necessary for the Bushland Reserve ('Forest'). The design also seeks to mitigate bushfire risks by proposing low-flammability trees side of Roads D and E, plants have been selected that are appropriate for treating

### **BUSHLAND RESERVE**

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### **ESPONSES 1 IMMARY 0**

Refer to Planning report for matters regarding zoning.

### "2.2 Overlays", "2.3 Knox Urban Design Framework" 'Design Response to 2.3 & 2.4" on page 6

- Remnant vegetation subject to the ESO2 overlay is & "2.4 Knox Green Streets Polic
- The design of the public realm offers a particularly strong guidelines and desired characters. Refer to the Norvel Estate Landscape Report for details. response to the Garden Suburbs and Creek Corridors protected and retained.
  - large expanses of green space and existing trees being The key objective of Garden Suburbs is met with: preserved, and
- high densities of new trees proposed in the public realm

# 'Design Response to 2.5" on page 6

### "2.5 Leisure Plan"

 Providing a formalised SUP along the western boundary support active leisure and active transport (walking & and access paths through the bushland reserve will cycling to local destinations)

# 'Design Response to 2.6" on page 7

lots being later subdivided with private lanes to service the outset avoids the less desirable outcome of larger of the market. Offering this scale of subdivision from

dwellings at the rear

### "2.6 Play Space Plan"

playgrounds with proprietary equipment, the public realm offering draws upon other opportunities identified in the Recognising that the area is already well serviced by Leisure Plan - through the following actions:

- the development of passive, local open space,
- the provision of safe road crossings, seats and footpaths

# 'Design Response to 4.1 & 4.2" on page 13

## "4.1 History" & "4.2 Biodiversity"

 Recognising that conveniences and transport connections are generally not within a very walkable distance, there is

an appropriate provision of on-street parking.

Design Response to 3.1 & 3.2" on page 8

"3.1 Land Uses" & "3.2 Transport"

- The history of the site is referenced with the use of Daniel Robertson bricks in the hardscape palette (refer to Norvel Estate Landscape Report).
  - preserved within a Council reserve, and other native trees (including the E. fulgens specimens) will be preserved High quality remnant indigenous vegetation will be wherever possible.
- into the reserve to help protect the health and biodiversity Management Plan prepared by Cardno for further detail. treated in a constructed wetland before it is discharged Water run-off from the proposed development will be of the area. Refer to Norvel Estate Stormwater
- The majority of proposed plants are native or indigenous to minimise the risk of weeds invading the reserve. Refer to Norvel Estate Landscape Report for details.

The cluster of dense and moderate tree canopy in the north of the site will be protected and retained

minimum and reduces the amount of cut and fill required. ensures level changes between properties are kept to a

Streets running east-west will enjoy views to the

Dandenong Ranges.

Most streets are proposed to run north-south. This

"3.3 Topography"

'Design Response to 3.3" on page 10

### "4.3 Site Dimensions",

Provided as background information

# 'Design Response to 4.4" on page 16

 The proposed streets are oriented in the same directions as the existing surrounding streets to provide continuity

Design Response to 3.4" on page 11

"3.4 Urban Form & Character'

The design has a finer grain of subdivision than the

and aid navigation.

- Castricum Place and the linear reserve, including a rest spot and way-finding. Providing a welcoming entry point at the junction of "4.4 Movement & Access"
  - provides more legible and direct access for pedestrians and cyclists to the Blind Creek trail, and onwards to New shared use path (SUP) along the linear reserve Boronia Activity Centre.
    - road network that is legible and responsive with the Creating logical site entry points and an internal

# 'Design Response to 5.1" on page 18

### "5.1 Linear Reserve"

Extends the green character, with additional tree and

- under-storey plantings along the SUP and entry point. Also Alignment of the SUP minimises the need for tree removal as much as possible (including preservation of the E. softens the inactive edge of the back fences.
  - Road is aligned immediately adjacent to the linear reserve and houses face towards it. This ensures the space does not feel too enclosed and provides a more pleasant frontage with passive surveillance along one side fulgens specimens).

# "Design Response to 5.2" on page 20

### providing passive surveillance and visual access toward All but one of the adjacent lots front on to the reserve, the reserve and Blind Creek Trail. "5.2 Bushland Reserve

- Agora Boulevard, is provided via paths that are positioned A road is proposed to separate residential development Pedestrian access through the reserve, connecting to from the reserve, providing a fire break.
- and designed to minimise disruption to remnant vegetation the bushland are intended to minimise impacts on existing Setbacks proposed for Lot 140 at the southeast corner of (south of the bushland) have been designed as 'shrubland tree protection zones (TPZs) and minimise bushfire risks from overhanging tree canopies The landscape concept for the wetland reserve and swale
- The street trees and nature strips along the road have been designed in accordance with the CFA guidelines "Landscaping for Bushfire - Garden Design and Plant Selection" or based on CFA advice. required for the bushland reserve.

so that they do not require any additional building setback

for bushfire safety purposes beyond that which is already

# 'Design Response to 5.3 and 5.4" on page 22

# "5.3 Eastern Boundary" & "5.4 Dion Street"

- New allotments will sit back-to-back with the existing lots, separated by new solid fencing to replace the existing wire
  - Dwellings bordering the east property boundary will have minimum 5m setbacks to allow for at least one canopy tree and flexibility of built form at the rear. This allows for a variety of highly articulated forms, including some larger
    - The proposed lot widths and rear building setbacks also maintain a similar pattern to the existing lots to the south of the site, at 54, 56, 58 and 60 Norvel Road.
      - Deciduous street trees are proposed for the extension to Dion Street to mark the entry to the development and maximise winter sun ingress for the adjacent properties.

# "Design Response to 5.5" on page 24

### "5.5 Norvel Road"

- New allotments within the estate along Norvel Road will front onto the existing street. They will have a minimum 4.5m front setback which is consistent with the range of setbacks currently existing along Norvel Road.
  - As is the case for most properties on Norvel Road, new allotments will not have front fences, maintaining the
- openness of the street.

  The existing street tree palette will be reinforced with more A, platandides 'Norwegian Sunset proposed along Norwel Road.

# 'Design Response to 5.6" on page 26

### "5.6 Castricum Place"

- New allotments along the western perimeter of the site will have frontage and vehicle access to Castricum Place, consistent with the existing street typology.

  - Street trees to be maintained where possible or planted between the proposed crossovers.

    Buildings ere proposed to have minimum 5.5m front setbacks which is consistent with the range of setbacks ourrently existing along Castricum Place.





URBIS,COM,AU





September 2023

### Biodiversity Assessment, 29Q Norvel Road, Ferntree Gully



**Final Report** 

**Prepared for:** 

**Norvel Estate** 



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### **Cover Photograph**

A photograph of the study area taken during the current assessment.

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### **Executive Summary**

Ecolink Consulting Pty Ltd was engaged to undertake a Biodiversity Assessment at 29Q Norvel Road (Lots 1 and 2 on TP963860L and Lot 1 on TP297137X), Ferntree Gully (the study area). The purpose of the assessment was to assess and map the ecological values and constraints within the study area to support an application for a residential development.

The study area is located within the Gippsland Plain bioregion of Victoria and the Port Philip and Westernport Catchment Management Area. It is zoned Special Use Zone 2 within the Knox City Council municipality. The northern part of the study area is covered by an Environmental Significance Overly – Schedule 2 (ESO2). This overlay aim to protect sites and vegetation of biological significance within the Knox City Council municipality from extinction, and to maintain and improve habitat corridors and connectivity

The study area is located within a suburban setting, approximately 30 kms east of Melbourne. Vegetation surrounding the study area has been heavily modified, although a strip of riparian vegetation, associated with Blind Creek provides connectivity between the moderate quality vegetation within the north of the study area and other patches of vegetation within the municipality.

The study area was previously a clay quarry that has been filled and rehabilitated in the past eight years. The quarry occupied the southern two-thirds of the study area, but left the vegetation in the northern part of the study area relatively intact. This has resulted in the identification of three distinct remnant patches where native vegetation either persists or has regenerated. The remainder of the study area is dominated by exotic species, where Perennial Rye-grass *Lolium perenne* has been sown to stabilise the rehabilitation works.

Two remnant patches of native vegetation were identified within the study area. Habitat Scores indicate that the vegetation is of high quality in the north of the study area, with Habitat Scores ranging from 26 to 55 (out of 100). Other native vegetation, that is not classified as remnant, was recorded in the south of the study area. This area is likely to be regenerating from the seed bank that was dormant within the imported top soil used to rehabilitate the quarry and is exempt from offsets as it is less than ten years old. It is dominated by Hop Goodenia *Goodenia ovata*.

The northern portion of the study area supported relatively high quality remnant vegetation. The overstorey was dominated by Mealy Stringybark *Eucalyptus cephalocarpa* and Swamp Gum *Eucalyptus ovata*, with fewer occurrences of Messmate Stringybark *Eucalyptus obliqua*, Red Stringybark *Eucalyptus macrorhyncha*, Narrow-leaf Peppermint *Eucalyptus radiata*, as well as occasional occurrences of Green Scentbark *Eucalyptus fulgens* that is listed as state significant on the Advisory List.

The midstorey contained a dense shrub cover, generally dominated Sweet Bursaria *Bursaria spinosa* subsp. *spinosa*, Prickly Tea-tree *Leptospermum continentale*, Swamp Paperbark *Melaleuca ericifolia*, Prickly Currant-bush *Coprosma quadrifida*, Shiny Cassinia *Cassinia longifolia* and Prickly Moses *Acacia verticillata*. The understorey was also dominated by a diversity of native species, with the most dominant and widespread species including Kangaroo Grass *Themeda triandra*, Weeping Grass *Microlaena stipoides* var. *stipoides*, Wallaby-grasses *Rytidosperma* spp., Forest Wire-grass *Tetrarrhena juncea*, Bracken *Pteridium esculentum*, and Thatch Saw-sedge *Gahnia radula*, as well as



herbs including Bidgee Widgee Acaena novae-zelandiae. Weeds were dominant in some locations including a substantial area with a moderate cover abundance (30-40%) of Kikuyu Cenchrus clandestinus and an area within a moderate cover of Panic Veldt-grass Ehrharta erecta var. erecta.

Only a relatively small proportion of RP1 and RP2, within the study area, will require vegetation removal for the proposed development. Three scattered indigenous trees were also recorded in an area that may support a trail to connect the development to Blind Creek and a sewer, but these trees are unlikely to require removal through sensitive design of these elements.

The project has avoided the removal of native vegetation wherever practicable and will minimise impacts to biodiversity values. Despite this, where removal of native vegetation is proposed biodiversity offsets will be required. The offset required is 0.126 General Habitat Units with a minimum Strategic Biodiversity Score of 0.202 located within the Port Phillip and Westernport Catchment Management Authority area, or Knox City Council municipality, as well as two large trees.

Ten fauna species were recorded within the study area, comprising a range of common native and introduced birds and reptile species. All of these species are common to the local area.

Although 18 threatened flora and fauna species have been previously recorded within three kilometres of the study area within the last thirty years, only one was recorded during the current assessment. Green Scentbark *Eucalyptus fulgens* was recorded within the study area. This species is listed as 'Rare' on the Advisory List of Rare and Threatened Plants in Victoria. Rosemary Grevillea *Grevillea rosmarinifolia* has also been recorded within the study area previously, but not during the current assessment. There is the potential that this species remains within the study area, although none of these species will be impacted by the proposed development. There is only a low likelihood that the previously recorded Grey Goshawk *Accipiter novaehollandiae novaehollandiae* utilises the study area, and it is unlikely to provide important habitat for this species.

In this context, and based on the relevant legislation and policies, the following recommendations are made:

- Minimising the amount of native vegetation removal within the study area. Any vegetation
  not approved for removal must be retained within the bushland and reserve areas in the
  north of the study area;
- Provide a biodiversity offset of 0.126 General Habitat Units with a minimum Strategic Biodiversity Score of 0.202 located within the Port Phillip and Westernport Catchment Management Authority area, or Knox City Council, and two large trees;
- Prepare a Land Management Plan that includes managing the ecological values of the study area;
- Prepare a Construction Environmental Management Plan that includes the following management actions prior, during and post construction:
  - o Appropriately fence and manage retained native vegetation;
  - o Soil containment, sediment and erosion measures;
  - o Weed management prescriptions, targeting noxious weeds; and
- A wildlife handler should be present when felling any trees.



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### Introduction

Ecolink Consulting Pty Ltd was engaged by Norvel Estate Pty Ltd to undertake a Biodiversity Assessment for the proposed residential development of 29Q Norvel Road (Lots 1 and 2 on TP963860L and Lot 1 on TP297137X), Ferntree Gully.

The purpose of the Biodiversity Assessment is to assess and map the ecological constraints within the study area (if any exist), in particular, the location, extent and quality of native vegetation to support an application to remove any native vegetation under Clause 52.17 of the Planning Scheme, as described in the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment Land Water and Planning 2017b). A previous assessment of the vegetation within the study area was undertaken in 2005 (Brown 2005), under the 'Net Gain' policy (Department of Natural Resources and Environment 2002), which has been superseded by the *Guidelines for the removal, destruction or lopping of native vegetation* policy.

Therefore, this Biodiversity Assessment will:

- Review previous ecological assessments of the study area;
- Determine the current ecological values of the study area;
- Evaluate any impacts that are likely to occur to any ecological values as a result of the potential loss of vegetation at the study area;
- Evaluate the extent and quality of native vegetation within the study area, required under the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment Land Water and Planning 2017b); and,
- Make recommendations to minimise or mitigate impacts to these ecological values, based on relevant legislation and policies.

### **Methods**

### **Desktop Assessment**

In order to determine the ecological values that have previously been recorded within the study area, and its vicinity, the following databases and literature were consulted:

- Planning Schemes Online (Department of Environment Land Water and Planning 2018c) to identify the planning zones and overlays relating to environmental matters e.g. Vegetation Protection Overlays, or Environmental Significance Overlays;
- The Biodiversity Interactive Map from the Department of Environment, Land, Water and Planning (DELWP) to identify historic and current Ecological Vegetation Classes (EVCs) (Department of Environment Land Water and Planning 2017a);
- The Victorian Biodiversity Atlas (Department of Environment Land Water and Planning 2018d) for records of threatened<sup>1</sup> flora and fauna within three kilometres of the study area within the previous 30 years;

<sup>&</sup>lt;sup>1</sup> Threatened flora and fauna includes species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the Victorian *Flora and Fauna Guarantee Act 1988* and the DSE Advisory Lists (Department of Environment and Primary Industries (2009; 2013; 2014).



- The Native Vegetation Information Management System (NVIM) to determine biodiversity offsets for native vegetation removal (Department of Environment Land Water and Planning 2018b);
- The 'Weeds of National Significance' database (Department of the Environment and Energy 2018b):
- The Protected Matters Search Tool from the Department of the Environment and Energy (DoEE) (Department of the Environment and Energy 2018a) to identify Matters of National Environmental Significance that may occur within three kilometres of the study area; and,
- Relevant legislation and policies (as required).

In addition, three reports previously prepared for the site were also reviewed:

- Brown L (2005). Habitat hectare assessment of Daniel Robertson's Quarry, Ferntree Gully, Victoria. Unpublished report by Biosis Research Pty Ltd for Daniel Robertson Australia Pty Ltd (Brown L: Port Melbourne);
- Mueck S and Organ A (2001). Flora and Fauna Assessment of Daniel Robertson's Quarry, Ferntree Gully, Victoria. Unpublished report by Biosis Research Pty Ltd for Daniel Robertson Australia Pty Ltd (Mueck S and Organ A: Port Melbourne); and
- Treemap Arboriculture (2016). Arboricultural Assessment and Report; Norvel Road, Ferntree Gully. Unpublished report by Treemap Arboriculture for Norvel Estate Pty Ltd (Treemap Arboriculture: Heidelberg).

### **Field Assessment**

### Flora and Fauna Assessment

The study area was assessed by Principal Ecologists, Simon Scott and Dr Stuart Cooney, on 9 February 2017. Both ecologists are suitably experienced at undertaking flora and fauna assessments and Simon holds a Vegetation Quality Assessors Accreditation from DELWP (No. 0015).

All flora species observed within the study area were recorded, with the exception of planted vegetation that was not considered a 'weed' (i.e. planted vegetation that was not spreading or reproducing). Where a species was not able to be confidently identified in the field, a sample was collected and later identified. Plants were identified to species level wherever possible, however, some plants that were planted, cultivars, hybrids, or plants that did not contain suitable fertile material used for identification were recorded to genus level.

Vegetation communities such as EVCs and nationally significant vegetation communities were recorded (if observed) and compared with their corresponding benchmarks or thresholds to ensure that they were accurately assigned.

A list of all fauna species observed within, and immediately surrounding, the study area was produced. This list consists of species seen, heard, or identified by other evidence of their presence (e.g. feathers, scats). Leica 12 X 50 binoculars and call mimicry/playback were used to assist in the identification species.

The presence of fauna habitat was noted, particularly in relation to potential habitats for threatened species. The greatest amount of time was spent surveying potential fauna habitats (e.g. trees, water bodies, crevices or under ground debris) during the assessment.



Threatened flora and fauna species were marked with a hand-held Garmin eTrex 10 GPS (accuracy +/- five metres) and key ecological values such as vegetation communities, scattered indigenous trees, fauna habitats, or threatened species habitats were mapped onto an aerial photograph of the study area.

### Guidelines for the removal, destruction or lopping of native vegetation

Although the initial site assessment was undertaken under the policy that existed prior to the introduction of the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) (Department of Environment Land Water and Planning 2017b), this final version of the report has been updated to reflect the current native vegetation removal policy in terms of reporting, terminology and offset requirements.

The Guidelines require that information regarding the biodiversity values of the site were obtained though:

- Site-based information that was measured or observed at a site, including:
  - Extent of native vegetation patches;
  - o Large trees;
  - Native vegetation condition assessed in accordance with the Vegetation Quality
     Assessment Manual Guidelines for Applying the Habitat Hectares Scoring Method
     (Department of Sustainability and Environment 2004);
  - o Ecological Vegetation Classes (EVC); and
  - Sensitive wetlands and coastal areas.
- Landscape scale information that cannot be measured or observed at the site and includes maps and models procured from DELWP.

The Guidelines require a Habitat Hectare assessment in instances where the impact is to be assessed under the Detailed Assessment Pathway. It was not possible to determine the risk-based pathway for the loss of native vegetation, and we therefore opted to complete the Habitat Hectare assessment in accordance with the methodology prescribed within the *Vegetation Quality Assessment Manual – Guidelines for Applying the Habitat Hectares Scoring Method* (Department of Sustainability and Environment 2004) at patches<sup>2</sup> of vegetation. All indigenous vegetation was assessed, and then assigned a quality rating based on the Habitat Hectare score (Department of Sustainability and Environment 2004).

To determine offsets, the location and species of indigenous 'scattered trees'<sup>3</sup>, and any 'large trees'<sup>4</sup> within patches were mapped. Details of the location, extent of native vegetation (patches, scattered trees and large trees) that are proposed for removal was provided to DELWP who produced a Native Vegetation Removal report which details the required offsets for impacts to native vegetation patches, Large Trees and scattered trees.

<sup>&</sup>lt;sup>2</sup> A 'patch' is defined as an area with at least 25% cover abundance of perennial native vegetation, or a group (i.e. three or more) trees forming a continuous canopy.

<sup>&</sup>lt;sup>3</sup> Scattered trees are defined as a native canopy tree that does not form a patch

<sup>&</sup>lt;sup>4</sup> Large trees are defined as meeting the size threshold specified in the bioregional EVC Benchmark



### **Limitations and Qualifications**

The following limitations and qualifications apply to this report:

- The results of the desktop assessment are reliant on data obtained from various databases and other reports. The accuracy of these historical data and some of the results provided within these reports cannot be verified.
- Some flora and fauna species may only be recorded during certain times or seasons (e.g. plants that only contain above-ground biomass and are only visible annually, nocturnal mammals and birds, migratory birds, or fauna identified through seasonal breeding calls such as some frog species). The author has made an informed decision about the likely presence of threatened species that may be present, or that may utilise habitats within the study area, based on a detailed desktop assessment, a review of the species' biology, an understanding of the ecological values of the local area, and an assessment of flora and fauna as well as their habitats.
- As with all ecological assessments, a greater survey effort is likely to yield additional flora and fauna records. Where these additional flora and fauna records may alter the recommendations made within this report, (e.g. where additional threatened species may utilise habitats within the study area, or where threatened species may be impacted by the proposed development), further assessment may be recommended, depending on the implications of relevant policies and legislation.

Despite these limitations to the assessment, the results gained by both a desktop and a field assessments are adequate to address the purpose of this report.



### Results

### **Study Area**

The study area is located within suburban Ferntree Gully, approximately 30 kms east of Melbourne. The northern boundary of the study area adjoins Blind Creek and the Blind Creek Billabong Reserve, while the rest of the study area is bordered by suburban housing lots (Figure 1). The landscape is generally flat, gently sloping towards Blind Creek in the north.

The study area was previously a clay quarry (Mueck and Organ 2001). The quarry occupied the southern two-thirds of the study area, with remnant woodland covering the northern section, interfacing with Blind Creek. A comparison of the maps provided in the previous reports prepared for the study area, suggests that some of the vegetation on the eastern boundary of the study area has been removed since those reports were prepared, although this happened prior to 2009, when Nearmap recorded its first aerial image of the study area (Nearmap 2018). The quarry was filled with material sourced off-site from mid-2014 to early-2016 (Nearmap 2018), and now comprises slashed exotic grasslands in the south, while the woodland remains in the north of the study area.

An additional area that is proposed for a trail and sewer was assessed along the western boundary of the study area that is largely flat and devoid of native vegetation (Plate 1). A third area, which is proposed for a pedestrian trail, extends to the north, along the eastern boundary of the study area, and will be used for a trail connecting Agora Boulevard to Blind Creek (Plate 2). This area comprises an exotic understorey under a largely native canopy of indigenous Eucalypts.

### **Flora**

### Flora Species

A total of 102 plant and tree species were recorded during the current assessment. This comprised 64 indigenous and 38 exotic plant species (Table A1).

The south of the study area, in the location of the previous quarry had been sown with Perennial Rye-grass *Lolium perenne* and lacked an overstorey and mid-storey. Despite this, some areas of regrowth supported more than 25% cover abundance of native species, dominated by Hop Goodenia *Goodenia ovata*, which meant they met thresholds to be classified as patches of remnant vegetation. It is likely that these plants have regenerated from the seed bank of imported soil spread over the quarry as part of its rehabilitation. As this regrowth is less than 10 years old, although identified as patches of remnant vegetation, they are exempt from offsetting under the Biodiversity Assessment Guidelines (see below).

The northern portion of the study area supported relatively high quality remnant vegetation. The overstorey was dominated by Mealy Stringybark Eucalyptus cephalocarpa and Swamp Gum Eucalyptus ovata, with fewer occurrences of Messmate Stringybark Eucalyptus obliqua, Red Stringybark Eucalyptus macrorhyncha, Narrow-leaf Peppermint Eucalyptus radiata, as well as occasional occurrences of Green Scentbark Eucalyptus fulgens that is listed as state significant on the Advisory List (Department of Environment and Primary Industries 2014).

The midstorey contained a dense shrub cover, generally dominated Sweet Bursaria *Bursaria spinosa* subsp. *spinosa*, Prickly Tea-tree *Leptospermum continentale*, Swamp Paperbark *Melaleuca ericifolia*,



Prickly Currant-bush *Coprosma quadrifida*, Shiny Cassinia *Cassinia longifolia* and Prickly Moses *Acacia verticillata*. The understorey was also dominated by a diversity of native species, with the most dominant and widespread species including Kangaroo Grass *Themeda triandra*, Weeping Grass *Microlaena stipoides* var. *stipoides*, Wallaby-grasses *Rytidosperma* spp., Forest Wire-grass *Tetrarrhena juncea*, Bracken *Pteridium esculentum*, and Thatch Saw-sedge *Gahnia radula* as well as herbs including Bidgee Widgee *Acaena novae-zelandiae*. Weeds were dominant in some locations including a substantial area with a moderate cover abundance (30-40%) of Kikuyu *Cenchrus clandestinus*, an area within a moderate cover of Panic Veldt-grass *Ehrharta erecta* var. *erecta* and Angled Onion *Allium triquetrum* dominating the understorey vegetation near Agora Court (Plate 2).

Compared with the results provided by Biosis (2001), we recorded fewer annual species such as lilies and orchids. This may be expected as the assessment was undertaken during late Summer, after a period of hot weather. It is likely that these annual species that were recorded by Biosis (2001) persist within the study area.

### Flora Habitat/Vegetation Communities

The vegetation within the study area was required to be assessed and classified against the policy and legislation stipulated by three tiers of government:

- Local Where various overlays and policies may apply pursuant to the Knox City Council Planning Scheme (Department of Environment Land Water and Planning 2018c);
- State Which includes DELWP's EVC mapping of vegetation communities (Department of Environment Land Water and Planning 2018a) and consideration under the Biodiversity Assessment Guidelines (Department of Environment and Primary Industries 2013); and,
- Commonwealth where vegetation may meet 'thresholds' to be classified as a federally listed community under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (Department of Sustainability Environment Water Population and Communities 2011).

### Local

The study area is currently zoned Special Use Zone 2 (Department of Environment Land Water and Planning 2018c). It is located within the Knox City Council municipality. Special Use Zone 2 land is to provide for the earth and energy resources industry. It is expected that the proponent will seek to have this zoning changed prior to development of the residential estate.

The northern section of the study area is covered by an Environmental Significance Overlay (ESO) 2 (Figure 1) (Department of Environment Land Water and Planning 2018c). Although this largely covers the area proposed for a reserve, it extends to the northern part of the proposed development. The ESO2 recognises sites of biological significance within the Knox City Council municipality. It aims to protect these sites from extinction, maintain and improve habitat corridors and connectivity, use offsets to achieve a 'Net Gain' in vegetation where native vegetation is to be removed and ensure development is consistent with these goals. Applicants will need to justify any native vegetation removal, where the Council considers that a development may impact the environmental objectives of the ESO2. This report includes consideration of the ESO2 in its recommendations.



### State

The study area is located within the Gippsland Plain bioregion of Victoria and the Port Philip and Westernport Catchment Management Area (Department of Environment Land Water and Planning 2016a). Historically, the study area is likely to have supported Ecological Vegetation Classes (EVC) 127: Valley Heathy Forest in the south and EVC 937: Swampy Woodland in the north, associated with Blind Creek. EVC 127: Valley Heathy Forest is characterised as "a low, open forest to 15 metres tall with a sedgy/grassy understorey with a component of small ericoid shrubs and grass-trees. Soil and moisture factors are critical in delimiting the vegetation" (Department of Environment Land Water and Planning 2018a). EVC 937: Swampy Woodland is characterised as an "open eucalypt woodland to 15 metres tall with ground-layer dominated by tussock grasses and/or sedges and often rich in herbs. Occurs on poorly drained, seasonally waterlogged heavy soils, primarily on swamp deposits but extending to suitable substrates within some landscapes of sedimentary origin" (Department of Environment Land Water and Planning 2018a).

Current modelling of vegetation within the study area suggests that little of these vegetation types remain. The current modelling of EVC 127: Valley Heathy Forest is in the area cleared prior to 2009 in the east of the study area (Department of Environment Land Water and Planning 2017a). The site assessment confirmed that none of the modelled EVC 127: Valley Heathy Forest remains in the study area, however a large patch of relatively high quality EVC 937: Swampy Woodland persists in the north of the study area, contiguous with the vegetation associated with Blind Creek.

### Commonwealth

Department of the Environment and Energy (2018a) modelling suggests that that the critically Endangered vegetation communities Natural Damp Grassland of the Victorian Coastal Plains and White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland may occur within the study area.

The remnant vegetation within the study area does not meet the criteria to qualify as Natural Damp Grassland of the Victorian Coastal Plains because it is characteristic of a woodland/forest type vegetation structure and not a grassland. It does qualify as White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland because the dominant overstorey species are not characteristic of this vegetation community.

### **Threatened Flora Species**

Two threatened flora species have previously been recorded within three kilometres of the study area within the last 30 years: Rosemary Grevillea *Grevillea rosmarinifolia* and Giant Honey-myrtle *Melaleuca armillaris* subsp. *armillaris* (Figure 3). A further seven species are predicted to occur within the study area based on the Protected Matters Search Tool (Department of the Environment and Energy 2018a). A consolidated list of these threatened flora species as well as their conservation status, preferred habitats and likelihood of occurrence for each species is provided in Table A3.

One of the records of Rosemary Grevillia is from within the northern part of the study area in 2001. The current assessment did not relocate this plant, however it is possible that this species persists within the study area. It is currently proposed that the vegetation within the north of the study area



will be retained within a reserve vested to council. On this basis, this plant would not be impacted by the proposed development of the study area.

Giant Honey-myrtle is not indigenous to the area. Nearby records are from planted specimens, as it is widely used as an ornamental plant, or in windrows. Further consideration of this plant is not required.

One threatened species, Green Scentbark, was recorded during the current assessment. Four Green Scentbark trees were been identified near the boundary of the reserve area during the current assessment and the Arborist's assessment (Treemap Arboriculture 2018); three of which may be impacted by the proposed development (Treemap tree numbers 92, 93 and 95: Figure 2). Other individuals are likely to occur within the reserve area, but will not be impacted by the proposed development. Green Scentbark is listed as 'Rare' on the Advisory List of Rare and Threatened Plants in Victoria (Department of Environment and Primary Industries 2014), so impacts to this species should be avoided or limited where possible.

No threatened species are likely to occur outside of the reserve area, because of the high level of land modification associated with the quarry. It is concluded that no other threatened flora species are likely to be impacted by the development given the protection of the highest quality vegetation within the study area and the current assessment of the remainder of the study area.

### **Vegetation Assessment**

Three patches of native vegetation were identified within the study area (Table 1; Figure 2), although a Habitat Hectare assessment was only completed on Patch 1 (RP1) and 2 (RP2).

Patch 3 cannot, by definition be 'remnant', as it is regenerating native plants from seed stock from imported soil (Plate 3). It is therefore exempt from requiring offsets under the 'regrowth' Clause of 52.17 within the Planning Scheme, and offsets are not required (Department of Environment Land Water and Planning 2018c).

The vegetation in the north of the study area (RP1) is the highest quality vegetation with a score of 55 out of 100 (Plate 4). This vegetation retains many of the characteristics of its natural state when compared with the EVC benchmark (Department of Environment Land Water and Planning 2018a). RP2 occurs on the fringes of this vegetation, the mid-storey/shrub layer has been removed, the understorey contains a lower diversity and there is a higher cover abundance of weeds).

### **Tree Assessment**

Three scattered indigenous trees were also recorded in the laneway on the western boundary of the study area (Table 2). These trees, or their Tree Protection Zones<sup>5</sup> may be impacted by a proposed path and sewer between the new estate and the Blind Creek Trail that runs across the north of the

<sup>&</sup>lt;sup>5</sup> The Tree Protection Zones have been determined in accordance with the Australian Standard for the Protection of Trees within Development Sites (AS 4970 - 2009) (Standards Australia 2009). It defines the Tree Protection Zone (TPZ) radius as 12 x DBH, but should not be less than 2 metres or greater than 15 metres. If an area greater than 10% of a tree's Tree Protection Zone is impacted by works, that tree will be considered lost and offset obligations will apply.



study area. However, sensitive design of this infrastructure, with input from a qualified arborist, is likely to avoid impacts to these trees.

**Table 1**. Habitat Hectare Scores for the remnant patches of native vegetation within, and adjoining, the study area.

Quality	Zone		RP1	RP2
Bioregio			Gippsland Plain	Gippsland Plain
EVC name		SW	SW	
EVC number			937	937
As	sessment Criteria	Maximum Score	Patch Score	Patch Score
	a. Large old trees	10	7	5
	b. Canopy cover	5	4	4
	c. Understorey	25	20	5
Site Condition	d. Lack of weeds	15	9	2
Sit	e. Recruitment	10	3	0
J	f. Organic litter	5	5	5
	g. Logs	5	2	0
	h. Total (sum of a-g)	75	50	21
Landscape	i. Patch size	10	2	2
	j. Neighbourhood	10	1	1
	k. Distance to core	5	2	2
I. Habitat Points (total) 100		55	26	
m. Habitat score (I ÷ 100)			0.55	0.26

### **Table Notes:**

SW – Swampy Woodland

Table 2. Tree species recorded within the scattered tree area of study area

Tree No.	Species Name	Common Name	DBH (cm) <sup>1</sup>	TPZ Radius (cm)
1	Eucalyptus ovata	Swamp Gum	97	1,164
2	Eucalyptus ovata	Swamp Gum	101	1,212
3	Eucalyptus ovata	Swamp Gum	87	1,044

### Table Notes:

<sup>&</sup>lt;sup>1</sup> Diameter at breast height



### **Fauna**

### **Fauna Species**

Ten fauna species were recorded within the study area during the current assessment (Table A2, Appendix A). This included eight native bird species, one introduced bird species, and one native reptile. Other fauna species would be recorded if greater time was spent on-site.

All of the species are all typical of fauna that are expected to occur in the foothills of the Dandenong Ranges. Only one reptile was recorded during the site assessment, Garden Skink *Lampropholis guichenoti*, although it is likely that other frogs, skinks and snakes would utilise the study area on occasion. Further discussion on species that may occur within the various fauna habitats is provided below.

### **Fauna Habitats**

The remnant vegetation within the study area and adjoining properties provides moderate to high quality woodland habitat to a range of species. The large trees are likely to provide habitat to a range of common bird and arboreal mammal species. This is likely to include gregarious bird species such as Rainbow Lorikeets *Trichoglossus haematodus* and Noisy Miners *Manorina melanocephala*. Mammals such as Common Ringtail Possums *Pseudocheirus peregrinus* and Common Brushtail Possums *Trichosurus vulpecula* are also likely to forage in the canopy of these trees, whilst microbats are likely to use the fissures and flaking bark as diurnal roosting locations. Where the understory exists, smaller birds such as Superb Fairywrens *Malurus cyaneus* and Brown Thornbills *Acanthiza pusilla*, as well as a range of honeyeaters, are likely to find refuge from larger, more aggressive birds.

Most of the other native birds observed, such as the Crimson Rosella *Platycercus eximius*, Australian Magpie *Gymnorhina tibicen* and Little Raven *Corvus mellori*, are widespread and common throughout open areas, suburban areas and farmlands throughout eastern Melbourne.

The vegetation is likely to provide an important corridor for fauna species moving across the landscape. This vegetation connects to other vegetation associated with Blind Creek to the north of the study area. These connections within the landscape are important for many species' ability to adapt to seasonal changes in food abundance, dispersal from natal areas and to facilitate gene mixing within the broader population.

### **Threatened Fauna Species and Communities**

A consolidated list of the 16 threatened fauna species previously recorded on, or within the vicinity of, the study area within the last thirty years, as well as a further 17 fauna species that may occur within the study area is provided in Table A4 (see also Figure 3). The conservation status, preferred habitats and likelihood of occurrence for each species is provided within this table.

There is a single record of a Grey Goshawk *Accipiter novaehollandiae novaehollandiae* from within the study area in 1997 (Figure 3). Grey Goshawks are largely sedentary birds, that favour large patches of vegetation (usually in excess of 10 hectares in size) (Marchant and Higgins 1993). The bird that was observed in 1997 may have been a juvenile bird looking for a new territory. It is unlikely that the study area provides important habitat for this species. Grey-headed Flying-foxes *Pteropus poliocephalus* are likely to fly over the study area on a regular basis, however, the lack of



fruiting trees within the study area means that it is unlikely to provide important resources to this species. The majority of the other threatened fauna species listed in Table A4 are wetland dependent or aquatic species that unlikely to occur within the study area on a regular basis.

No threatened fauna species were recorded during the current assessment. No fauna communities listed under the Victorian *Flora and Fauna Guarantee Act 1988* were recorded within the study area and none are likely to occur.



### Discussion

A detailed summary of the legislation that was considered when preparing this report is provided in Appendix 2. The discussion presented in this section of the report does not re-iterate information provided in Appendix 2, but summarises the results and recommendations arising from the interpretation of this legislation.

### Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The desktop assessment identified seven threatened flora, 15 threatened fauna species and two threatened vegetation community, listed under the EPBC Act that may occur within the study area. None of these species have previously been recorded within the study area and preferred habitat for these species does not occur within the study area, despite providing moderate to high quality habitat to a range of native species. This is largely attributed to local extinctions of the species that are modelled to occur or have historically occurred within the study area and its surrounds, as well as the type of habitat within the study area (i.e. many of the EPBC Act listed species that may occur within the landscape are associated with aquatic environments, which is limited within the study area).

On the basis of this, a referral to the Commonwealth Department of the Environment and Energy under the EPBC Act is not recommended.

### Flora and Fauna Guarantee Act 1988 (Vic)

The desktop assessment identified five flora and 20 fauna species listed under the FFG Act that may occur within the study area (Tables A3 and A4). One of these species (Grey Goshawk) has been recorded within the study area on one occasion, however the study area is unlikely to provide important core habitat to this species because of its limited size, but may provide habitat for dispersing immature animals moving between areas of more suitable habitat.

In addition, the FFG Act also lists 'protected flora'. Protected flora includes whole families or genera, not just plant species, such as daisies, heaths, orchids, and most Acacias. These species and genera are not necessarily regarded as threatened, but require an approved 'protected flora licence or permit' from DELWP prior to their removal from *public* land. As the development is not located in public land, a 'protected flora licence of permit' will not be required.

### Planning and Environment Act 1987 (Vic)

Although there is no native vegetation in the area covered by the VPO1, some of the vegetation within the ESO2 is proposed for removal (Figure 1 and 2). The removal of this vegetation is required to facilitate the road that will act as a buffer between the proposed reserve and the development (P. D'Emilio. Peddle Thorp Architects, *In litt.* 10 February 2017). The proposed development will require a planning permit from the City of Knox Council under Clause 52.17 prior to the removal, destruction or lopping of this native vegetation (Department of Environment Land Water and Planning 2017b). Biodiversity offsets will be required for any such impacts (discussed below).



### Catchment and Land Protection Act 1994 (Vic)

Primary considerations of the Catchment and Land Protection Act 1994 (Vic) relate to soil and water conservation, as well as the management of pest plants and animals.

The study area contains three weed species that are listed as 'noxious' within the Port Phillip and Westernport Catchment Management Area (Table A1). These include Blackberry Rubus fruticosus spp agg., Boneseed Chrysanthemoides monilifera and Montpellier Broom Genista monspessulana, Hawthorn, Spear Thistle Cirsium vulgare and Sweet Briar Rosa rubiginosa which are listed as 'Regionally Controlled'. The proponent is required to 'control the spread' of all 'regionally controlled' species from their property (Melville 2008).

In addition, two species are listed as 'Restricted'; Bridal Creeper *Asparagus asparagoides* and Soursob *Oxalis pes-caprae*. There are limitations on the collection and trade of these species.

Four of these noxious species are also listed as Weeds of National Significance; Bridal Creeper, Boneseed, Blackberry and Montpellier Broom.

The proposed development should aim to remove these plants when construction commences, and ensure they are removed during the future the landscaping and maintenance of the study area. It is expected that weed management would form part of a Construction Environment Management Plan. Where revegetation is required, the palette of species to be used should represent the historic ECV of the study area (EVC 937: Swampy Woodland). All plants should be of local provenance and not include hybrid species.

The Construction Environment Management Plan provides guidance on the management of noxious weeds during the development and remove any weeds that establish post-construction. The Construction Environment Management Plan will also include details relating to the:

- Fence and exclude access to areas of retained native vegetation, including the remnant patches and the scattered trees;
- Maintenance of vehicle hygiene and vehicle wash-down areas;
- Use of clean fill (if required);
- Management of noxious that may establish post-construction through spraying with herbicide or hand-removal;
- Use of noxious species during any landscaping of the property.

Erosion and sediment control is also expected to be implemented as part of the Construction Environment Management Plan to EPA Standards in order to avoid direct and indirect impacts to the native vegetation and drain and Blind Creek downslope.

### Wildlife Act 1975 (Vic)

It is likely that some locally common species of fauna will be displaced by the proposed development. Furthermore, there remains a low likelihood that animals may be accidentally injured when removing vegetation, particularly the large trees. All native vertebrate wildlife is protected under the *Wildlife Act 1975* (Vic), and therefore contractors must use due care when removing vegetation from the study area. It is recommended that an ecologist or wildlife handler is present during the felling of any trees that may contain resident fauna.



### Guidelines for the Removal, Destruction or Lopping of Native Vegetation

The location of the native vegetation within the study area means that the proposed development will inevitably result in the loss of some of that vegetation. Applicants who wish to remove native vegetation must generally demonstrate how the application meets the three-step approach to:

- 1. Avoid the removal, destruction or lopping of native vegetation.
- 2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided; and
- 3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b).

Most of the vegetation within the study area is modelled by DELWP as being 'Location 1' vegetation which is the lowest on a scale of 1, 2 and 3 (Department of Environment Land Water and Planning 2018b). However, an area of Location 2 vegetation is modelled near the middle of the study area, and the southern boundary of the proposed reserve. Native vegetation that is to be impacted will need to be offset, consistent with Clause 52.17 of the Knox City Council planning scheme.

Based on the current assessment, and the Master Plan for the development (Peddle Thorp Architects, 36-0125, Rev E: dated November 2020), 1.129 hectares of native vegetation will be directly impacted by clearing for the proposed development (Figure 2). However, 0.738 hectares of this vegetation, that comprises RP3, is exempt from requiring offsets because it is classified as regeneration less than ten years old (Department of Environment Land Water and Planning 2017b). Most of the vegetation that is classified as Location 2 vegetation will be avoided. Offsets will be required for the remaining 0.391 hectares of native vegetation (parts of RP1 and RP2) (Appendix 3).

### **Avoidance and Minimisation Statement**

The development plan has undergone a number of iterations to avoid and minimise impacts to native vegetation. Iterations of the development plan have avoided impacts to modelled Rusty Velvet-bush *Lasiopetalum ferrugineum* within the study area and aimed to retain the highest quality native vegetation within the study area. This has resulted in the retention of vegetation adjoining the existing patch of native vegetation (RP1) that extends beyond the study area to the riparian vegetation of Blind Creek. Most of this vegetation was Location 2 vegetation (the second highest modelled risk rating), and has been generally avoided by the proponent. The result of these efforts has been to achieve an assessment under the Intermediate Risk-based pathway.

Subsequent development of the Master Plan has introduced buffers between the residential lots and the retained vegetation. These will serve the dual purposes of fire and habitat protection. In addition, the Water Treatment Area will further protect the retained vegetation the north of the study area. Nonetheless, the changes to hydrology in this area may result in negative impacts to vegetation in this location, including to the trees that are retained, but included in the offset calculation above. This vegetation, as well as vegetation that will be impacted for the creation of a trail to Agora Boulevard, is classified as lost for the purposes of calculating offsets (either partial or total as per the requirements of Clause 52.17 of the planning scheme and The Guidelines), as shown on Figure 1. However, in a practical sense, this vegetation will not be entirely removed and sensitive



placement of the trail to Agora Boulevard and selective removal of vegetation to achieve the defendable space means that much of this vegetation will, in fact, remain within the study area.

Where management of defendable space is required in the north of the property, partial removal of native vegetation is proposed to maintain as much the ecological value of the site as possible, particularly large trees, while ensuring the development is safe from bushfire attack.

The proposed pedestrian trail from Agora Boulevard to the north (Figure 2), will be constructed from pervious materials at the existing grade. This will negate impacts to the Tree Protection Zones of the indigenous trees that form a canopy over this location. Impacts to vegetation will be restricted to the exotic understorey in this location, and no native vegetation, or offsets are required.

A more detailed discussion of impacts to native vegetation is provided in separate advice provided to the client and included here as Appendix 4.

### **Native Vegetation Removal Report**

A Native Vegetation Removal Report has been prepared for the proposed development and is provided in Appendix 3. This report uses the Habitat Hectare scores and native vegetation polygons collected during the current assessment. The report includes the species specific offset test, which determines if the proposed vegetation removal will have a proportional impact on any Victorian rare or threatened species habitat above a specific offset threshold, which is set at 0.005 per cent of total habitat for each species. This test was applied to current proposal, and it was determined that no species specific offsets were required. Table 3 and Appendix 3 present the offset required for the removal of the remnant vegetation.

Table 3. Native vegetation offset requirements under the current development plan

Location Risk	Location 2	
Risk Based Pathway	Intermediate	
Total Extent Removed	0.083ha	
Remnant Patches	• 0.391ha	
<ul> <li>Scattered Trees</li> </ul>	• Nil	
General Offset Requirements	0.126 General Habitat Units	
	Two Large Trees	
Specific Offset Requirements	Nil	
Minimum Strategic Biodiversity Score	0.202	
Offset Location	Port Phillip and Western Port CMA or within the Knox City Council municipality	



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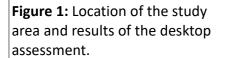


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### **Figures**

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Norvel Road, Ferntree Gully, Victoria.

Legend

Study Area

Open Space

Bushland Reserve

Reserve

Planning Overlays

\_\_\_\_\_\_ESO2

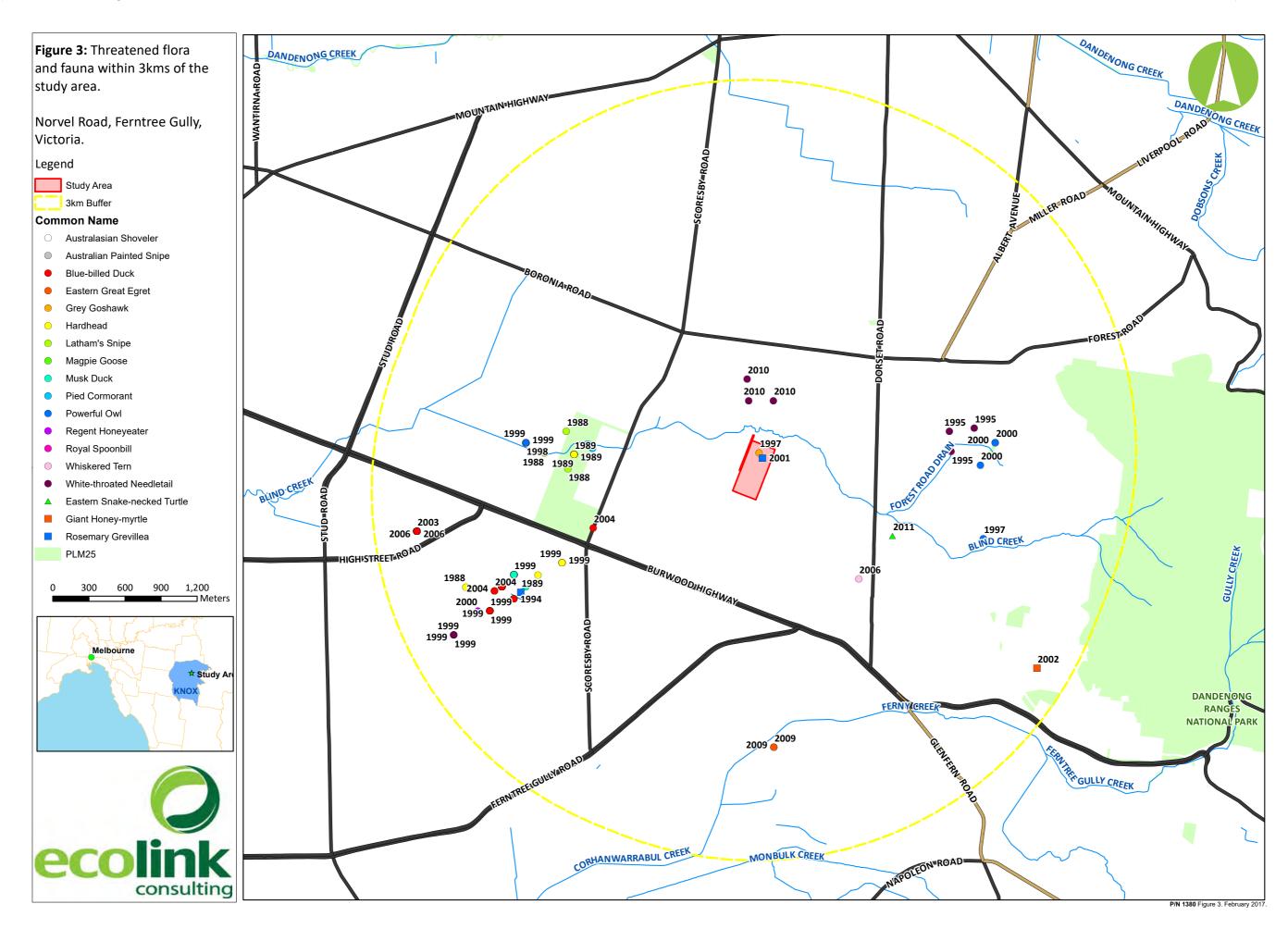
\* Location of proposed open spaces as per Peddle Thorp Architects, 36-0125, Rev E: dated November 2020





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## **Plates**



**Plate 1**. The location of the proposed sewer and trail on the western boundary of the study area, looking south.



**Plate 2.** Weedy understorey, under a largely indigenous overstorey along the north-eastern extension of the study area, south from Agora Boulevard.





Plate 3. Regrowth from the seed-bank of the imported fill, showing the dominance of Hop Goodenia





Plate 4. Remnant Patch 1



# **Appendices**

# Appendix 1. Flora and Fauna Tables.

Table A1. Flora recorded within the study area

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weed Classification
*	Angled Onion	Allium triquetrum	- Significance	- Classification
	Austral Bracken	Pteridium esculentum		_
	Bidgee-widgee	Acaena novae-zelandiae	-	-
	Black Wattle	Acacia mearnsii	_	_
	Black-anther Flax-lily	Dianella revoluta s.l.	-	-
*	Blackberry	Rubus fruticosus spp. agg.	Yes	Regionally controlled
	Blackwood	Acacia melanoxylon	-	-
*	Boneseed	Chrysanthemoides monilifera	Yes	Regionally controlled
*	Bridal Creeper	Asparagus asparagoides	-	Restricted
	Bristly Wallaby-grass	Rytidosperma setaceum	-	-
*	Brown-top Bent	Agrostis capillaris	-	-
	Bundy	Eucalyptus goniocalyx s.s.	-	-
	Centella	Centella cordifolia	-	-
	Cherry Ballart	Exocarpos cupressiformis	-	-
*	Cleavers	Galium aparine	-	-
*	Cocksfoot	Dactylis glomerata	-	-
	Common Apple-berry	Billardiera scandens s.l.	-	-
	Common Blown-grass	Lachnagrostis filiformis s.l.	-	-
	Common Bog-sedge	Schoenus apogon	-	-
	Common Cassinia	Cassinia aculeata subsp. aculeata	-	-
*	Common Centaury	Centaurium erythraea	-	-
	Common Grass-sedge	Carex breviculmis	-	-
	Common Love-grass	Eragrostis brownii	-	-
	Common Raspwort	Gonocarpus tetragynus	-	-
	Common Rice-flower	Pimelea humilis	-	-
*	Common Sow-thistle	Sonchus oleraceus	-	-
	Common Spike-sedge	Eleocharis acuta	-	-
	Common Tussock-	Poa labillardierei	-	-
	grass			
	Common Woodruff	Asperula conferta	-	-
	Cotton Fireweed	Senecio quadridentatus	-	-
*	Couch	Cynodon dactylon var. dactylon	-	-
	Cudweed	Euchiton sp.	-	-
	Dodder Laurel	Cassytha spp.	-	-



Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weed Classification
	Drooping Cassinia	Cassinia sp. aff. arcuata (Midlands)	-	-
*	English Ivy	Hedera helix	-	-
*	Flatweed	Hypochaeris radicata	-	-
	Forest Wire-grass	Tetrarrhena juncea	-	-
	Grassland Wood-sorrel	Oxalis perennans	-	-
*	Hairy Bird's-foot	Lotus subbiflorus	-	-
	Trefoil	<u> </u>		
*	Hairy Hawkbit	Leontodon saxatilis subsp. saxatilis	-	-
	Hop Goodenia	Goodenia ovata	-	-
	lvy-leaf Violet	Viola hederacea sensu Willis (1972)	-	-
	Kangaroo Grass	Themeda triandra	-	-
	Kidney-weed	Dichondra repens	-	-
*	Kikuyu	Cenchrus clandestinus	-	-
*	Large Quaking-grass	Briza maxima	-	-
	Love Creeper	Comesperma volubile	-	-
	Mealy Stringybark	Eucalyptus cephalocarpa s.s.	-	-
	Messmate Stringybark	Eucalyptus obliqua	-	-
	Milkmaids	Burchardia umbellata	-	-
*	Montpellier Broom	Genista monspessulana	Yes	Regionally controlled
	Mountain Clematis	Clematis aristata	-	-
*	Musky Heron's-bill	Erodium moschatum	-	-
	Myrtle Wattle	Acacia myrtifolia	-	-
*	Onion Grass	Romulea rosea	-	-
	Pale Flax-lily	Dianella longifolia s.l.	-	-
	Pale Rush	Juncus pallidus	-	-
*	Panic Veldt-grass	Ehrharta erecta var. erecta	-	-
*	Paspalum	Paspalum dilatatum	-	-
*	Perennial Rye-grass	Lolium perenne	-	-
*	Pimpernel	Lysimachia arvensis	-	-
*	Prairie Grass	Bromus catharticus	-	-
	Prickly Currant-bush	Coprosma quadrifida	-	-
	Prickly Moses	Acacia verticillata	-	-
	Prickly Tea-tree	Leptospermum continentale	-	-
*	Prunus	Prunus spp.	-	-
*	Radiata Pine	Pinus radiata	-	-
	Reed Bent-grass	Deyeuxia quadriseta	-	-
*	Ribwort	Plantago lanceolata	-	-
	Shiny Cassinia	Cassinia longifolia	-	-
	Shrubby Fireweed	Senecio minimus	-	-
	Silvertop Wallaby-	Rytidosperma pallidum	-	-



			National Significance	Weed Classification
	grass			
	Slender Speedwell	Veronica gracilis	-	-
	Slender Wallaby-grass	Rytidosperma racemosum var. racemosum	-	-
	Small Loosestrife	Lythrum hyssopifolia	-	-
	Small Poranthera	Poranthera microphylla s.l.	-	-
	Snowy Daisy-bush	Olearia lirata	-	-
	Soft Tussock-grass	Poa morrisii	-	-
*	Soursob	Oxalis pes-caprae	-	Restricted
	Spiny-headed Mat- rush	Lomandra longifolia	-	-
	Stinking Pennywort	Hydrocotyle laxiflora	-	-
*	Suckling Clover	Trifolium dubium	-	-
	Swamp Club-sedge	Isolepis inundata	-	-
	Swamp Gum	Eucalyptus ovata	-	-
	Swamp Paperbark	Melaleuca ericifolia	-	-
	Sweet Bursaria	Bursaria spinosa subsp. spinosa	-	-
#	Sweet Pittosporum	Pittosporum undulatum	-	-
*	Sweet Vernal-grass	Anthoxanthum odoratum	-	-
	Tall Rush	Juncus procerus	-	-
	Thatch Saw-sedge	Gahnia radula	-	-
*	Toowoomba Canary- grass	Phalaris aquatica	-	-
	Tree Everlasting	Ozothamnus ferrugineus	-	-
	Variable Stinkweed	Opercularia varia	-	-
	Variable Sword-sedge	Lepidosperma laterale	-	-
	Veined Spear-grass	Austrostipa rudis	-	-
*	Water Couch	Paspalum distichum	-	-
	Wattle Mat-rush	Lomandra filiformis	-	-
	Weeping Grass	Microlaena stipoides var. stipoides	-	-
*	White Clover	Trifolium repens var. repens	-	-
	Yellow Wood-sorrel	Oxalis corniculata s.l.	-	-
*	Yorkshire Fog	Holcus lanatus	-	-

### **Table Notes:**

This table does not include ornamental plants, trees or shrubs that were not spreading or reproducing beyond where they were planted.

<sup>\*</sup> Exotic # Naturalised



Table A2. Fauna recorded within the study area

Origin	Common Name	Species Name
Birds		
	Crested Pigeon	Ocyphaps lophotes
*	Spotted Dove	Streptopelia chinensis
	Sulphur-crested Cockatoo	Cacatua galerita
	Musk Lorikeet	Glossopsitta concinna
	Rainbow Lorikeet	Trichoglossus haematodus
	Crimson Rosella	Platycercus elegans
	Superb Fairy-wren	Malurus cyaneus
	Red Wattlebird	Anthochaera carunculata
	Little Raven	Corvus mellori
	Australian Magpie	Cracticus tibicen
Reptiles		
	Garden Skink	Lampropholis guichenoti

## **Definitions**

<sup>\* -</sup> Introduced species



Table A3. Threatened flora that has previously been recorded within, or in the vicinity of the study area (Department of Environment Land Water and Planning 2017a), or that has habitat that may occur within the vicinity of the study area (Department of the Environment and Energy 2018a).

Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Sighting (no of sightings)	Habitat Present on Site	Likelihood of Presence
Clover Glycine	Glycine latrobeana	Vulnerable	Vulnerable FFG Listed	Grassy woodland; plains grassland; box woodland; dry sclerophyll forest.	NPR	No	Unlikely
Giant Honey-myrtle	Melaleuca armillaris subsp. armillaris	-	Rare	Mainly confined to near-coastal sandy heaths, scrubs slightly raised above saltmarsh, riparian scrubs, rocky coastlines and foothill outcrops eastwards from about Marlo. Occurrences to the west are naturalised.	2002 (1)	No	Unlikely
Leafy Greenhood	Pterostylis cucullata	Vulnerable	Endangered FFG Listed	Tea-tree heath	NPR	No	Unlikely
Lilac Leek-orchid	Prasophyllum colemaniae	Vulnerable	Extinct	Highly localised, growing among grass tussocks and shrubs in open forest. No populations are currently known to exist	NPR	No	Unlikely
Maroon Leek-orchid	Prasophyllum frenchii	Endangered	Endangered FFG Listed	Tea-tree heath; wattle tea-tree scrub; valley sclerophyll forest. Predominantly in or near coastal swamps. Rarely occupies sites more than 10 km inland	NPR	No	Unlikely
Matted Flax-lily	Dianella amoena	Endangered	Endangered FFG Listed	Grassy Wetland; Red Gum woodland; plains grassland; grassy woodlands.	NPR	No	Unlikely



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Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Sighting (no of sightings)	Habitat Present on Site	Likelihood of Presence
River Swamp Wallaby-grass	Amphibromus fluitans	Vulnerable	-	Beside swamps in grassy low open forest, riparian scrub. Required moist soils, tolerates inundation.	NPR	No	Unlikely
Rosemary Grevillea	Grevillea rosmarinifolia subsp. rosmarinifolia	-	Rare	Prefers well drained soils in plains grasslands and dry sclerophyll forests	2001 (2)	No	Unlikely
Round-leaf Pomaderris	Pomaderris vacciniifolia	Critically Endangered	Endangered FFG Listed	Valley sclerophyll forest	NPR	No	Unlikely

<sup>\*</sup> Likelihood of Presence Definitions:

Unlikely – Site does not contain habitat and/or it is outside the species' known, current distribution.

Low – Site contains some marginal habitat, but the species was not observed and has not been recently recorded in previous surveys in the area.

Moderate – Site contains preferred habitat that may support a population of the species. However, other factors, such as fragmentation, disturbance or predators may be impacting any local population.

High - Site contains the preferred habitat which is likely to support the species.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded at the site.

NPR - No previous record, modelled presence only under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018a).

Threatened status based on the Advisory List of Rare or Threatened Plants in Victoria (Department of Environment and Primary Industries 2014).



Table A4. Threatened fauna that has previously been recorded within, or in the vicinity of the study site (Department of Environment Land Water and Planning 2017a), or that has habitat that may occur within the vicinity of the site (Department of the Environment and Energy 2018a).

Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Record (no. of sightings)	Habitat Present on Site	Likelihood of Presence
Birds							
Magpie Goose	Anseranas semipalmata	-	Near Threatened, FFG Listed	Large seasonal wetlands and well-vegetated dams, wet, grasslands	1994 (21	No	Unlikely
Blue-billed Duck	Oxyura australis	-	Endangered, FFG Listed	Well-vegetated freshwater swamps, large dams, lakes. More open waters in winter.	2011 (51)	No	Unlikely
Musk Duck	Biziura lobata	-	Vulnerable	Permanent swamps with dense vegetation, more open waters in non-breeding season.	2001 (2)	No	Unlikely
Australasian Shoveler	Anas rhynchotis	-	Vulnerable	Heavily vegetated swamps and floodwaters.	1991 (2)	No	Unlikely
Hardhead	Aythya australis	-	Vulnerable	Deep, vegetated swamps, open water.	2007 (32)	No	Unlikely
Royal Spoonbill	Platalea regia	-	Near Threatened	Larger shallow waters (inland and coastal), well-vegetated shallow freshwater wetlands, floodplains, billabongs, sewage ponds, irrigation storages, tidal mudflats, estuaries, salt marshes, salt fields, mangroves, islands.	2007 (4)	No	Unlikely



Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Record (no. of sightings)	Habitat Present on Site	Likelihood of Presence
Australasian Bittern	Botaurus poiciloptilus	Endangered	Endangered	Reed beds, dense vegetation of freshwater swamps and creeks.	NPR	No	Unlikely
Eastern Great Egret	Ardea modesta	-	Vulnerable, FFG Listed	Floodwaters, rivers and shallows of wetlands, intertidal mud flats.	2009 (9)	No	Unlikely
Pied Cormorant	Phalacrocorax varius	-	Near Threatened	Large freshwater and saline wetlands and tidal bays along the coast.	1988 (2)	No	Unlikely
Grey Goshawk	Accipiter novaehollandiae novaehollandiae	-	Vulnerable, FFG Listed	Wet Eucalypt / mixed forest with closed canopy and generally low stem density	1997 (1)	No	Unlikely
Australian Painted- Snipe	Rostratula australis	Vulnerable	Critically Endangered, FFG Listed	Uncommon summer migrant to Victoria. Lowlands on shallow freshwater swamps with emergent vegetation, and flooded salt marshes.	NPR	No	Unlikely
Eastern Curlew	Numenius madagascariensis	Critically Endangered	Vulnerable, FFG Listed	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely
Curlew Sandpiper	Calidris ferruginea	Critically Endangered	Endangered, FFG Listed	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely
Latham's Snipe	Gallinago hardwickii	-	Near Threatened	Wet grasslands, open and wooded swamps.	2010 (21)	No	Unlikely
Whiskered Tern	Chlidonias hybridus javanica	-	Vulnerable	Lakes, swamps with emergent or floating plants, low bushes in saltmarsh and estuaries.	2006 (1)	No	Unlikely



Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Record (no. of sightings)	Habitat Present on Site	Likelihood of Presence
Swift Parrot	Lathamus discolor	Endangered	Endangered, FFG Listed	Winter migrant from Tasmania. Generally prefers Box-Ironbark forests and woodlands inland of the Great Dividing Range during winter.	NPR	No	Unlikely
Powerful Owl	Ninox strenua	-	Vulnerable, FFG Listed	Tall open forest and woodland.	2000 (4)	No	Low
White-throated Needletail	Hirundapus caudacutus	-	Vulnerable, FFG Listed	Aerial insectivore that rarely lands to perch, often sleeping on the wing	2010 (3)	No	Low
Regent Honeyeater	Anthochaera phrygia	Endangered	Critically Endangered, FFG Listed	Depends on nectar and insects from Box-Ironbark Eucalypt forests. Only breeding habitat lies in Northeast Victoria and central coast of NSW	2000 (1)	No	Unlikely
Painted Honeyeater	Grantiella picta	Vulnerable	Vulnerable, FFG Listed	Open box-ironbark forests and woodlands, particularly where trees are infested with mistletoe.	NPR	No	Unlikely
Mammals							
Spotted-tail Quoll	Dasyurus maculatus maculatus	Vulnerable	Endangered, FFG Listed	Forests including large intact areas of vegetation for foraging.	NPR	No	Unlikely
Swamp Antechinus	Antechinus minimus maritimus	Vulnerable	Near Threatened, FFG Listed	Heathy forest, wetlands, heathland and coastal scrub.	NPR	No	Unlikely
Greater Glider	Petauroides volans	-	Vulnerable	Wet sclerophyll forests, requires large tree hollows for nesting	NPR	No	Unlikely



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Common Name	Species Name	National Status *	Victorian Status **	Habitat Preferences	Most Recent Record (no. of sightings)	Habitat Present on Site	Likelihood of Presence
Grey-headed Flying-fox	Pteropus poliocephalus	Vulnerable	Vulnerable, FFG Listed	Roost sites commonly occur in gullies, in vegetation with dense canopy cover and close to water.	NPR	No	Moderate
Smoky Mouse	Pseudomys fumeus	Endangered	Endangered, FFG Listed	Dry sclerophyll forests with tussocky understorey	NPR	No	Unlikely
Broad-toothed Rat	Mastacomys fuscus mordicus	Vulnerable	Endangered, FFG Listed	A range of habitats from sub- alpine to coastal heathland, with high vegetative coverage in high rainfall areas	NPR	No	Unlikely
Frogs							
Growling Grass Frog	Litoria raniformis	Vulnerable	Endangered, FFG Listed	Permanent lakes, swamps, dams and lagoons.	NPR	No	Unlikely
Reptiles							
Eastern Long-necked Turtle	Chelodina longicollis	-	Data Deficient	Coastal and inland waterways, often seen wandering far from water	2011 (2)	No	Unlikely
Fish							
Australian Grayling	Prototroctes maraena	Vulnerable	Vulnerable, FFG Listed	Clear gravelly streams; deep slow flowing pools.	NPR	No	Unlikely
Dwarf Galaxias	Galaxiella pusilla	Vulnerable	Vulnerable, FFG Listed	Slow moving waters, including ephemeral drains.	NPR	No	Unlikely

#### Table Notes:

This table excludes species listed exclusively as 'migratory' or 'marine' under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018a).

#### \* Likelihood of Presence Definitions:

Unlikely – Site does not contain habitat and/or it is outside the species' known, current distribution. Birds and bats may fly over.

Low –Site contains some marginal habitat, but the species was not observed and has not been recorded in previous recent surveys in the area. Birds and bats may fly over.



### Biodiversity Assessment, Norvel Road, Ferntree Gully

Moderate – Site contains preferred habitat that may support a population of the species. Birds and bats may opportunistically or seasonally forage at the site.

High – Site contains preferred habitat which is likely to support the species. Birds and bats are likely to regularly (at least seasonally) forage or roost at the site.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded on the site.

NPR – No previous record, modelled presence only under the EPBC Protected Matters Search results (Department of the Environment and Energy 2018a).

Threatened status based on the Advisory List of Threatened Vertebrate Fauna in Victoria (Department of Sustainability and Environment 2013) and the Advisory List of Threatened Invertebrate Fauna in Victoria (Department of Sustainability and Environment 2009).



### Appendix 2. Legislation

### **Commonwealth Legislation**

### Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) is to provide for the conservation of 'Matters of National Environmental Significance'. The Act defines eight Matters of National Environmental Significance:

- World Heritage properties;
- National Heritage Places;
- Ramsar wetlands of international significance;
- · Nationally listed threatened species and ecological communities;
- Listed migratory species;
- Commonwealth marine areas:
- · The Great Barrier Reef Marine Park; and,
- Nuclear actions.

Under the Act, actions that are likely to have a significant impact upon Matters of National Environmental Significance require approval from the Federal Environment Minister. This approval is sought through a referral process for a particular action. An action includes any project, development, undertaking, activity or series of activities. Consideration of the requirement for an 'EPBC Referral' to the Minister has been made within this report.

### **State Legislation**

### Flora and Fauna Guarantee Act 1988 (Vic)

The Flora and Fauna Guarantee Act 1998 (Vic) (FFG Act) provides a legal framework for enabling and promoting the conservation of all Victoria's native flora and fauna, and to enable management of potentially threatening processes on public land. The Act lists native species, communities, and processes that threaten native flora and fauna, under Schedules of the Act. This enables the assessor and regulators to establish management measures to mitigate impacts on listed values within Victoria.

A 'Protected Flora and Fauna Licence or Permit' from DSE is required to 'take' listed flora species that are members of listed communities or protected flora from public land. 'Taking' flora is defined as any action which results in the removal or death of a native plant. A permit is not required under the FFG Act for private land, unless listed species are present and the land is declared 'critical habitat' for the species.

An evaluation of the likelihood of the presence of significant flora and fauna species on the subject site, including those listed under the FFG Act that have previously been recorded in the vicinity of the site, has been undertaken.

### Planning and Environment Act 1987 (Vic)

The *Planning and Environment Act 1987* (Vic) (P&E Act), later amended by the *Planning and Environment (Planning Schemes) Act 1996* (Vic) provides the foundation of planning schemes in



Victoria. Planning schemes set out policies and provisions for the development and protection of land within each municipality in Victoria.

The Planning and Environment (Planning Schemes) Act 1996 provides for the Minister for Planning to prepare a set of standard provisions for planning schemes called the Victoria Planning Provisions (VPP). The VPP is a state-wide reference document or template from which planning schemes are sourced and constructed. Incorporation of references such as the Permitted Clearance of Native Vegetation — Biodiversity Assessment Guidelines into Section 12 of the VPP ensures that all municipalities must consider this policy. Local zones and overlays, such as Environmental Significance Overlays, may be incorporated into Section 30 and 40 of the planning provisions by each Council, but only remain relevant within that municipality.

The objectives of the P&E Act are to integrate local land use, development planning and development policy with environmental, social, economic, conservation and resource management policies at State, regional and municipal levels through a set of planning schemes. The Act also establishes a clear procedure for public participation in decision making in amending planning schemes

Some important sections of the planning scheme, in relation to the ecological values of a site, include:

- Section 12 of the State Planning Policy Framework, which identifies, and aims to protect, key biodiversity assets from inappropriate development. It directly refers to Victoria's No Net Loss policy and other legislation which must be considered when preparing a planning permit application;
- Provision 52.17 which identifies where native vegetation removal is exempt from requiring a planning permit;
- Provision 66.02 which identifies all of the mandatory referral authorities. In particular the Victorian Department of Environment and Primary Industries is identified as the recommending referral authority if a proponent proposes:
  - To remove, destroy or lop native vegetation if the area to be cleared is 0.5 hectare or more.
  - To remove, destroy or lop native vegetation for the following class of application based on the risk-based pathway as defined in the Permitted clearing of native vegetation – Biodiversity assessment guidelines
    - High risk-based pathway.
    - To remove, destroy or lop native vegetation if a property vegetation plan applies to the site.
    - To remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority (Department of Environment Land Water and Planning 2018c).

### Catchment and Land Protection Act 1994 (Vic)

The Catchment and Land Protection Act 1994 (Vic) (CALP Act) is the principle legislation relating to the management of pest plants and animals in Victoria. Under this Act, landowners have a responsibility to avoid causing or contributing to land degradation. Where possible, landowners are



required to conserve soil, protect water resources, eradicate 'regionally prohibited' weeds, prevent the growth and spread of 'regionally controlled' weeds and control pest animals. The CALP Act lists the species that are considered weeds and pest animals.

### Wildlife Act 1975 (Vic)

Victoria's Wildlife Act 1975 (Vic) and the Wildlife Regulations 2002 (Vic) protect all indigenous vertebrate fauna, some non-indigenous vertebrate fauna, and some invertebrate fauna listed as 'threatened' under the FFG Act. The Wildlife Act 1975 (Vic)prevents intentional injury to wildlife, and stipulates that a licence should be granted where there is a possibility that wildlife are injured, or where wildlife is to be kept, relocated or traded.

In most cases, where the proponent is planning to develop a site, a planning permit approval provides this licencing approval, however, this report advises if an additional permit is required. Circumstances where this legislation may not be relevant is where fish are involved, on public land where additional regulatory approval is required, or where other permits are required (such as where fauna are required to undergo invasive procedures or installation of telemetry systems).

#### Fisheries Act 1995 (Vic)

The Fisheries Act 1995 (Vic) provides the legislative framework for the regulation, management conservation of Victorian fish species and their habitats. As with the Victorian Wildlife Act 1975 described above, the key method to ensure compliance is through licencing. Where fish, or their habitats, are likely to be impacted, this report will identify additional requirements.

### Other relevant policy

# Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b)

The Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b) were released by DELWP in December 2017. These guidelines supersede the Biodiversity Assessment Guidelines (Department of Environment and Primary Industries 2013).

A permit to remove native vegetation under clause 52.16 and 52.17 of the Victoria Planning Provisions is required unless:

- The table of exemptions to this clause specifically states that a permit is not required;
- It is native vegetation or an area specified in the schedule to the clause;
- A Native Vegetation Precinct Plan corresponding to the land is incorporated into the relevant planning scheme; or
- Bushfire exemptions apply in bushfire prone areas (Department of Environment Land Water and Planning 2017b).

The Guidelines describe the permitting process for applications to remove native vegetation on private and public property within Victoria. A key strategy of the State Planning Policy Framework, relating to biodiversity, is to ensure that there is no net loss to biodiversity as a result of the



removal, destruction or lopping of native vegetation. This is achieved through iteratively applying the three-step approach:

- 1. Avoiding the removal, destruction or lopping of native vegetation.
- 2. Minimising impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
- 3. Providing an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017b; p. 4).

Native vegetation is defined in the Victoria Planning Provisions as 'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses' (Department of Environment Land Water and Planning 2017b).

Native vegetation is further classified into two categories (Department of Environment Land Water and Planning 2017b):

- A remnant patch of native vegetation (measured in hectares) is either:
  - An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native, or
  - Any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or
  - Any mapped wetland included in the Current Wetlands Map, available in DELWP systems and tools.

OR

• A scattered tree (measured in number of trees), is a native canopy tree that does not form a patch (Department of Environment Land Water and Planning 2017b).

In addition, a canopy tree with a Diameter at Breast Height (DBH) greater than or equal to the large tree benchmark for the relevant bioregional EVC is defined as a large tree. Large trees can be either a large scattered tree or a large tree within a patch.

The contribution that is made by native vegetation to the biodiversity values of Victoria is determined through an assessment of both site-based information and landscape scale information.

At a site-based level, the contribution is determined through an assessment of:

- The extent of native vegetation;
- The number of large trees (either within a patch or scattered trees), relative to the appropriate EVC benchmark;
- The native vegetation condition, which is determined through a Habitat Hectare assessment
- The conservation status of the Ecological Vegetation Class (EVC) to which the vegetation can be classified; and,
- The presence of sensitive wetlands and coastal areas.



At a landscape scale, the value of the vegetation is determined with reference to its strategic context in the Victorian landscape (Department of Environment and Primary Industries 2013). This is determined by the vegetation's 'Strategic Biodiversity Score' (SBS) and its 'Habitat Importance Score' (HIS) for its value to rare and threatened species (Department of Environment Land Water and Planning 2017b).

All native vegetation within Victoria has a SBS that has been determined through spatial modelling, based on its rarity, level of depletion, species habitats, and condition and connectivity (Department of Environment Land Water and Planning 2017b). SBS scores are between 0 and 1 and are used to determine the offset required for the loss of that vegetation. Native vegetation only has a HIS score if it is habitat for a particular rare or threatened species<sup>6</sup> (Department of Environment Land Water and Planning 2017b). There are two types of rare or threatened species habitats that may be provided by native vegetation:

- **Highly localised habitats for rare or threatened species** where impact to this particular patch of native vegetation could result in a significant biodiversity impact, such as a breeding colony or species with a limited geographic extent.
- **Dispersed rare or threatened species habitats** where habitat for the threatened species has become depleted or fragmented over time (Department of Environment Land Water and Planning 2017b).

The HIS is used to apply the decision guidelines in relation to the removal of a patch of native vegetation and to determine offset requirements (Department of Environment Land Water and Planning 2017b).

Applications to remove native vegetation are categorised against one of three assessment pathways. These pathways are categorised as:

- Basic limited impacts on biodiversity.
- Intermediate could impact on large trees, endangered EVCs, and sensitive wetlands and coastal areas.
- Detailed could impact on large trees, endangered EVCs, sensitive wetlands and coastal areas, and could significantly impact on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017b).

This is initially determined in two ways, based on the 'location map' and the extent risk of the vegetation proposed to be removed. The location risk is determined with reference to the *Native Vegetation Location Risk* map available on DELWP's website (Department of Environment Land

• DELWP's Advisory List of Rare or Threatened Plants in Victoria (DEPI 2014a) as 'endangered', 'vulnerable', or 'rare', but does not include the 'poorly known' category.

<sup>&</sup>lt;sup>6</sup> Rare or threatened species are species listed in:

DELWP's Advisory List of Threatened Vertebrate Fauna in Victoria (DEPI 2013) as 'critically endangered', 'endangered' or 'vulnerable', but does not include 'near threatened' or 'data deficient' categories

DELWP's Advisory List of Threatened Invertebrate Fauna in Victoria (DEPI 2009) as 'critically endangered', 'endangered' or 'vulnerable', but does not include 'near threatened' or 'data deficient' categories.



Water and Planning 2018b). This map shows whether native vegetation is classified as Location 1, 2 or 3.

The extent risk is determined based on the amount of native vegetation that is proposed for removal and includes the area (in hectares) of impact to native vegetation, the number of scattered trees, and the number of large trees (Table A5).

**Table A5.** Assessment pathways for removal of remnant patches of native vegetation (Department of Environment Land Water and Planning 2017b).

Extent		Location	
	Location 1	Location 2	Location 3
Less than 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

All applications to remove native vegetation must include the following information:

- 1. Information about the native vegetation to be removed, including:
  - a. The assessment pathway and reason for the assessment pathway;
  - b. A description of the native vegetation to be removed;
  - c. Maps showing the native vegetation and property in context;
  - d. The offset requirement, determined in accordance with section 5 of the Guidelines that will apply if the native vegetation is approved to be removed.
- 2. Topographic and land information relating to the native vegetation to be removed;
- 3. Recent, dated photographs of the native vegetation to be removed;
- 4. Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five year period before the application for a permit is lodged;
- 5. An 'Avoid and Minimise' statement;
- 6. A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the *Conservation, Forests and Lands Act 1987* (Vic) that applies to the native vegetation to be removed;
- 7. Where the removal of native vegetation is to create defendable space, a written statement explaining why the removal of native vegetation is necessary;
- 8. If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations at decision guideline 8, and
- 9. An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified, and can be secured in accordance with the Guidelines (Department of Environment Land Water and Planning 2017b; p. 20-21).



If the application will be assessed under the Detailed Assessment Methodology, the following additional requirements apply:

- 10. A site assessment report of the native vegetation to be removed, including:
  - a. A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status.
  - b. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any large trees within patches.
  - c. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any scattered trees, and whether each tree is small or large.
- 11. Information about impacts on rare or threatened species habitat, including:
  - a. The relevant section of the Habitat importance map for each rare or threatened species requiring a species offset.
  - b. For each rare or threatened species that the native vegetation to be removed is habitat for, according to the Habitat importance maps: the species' conservation status the proportional impact of the removal of native vegetation on the total habitat for that species whether their habitats are highly localised habitats, dispersed habitats, or important areas of habitat within a dispersed species habitat (Department of Environment Land Water and Planning 2017b; p. 22).

Ten decisions guidelines are identified within the Guidelines that the responsible or referral authority must consider when deciding on an application to remove native vegetation. These are summarised as follows:

- 1. The degree to which the application avoids and minimises impacts to native vegetation, and where vegetation is proposed to be removed, the highest quality vegetation is avoided;
- 2. The role that the vegetation to be removed has in relation to landscape services such as erosion control, ground-water quality, waterway quality;
- 3. The role of the vegetation in the preservation of landscape features;
- 4. Whether any part of the native vegetation to be removed, destroyed or lopped is protected under the *Aboriginal Heritage Act 2006* (Vic);
- The need to remove, destroy or lop native vegetation to create defendable space to reduce the risk of bushfire to life and property, having regard to other available bushfire risk mitigation measures;
- 6. Whether the native vegetation to be removed is in accordance with any Property Vegetation Plan that applies to the site;
- 7. Whether an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines;
- 8. Whether the application is consistent with a Native Vegetation Precinct Plan (where relevant);
- 9. For applications in both the Intermediate and Detailed Assessment Pathway only, the impacts on biodiversity values that would occur as a result of vegetation removal; and,
- 10. For applications in the Detailed Assessment Pathway only, the impacts on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017b).



### Offset requirements

In all cases where native vegetation is approved for removal, the proponent is liable for the security of an offset site that meets the requirements under the Guidelines. An offset can be either a:

- First party offset on the same property as the proposed removal of native vegetation, or on another property owned or managed (in the case of Crown land) by the party requiring the offset, or
- Third party offset on another party's property. Third party offsets are traded as native vegetation credits.

In most cases a third party offset is the simplest and most cost effective means of securing the required offset.

There are three components to offset requirements:

- 1. Offset type (general or species).
- 2. Offset amount (measured in general or species habitat units).
- 3. Offset attributes.

Two types of offset are identified: General Offsets and Specifics Offsets. Specific Offsets may only be required if the native vegetation to be removed is habitat for rare or threatened species that are identified in an Intermediate or Detailed Assessment Pathway application (Department of Environment Land Water and Planning 2017b). To determine this, a 'Specific Biodiversity Equivalence Score' is calculated by multiplying the habitat hectares with the HIS for each species that may be impacted. For each of the species, this figure is divided by the sum of all the Specific Biodiversity Value Scores calculated for the remaining vegetation under investigation to give a specific offset threshold for each species. If the amount of vegetation removed exceeds this threshold, then a Specific Offset is required. If it does not exceed the threshold, then only a General Habitat Offset is required (Table A6)(Department of Environment Land Water and Planning 2017b).

Table A6 summarises the offset requirements for each of the Assessment Pathways and offset types.



**Table A6.** Offset requirements for the removal of native vegetation

		Offset amount		Offset attributes	
Assessment Pathway	Offset Type	Risk Adjusted Biodiversity Equivalence	Species Habitat Requirement	Vicinity	Strategic Biodiversity Score
Basic Assessment Pathway	General offset	1.5 times the general biodiversity equivalence score <sup>1</sup> of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
Intermediate	General offset	1.5 times the general biodiversity equivalence score of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
or Detailed Assessment Pathway	Specific offset	For each species impacted, 2 times the specific biodiversity equivalence score of the native vegetation to be removed.	Likely habitat for each rare or threatened species that a specific offset is required for, according to the specific- general offset test.	No restrictions.	No restrictions.

 $<sup>^{1}</sup>$  The general biodiversity equivalence score is determined by multiplying the vegetation's habitat hectare score by its SBS.



# **Appendix 3. Native Vegetation Removal Report**



# Native vegetation removal report

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

Date of issue: 10/12/2020 Report ID: ECL\_2020\_030

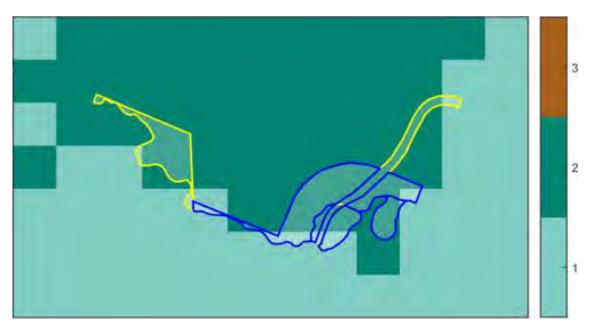
Time of issue: 5:41 pm

Project ID	1380 Norvel Estate EnSym 07122020
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# Assessment pathway

Assessment pathway	Intermediate Assessment Pathway
Extent including past and proposed	0.391 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.391 ha
No. Large trees proposed to be removed	2
Location category of proposed removal	Location 2  The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

### 1. Location map





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# Native vegetation removal report

# Offset requirements if a permit is granted

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

General offset amount <sup>1</sup>	0.126 general habitat units					
Vicinity	Port Phillip and Westernport Catchment Management Authority (CMA) or Knox City Council					
Minimum strategic biodiversity value score <sup>2</sup>	0.202					
Large trees	2 large trees					

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

Appendix 1 includes information about the native vegetation to be removed

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

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

<sup>1</sup> The general offset amount required is the sum of all general habitat units in Appendix 1.

<sup>2</sup> Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required



# Native vegetation removal report

# Next steps

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

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

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

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

- The assessment pathway and reason for the assessment pathway
- A description of the native vegetation to be removed (met unless you wish to include a site assessment)
- · Maps showing the native vegetation and property
- The offset requirements determined in accordance with section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- · Recent dated photographs
- · Details of past native vegetation removal
- An avoid and minimise statement
- A copy of any Property Vegetation Plan that applies
- A defendable space statement as applicable
- A statement about the Native Vegetation Precinct Plan as applicable
- An offset statement that explains that an offset has been identified and how it will be secured.

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

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

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# Appendix 1: Description of native vegetation to be removed

All zones require a general offset, the general habitat units each zone is calculated by the following equation in accordance with the Guidelines:

General habitat units = extent x condition x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

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

# Native vegetation to be removed

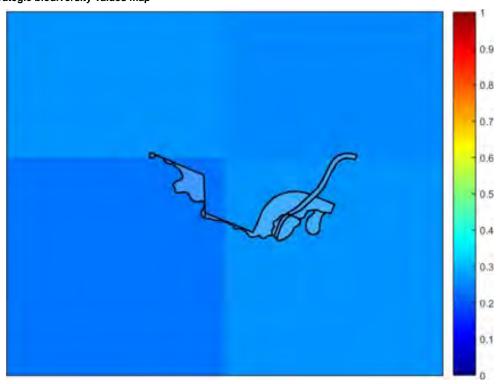
	Information provided by or on behalf of the applicant in a GIS file					Information calculated by EnSym						
Zone	Туре	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
0-A	Patch	gipp0937	Endangered	0	no	0.550	0.002	0.002	0.259		0.001	General
0-B	Patch	gipp0937	Endangered	2	no	0.550	0.086	0.086	0.230		0.044	General
0-C	Patch	gipp0937	Endangered	0	yes	0.275	0.131	0.131	0.259		0.034	General
0-D	Patch	gipp0937	Endangered	0	yes	0.130	0.033	0.033	0.260		0.004	General
0-E	Patch	gipp0937	Endangered	0	yes	0.130	0.030	0.030	0.260		0.004	General
0-F	Patch	gipp0937	Endangered	0	no	0.550	0.049	0.049	0.259		0.025	General
0-G	Patch	gipp0937	Endangered	0	no	0.260	0.009	0.009	0.260		0.002	General
0-H	Patch	gipp0937	Endangered	0	yes	0.130	0.009	0.009	0.260		0.001	General
0-1	Patch	gipp0937	Endangered	0	yes	0.275	0.042	0.042	0.260		0.011	General

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

This is not applicable in the Intermediate Assessment Pathway.

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Appendix 3- Images of mapped native vegetation 2. Strategic biodiversity values map





## 4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

Blue boundaries denote zones of partial removal with a halved condition score.



To: Matt Kelleher, Director City Liveability

Reviewed by: Nasrin Dehghani, Coordinator City Strategy and Planning

Shiranthi Widan, Manager City Futures

From: Georgia Stensness, Senior Strategic Planner

Date: 08 May 2023

KX No: D23-12097

Subject: Amendment C184knox – Norvel Estate: Approval of changes to the amendment documents prior

to exhibition

#### Purpose

Your approval is sought to make changes to amendment and supporting documents relating to the combined Amendment C184knox (amendment) and Planning Permit Application P/2020/6049 (planning permit application).

Subject to your approval, the amendment will meet all the authorisation conditions which will enable exhibition currently planned for June-July 2023.

### **Background**

On 22 November 2021, Council resolved to seek authorisation from the Minister for Planning to prepare and exhibit combined Planning Permit and Amendment C184knox. This decision included a resolution that authorised the CEO (or such person as the CEO selects) to make minor changes where changes do not affect the purpose or intent of the amendment, or changes in response to the Minister's authorisation conditions, prior to public exhibition.

On 04 April 2022, Council received authorisation from the Minister subject to conditions, including a condition regarding the preparation of Cultural Heritage Management Plan (CHMP) (Condition 2). Subsequently, Urbis (on behalf of the proponent) sought a variation to Condition 2 of the authorisation to defer the requirement for a CHMP until the amendment progresses to a panel hearing.

On 25 May 2022, the then DELWP issued an amended letter of authorisation confirming a CHMP is required prior to exhibition. A copy of the letter is attached to this memo.

The authorisation conditions are as follows:

- 1. The two precursor s173 agreements (the development and transfer s173 agreement and the social housing s173 agreement) must be exhibited with the amendment, either as part of the land title if registered on title, or as draft (or signed) agreements if not registered on title.
- 2. A cultural heritage management plan (CHMP) or certified preliminary Aboriginal heritage test (CPAHT) stating that no cultural heritage management plan is required must be provided before the amendment is exhibited. The CHMP or CPAHT is not required to be exhibited with the amendment unless the Wurundjeri



# Memorandum

Woi Wurrung Cultural Heritage Aboriginal Corporation permits exhibition. Should the amendment progress to a Panel, the CHMP or CPAHT must be provided to Planning Panels Victoria with the exhibited documents.

- 3. Amend the Explanatory Report to respond to State policy and explain specifically how the amendment addresses relevant bushfire risk.
- 4. The wording in the Explanatory Report refers to 'balancing' the preservation of human life with ecological values (in the face of bushfire risk). This must be corrected, and it be made clear that the preservation of human life in the face of bushfire risk is given priority. It is noted that the report may discuss ecological values being weighted, but the preservation of human life is given priority. It is further noted that the underlying documents generally indicate this.
- 5. In the Explanatory Report, in assessing environmental effects, clarify if and how a clause 52.17 native vegetation offset ensures no threatened flora or fauna are impacted.

On 06 May 2022, Director approval was granted to make changes to the amendment documents to satisfy Conditions 1, 3, 4 and 5. A copy of the approval (memo) is attached.

On 17 April 2023, Urbis resubmitted a revised amendment package to address all authorisation conditions.

### Proposed Changes for your approval

#### 1. CHMP

On 28 February 2023, Urbis submitted a CHMP in response to authorisation Condition 2. Further, they advised that the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation has consented to the CHMP being exhibited with the amendment, subject to sensitive information being redacted. On 04 May 2023 Urbis provided a redacted version of the CHMP and confirmed that the Wurundjeri have approved this version for exhibition.

### 2. Changes as a result of CHMP preparation

The CHMP preparation has led to a number of changes required to the other amendment/permit documentation. These changes are generally minor and have no detrimental impact on the conditions of the authorisation letter nor the purpose or intent of the amendment and planning permit application. The proposed changes and their rationale are outlined below:

Change	Planner's comments				
Removal of a boardwalk from the	The original subdivision master plan shows a proposed boardwalk in the bushland				
plans and adding	reserve with the intention of it being confirmed and constructed by Council at a later				
notations/conditions to guide its	stage.				
future construction					
	The boardwalk was removed from that plan because a CHMP must assess the potential impact of a proposed activity on Aboriginal cultural heritage, and the location of the boardwalk, its design and proposed construction had not been confirmed.				
	To guide the future construction of the boardwalk, the following notation was placed on the subdivision master plan and incorporated into other supporting documents:				
	"Future 1.2m boardwalk connection through bushland to Agora Blvd at a location to be determined and works carried out by Council. Boardwalk subject to CHMP process upon completion of detailed design".				
	Importantly, a detailed design of the boardwalk will be required and is captured under existing proposed condition 5(z).				

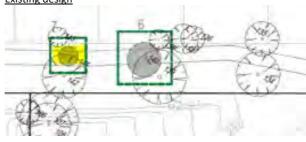


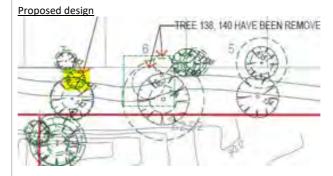
## Memorandum

#### **Retention of Tree 141**

The original plans sought to remove four trees as part of the proposal identified as Trees 141, 164, 167 and 169, all of which trigger a planning permit for their removal. Tree 141 is now proposed to be retained to respond to advice from the Cultural Heritage Advisor, and is highlighted yellow below.

# Existing design





Its retention represents an improved outcome from an environmental and amenity perspective when considering it has a height of 8 metres and canopy spread of 4 metres, and a useful life expectancy of 15-30 years. In addition, though it requires the design of the bike path to be altered, the change is relatively minor in nature.

With respect to permit conditions, there are suitable conditions to ensure the retention and longevity of existing trees. Also it is worth noting that its retention does not result in any changes to the permit conditions or preamble.

### Additional conditions of permit relating to the CHMP

Overall, the retention of Tree 141 is supported.

The draft permit was compiled before the receipt of the CHMP. Therefore prior to exhibition, it is considered appropriate to add the following conditions to the permit:

"Works must be conducted in accordance with the requirements of the approved Cultural Heritage Management Plan (approved CHMP No. 18338)." "Except with the prior written consent of the Responsible Authority, the Cultural Heritage Management Plan must not be modified."

A track change version of the permit is provided as an attachment.

Where applicable, any documents within the combined amendment package have been updated to reflect the above changes.



#### 3. Changes proposed by officers

Following further officer review, the following minor changes are also made to the document package:

Change	Planner's comments
Site address	The site address has been updated to correctly reflect the subject properties (error in
	original documents). It is noted that the Section 173 agreement refers to the correct address.
Correct plotting of Tree 132	The revised arborist report dated April 2023 in response to the CHMP shows Tree 132 has been removed, however, is depicted as retained in other documents.
	On 20 April 2023, Council's Bushland Management Team confirmed Tree 132 has not
	been removed. Instead, it is plotted incorrectly. Photographic evidence was also
	provided; <u>View - D23-92972 - From Bushland Management Team - Tree 132 has not</u>
	<u>been removed - 2023-04-20</u> .
	As the aborist report is not referred to in the draft permit, new conditions to correct its plotting is all that is required to guide the preparation of Condition 1 plans.
Removal of Tree 138	The revised plans and documents no longer show the retention of Tree 138 at 6
	Jacobus Walk, which is outside of the site boundaries to the west. Provided there are
	no tree related covenants on title, its removal did not trigger a planning permit.
Changes to planning permit	<ul> <li>Inserted conditions relating to the CHMP (discussed above)</li> </ul>
conditions	<ul> <li>Inserted new conditions 1(xi) and 6(l) to ensure Tree 132 is plotted correctly (discussed above)</li> </ul>
	Conditions 19 – 21 have been deleted as these are not applicable to a subdivision of this size
	The above changes to the draft permit have been discussed with and verbally approved by the Urban Planning Coordinator.
Other minor changes	Minor editorial changes and error corrections have been made in preparation for exhibition.

#### Conclusion

The changes discussed above are either to satisfy the authorisation conditions, or do not change the intent or purpose of the amendment, and are therefore recommended to be approved to enable the combined amendment to proceed to exhibition.

#### **Recommendations**

- Approve the changes to the amendment documents and draft planning permit as outlined in this report and as reflected in the attached revised documents.
- Note that all authorisation conditions have been met and the amendment is ready for exhibition.

Approved  Declined	60 hans
11 May 2023	Matt Kelleher – Director City Liveability



#### **Attachments**

- Amended authorisation letter View D22-150561 OFFICIAL: Knox C184 Revised authorisation letter May 2022 V2
- CHMP View D23-47277 Cultural Heritage Management Plan 21 February 2023
- Draft planning permit Edit D23-13913 C184knox P20206049 Draft Permit Norvel Estate Form 9 Exhibition
- Explanatory report <u>Edit D23-106451 C184knox Explanatory Report Track Change authorisation conditions April 2022 & additional changes</u>
   (also includes changes approved May 2022)
- Previous memo re authorisation conditions <u>View D22-98509 Memo to Director DELWP authorisation conditions Norvel Estate C184knox</u>



To: Matt Kelleher, Director City Liveability

Reviewed by: Shiranthi Widan, Manager City Futures

From: Georgia Stensness, Senior Strategic Planner

Date: 22/02/2024

KX No: D24-40308

Subject: Norvel Estate - Combined Amendment C184knox and Planning Permit Application P/2020/6049

Seeking approval to make minor changes to the draft planning permit and proposed Schedule 7 to the Neighbourhood Residential Zone for Planning Panel purposes.

The purpose of this memo is to seek your authorisation to make minor changes to the documentation for combined Amendment C184knox and Planning Permit Application P/2020/6049 in accordance with Council's resolution at its meeting on 27 November 2023. Endorsement of the changes outlined below will enable officers to make amended submissions on behalf of Council at the panel hearing scheduled for 12, 13 and 15 March 2024.

It is noted the delegation to consider and authorize these changes has been provided to you by Bruce Dobson, CEO on 1 March 2024.

#### **Background**

On 27 November 2023, Council considered submissions received to the Amendment and Application for the Norvel Road quarry site and resolved to refer these submissions (31 in total) to an independent Planning Panel for further consideration.

Broadly, the Amendment seeks to rezone the former quarry from the Special Use Zone to residential and public land zones to enable residential development to locate on the site. The Application seeks to subdivide the site to create 138 residential lots and associated reserves.

#### Planning Panel request

Officers have since requested that the Minister for Planning appoint a planning panel, and the hearing has been set for 12, 13 and 15 March 2024.

The letter received from Planning Panels Victoria on 25 January 2024 requires Council to submit a 'Day 1' version of the amendment documentation including draft without prejudice permit conditions. This requirement allows Council to submit a revised version of the draft planning permit and proposed Schedule 7 to the Neighbourhood Residential Zone for consideration by the planning panel members.

The proponent's representative for the hearing approached officers on 25 January 2024, to seek changes to the conditions in the draft planning permit. Further requests were submitted on 21 February 2024. Although many of the



requested changes are not supported by officers, it provided officers with an opportunity to revisit the conditions, to make editorial improvements and administrative changes, without altering their intent or purpose. Officers are proposing minor revisions to the draft planning permit and proposed Schedule 7 to the Neighbourhood Residential Zone, following input from various internal teams, including the statutory planning team.

Outlined below are the proposed key changes. For a full list, please refer to the documents in the Attachments section of this memo.

#### Proposed key changes

Draft planning permit conditions

Existing condition	Proponent's request	Officers' recommended changes	Justification
A building envelope on lot 52 with a size of 10 metres by 15 metres that is setback 3 metres from the western boundary. If this cannot be achieved, then lots 51 and 52 may have to consolidated, realigned or the size of lot 52 increased.	A building envelope on lot 52 with a minimum size of 150 square metres 10 metres by 15 metres that is setback 3 metres from the western boundary. If this cannot be achieved, then lots 51 and 52 must either be may have to consolidated, realigned or the size of lot 52 increased.	A building envelope on lot 52 with a minimum size of 10 metres by 15 metres, unless otherwise agreed to by the Responsible Authority. The building envelope must also demonstrate compliance with the relevant setback requirements of Condition 28.	The officers' recommended changes are not consistent with that sought by the proponent.  The condition is revised to allow Council to consider an alternate building envelope, noting that the lot is irregularly shaped.  Additionally, given the possibility of the frontage facing north or east, and as there are a number of relevant setback requirements stipulated under Condition 28, it is considered appropriate to replace reference to the 'western boundary' with reference to Condition 28.
Each lot must be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 5-8 metres, and be located within the front setback. Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 3	Each lot must be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 5-8 metres, and be located within the front setback. Each tree should be surrounded by 20 square metres of permeable surface with a minimum radius of 3	Each lot must be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 5-8 metres, and be located within the front setback. Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 2 metres. This requirement	The officers' recommended changes are not consistent with that sought by the proponent.  While officers consider the requirement for 20sqm of permeable surface around a tree to be appropriate, a reduction to the minimum radius requirement is acceptable due to its impractical application. A reduction to 2 metres is supported when considering the minimum front setback



Existing condition	Proponent's request	Officers' recommended changes	Justification
metres. This requirement does not apply to lots 52, 87-91 inclusive, 137, and 138 subject to bushfire management.	metres. This requirement does not apply to lots 33-40, 52, 87-91 inclusive, 137, and 138 subject to bushfire management.	does not apply to lots 52, 87-91 inclusive, 137, and 138 subject to bushfire management.	requirements and allowable encroachments, set out in Condition 28. Without this variation, it is anticipated Council would receive a high volume of applications seeking to vary the requirement.  Importantly, the proposed variation to Standard B13 in NRZ7 is recommended to be amended so that it is consistent with the change above.
Each lot must be provided with a minimum one (1) large feature shrub in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 4-5 metres, and be located within the rear setback of each lot. Each large feature shrub should be surrounded by 15 square metres permeable surface with minimum radius of 2 metres. This requirement does not apply to Lot 138.	Each lot must be provided with a minimum one (1) large feature shrub in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 4-5 metres, and be located within the rear setback of each lot. Each large feature shrub should be surrounded by 15 square metres of permeable surface with minimum radius of 2 metres. This requirement does not apply to lots 33-40 and Lot 138.	Each lot must be provided with a minimum one (1) large feature shrub in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 4-5 metres, and be located within the rear setback of each lot. Each large feature shrub should be surrounded by 12 square metres permeable surface with minimum radius of 1.5 metres. This requirement does not apply to Lot 138.	The proposed changes are not consistent with that sought by the proponent.  Regarding the requirement for 15sqm of permeable surface around a large shrub with a minimum radius of 2 metres, Council's landscaping officers support a variation. The requirement can be adjusted so that the permeable surface is reduced to 12sqm and the minimum radius is reduced to 1.5 metres.  It is also worth noting that most lots will not require planning permission for development. Therefore when considering the private open space requirements under the building regulations which require an area at the side or rear of the building that is at least 25sqm with a minimum dimension of 3 metres, the proposed changes also aim to streamline the building approval process, by minimising the number of applications seeking to vary the requirement.



Existing condition	Proponent's request	Officers' recommended changes	Justification
Prior to Statement of Compliance for Stage 1, the owner/developer must pay to the Council a financial contribution towards stormwater management to ensure BPEM stormwater targets are met, and for the construction of the bushland boardwalk including any associated sign. The financial contribution amount must be agreed to by the Responsible Authority.	7i) Prior to the issue of the Statement of Compliance for stage 1 of the subdivision, the owner must pay to the Responsible Authority a financial contribution towards stornwater management by the Responsible Authority.  7ii) To determine the financial contribution amount, the owner must provide the Responsible Authority for its approval a cost saving estimate for the design and construction of stornwater management treatments to meet the BPEM target without relying on the bushland area of the land as shown on the plan endorsed under condition 1.  7iii) The contribution required to be paid under this condition is the difference between the cost of the stornwater management treatments	Prior to the issue of a Statement of Compliance for Stage 1, the owner of the land must pay to the Responsible Authority a financial contribution towards the stormwater management by the Responsible Authority.  The contribution required to be paid in accordance with Condition 7 is the difference between the cost of a typical stormwater management treatment solution which meets BPEM targets and the cost of the approved stormwater management treatments as approved by the Responsible Authority.	The officers' recommended changes are not consistent with that sought by the proponent.  The requirements have been split into multiple conditions, noting these conditions speak to stormwater management, and the row below contains conditions relating to the boardwalk and associated signage. The conditions have been revised to provide greater clarity and certainty, with input received from the Stormwater team.



Existing condition	Proponent's request	Officers' recommended changes	Justification
	to meet BPEM without relying on bushland area and the approved stormwater management treatments as approved by the Responsible Authority.		
To determine the financial contribution amount, the owner/developer must provide the Responsible Authority with a cost estimate for the design and construction of stormwater management treatments and the bushland boardwalk including any associated sign.	8i) Prior to the issue of a statement of compliance for Stage 1, concurrently with the submission of plans for endorsement under condition 1, a plan showing the details of the bushland boardwalk to be constructed at the cost of the owner which shall generally be in accordance with plan XXXX must be submitted to the Responsible Authority for its approval. Once the plan has been approved, the owner shall submit to the Responsible Authority the cost of constructing the bushland boardwalk in accordance with the approved plan for the approval of the Responsible Authority.  8ii) The amount of the construction for the boardwalk shall be the amount approved by the Responsible Authority and must be paid prior to the issue of the Statement of	Prior to the issue of a Statement of Compliance for Stage 1, concurrently with the submission of plans for endorsement under Condition 1, a plan must be prepared to the satisfaction of the Responsible Authority showing the location of the bushland boardwalk and associated educational signage, and the following details:  a) The boardwalk to be a minimum 1.2 metres wide.  b) Compliance with Australian Standards AS 1428 Design for access and mobility (series) and AS2156.2 Infrastructure design (or as amended) unless otherwise approved by the Responsible Authority.  c) Impact on existing vegetation minimised.  d) A schedule of construction materials including swatch samples.  e) Dimensions.  Once the plan required by Condition 9 has been approved, the owner of the land shall submit to	The officers' recommended changes are not consistent with that sought by the proponent.  The conditions have been revised to provide greater clarity and certainty.  Additionally, the inclusion of 'educational' is crucial to specify the type of signage being sought. Moreover, the wording regarding the plan submission requirement provides a degree of flexibility, noting Council currently does not have any guidelines for constructing a boardwalk or similar. Importantly, input was sought from the Infrastructure and Major Projects team.



Existing condition	Proponent's request	Officers' recommended changes	Justification
	Compliance for stage 1 of the residential subdivision of the land permitted by this permit.	the Responsible Authority for its approval the cost of constructing the bushland boardwalk and associated educational signage in accordance with the approved plan for the approval of the Responsible Authority.  Prior to the issue of a Statement of Compliance for Stage 1, the amount for the construction of the boardwalk and associated educational signage must be paid.	
Prior to Certification of any stage of this subdivision, Melbourne Water requires that the applicant submit a detailed Drainage and Stormwater Management Strategy for approval, which demonstrates how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater. The strategy should also include information regarding the future ownership and maintenance requirements of any proposed assets.	Deletion of condition	Deletion of condition	The proponent sought the deletion of this condition and Melbourne Water consented to its deletion on 07 February 2024.  View - D24-31861 - From Melbourne Water - comments on without prejudice permit conditions - 2024-02-07



#### Recommendations

Officers recommend that you (or your delegate):

- Approve the minor changes made to the draft planning permit as per the track change documents (attached):
- Approve the minor changes made to the proposed Schedule 7 to the Neighbourhood Residential Zone (attached).

Approve	Approved (delegated by CEO 1/3/2024)
Not Approved	
Name	Matt Kelleher, Director City Liveability (1/3/2024)
Signature	allan

#### **Attachments**

- <u>View D24-43417 NRZ Schedule 7 Post Exhibition track changes accepted Day 1 version</u>
- View D24-42231 D23-224411 Knox C184knox P 2020 6049 Draft Planning Permit with Track Changes Post Exhibition Day 1 version

Lawyers Collins Square, Tower Two Level 25, 727 Collins Street Melbourne VIC 3008 Australia

Telephone 61 3 9258 3555 Facsimile 61 3 9258 3666

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DX 259 Melbourne

## **Agreement under section 173** of the Planning and Environment Act 1987 Subject Land: 29 Norvel Road, Ferntree Gully

Purpose: Cost of construction of Boardwalk and Sha e Use Path

Knox City Council and

**Norvel Estate Pty Itd** 



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## Agreement under section 173 of the Planning and Environment Act 1987

#### **Dated**

#### **Parties**

Name	Knox City Council
Address	511 Burwood Highway, Wantirna South, Victoria
Short name	Council

Name	Norvel Estate Pty Ltd
Address	10 Poplar Street, Box Hill, Victoria
Short name	Owner

### **Background**

- A. Council is the responsible authority for the Planning Scheme.
- B. The Owner is or is entitled to be the registered proprietor of the Subject Land.
- C. The Owner is proposing to subdivide and develop the Subject Land for residential development. The proposed subdivision and development of the Subject Land is to be facilitated by Amendment C184knox to the Planning Scheme and the Planning Permit.
- D. The Owner has agreed to:
  - D.1 prepare plans for the development of the Boardwalk and Shared Use Path; and
  - D.2 pay Council the costs of the works associated with the Boardwalk and Shared Use Path,

in accordance with this Agreement.



#### The Parties agree

#### 1. Definitions

In this Agreement unless the context admits otherwise:

Act means the Planning and Environment Act 1987.

Agreement means this deed and includes this deed as amended from time to time.

**Agora Boulevard Land** means the land at 54 Agora Boulevard, Ferntree Gully, being the land referred to in certificate of title volume 09406 folio 976 and volume 09505 folio 570 and any reference to the Agora Boulevard Land includes any lot created by the subdivision of the Agora Boulevard Land or any part of it.

Amendment means C184knox to the Planning Scheme.

**Biodiversity Assessment** means a biodiversity assessment report prepared for the construction of the Boardwalk or Shared Use Path, in accordance with clause 5.1.4.

**Boardwalk** means the boardwalk/pathway proposed on the Agora Boulevard Land which is to be designed in accordance with clause 5.1.2(a) of this Agreement.

**Building Permit Documents** means any documents required for Council to obtain a building permit under the *Building Act 1993* for the Boardwalk and Shared Use Path.

**Bushland Reserve** means the land at 29R Norvel Road, Ferntree Gully, being the land referred to in certificate of title volume 12496 folio 040, described as Reserve 1 on Plan of Subdivision 915838N, and any reference to the Bushland Reserve includes any lot created by the subdivision of the Bushland Reserve or any part of it..

**Consent Fee** means a fee payable by the Owner to Council for deciding whether to give consent for anything this Agreement provides must not be done without Council's consent, and which is payable at the rate of:

- (a) \$336.40 if paid within 12 months from the date that this Agreement commences; or
- (b) \$336.40 plus Indexation if paid at any time after 12 months from the date that this Agreement commences.

**CPI** means the annual Consumer Price Index (All Groups-Melbourne) as published by the Australian Bureau of Statistics, or, if that index number is no longer published, its substitute as a cumulative indicator of the inflation rate in Australia, as determined by Council from time to time.

**Cultural Heritage Management Plan** means a cultural heritage management plan prepared in accordance with the Part 3 of the *Aboriginal Heritage Regulations 2018.* 

#### Current Address means:

- (a) for Council, the address shown on page one of this Agreement, or any other address listed on Council's website; and
- (b) for the Owner, the address shown on page one of this Agreement or any other address provided by the Owner to Council for any purpose relating to the Subject Land.

**Current Email** means:



- (a) for Council, knoxcc@knox.vic.gov.au, or any other email address listed on Council's website; and
- (b) for the Owner, any email address provided by the Owner to Council for the express purpose of electronic communication regarding this Agreement.

**Indexation** means an annual adjustment to the Consent Fee carried out in accordance with CPI.

**Owner** means the person and/or entity registered or entitled from time to time to be registered as proprietor of an estate in fee simple of the Subject Land and includes a mortgagee-in-possession.

**Owner's obligations** includes the Owner's specific obligations and the Owner's further obligations.

**Party** or **Parties** means the Parties to this Agreement but does not include a person who has transferred or otherwise disposed of all of their interests in the Subject Land.

**Planning Permit** means planning permit no. P/2020/6049 as amended from time to time, if it is approved by the Minister for Planning and issued by Council, authorising the staged subdivision, development of pathways, removal of vegetation and associated works on the Subject Land and Bushland Reserve in accordance with plans endorsed by Council.

**Planning Scheme** means the Knox Planning Scheme and any other planning scheme that applies to the Subject Land.

**Shared Use Path** means the shared use path proposed on the Bushland Reserve which is to be designed in accordance with clause 5.1.2(b) of this Agreement.

**Stage** followed by a reference to a stage number is a reference to a specified stage of the development of the Subject Land as identified in any staging plan forming part of plans endorsed under the Planning Permit for the Subject Land.

**Statement of Compliance** means a Statement of Compliance under the *Subdivision Act* 1988.

**Subject Land** means the land situated at 29 Norvel Road, Ferntree Gully being the land referred to in certificate of title volume 12496 folio 039, described as Lot 1 on Plan of Subdivision 915838N, and any reference to the Subject Land includes any lot created by the subdivision of the Subject Land or any part of it.

**Vegetation Assessment** means a vegetation assessment report prepared for the construction of the Boardwalk or Shared Use Path, in accordance with clause 5.1.3.

#### 2. Interpretation

In this Agreement unless the context admits otherwise:

- 2.1 the singular includes the plural and vice versa;
- 2.2 a reference to a gender includes all genders;
- a reference to a person includes a reference to a firm, corporation or other corporate body and that person's successors in law;



- 2.4 any agreement, representation, warranty or indemnity by 2 or more persons (including where 2 or more persons are included in the same defined term) binds them jointly and severally;
- a term used has its ordinary meaning unless that term is defined in this Agreement. If a term is not defined in this Agreement and it is defined in the Act, it has the meaning as defined in the Act;
- 2.6 a reference to an Act, regulation or the Planning Scheme includes any Act, regulation or amendment amending, consolidating or replacing the Act, regulation or Planning Scheme;
- 2.7 the Background forms part of this Agreement;
- the Owner's obligations take effect as separate and several covenants which are annexed to and run at law and equity with the Subject Land; and
- 2.9 any reference to a clause, page, condition, attachment or term is a reference to a clause, page, condition, attachment or term of this Agreement.

#### 3. Purposes of Agreement

The Parties acknowledge and agree that the purposes of this Agreement are to:

- 3.1 record the terms and conditions on which the Owner agrees to pay Council for the cost of the construction of the Boardwalk and Shared Use Path; and
- 3.2 achieve and advance the objectives of planning in Victoria and the objectives of the Planning Scheme in respect of the Subject Land.

#### 4. Agreement required

The Parties agree that this Agreement will continue to be required until the Owner has complied with all of the Owner's obligations.

#### 5. Owner's specific obligations

#### 5.1 Design of the Boardwalk and Shared Use Path

The Owner covenants and agrees that, except with the prior written consent of Council:

- 5.1.1 the Owner must prepare:
  - (a) a Vegetation Assessment;
  - (b) a Biodiversity Assessment;
  - (c) detailed designs and specifications (**Designs**) that are responsive to the recommendations and findings of the Vegetation Assessment and Biodiversity Assessment;
  - (d) Building Permit Documents; and
  - (e) any other supporting documents;

#### Maddocks

for the Boardwalk and Shared Use Path at the Owner's cost and to the Council's satisfaction:

#### 5.1.2 the Designs:

- (a) for the Boardwalk, must be generally in accordance with the landscape masterplan drawings 01 and 02 prepared by Urbis dated 17 February 2021 (Job No. ND1757) with modifications required to:
  - (i) ensure the Boardwalk is a minimum of 1.5 metres wide;
  - (ii) demonstrate compliance with Australian Standard AS1428 Design for access and mobility (series) and AS2156.2 Infrastructure Design;
  - (iii) show vegetation that is to be retained and protected, and vegetation that is suitable for removal:
  - (iv) avoid vegetation removal and if removal cannot be avoided, only the minimum amount necessary should be removed;
  - (v) minimise the impact on retained vegetation;
  - (vi) incorporate any recommendations from the Vegetation Assessment and Biodiversity Assessment;
  - (vii) include a schedule of construction materials including swatch samples;
  - (viii) be scaled and include dimensions;
  - (ix) replace the hardwood timber with another material that is suitable for the Boardwalk such as fibre reinforced plastic;
  - (x) include educational signage with the quantity, design and location to be to Council's satisfaction
- (b) for the Shared Use Path, must be generally in accordance with the landscape masterplan drawings 01 prepared by Urbis dated 17 February 2021 (Job No. ND1757) with modifications required to:
  - (i) ensure the Shared Use Path is a minimum 1.5 metres wide;
  - (ii) ensure the Shared Use Path is constructed of compacted granitic sand;
  - (iii) show vegetation that is to be retained and protected, and vegetation that is suitable for removal;
  - (iv) avoid vegetation removal and if removal cannot be avoided, only the minimum amount necessary should be removed;
  - (v) minimise the impact on existing vegetation;
  - (vi) incorporate any recommendations from the Vegetation Assessment and Biodiversity Assessment;
  - (vii) include a schedule of construction materials including swatch samples;



- (viii) be scaled and include dimensions.
- 5.1.3 the Vegetation Assessment must be prepared by a suitably qualified professional to Council's satisfaction, and include but not be limited to:
  - (a) a schedule listing all relevant vegetation including data;
  - (b) a plan showing the location of each tree and groups of significant ground vegetation identified by the number assigned in the report, tree protection zones and structural root zones;
  - (c) recommendations to safeguard trees and significant ground vegetation during construction works;
  - (d) any special design and construction requirements;
  - (e) comments and photographs if relevant; and
  - (f) an explanation as to how the Designs have been prepared to minimise the impact of the Boardwalk and Shared Use Path on existing vegetation;
- 5.1.4 the Biodiversity Assessment must be prepared by a suitably qualified professional to Council's satisfaction, and include but not be limited to:
  - (a) an inventory of flora and fauna;
  - (b) maps and photographs if relevant; and
  - (c) any special design and construction requirements; and
  - (d) an explanation as to how the Designs have been prepared to avoid and minimise the impact of the Boardwalk and Shared Use Path on biodiversity;
- 5.1.5 Council will consider the documents provided under clause 5 and advise the Owner whether it agrees in principle to the Designs of the Boardwalk and Shared Use Path or whether any further changes are required.

#### 5.2 Cultural Heritage Management Plan

The Owner covenants and agrees that, except with the prior written consent of Council:

- 5.2.1 after the Owner receives confirmation from Council that it agrees in principle to the Designs of the Boardwalk and Shared Use Path under clause 5.15.1.5, the Owner must if required under the Aboriginal Heritage Act 2006:
  - (a) prepare a Cultural Heritage Management Plan or amend the approved Cultural Heritage Management Plan (CHMP 18338) for the construction of the Boardwalk and Shared Use Path; and
  - (b) submit the Cultural Heritage Management Plan for approval in accordance with the Aboriginal Heritage Act 2006 and Aboriginal Heritage Regulations 2018:
- 5.2.2 the Owner must use its best endeavours to enable the Cultural Heritage
  Management Plan to be approved as soon as possible, including addressing any
  requirements raised by the registered Aboriginal party or the Secretary of the
  Department of Premier and Cabinet (as relevant); and



5.2.3 within two weeks of receiving notification of the approval of the Cultural Heritage Management Plan in accordance with clause 5.2.1(a), provide Council with a copy of the Cultural Heritage Management Plan.

## 5.3 Approval of Designs ,Vegetation Assessment, Biodiversity Assessment, Building Permit Documents and supporting documents

The Owner covenants and agrees that, except with the prior written consent of Council:

- 5.3.1 after receiving notification of the approval of the Cultural Heritage Management Plan in accordance with clause 5.2.1(a), the Owner must:
  - (a) make any changes required to the Designs, Vegetation Assessment, Biodiversity Assessment, Building Permit Documents and any other supporting documents for the Boardwalk and Shared Use Path to address the requirements of the approved Cultural Heritage Management Plan; and
  - (b) submit the final Designs, Vegetation Assessment, Biodiversity Assessment, Building Permit Documents and any supporting documents for the Boardwalk and Shared Use Path to Council for consideration and approval; and
- 5.3.2 Council will consider the documents provided under 5.3.1 and advise the Owner whether it approves the Designs of the Boardwalk and Shared Use Path or whether any further changes are required prior to approval.

#### 5.4 Community Engagement on Designs

The Owner covenants and agrees that, except with the prior written consent of Council:

- 5.4.1 Council may decide, before the Owner completes its obligations under clause 5.2, at its absolute discretion, to undertake community engagement in relation to the Designs of the Boardwalk and Shared Use Path;
- 5.4.2 if Council decides to undertake community engagement in accordance with clause 5.4.1, the Owner:
  - (a) may be required to consider and incorporate the outcomes of the community engagement into the Designs provided it is not inconsistent with the requirements of clause 5 of this Agreement; and
  - (b) must pay to Council within 14 days after a written request for payment, Council's costs and expenses relating to that community engagement; and
  - (c) must participate in and lead discussions at any community information or consultation sessions that are held as part of the community engagement under this clause.

#### 5.5 Financial Contribution

The Owner covenants and agrees that, except with the prior written consent of Council:

- 5.5.1 after Council approves the Designs, the Owner must:
  - (a) produce detailed costings for the construction of the Boardwalk and Shared Use Path prepared by a suitable qualified quantity surveyor that are based on the Designs and supporting documents approved by Council and must:



- include any costs required to implement the recommendations and requirements of the Cultural Heritage Management Plan, Vegetation Assessment and Biodiversity Assessment;
- (ii) be based on a contingency of 12 months between the date of the costings and the time of construction of the Boardwalk and Shared Use Path to account for the time it may take Council to procure a suitable contractor and increases in material costs;
- (iii) include any costs required to comply with any building permit;
- (b) submit the costings to Council for approval; and
- 5.5.2 within two weeks of Council approving the costings, pay Council the total costs of the Boardwalk and Shared Use Path as set out in the costings approved by Council.

#### 5.6 Access to the Subject Land

The Owner covenants and agrees that if Council requires access to the Subject Land to complete the construction of the Boardwalk and Shared Use Path it will provide Council and its contractors with access to the Subject Land for that purpose and for no fee.

#### 6. Statement of Compliance for Stage 1

The Owner covenants and agrees that, except with the prior written consent of Council:

- 6.1.1 the Owner must complete its obligations under clauses 5.1 to 5.5 prior to the issue of Statement of Compliance for Stage 1 of the development of the Subject Land allowed by the Planning Permit;
- 6.1.2 Council may, at its election, withhold issuing Statement of Compliance for Stage 1 of the development of the Subject Land allowed by the Planning Permit until the Owner fully complies with its obligations under clauses 5.1 to 5.5.

#### 7. Owner's further obligations

#### 7.1 Notice and registration

The Owner must bring this Agreement to the attention of all prospective occupiers, purchasers, lessees, licensees, mortgagees, chargees, transferees and assignees.

#### 7.2 Further actions

The Owner:

- 7.2.1 must do all things necessary to give effect to this Agreement;
- 7.2.2 consents to Council applying to the Registrar of Titles to record this Agreement on the certificate of title of the Subject Land in accordance with s 181 of the Act; and
- 7.2.3 agrees to do all things necessary to enable Council to do so, including:
  - (a) sign any further agreement, acknowledgment or document; and
  - (b) obtain all necessary consents to enable the recording to be made.



#### 7.3 Fees

The Owner must pay any Consent Fee to Council within 14 days after a written request for payment.

#### 7.4 Council's costs to be paid

The Owner must pay to Council within 14 days after a written request for payment, Council's costs and expenses (including legal expenses) relating to this Agreement, including:

- 7.4.1 preparing, drafting, finalising, signing, recording and enforcing this Agreement;
- 7.4.2 preparing, drafting, finalising and recording any amendment to this Agreement; and
- 7.4.3 preparing, drafting, finalising and recording any document to give effect to the ending of this Agreement.

#### 7.5 Time for giving consent

If Council makes a request for payment of any Consent Fee under clause 7.3, the Parties agree that Council will not decide whether to grant the consent sought until payment has been made to Council in accordance with the request.

#### 7.6 Interest for overdue money

- 7.6.1 The Owner must pay to Council interest in accordance with s 120 of the *Local Government Act 2020* on any amount due under this Agreement that is not paid by the due date.
- 7.6.2 If interest is owing, Council will apply any payment made to interest and any balance of the payment to the principal amount.

#### 8. Agreement under s 173 of the Act

Without limiting or restricting the respective powers to enter into this Agreement, and insofar as it can be so treated, this Agreement is made as a deed in accordance with s 173 of the Act.

#### 9. Owner's warranties

The Owner warrants that apart from the Owner and any other person who has consented in writing to this Agreement, no other person has any interest, either legal or equitable, in the Subject Land which may be affected by this Agreement.

#### 10. Successors in title

Until such time as a memorandum of this Agreement is recorded on the certificate of title of the Subject Land, the Owner must require successors in title to:

- 10.1 give effect to this Agreement; and
- 10.2 enter into a deed agreeing to be bound by the terms of this Agreement.



#### 11. General matters

#### 11.1 Notices

A notice or other communication required or permitted to be served by a Party on another Party must be in writing and may be served:

- 11.1.1 personally on the other Party;
- 11.1.2 by leaving it at the other Party's Current Address;
- 11.1.3 by posting it by priority prepaid post addressed to the other Party at the other Party's Current Address; or
- 11.1.4 by email to the other Party's Current Email.

#### 11.2 Counterparts

This Agreement may be executed in counterparts, all of which taken together constitute one document.

#### 11.3 No waiver

Any time or other indulgence granted by Council to the Owner or any variation of this Agreement or any judgment or order obtained by Council against the Owner does not amount to a waiver of any of Council's rights or remedies under this Agreement.

#### 11.4 Severability

If a court, arbitrator, tribunal or other competent authority determines that any part of this Agreement is unenforceable, illegal or void then that part is severed with the other provisions of this Agreement remaining operative.

#### 11.5 No fettering of Council's powers

This Agreement does not fetter or restrict Council's power or discretion to make decisions or impose requirements or conditions in connection with the grant of planning approvals or certification of plans subdividing the Subject Land or relating to use or development of the Subject Land.

#### 11.6 Inspection of documents

A copy of any planning permit, document or plan referred to in this Agreement is available for inspection at Council offices during normal business hours upon giving the Council reasonable notice.

#### 11.7 Governing law

This Agreement is governed by and is to be construed in accordance with the laws of Victoria.

#### 11.8 Electronic Execution

- 11.8.1 Each Party consents to the signing of this Agreement by electronic means. The Parties agree to be legally bound by this Agreement signed in this way.
- 11.8.2 Each Party reserves the right to sign this Agreement by electronic means, including by use of software or an online service for this purpose.



#### 12. Commencement of Agreement

This Agreement commences on the date the Amendment C184knox is approved by the Minister for Planning.

#### 13. Ending of Agreement

- 13.1 This Agreement ends when:
  - 13.1.1 the Owner has complied with all of the Owner's obligations; and
  - 13.1.2 the Boardwalk and Shared Use Path have been constructed.
- After this Agreement has ended, Council will, at the Owner's written request, apply to the Registrar of Titles under s 183(1) of the Act to cancel the record of this Agreement.





## Signing Page

Position Held

Signed, sealed and delivered as a deed by the Parties.

Signed by and on behalf, and with the authority of the Knox City Council by

Signature

In the exercise of a power conferred by an Instrument of Delegation, in the presence of:

Witness Signature

Print Name

This document was witnessed by audio visual link in accordance with the requirements of s12 of the *Electronic Transactions (Victoria) Act 2000*.

Maddocks

<b>Executed as a deed</b> by Norvel Estate Pty Ltd <b>ACN 619 386 855</b> in accordance with s 127(1) and s 127(3) of the <i>Corporations Act 2001</i> :	) )
Signature of Sole Director	
Qing Dong Liu	





# PLANNING PERMIT GRANTED UNDER SECTION 961 OF THE PLANNING AND ENVIRONMENT ACT 1987

**Application No:** P/2020/6049

Planning Scheme: Knox

**Responsible Authority:** Knox City Council

#### **ADDRESS OF THE LAND:**

29<del>Q and 29R</del> Norvel Road, FERNTREE GULLY VIC 3156 (Lots 1 & <u>RES1</u>2 on-<u>PS915838NTP963860L & Lot 1 on TP297137X</u>)

#### THE PERMIT ALLOWS:

Staged subdivision (including 138 residential lots), development of pathways, removal of native vegetation, and associated works

in accordance with the endorsed Plan(s)

#### THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT:

#### **Amended Plans**

- Prior to certification of any stage of the plan of subdivision and the commencement of any buildings and works including removal of vegetation, amended plans must be submitted and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of the permit. The plans must be drawn to scale with dimensions and three copies must be provided. The plans must be generally in accordance with the submitted plans but modified to show:
  - Amended subdivision layout plan, consistent with the relevant requirements of <u>Ce</u>onditions 5, 6, and <u>2848</u> of this permit, which includes the following changes:
    - A building envelope on lot 52 with a <u>minimum</u> size of 10 metres by 15 metres, <u>unless otherwise agreed to by the Responsible Authority. The building envelope</u> <u>must also demonstrate compliance with the relevant setback requirements of Condition 28. that is setback 3 metres from the western boundary. If this cannot be achieved, then lots 51 and 52 may have to consolidated, realigned or the size of lot 52 increased;</u>
    - ii) Removal of on-street car parking bays affecting vehicle movements at intersections of Road E/F, A/E, B/A, Norvel Road and Road H, and the bend of Dion Street-Road G/F and Road B/C<sub>7</sub>.
    - iii) The bend at Dion Street-Road G/F must have an outer radius rather than a sharp 90-degree angle;
    - iv) Crossovers to lots 1, 31, and 32 to <u>demonstrate compliance with Condition 67.</u> be relocated as much as practical to be clear of the intersection;
    - v) Building setbacks consistent with the requirements of Ceondition 2818;
    - vi) Showing garden area calculation and demonstrating that minimum garden area can be achieved for lots less than 400sqm<sub>7</sub>.

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## PLANNING PERMIT GRANTED LINDER SECT

GRANTED UNDER SECTION 96I OF THE PLANNING AND ENVIRONMENT ACT 1987 **Application No:** P/2020/6049

Planning Scheme: Knox

**Responsible Authority:** Knox City Council

- vii) Pram ramp footpath connection for pedestrian access across Norvel Road at the new intersection with Road H and the footpath on the eastern side of Road H to connect with the crossover of 60 Norvel Road.
- viii) Pram ramp footpath connection across Norvel Road at either side McMahons Road intersection on the eastern side and the western side.
- ix) The nature strip verge for Road H increased to 2.4 metres on both sides;
- x) A crossover from Road C and Castricum Place to enable emergency vehicle to enter the removable bollard emergency access from these roads.
- xi) The location of Tree 132 corrected.
- xii) Requirements from Ausnet as per Condition 41.

xi)xiii) Requirements from the CFA as per Ceondition 4248.

- b) A subdivision staging plan.
- c) A plan showing vegetation removal.

#### Layout not altered

- The subdivision, buildings and works, and extent of native vegetation removal, as shown on the endorsed plans, must not be altered except with the prior written consent of the Responsible Authority.
- 3) Unless otherwise agreed to by the Responsible Authority, works associated with the approved subdivision must only commence when all detailed plans associated with the particular stage are approved by the Responsible Authority and once commenced, these works must be undertaken and completed in accordance with the endorsed detailed plans to the satisfaction of the Responsible Authority prior to the issue of a Statement of Compliance.

#### Sequencing of staging

4) The subdivision must proceed in the order of stages as shown on the endorsed plan unless otherwise agreed in writing by the Responsible Authority.

#### **Engineering Plans Required**

- Prior to the certification of a plan of subdivision, detailed engineering construction plans prepared by a qualified Civil Engineering Consultant must be submitted for all works and approved by the Responsible Authority for each stage of the subdivision. Construction plans must be clearly dimensioned and detail all roads, pathways, drainage works (*including WSUD*) and computations (to AHD). Three copies and digital formal (*Autocad and .pdf*) must be provided. The detailed plans must be generally in accordance with the endorsed plan, including the stormwater management plan (*Cardno V161919 dated 25 May 2021*), and show:
  - a) Any changes required under Condition 1.

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## PLANNING PERMIT GRANTED UNDER SECTION 961 OF THE PLANNING AND

**ENVIRONMENT ACT 1987** 

**Application No:** P/2020/6049

Planning Scheme: Knox

**Responsible Authority:** Knox City Council

- b) Tree protection zone for all trees being retained with annotation that services works within tree protection zone must be thrust bored.
- c) CFA requirements at Condition 4248, 4753, and 4854.

#### Drainage

- d) Details of stormwater management, including provision for all stormwater to be directed to the legal point of discharge for each lot as per Knox City Council's Civil Works and Stormwater Drainage Guidelines for subdivisions;
- e) Functional design of the sedimentation basin, retarding basin, wetlands and any other WSUD system in the subdivision;
- f) Stormwater directed into the Melbourne Water's drainage system must do so only with the consent of Melbourne Water and must meet their requirements;
- g) Water Sensitive Urban Design treatments.
- h) Maintenance regime for the stormwater treatment system that include activity description, frequency and ongoing maintenance, management responsibility and a checklist for handover to Council:
- i) A design and construction schedule of the stormwater treatment/detention system.
- j) All Council pipelines must be designed for 10% Annual Exceedance Probability (AEP) event.
- k) The minimum pipe diameter for the drainage system must be 300mm.

#### Road and footpath

- l) Details including surface and underground drainage, intersections, pavement and footpath/shared path details, street lighting, fire hydrants, vehicle crossovers, line marking, street signage, concrete kerbs and channels and outfall drainage;
- m) Swept path diagrams for junctions, bends, and hammerhead turning areas to ensure suitable access for all vehicles, including emergency vehicles, to turn and remain free of encroachment or obstructions, including on-street car parking:
- n) The location and design depth and composition of pavement, including raised traffic islands and speed control devices;.
- Proposed traffic <u>calming treatment mid-block</u> <u>calming devices and speed humps</u>, <u>including speed humps</u> in the detailed design for Road A <del>and H;</del>.
- p) Right angle bends require a painted centre line and raised reflective markers to separate traffic travelling in opposite directions including give-way signage and surface treatment design to accentuate priority traffic along Road E/F and A/E at the junction of the north-east access cul-de-sac and Road D and support pedestrian movement across Road D<sub>72</sub>.

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Planning Scheme: Knox

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- q) A minimum 8 metres is required for kerb returns at bends. The kerb between the North-East access lane and Road E must be altered to show an 8 metre radius;
- r) The location of all services and cables to be underground and the annotation that all services works within Tree Protection Zone must be thrust bored:
- s) The location of all "no parking" and "Street name" and various traffic signage. No parking must be provided on the residential side of Road C and D. Street signage, such as "No Through Road" along Norvel Road must be relocated to the satisfaction of the Responsible Authority;
- t) A fully mountable splitter island must be constructed at the intersection of McMahons Road and Norvel Road to the satisfaction of the Responsible Authority;
- u) If construction is done in stage, turnaround provision for waste collection vehicles must be provided where roads are not yet completed;
- v) Cross sections for roads and access lanes to be provided.; and

#### On-street car parking plan

- w) Details of on-street car parking including CFA requirements at Condition 4248;.
- x) Parking restrictions limiting on-street parking to only one side on the narrower Access Place type roads with preference of the no parking to be located on the residential side; and,
- y) Waste bin collection points to be designated for each lots to show planned access for garbage collection.

#### Bicycle path, trail, and bushland track

- z) Detail bushland boardwalk/<u>pathway</u> location and construction design including the location of existing vegetation in accordance with the requirements of Condition 9;.
- aa) Detail of construction of bike path, and maintenance trail to Agora Blvd, including that paths and trails located within tree protection zone must be constructed above grade;
- bb) Removable bollard at either end of the trail to Agora Boulevard to limit vehicle access to maintenance and emergency vehicles only.

#### **Street Lighting**

- cc) Details of Street Lighting type and location, provided to the satisfaction of the relevant authority and in accordance with AS1158. This must include a lighting to all intersections, bends in the road and at the end of roads.
- dd) Street lighting to be incorporated at both end of the Pedestrian Link between Road A and H.
- ee) Lighting along the bushland reserve frontage (Road E, Road D, and the end of Road F) to consider measures that avoid any light spilling to the bushland reserve.

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To the satisfaction of the Responsible Authority. Once approved, these plans become the endorsed plans of this permit.

#### **Landscaping Plan Required**

- Prior to the certification of a plan of subdivision for any stage, a detailed landscaping plan prepared by a suitably qualified landscape architect or a suitably qualified landscape designer must be submitted to and approved by the Responsible Authority for all reserves, including road reserves and public spaces, relevant to that stage by Responsible Authority. Once approved, the plan will be endorsed and then form part of the Planning Permit. A digital format (.pdf) must be provided generally in accordance with Knox's Landscape Plan Guidelines, the Landscape Report Revision I 02/03/2023 prepared by Urbis and the Arboricultural Report Revision April 2023 prepared by Treemap Arboriculture and modified to show:
  - a) Any changes required under Condition 1.
  - b) Streetscape and reserve designs detailing location of water sensitive urban design features, garden beds, location of street furniture, the position of street lighting, fire hydrants, side entry and service pits, pathways within reserves, electricity substations and planting of vegetation.

The species and planting size of trees must be selected to the satisfaction of the Responsible Authority.

- c) The planting species modified as:
  - i) Tilia cordata to be changed to Nyssa Sylvatica 'Forum';
  - ii) Nyssa sylvatica is a more adaptable species to a warming climate;
  - iii)ii) Acer platanoides 'Norwegian Sunset' to be changed to Acer truncatum x Applatanoides 'Warrenred' Pacific Sunset. Eucalyptus melliodora 'Yellow Box'; Norwegian sunset cultivar is not available anymore;
  - iv)—The Eucalyptus melliodora planting area have the following understorey species additions to add to diversity/beauty::
  - <u>v-)iii)</u> Allocasuarina littoralis, Acacia pravissima, Kunzea ericoides, Leptospermum petersonii, Bursaria spinose;
  - vi)iv) Northern end planting (area that abuts bushland reserve) to be changed to the native tree species, Angohpora hispida '(Dwarf Apple');
  - <u>vii)v)</u> Angophora hispida to be planted on the northern side of Road E and Road D, spaced at 12 metre centres to incorporate the 5 metre canopy separation when they reach maturity.
- d) Delineation of the bushfire defendable space area and proposed planting schedule and location within the defendable space area modified to accord with bushfire management requirements as per Ceondition 4450.
- e) No street tree for lots 137 and 138 to meet bushfire defendable space requirement.

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- f) The street trees on the south side of Road E and along Lot 52 moved to the north side of Road E and D to meet bushfire defendable space requirement.
- g) The opportunity for a second canopy tree to be located at the northern end of Road H to help frame the dead end to the road.
- h) A planting schedule of all proposed trees, shrubs and ground covers including botanical names, common names, pot sizes, sizes at maturity and quantities of each plant, to be planted within the nature strip and reserves.
- i) Details of the surface finishes of roads, pathways, tracks, and bike path.
- j) Annotation that all services works within Tree Protection Zone must be thrust bored and bike path within tree protection zone must be constructed above grade.
- k) Details and location of all services including above and below ground lines, cables, hydrants and pipes (including as cross-section) with annotation that all services to be located at a minimum depth of 600mm within road reserves.;
- I) The location of Tree 132 corrected: and
- m) Trees to be retained and their respective tree protection zones (reserves only)\_-
- m)n) A minimum 1.8 metre high paling or steel fence (or similar) along the eastern boundary where the proposed residential lots adjoin existing residential lots.

To the satisfaction of the Responsible Authority. Once approved, these plans become the endorsed plans of this permit.

- 7) Prior to the issue of a Statement of Compliance for Stage 1, the owner/developer of the land must pay to the Responsible Authority a financial contribution towards the stormwater management which shall be to the satisfaction of the Responsible Authority.

  must pay to the Council a financial contribution towards stormwater management to ensure BPEM stormwater targets are met, and for the construction of the bushland boardwalk including any associated sign. The financial contribution amount must be agreed to by the Responsible Authority.
- 8) The contribution required to be paid in accordance with Condition 7 is the difference between the cost of a typical stormwater management treatment solution which meets BPEM targets and the cost of the approved stormwater management treatments as approved by the Responsible Authority. The owner of the land shall submit the cost to the Responsible Authority for its approval.

To determine the financial contribution amount, the owner/developer must provide the Responsible Authority with a cost estimate for the design and construction of stormwater management treatments and the bushland boardwalk including any associated sign.

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- 9) Prior to the issue of a Statement of Compliance for Stage 1, concurrently with the submission of plans for endorsement under Condition 1, a plan must be prepared to the satisfaction of the Responsible Authority and be generally in accordance with the landscape masterplan drawings 01 and 02 prepared by Urbis dated 17/02/21 (Job No. ND1757) showing the location of the bushland boardwalk/pathway and associated educational signage, and the following details:
  - a) The boardwalk/pathway to be a minimum 1.2 metres wide.
  - b) Compliance with Australian Standards AS 1428 Design for access and mobility (series)
     and AS2156.2 Infrastructure design (or as amended) unless otherwise approved by the

     Responsible Authority.
  - c) Impact on existing vegetation minimised.
  - d) A schedule of construction materials including swatch samples.
  - e) Hardwood timber replaced with another material.
  - f) Dimensions.
- Once the plan required by Condition 9 has been approved, the owner of the land shall submit to the Responsible Authority for its approval the cost of constructing the bushland boardwalk/pathway and associated educational signage in accordance with the approved plan for the approval of the Responsible Authority.
- 11) Prior to the issue of a Statement of Compliance for Stage 1, the amount for the construction of the boardwalk/pathway and associated educational signage must be paid.
- 9)12) Prior to issue of a Statement of Compliance for each stage, the following works must be completed or bonded in accordance with approved plans to the satisfaction of the Responsible Authority:
  - a) stormwater drainage;
  - b) roads and lighting;
  - c) traffic devices;
  - d) car parking and access ways must be drained, sealed and line marked;
  - e) footpaths, bike path, trails, and pram crossings; and
  - f) landscaping.
- 10)13) Prior to any works commencing within Council Bushland reserve and Seecal reserve,
  Council's Biodiversity Officer must be contacted to arrange an inspection of the works area.

#### **Native Vegetation**

- 11)14) Before works start, the permit holder must advise all persons undertaking the vegetation removal and works on site of all relevant conditions of this permit.
- 12)15) In order to offset the removal of 0.391 hectares of native vegetation approved as part of this permit, the applicant must provide a native vegetation offset that meets the following requirements and is in accordance with the Biodiversity Assessment prepared by Ecolink

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Planning Scheme: Knox

Responsible Authority: Knox City Council

Consulting dated September 2023 and the Permitted clearing of native vegetation—

Biodiversity assessment guidelines Guidelines for the removal, destruction or lopping of native vegetation, and the Native vegetation gain scoring manual:

#### The general offset must:

- contribute offset amount of 0.126 general habitat units,
- be located within the Port Phillip and Westernport Catchment Management Authority boundary or Knox municipal district,
- have a strategic biodiversity score of at least 0.202.
  - 13)16) Prior to the removal of any native vegetation and the issue of a Statement of Compliance, evidence that the required offset for the project has been secured must be provided to the satisfaction of the Responsible Authority.

#### **Tree Protection Conditions**

- Prior to any buildings and works, subdivision works, and vegetation removal commencing, all trees and vegetation to be retained and the bushland reserve must be fenced off with barrier fencing to create a protection zone. The tree protection zone must be a minimum radius of 12x the diameter of the trunk, measured at a height of 1.4 metres from the ground as identified in the Australian Standard for the protection of trees (AS 4970-2009).
  The fence is to be maintained and clearly marked throughout the construction period and removed at the completion of all works.
- All works, including excavation and fill, within the tree protection zone areas of the trees to be retained, within and adjacent to the site including reserves, must be undertaken under the supervision of a qualified Arborist to ensure that there is no unreasonable damage to the root system of trees to be retained and/or protected, to the satisfaction of the Responsible Authority.
- 19) The tree protection fence is to be chain link or wire mesh, comprise either wooden or steel posts set into the ground or on concrete pads, and be a minimum height of 1.8 metres.

  Signage is to be affixed to the fence advising that the area is a tree protection zone and a nogo development area.
- 20) The tree protection fence and signage is to be maintained throughout the construction period and removed at the completion of all works.
- 14)21) No temporary removal of the tree protection fence, or encroachment into the protection zone is permitted without the written consent of the responsible authority.
- 15)22) Trees are to be watered thoroughly prior to construction works commencing and throughout the period of construction works to the satisfaction of the Responsible Authority.

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**Responsible Authority:** Knox City Council

No materials, vehicle, equipment, waste, soil or other goods must be stored or placed within the tree protection zone.

16)24) Prior to any works commencing on site, the Responsible Authority must be contacted to inspect the Tree Protection fencing.

<u>47)25)</u> Entry and exit pits for underground services must not be constructed within the tree protection zone of native tree.

#### **Cultural Heritage Management Plan Conditions**

- 18)26) -Works must be conducted in accordance with the requirements of the approved Cultural Heritage Management Plan (approved CHMP No. 18338).
- 19)27) Except with the prior written consent of the Responsible Authority, the Cultural Heritage Management Plan must not be modified.

#### **Section 173 Agreement**

20)28) Prior to the issue of a statement of compliance, the owner of the land must enter into an agreement with the Responsible Authority pursuant to Section 173 Agreement of the Planning and Environment Act 1987 and provide evidence to the Responsible Authority that the agreement has been registered on the certificate of title for the land. The agreement will stipulate the following building design requirements applies to the development of future dwellings on the land unless otherwise approved by the Responsible Authority.

#### Front Setbacks

- a) Front walls of a building must be setback a minimum of:
  - i. 5.5 metres from a street frontage for lots facing Castricum Place.
  - ii. 4 metres from a street frontage for lots on the northern side of "Road B" shown as Lots 33 to 40 on the attached plan. No encroachment within the front setbacks are is allowed for these lots.
  - iii. The distance set as defendable space for the lots affected by bushfire defendable space as shown on the endorsed plans and as a restriction on the plan of subdivision. No encroachment within the defendable space are is allowed for these lots.
  - iv. 4.5 metres from a street frontage for all other lots.

Any encroachment into the front street setback of point (i.) and (iv.) above must be limited to the following structure provided it encroaches no more than 0.5 metres into the specified setback distances:

• porches, pergolas and verandahs that are less than 3.6 metres in height;

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 decks, terraces, landings, stairways, ramps, eaves, window hoodings, sunblinds, fascias, gutters, masonry chimneys, flues, pipes, and domestic services normal to a dwelling.

#### Front Setbacks for garages or carports

- b) Front walls of a car parking structure (such as garages and carport) must be setback a minimum of:
  - i. 0.5 metres from the front wall of the building for lots facing Castricum Place.
  - 5.4 metres from a street frontage and at least 0.5 metres behind the front wall of the building for all other lots.

#### Side Setbacks

c) Side walls of a building on a corner lot must be setback a minimum of 1.5m from a side street frontage. No encroachment within the side street setback is allowed.

#### Rear Setbacks

- d) Rear walls of a building must be setback a minimum of 3 metres from the rear boundary for all lots except for:
  - i. Lots 33-40 inclusive.
  - ii. Lots 113-138 inclusive.
- <u>e)</u> Rear walls of a building for lots 113-138 inclusive must be setback a minimum of 5 metres from the rear boundary.
- Any encroachment into the rear setback of point (d) and (e) above must be limited to the following structure provided it does not encroach within the minimum radius of the large feature shrubs required under point (pj):
  - porches, pergolas and verandahs that are less than 3.6 metres in height;
  - terraces, patios, decks, landings that are less than 800mm in height, stairways, ramps, eaves, fascia or gutter, water tanks, and domestic services normal to a dwelling;
  - outbuildings that does not exceed a gross floor area of 10 square metres.

#### <u>Lot 138</u>

- fg) The dwelling on Lot 138 should be single storey. However, if a double storey building is proposed, the upper level must meet the following requirements:
  - i. setback by at least 3 metres behind the ground floor north and west wall façade to ensure a recessive second storey element.
  - ii. The upper level setback means the recess above the ground floor wall calculated as the shortest horizontal distance from the top of the ground floor wall. It does

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not include projection such as balconies. Any balconies located within this setback must be clear to the sky.

- g)h) The wall of a building must be setback a minimum of 3.8 metres from the northern boundary and 2 metres from the part of the western boundary that does not constitute part of a street frontage.
- A)i) Regardless of point (hg) above, no building and works, other than fencing, are allowed in the tree protection zone of any tree. An arboricultural report will be required to determine the tree protection zone of any tree encroaching onto Lot 138 and tree protection fencing must be installed prior to any works commencing on this lot.
- (4)[) The western boundary fence with the bushland reserve must be no more than 1.2 metres in height.
- jk) The northern boundary fence with the bushland reserve must be no more than 1.2 metres in height for the first 12 metres from the western boundary.

#### **Front Boundary**

- **k)**]] Front fences are not allowed on a road frontage or within 3 metres of a road frontage (excludes side boundaries).
- 14m) No structures are allowed within 200 millimetres of a footpath in the road reserve.

#### One Crossover per Lot

m)n) Only one (1) crossover per lot is allowed. The crossover must not exceed a width of 3 metres but may be merged with that of an adjoining lot provided that it results in no more than one (1) crossover per lot.

#### **Landscaping**

- n)o) Each lots must-provide be provided with a minimum of one (1) small canopy tree in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 5-8 metres, and be located within the front setback. Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 3-2 metres. This requirement does not apply to lots 52, 87-91 inclusive, 137, and 138 subject to bushfire management.
- e)p) Each lots must be provided with a minimum one (1) large feature shrubs in accordance with Knox's Landscape Plan Guidelines (or as amended) with a mature height of 4-5 metres, and be located within the rear setback of each lot. Each large feature shrubs should be surrounded by 15-12 square metres permeable surface with minimum radius of 2-1.5 metres. This requirement does not apply to Lot 138.
- p)g) The planted canopy trees and large feature shrubs must be maintained to the satisfaction of the Responsible Authority and must not be removed.

#### Lots less than 400 square metres in area

q)r) A minimum garden area of 25 percent must be set aside in accordance with the Knox Planning Scheme.

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Bushfire Management - Lots 52, 87 to 91, 137-136 to 138

r)s) The development and management of defendable space on lots 52, 87 to 91 inclusive, and 13<mark>67</mark>-138 must be in accordance with the endorsed Bushfire Management Plan.

All costs associated with the preparation and registration of the agreement must be borne by the owner of the land. The owner of the land must pay all of the Responsible Authority's reasonable legal costs and expenses of this agreement, including preparation, execution and registration on title.

#### **Telecommunications**

21)29) The owner of the land must enter into an agreement with:

- A telecommunications network or service provider for the provision of telecommunication services to each lot shown on the endorsed plan in accordance with the provider's requirements and relevant legislation at the time; and
- b) A suitably qualified person for the provision of fibre ready telecommunication facilities to each lot shown on the endorsed plan in accordance with any industry specifications or any standards set by the Australian Communications and Media Authority, unless the applicant can demonstrate that the land is in an area where the National Broadband Network will not be provided by optical fibre.
- 22)30) Before the issue of a Statement of Compliance for any stage of the subdivision under the Subdivision Act 1988, the owner of the land must provide written confirmation from:
  - A telecommunications network or service provider that all lots are connected to or are ready for connection to telecommunications services in accordance with the provider's requirements and relevant legislation at the time; and,
  - A suitably qualified person that fibre ready telecommunication facilities have been provided in accordance with any industry specifications or any standards set by the Australian Communications and Media Authority, unless the applicant can demonstrate that the land is in an area where the National Broadband Network will not be provided by optical fibre.

#### **Road naming**

23)31) Prior to the Certification of any stage, proposed naming for all new roads must be submitted to and approved by the Responsible Authority with the approved names to be then applied on the pPlan of ssubdivision for certification.

Names must be in accordance with the Naming rules for places in Victoria [2022] to the satisfaction of the Responsible Authority. -Road G must be named as continuation of Dion Street.

#### **Public Open Space**

24) A contribution to the Council for public open space must be required pursuant to Section 18A of the Subdivision Act 1988 and Clause 52.01 of the Knox Planning Scheme.

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#### **Site and Environmental Management**

25)32) Prior to the commencement of any works for a relevant stage on the subject land, a Site and Environmental Management Plan to the satisfaction of the Responsible Authority must be submitted and approved by the Responsible Authority. The Site and Environmental Management Plan will be endorsed and form part of the permit. The Site and Environmental Management Plan must address and document as appropriate, the construction activities proposed on the land under the following heading:

 Occupational health and safety and site induction, environmental controls, traffic management, amenity and safety of the public as well as site security, and cultural protection measures applicable to the site during construction.

The Site and Environmental Management Plan must include:

- b) Environmental Management:
  - Soil erosion and sediment control provisions to protect existing local stormwater infrastructure, Blind Creek and the bushland from erosion product and sediment transport by minimising erosion of lands during work;
  - Measures to prevent construction fill encroaching on or being placed within the bushland;
  - iii) Protection measures to ensure that disturbance to native flora and fauna habitat is avoided in the first instance, minimised where avoidance is not possible with appropriate contingencies incorporated to prevent the potential for the introduction of exotic flora and fauna species is abated;
  - Specific measures for any works related to the bushland reserve or Seecal Reserve must be included and must include the notification of Council's Biodiversity Officer prior to any works commencing;
  - Hydraulics and hydrology provisions to manage water quality and quantity, and protect the habitat value of Blind Creek (measures used should include the installation of a perimeter fence to protect the waterway prior to the commencement of works);
  - vi) Tree protection in accordance with Conditions 1317 to 2517.
  - vii) Any recommendations of any approved Cultural Heritage Management Plan (if applicable);
  - viii) The plan must ensure that contractor working on the site are inducted to this Environmental Management Plan prior to conduct any works around or within the bushland reserve.
- c) Site Management
  - i) Identifying access and egress opportunities for emergency vehicles, workers, and early residents of approved stage in case of emergency;
  - ii) Relevant Country Fire Authority requirements as per conditions 33 and 36;

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- iii) All machinery wash-down area, personnel rest areas and parking;
- iv) Waste management measures during construction;
- Measures to reduce the impact of noise, dust and other emissions created during the construction process including measures to prevent dirt being tracked onto surrounding roads by vehicles;
- vi) If requested by the Responsible Authority at any stage, a contamination assessment for a site with suspected contamination must be provided for the relevant stage to the satisfaction of the Responsible Authority;
- vii) Traffic Management identifying the access and egress access point(s) for construction vehicles and detailing the measures to ensure amenity of the adjoining areas is not impacted by the movement of vehicles (cars, trucks and construction machinery) associated with construction activities on the site.
- 26)33) The endorsed Site and Environmental Management Plan must be implemented and maintained throughout the construction to the satisfaction of the Responsible Authority and all works must be carried out in accordance with the measures set out in the approved Site and Environmental Management Plan unless otherwise agreed in writing by the Responsible Authority.
- 27)34) Prior to the commencement of any works on site, an inspection by Council's Environmental Officer must be carried out to determine compliance with the Site and Environmental Management Plan.

#### South East Water Conditions (reference: 35707694)

South East Water - Water and Sewer

- 28)35) The owner of the subject land must enter into an agreement with South East Water for the provision of drinking water supply and fulfil all requirements to its satisfaction.
- 29)36) The owner of the subject land must enter into an agreement with South East Water for the provision of sewerage and fulfil all requirements to its satisfaction.
- 30)37) All lots on the pelan of subdivision must be provided with separate connections to South East Water drinking water supply and sewerage systems.

South East Water – Certification

- 31)38) Prior to certification, the Plan of Subdivision must be referred to South East Water, in accordance with Section 8 of the Subdivision Act 1988.
- 32)39) The certified pelan of subdivision will need to show sewerage supply easements over all existing and/or proposed South East Water sewer mains located within the land, to be in favour of South East Water Corporation pursuant to Section 12(1) of the Subdivision Act.

#### **AusNet Services Conditions**

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33)40) The pelan of Subdivision submitted for certification must be referred to AUSNET ELECTRICITY SERVICES PTY LTD in accordance with Section 8 of the Subdivision Act 1988.

#### 34)41) The applicant must:

- a) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for supply of electricity to each lot on the endorsed plan.
- b) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for the rearrangement of the existing electricity supply system.
- c) Enter into an agreement with AUSNET ELECTRICITY SERVICES PTY LTD for rearrangement of the points of supply to any existing installations affected by any private electric power line which would cross a boundary created by the subdivision, or by such means as may be agreed by AUSNET ELECTRICITY SERVICES PTY LTD.
- d) Provide easements satisfactory to AUSNET ELECTRICITY SERVICES PTY LTD for the purpose of "Power Line" in the favour of "AUSNET ELECTRICITY SERVICES PTY LTD" pursuant to Section 88 of the Electricity Industry Act 2000, where easements have not been otherwise provided, for all existing AUSNET ELECTRICITY SERVICES PTY LTD electric power lines and for any new power lines required to service the lots on the endorsed plan and/or abutting land.
- e) Obtain for the use of AUSNET ELECTRICITY SERVICES PTY LTD any other easement required to service the lots.
- f) Adjust the position of any existing AUSNET ELECTRICITY SERVICES PTY LTD easement to accord with the position of the electricity line(s) as determined by survey.
- g) Adjust the position of any existing AUSNET ELECTRICITY SERVICES PTY LTD easement to accord with the position of the electricity line(s) as determined by survey.
- Set aside on the plan of subdivision Reserves for the use of AUSNET ELECTRICITY SERVICES PTY LTD for electric substations.
- i)h) Provide survey plans for any electric substations required by AUSNET ELECTRICITY SERVICES PTY LTD and for associated power lines and cables and executes leases for a period of 30 years, at a nominal rental with a right to extend the lease for a further 30 years. AUSNET ELECTRICITY SERVICES PTY LTD requires that such leases are to be noted on the title by way of a caveat or a notification under Section 88 (2) of the Transfer of Land Act prior to the registration of the plan of subdivision.
- Provide to AUSNET ELECTRICITY SERVICES PTY LTD a copy of the plan of subdivision submitted for certification that shows any amendments that have been required.
- Agree to provide alternative electricity supply to lot owners and/or each lot until such time as permanent supply is available to the development by AUSNET ELECTRICITY SERVICES PTY LTD. Individual generators must be provided at each supply point. The generator for temporary supply must be installed in such a manner as to comply with the Electricity Safety Act 1998.

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Hk) Ensure that all necessary auditing is completed to the satisfaction of AUSNET ELECTRICITY SERVICES PTY LTD to allow the new network assets to be safely connected to the distribution network.

#### Melbourne Water Conditions (reference: MWA-1164280)

Melbourne Water Certification

- 35) Prior to Certification of any stage of this subdivision, Melbourne Water requires that the applicant submit a detailed Drainage and Stormwater Management Strategy for approval, which demonstrates how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater. The strategy should also include information regarding the future ownership and maintenance requirements of any proposed assets.
- <u>36)42)</u> Unless otherwise agreed in writing by the relevant drainage authority, the subdivision must retard stormwater back to pre-development levels before entering the downstream drainage system/waterway and/or retard stormwater back to the sufficient capacity of the downstream drainage system.
- 37)43) Stormwater runoff from the subdivision must achieve State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater as set out in the 'Urban Stormwater Best Practice Environmental Management Guidelines (CSIRO) 1999'.

#### Melbourne Water - stormwater connection

- Prior to the commencement of works, a separate application direct to Melbourne Water must be made for approval of any new or modified stormwater connection to Melbourne Water's drains or watercourses, works near or over a Melbourne Water asset and/or waterway crossing.
- Strategy to the satisfaction of Melbourne Water is to be submitted and approved by Melbourne Water. The strategy is to demonstrate how stormwater runoff from the subdivision will achieve flood protection standards and State Environment Protection Policy (Waters of Victoria) objectives for the environmental management of stormwater. The strategy must consider flows from external catchment areas when determining how the development will achieve flood protection standards. The strategy should also include information regarding future ownership and maintenance requirements of any proposed stormwater assets.

Melbourne Water - Statement of Compliance

39)46) Prior to the issue of a Statement of Compliance, engineering plans of the subdivision (in electronic format) must be forwarded to Melbourne Water.

#### **Multinet Condition**

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40)47) A Statement of Compliance must be obtained from Multinet Gas prior the plan of subdivision being released from the Titles Office.

#### CFA Conditions (reference: 13000-68738-107873)

CFA - Amended plans

- 41)48) Prior to the certification of any stage of the plan of subdivision amended plans must be submitted and show:
  - a) All roads are designed to ensure the road width is constructed as specified in Table C1 of Clause 56.06-8 of the Knox Planning Scheme for an Access Lane and clear of encroachments, such as on-street parking.
  - b) Plans that show the design and location of on-street parking to ensure that the parking bays do not encroach onto the road and hinder the movement of emergency vehicles.
  - c) Plans that demonstrate the turning bays can accommodate emergency vehicles to manoeuvre in accordance with the requirements set out in CFA's Requirements for Water Supplies and Access for Subdivisions, 2006.
  - The provision of removable bollards between Road H and Road F for the purposes of access for emergency vehicles.

#### CFA – Fire management plan

- 42)49) A Fire Management Plan must be submitted and approved by the Responsible Authority prior to development starting that identifies how the bushfire risk will be managed during each Stage of the subdivision and what stage the various bushfire protection measures will be relied upon for the application.
- 43)50) Before the certification of the plan of subdivision, a Bushfire Management Plan must be submitted to and endorsed by the Responsible Authority. The plan must show the following information, unless otherwise agreed in writing by the CFA and the Responsible Authority:
  - a) The design and layout of the subdivision, including lot layout, road design and access points, both pedestrian and vehicular.
  - b) The location of nearby hazards within 150m of the subdivision boundary.
  - The location of any bushfire hazards that will be retained or created on the land within the subdivision.
  - d) The location of any areas of vegetation within the subdivision not located on private land that will be managed to a low threat condition, including the reserves.
  - e) The setback distance of any development from the bushfire hazard for defendable space purposes where vegetation will be managed.
  - f) Notations of vegetation management standards and when vegetation management will occur i.e. annually, quarterly, during the fire danger period.
  - g) Vegetation must be managed within any area of defendable space to the following standard:

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- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- iii) Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- iv) Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
- v) Shrubs must not be located under the canopy of trees.
- vi) Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
- vii) Trees must not overhang or touch any elements of the building.
- viii) The canopy of trees must be separated by at least 5 metres.
- ix) There must be a clearance of at least 2 metres between the lowest tree branches and ground level.
- h) Details of any other bushfire protection measures that are to be adopted at the site.
- i) Nominate that any building on a new lot will be required to be designed and constructed to a minimum standard of Bushfire Attack Level (BAL) 12.5.

CFA - Building envelope

44)51) Any lot that contains defendable space must include a building envelop that ensures development will not be allowed within the area of defendable space.

#### CFA – Construction and site management plan

- 45)52) Before commencement of works, a Bushfire Site Management Plan that addresses bushfire risk during, and where necessary, after construction must be submitted and approved by the responsible authority. The plan must specify, at minimum:
  - a) The staging of development and the likely bushfire risks from surrounding hazards at each stage;
  - b) An area of land between the development edge and bushfire hazard consistent with the separation distances specified in AS3959-2018, where bushfire risk is managed to enable the development, on completion, to achieve a BAL-12.5 construction standard in accordance with AS3959-2018;
  - c) The land management measures to be undertaken by the developer to reduce the risk from fire within any surrounding rural or undeveloped landscape to protect residents and property from the threat of grassfire and bushfire; and
  - d) Provision of adequate access and egress for Stage One subdivisions to minimise grass and bushfire risks to new residents prior to the full completion of the subdivision.

<b>CFA</b>	- H	ydra	ints

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46)53) Prior to the issue of a Statement of Compliance under the Subdivision Act 1988 the following requirements must be met to the satisfaction of the CFA:

- a) Above or below ground operable hydrants must be provided. The maximum distance between these hydrants and the rear of all building envelopes (or in the absence of building envelopes, the rear of the lots) must be 120 metres and the hydrants must be no more than 200 metres apart. These distances must be measured around lot boundaries.
- b) The hydrants must be identified with marker posts and road reflectors as applicable to the satisfaction of the Country Fire Authority.

Note –CFA's requirements for identification of hydrants are specified in 'Identification of Street Hydrants for Firefighting Purposes' available under publications on the CFA web site (<a href="www.cfa.vic.gov.au">www.cfa.vic.gov.au</a>)

#### CFA - Roads

- 47)54) Roads must be constructed to a standard so that they are accessible in all weather conditions and capable of accommodating a vehicle of 15 tonnes for the trafficable road width.
  - a) The average grade must be no more than 1 in 7 (14.4%) (8.1 degrees) with a maximum of no more than 1 in 5 (20%) (11.3 degrees) for no more than 50 metreers. Dips must have no more than a 1 in 8 (12%) (7.1 degree) entry and exit angle.
  - b) Curves must have a minimum inner radius of 10 metres.
  - c) Have a minimum trafficable width of 3.5 metres and be clear of encroachments for at least 0.5 metres on each side and 4 metres above the access way.
  - d) Roads more than 60m in length from the nearest intersection must have a turning circle with a minimum radius of 8m (including roll-over kerbs if they are provided) T or Y heads of dimensions specified by the CFA may be used as alternatives.

#### CFA - Maintenance of defendable space

48)55) Before the Statement of Compliance is issued under the Subdivision Act 1988, the defendable space on every lot in the subdivision must be implemented and maintained as specified on the endorsed Bushfire Management Plan, unless otherwise agreed in writing by the CFA and the Responsible Authority.

#### **Drainage/Construction Conditions**

- 49)56) All stormwater drainage runoff from the site must be properly collected and discharged in a complete and effective system of drains within the subdivision and connected to the legal point of discharge as directed by the Responsible Authority. It must not cause a nuisance to abutting properties. The internal drains of the proposed lots are to be independent of the internal drains of other lots.
- 50)57) Prior to the issue of a Statement of Compliance, any damage caused to the existing drainage system during the installation of the new property inlet must be repaired or replaced to the satisfaction of the Responsible Authority.

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#### **Payments and Maintenance Bonds**

51)58) Prior to the issue of a Statement of Compliance, the owner/developer must pay to the Council a payment for supervision of works being 2.5% of the value of all works shown on the Engineering and Landscape Plans and a payment for checking of Engineering and Landscape Plans being 0.75% of all works shown on the engineering plan.

52)59) Prior to the issue of a Statement of Compliance, the owner/developer must lodge with

- a) A refundable maintenance bond being 5% of the value of all works shown on the engineering plan; and
- b) A refundable outstanding works bond being the value of all works to be completed plus 50%.

The Developer is responsible for the maintenance of the completed construction works and such works must be kept in good condition for a period of three months.

(A priced Bill of Quantities must be supplied to Council to validate the value of works as shown on the plan. This is used to determine the amount of the engineering fees and maintenance bond and provides a record of the value of Councils assets).

#### **Bond Return**

- 53)60) Prior to the issue of a Statement of Compliance or the return of maintenance bonds in respect to the subdivision works – whichever is the later, the owner or developer must submit to Council the following information (whichever are applicable) in an electronic format agreed by the Knox City Council:
  - a) Subdivision plans showing title boundaries, road reserves, municipal reserves and easements
  - As constructed engineering plans in electronic format relating to roads, drains and other b) infrastructure constructed in conjunction with the subdivision.
  - c) Areas where fill exceeding 150 millimetres has been placed.

#### **Incomplete works Bond return**

54)61) Prior to the return of the incomplete works bond, Council will inspect the works and determine if these works have been constructed in accordance with the approved design and specifications to the satisfaction of the Responsible Authority. Should these works be satisfactory, the incomplete bond will be returned and a practical completion certificate will be issued by the Responsible Authority.

#### **Asset Protection**

55)62) Prior to the issue of a Statement of Compliance for any stage of the development, the developer must be responsible for the reinstatement and repair of any damage, and costs of all alterations to the Knox City Council and any other Public Authority assets deemed necessary and required by such Authorities for the development/subdivision. Re-instatement or modification of assets as directed by the Responsible Authority will be required or compensation to the value of Council's loss must be paid.

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#### Fencing of reserves

56)63) Prior to the issue of a Statement of Compliance, any fencing along the common boundary between a lot and a reserve or walkway or existing lot as shown on the subdivision and detailed endorsed plan must be designed and erected to the satisfaction of the Responsible Authority.

Fencing between lot 138 and the bushland reserve must be in accordance with the requirement of Condition 2818(f).

57)64) All costs associated with the provision of the fencing are to be borne by the owner/developer under this permit.

#### **Final Compliance Inspection**

<u>58)65)</u> Prior to the issue of a Statement of Compliance a final inspection by Council's Surveillance Officer must be carried out to verify the completion of works in accordance with the Engineering Plans, to Council's standards and satisfaction.

<u>59)66)</u> Prior to the issue of a Statement of Compliance a final inspection by Council's Enforcement Officer must be carried out to verify the completion of landscaping in accordance with the Landscape Plans, to Council's standards and satisfaction.

#### Vehicle crossing

60)67) Prior to the issue of a Statement of Compliance, vehicle crossings must be constructed to service all lots and any vehicle crossing no longer required must be returned to nature strip to the satisfaction of the Responsible Authority. All crossovers must be 10 metresm clear of an intersection, 3 metresm clear of all street trees and 1 metrem clear of all other assets in the road reserve.

#### **Public Space trees**

61)68) Nursery stock must be inspected and approved by a suitably qualified arborist or horticulturalist before planting and a report from this suitably qualified arborist or horticulturalist declaring that the nursery stock complies with the relevant Australian Standard, must be provided to the satisfaction of the Responsible Authority.

62)69) Following the planting of trees within the road reserves and open space reserves, an inspection must be arranged with representatives of the applicant, the landscape contractor appointed by the applicant and Knox City Council Parks Services and Landscape Officer who when satisfied will issue a Certificate of Practical Completion.

63)70) Trees and landscaping works within the road reserves, open space reserves and all landscaping within the development must be maintained at no cost to Knox City Council for a period of two years following the date of issue of the Certificate of Practical Completion. At the end of this period and following another inspection, Council will determine if the

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landscaping is satisfactory. Should the landscaping be satisfactory, the landscape bond will be returned if applicable, a Final Completion will be issued and at this point the maintenance responsibility will be assumed by Knox City Council.

- 64)71) The two-year maintenance of the trees must include formative pruning 12 months after planting to the satisfaction of the Responsible Authority.
- 65)72) Prior to the issue of a Statement of Compliance, for the final stage, the Developer must pay to the Council a street tree maintenance bond fee of \$350.00 per tree within the final stage.
- 66)73) Protection of Council's street trees must be in accordance with the Australian Standard for the protection of trees (AS 4970-2009) to the satisfaction of the Responsible Authority.

#### **Street Lighting**

67)74) Prior to the issue of a Statement of Compliance, street lighting must be provided to the satisfaction of the relevant authority and in accordance with AS 1158 and the endorsed plans. Non Standard street lighting will be accepted provided it is to the satisfaction of the Responsible Authority.

#### **Permit expiry**

68)75) The permit will expire if any of the following circumstances applies:

- a) The plan of subdivision for the first stage of the subdivision is not certified under the Subdivision Act 1988 within two (2) years of the date of this permit.
- b) The plan of subdivision for the subsequent stage is not certified under the Subdivision Act 1988 within two (2) years of certification of the previous stage.
- c) The registration of the plan of subdivision for each stage is not completed within five (5) years of the date of Certification under the Subdivision Act 1988 of that stage.
- d) The buildings and works, including removal of vegetation, component has not commenced within seven (7) years of the date of issue of the permit.
- e) The buildings and works, including removal of vegetation, component is not completed within nine (9) years of the date of issue of the permit.

The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires or in accordance with Section 69 of the Planning and Environment Act 1987.

Date Issued:	Signature for the	
	Responsible Authority	
		Page 22 of 24



# PLANNING PERMIT GRANTED UNDER SECTION 961 OF THE PLANNING AND ENVIRONMENT ACT 1987

**Application No:** P/2020/6049

Planning Scheme: Knox

**Responsible Authority:** Knox City Council

#### **NOTATIONS:**

#### Melbourne Water Notes (Stormwater Management Plan)

- Assessment of the stormwater management strategy indicates that pre-developed flows
  have been overestimated as the storage of the current site has not been accounted for.
  Approximately 3.5-4 ha of water of the existing site will be held in storage due to the large
  depressions on the site, hence pre-developed 1% AEP flows have been overestimated. The
  stormwater strategy will need to account for the current storage on the site, update the predeveloped 1% AEP flow and update the detention volume required.
- Due to the size of the subdivision and the external catchment area, internal drainage and stormwater requirements will be to the satisfaction of Council as the relevant local drainage authority. It is advised to council that consideration be given to the following:
  - Flows from the external catchment should be conveyed through the new subdivision.
  - Properties finished floor levels should be set 300mm above the applicable 1% AEP flood level associated with any overland flow through the subdivision.
  - Safe access for the subdivided properties should be provided in accordance with the relevant standards in the *DELWP Guidelines for Development in Flood Affected Areas* (considering the roads running south-north will be used for 1% AEP flow conveyance).
- In order to receive further review/approval of the stormwater management strategy, please submit an updated strategy addressing the above requirements via the Melbourne Water website.

#### **Knox City Council Notes**

- All utility services (drainage, sewer) are to be verified onsite by the applicant/developer prior to the commencement of any works.
- No buildings are permitted to be constructed over Council easements.
- A road opening permit from Council is required for any works within the road reserve, including the nature strip.
- Vehicle crossing must be constructed in accordance with Council's standard drawings, specifications and vehicle crossing policy.
- This permit does not discharge an occupier from any liability relating to the construction, maintenance or the repair of a dividing fence, pursuant to the provisions of the Fences Act 1968 (as amended).

Date Issued:	Signature for the
	Responsible Authority

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PLANNING
PERMIT
GRANTED UNDER SECTION
96I OF THE PLANNING AND
ENVIRONMENT ACT 1987

**Application No:** P/2020/6049

Planning Scheme: Knox

Responsible Authority: Knox City Council

 A contribution to the Council for public open space must be required pursuant to Section 18A of the Subdivision Act 1988 and Clause 53.01 of the Knox Planning Scheme.



Date Issued:	Signature for the
	Responsible Authority

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### PLANNING PERMIT IMPORTANT INFORMATION ABOUT THIS PERMIT

#### WHAT HAS BEEN DECIDED?

The responsible authority has issued a permit. The permit was granted by the Minister under section 96l of the **Planning and Environment Act 1987** on approval of Amendment No. C184knox to the Knox Planning Scheme.

#### CAN THE RESPONSIBLE AUTHORITY AMEND THIS PERMIT?

The responsible authority may amend this permit under Division 1A of Part 4 of the **Planning and Environment Act** 1987

#### WHEN DOES THE PERMIT BEGIN?

The permit operates from a day specified in the permit being a day on or after the day on which the amendment to which the permit applies comes into operation.

#### WHEN DOES A PERMIT EXPIRE?

- 1. A permit for the development of land expires if—
  - the development or any stage of it does not start within the time specified in the permit; or
  - the development requires the certification of a plan of subdivision or consolidation under the Subdivision
     Act 1988 and the plan is not certified within two years of the issue of the permit, unless the permit contains a
     different provision; or
  - the development or any stage is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit or in the case of a subdivision or consolidation within five years of the certification of the plan of subdivision or consolidation under the **Subdivision Act 1988**.
- 2. A permit for the use of land expires if—
  - the use does not start within the time specified in the permit, or if no time is specified, within two years after the issue of the permit; or
  - · the use is discontinued for a period of two years.
- 3. A permit for the development and use of land expires if—
  - the development or any stage of it does not start within the time specified in the permit; or
  - the development or any stage of it is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit; or
  - the use does not start within the time specified in the permit, or, if no time is specified, within two years after the completion of the development; or
  - the use is discontinued for a period of two years.
- 4. If a permit for the use of land or the development and use of land or relating to any of the circumstances mentioned in section 6A(2) of the **Planning and Environment Act 1987**, or to any combination of use, development or any of those circumstances requires the certification of a plan under the **Subdivision Act 1988**, unless the permit contains a different provision—
  - the use or development of any stage is to be taken to have started when the plan is certified; and
  - the permit expires if the plan is not certified within two years of the issue of the permit.
- 5. The expiry of a permit does not affect the validity of anything done under that permit before the expiry.

#### WHAT ABOUT REVIEWS?

In accordance with section 96M of the **Planning and Environment Act 1987**, the applicant may not apply to the Victorian Civil and Administrative Tribunal for a review of any condition in this permit.

#### KNOX PLANNING SCHEME

--/--/---Proposed C184knox

#### SCHEDULE 7 TO CLAUSE 32.09 NEIGHBOURHOOD RESIDENTIAL ZONE

Shown on the planning scheme map as NRZ7.

#### **NORVEL ESTATE**

### 1.0

#### Neighbourhood character objectives

--/--/---Proposed C184knox

- To ensure that new development reflect the preferred neighbourhood character of the surrounding
- To support a diversity of housing stock typology consisting of detached dwellings, villa units and townhouses.
- To ensure a green and leafy identity through visual dominance of landscaping along street alignment.
- To provide vegetated front setbacks with no front fencing or the use of low, visually permeable front boundary treatments which enhance the spaciousness and strong avenue planting of the streetscapes.
- To maximise the opportunities to create high quality landscaping through minimal paving and the use of permeable ground surfaces.

#### 2.0 Minimum subdivision area

--/---Proposed C184knox

None specified.

#### 3.0 --/---Proposed C184knox

#### Permit requirement for the construction or extension of one dwelling or a fence associated with a dwelling on a lot

	Requirement
Permit requirement for the construction or extension of one dwelling on a lot	None specified.
Permit requirement to construct or extend a front fence within 3 metres of a street associated with a dwelling on a lot	None specified.

### 4.0

--/--/ Proposed C184knox

#### Requirements of Clause 54 and Clause 55

	Standard	Requirement
Minimum street setback	A3 and B6	Context: The site is on a corner
		Minimum setback from a side street:
		Side walls of new development on a corner site should be setback the same distance as the setback of the front wall of any existing building on the abutting allotment facing the side street or 1.5 metres, whichever is the lesser.
Site coverage	A5 and B8	None specified.
Permeability	A6 and B9	None specified.
Landscaping B	B13	Provision of a minimum of one canopy tree within the front setback per 5 metres of width of the site (excluding the width of one driveway).
		A dwelling should have at least one canopy tree within the front setback for every 5 metres of the width of the street frontage (excluding the width of one driveway).
		Each tree should be surrounded by 20 square metres permeable surface with a minimum radius of 3-2 metres. Up to 50 per cent of the permeable surface may be shared with another tree.
Side and rear	A10 and B17	None specified.
setbacks		Page 1 of 2

#### KNOX PLANNING SCHEME

	Standard	Requirement
Walls on boundaries	A11 and B18	The height of a new wall constructed on or within 200mm of a- side or rear boundary or a carport constructed on or within 11 metres of a side or rear boundary should not exceed an average of 3.6 metres with no part higher than 4.0 metres unless abutting a higher existing or simultaneously constructed wall. None specified.
Private open space	A17	None specified.
	B28	None specified.
Front fence height	A20 and B32	Streets in a Road Zone Category 1: 2 metres
		Other streets: 1.2 metres A front fence within 3 metres of a street in a Transport Zone 2 should not exceed 2 metres in height, or 1.2 metres in for all other streets.

#### 5.0

Proposed C184knox

Maximum building height requirement for a dwelling or residential building

None specified.

#### 6.0 Application requirements

--/--/ Proposed C184knox

The following application requirements apply to an application for a permit under Clause 32.09, in addition to those specified in Clause 32.09 and elsewhere in the scheme and must accompany an application, as appropriate, to the satisfaction of the responsible authority:

- For developments of five or more dwellings and for residential buildings, a report which demonstrates how the proposal will be accessible to people with limited mobility.
- For developments of three or more dwellings and for residential buildings, an application must be accompanied by a Sustainable Design Assessment.

#### 7.0 Decision guidelines

--/---Proposed C184knox

The following decision guidelines apply to an application for a permit under Clause 32.09, in addition to those specified in Clause 32.09 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

- Whether the layout and appearance of areas set aside for car parking storage, including garages and carports are sensitively designed and sited to not dominate the streetscape by including the following features:
  - Locate carports and garages behind the line of the dwellings or in the rear yard.
- How vehicle crossovers are located and minimised in number to prevent traffic disruption, and preserve nature strips and street trees.
- Whether the built form and development complements the landscape setting by including the following features:
  - Minimises hard paving throughout the site by limiting driveway widths and lengths, providing landscaping on both sides of driveways, and restricting the extent of paving within open space areas.
  - Maximises planting opportunities adjacent to the street by reducing the impact of hard paving and building encroachment within the front setback.
- Whether the development accommodate landscaping opportunity within front setbacks for the planting of small and medium indigenous canopy trees.