

MAJOR ROAD PROJECTS VICTORIA

AUGUST 2020

# TECHNICAL REPORT D – SOCIAL IMPACT ASSESSMENT

Report No: 2135645A-N-32-STE-REP-0001 REV01

YAN YEAN ROAD  
UPGRADE – STAGE 2:  
KURRAK ROAD TO  
BRIDGE INN ROAD

wsp



# Question today *Imagine tomorrow* Create for the future

## Technical Report D – Social Impact Assessment) Yan Yean Road Upgrade – Stage 2: Kurrak Road to Bridge Inn Road

Major Road Projects Victoria

WSP

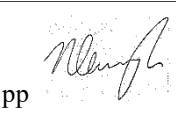


Level 15, 28 Freshwater Place  
Southbank VIC 3006

Tel: +61 3 9861 1111

Fax: +61 3 9861 1144

wsp.com

REV	DATE	DETAILS
01	07/08/2020	Updated to address TRG comments

	NAME	DATE	SIGNATURE
Prepared by:	Ellen Buswell	07/08/2020	 pp
Reviewed by:	Naomi Cavanagh	07/08/2020	
Approved by:	Jay Knight	07/08/2020	

This document may contain confidential and legally privileged information, neither of which are intended to be waived, and must be used only for its intended purpose. Any unauthorised copying, dissemination or use in any form or by any means other than by the addressee, is strictly prohibited. If you have received this document in error or by any means other than as authorised addressee, please notify us immediately and we will arrange for its return to us.



# TABLE OF CONTENTS

ABBREVIATIONS.....	IV
EXECUTIVE SUMMARY.....	V
<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND.....	1
1.2 PROJECT DESCRIPTION .....	1
1.3 PROJECT OBJECTIVES .....	4
<b>2 EES SCOPING REQUIREMENTS .....</b>	<b>5</b>
2.1 SCOPING REQUIREMENTS .....	5
<b>3 METHODOLOGY .....</b>	<b>6</b>
3.1 STUDY AREA.....	6
3.2 EXISTING CONDITIONS .....	8
3.3 RISK ASSESSMENT .....	8
3.4 IMPACT ASSESSMENT .....	12
3.5 CULTURALLY SIGNIFICANT TREES.....	12
3.6 STAKEHOLDER ENGAGEMENT AND COMMUNITY FEEDBACK.....	14
3.7 LIMITATIONS AND ASSUMPTIONS.....	14
<b>4 LEGISLATION, POLICIES AND GUIDELINES.....</b>	<b>15</b>
4.1 COMMONWEALTH LEGISLATION .....	15
4.2 STATE LEGISLATION .....	15
4.3 PLANNING POLICY FRAMEWORK .....	15
4.4 GUIDELINES .....	16
4.5 LOCAL GOVERNMENT.....	19
<b>5 EXISTING CONDITIONS.....</b>	<b>24</b>
5.1 SUMMARY OF POLICY CONTEXT.....	24
5.2 COMMUNITY PROFILE .....	24
5.3 SERVICES, FACILITIES AND PLACES OF SIGNIFICANCE .....	33
5.4 ACCESS AND MOVEMENT .....	39

## CONTENTS (Continued)

<b>6</b>	<b>RISK ASSESSMENT .....</b>	<b>42</b>
<b>6.1</b>	<b>RISK ASSESSMENT .....</b>	<b>42</b>
<b>7</b>	<b>IMPACT ASSESSMENT .....</b>	<b>53</b>
<b>7.1</b>	<b>DISLOCATION .....</b>	<b>53</b>
<b>7.2</b>	<b>COMMUNITY VALUES .....</b>	<b>55</b>
<b>7.3</b>	<b>ACCESS.....</b>	<b>57</b>
<b>7.4</b>	<b>MITIGATION.....</b>	<b>59</b>
<b>8</b>	<b>ENVIRONMENTAL PERFORMANCE REQUIREMENTS.....</b>	<b>63</b>
<b>9</b>	<b>CONCLUSIONS .....</b>	<b>67</b>
<b>10</b>	<b>REFERENCES.....</b>	<b>68</b>

## LIST OF TABLES

TABLE 3.1	RISK SIGNIFICANCE MATRIX .....	10
TABLE 3.2	LIKELIHOOD CATEGORIES.....	11
TABLE 3.3	GENERIC CONSEQUENCE CRITERIA.....	11
TABLE 3.4	SOCIAL CONSEQUENCE CATEGORIES .....	12
TABLE 4.1	WHITTLESEA OPEN SPACE HIERARCHY .....	21
TABLE 5.1	SUMMARY OF KEY STUDY AREA POPULATION CHARACTERISTICS.....	27
TABLE 5.2	SUMMARY OF COMMUNITY VALUES .....	31
TABLE 5.3	ANNUAL COMMUNITY ACTIVITIES.....	36
TABLE 6.1	SUMMARY OF SOCIAL AND VEGETATION (SOCIAL AND CULTURAL VALUES) RISK ASSESSMENT .....	43
TABLE 7.1	IMPACT RISK CATEGORIES .....	53
TABLE 7.2	SUMMARY OF IMPACTS AND MITIGATION BY STUDY AREA COMMUNITY .....	59
TABLE 8.1	EPRS RELEVANT TO SOCIAL AND CULTURAL ASSESSMENT .....	64



## LIST OF FIGURES

FIGURE 1.1	PROJECT AREA AND KEY PROJECT COMPONENTS.....	2
FIGURE 1.2	BRIDGE INN ROAD INTERSECTION DESIGN.....	3
FIGURE 3.1	SA1S THAT COMPRISE STUDY AREA (2016).....	7
FIGURE 3.2	ENVIRONMENTAL RISK PROCESS.....	9
FIGURE 4.1	NORTH GROWTH CORRIDOR PLAN – COMMUNITY CONCEPT PLAN .....	18
FIGURE 4.2	NILLUMBIK GREEN WEDGE (AREA SHADED OLIVE) .....	23
FIGURE 5.1	COMPARISON OF RESIDENTIAL POPULATION DENSITY – WHITTLESEA (2011, 2016).....	25
FIGURE 5.2	COMPARISON OF RESIDENTIAL POPULATION DENSITY – NILLUMBIK (2011, 2016).....	26
FIGURE 5.3	TWO RIVER RED GUMS.....	37
FIGURE 5.4	RED GUM TREE 1265.....	38

## LIST OF APPENDICES

APPENDIX A	DEMOGRAPHIC PROFILES
APPENDIX B	RISK REGISTER
APPENDIX C	COMMUNITY FACILITY AUDIT
APPENDIX D	MAPS
APPENDIX E	PUBLIC TRANSPORT MAPS
APPENDIX F	PROJECT DESCRIPTION

# ABBREVIATIONS

AHC	Australian Heritage Commission
CRG	Community Reference Group
DELWP	Department of Environment, Land, Water and Planning
DoT	Department of Transport
EE Act	<i>Environment Effects Act 1978</i>
EES	Environment Effects Statement
EMF	Environmental Management Framework
EPA	Environment Protection Authority
EPR	Environmental Performance Requirement
ERA	Environmental Risk Assessment
HO	Heritage Overlay
MRPV	Major Road Projects Victoria
MSS	Municipal Strategic Statement
PBN	Principal Bicycle Network
PPF	Planning Policy Framework
SA1	Statistical Area Level 1
SEIFA	Socio-Economic Indexes for Areas

# EXECUTIVE SUMMARY

WSP has been engaged by the Major Road Projects Victoria (MRPV) to undertake an assessment of social impacts arising from the Yan Yean Road Upgrade – Stage 2 from Kurrak Road to Bridge Inn Road (the Project). This assessment builds on the preliminary desktop review of social factors prepared in July 2017 and will inform the preparation of the Environment Effects Statement (EES) and associated draft Planning Scheme Amendment.

This assessment considered change from the existing situation, established through a preliminary review, and found that the most impacts on local communities are anticipated during the construction phase, with respect to disruptions and restricted or altered local access.

---

## PROJECT DESCRIPTION

The Project would duplicate a 5.5 km portion of Yan Yean Road between Kurrak Road and Bridge Inn Road increasing the existing two lanes to four lanes (comprising two lanes in each direction). The design speed along Yan Yean Road is 70 km/h, with the exception of north of Bridge Inn Road which is 80 km/h. The design for the Project has 3.5 metre wide lanes with the majority of the Project using a 2.2 metre-wide central median. This cross section was adopted in design due to various constraints ranging from road safety issues, steep and rolling terrain, high cut and fill batters and subsequent retaining walls at certain locations, as well as seeking to limit impacts to existing properties, local accesses and trees along Yan Yean Road.

Construction will include two new roundabouts at Heard Avenue and Youngs Road), five new signalised intersections at Bannons Lane, Jorgensen Avenue, North Oatlands, Orchard and Bridge Inn Roads, upgrades to one existing signalised intersection at Ironbark Road, new street lighting at all intersections, road signage and landscaping. The Project will also include establishment of a 3 m wide shared user path on the western side and 1.2 m wide footpath on the eastern side of Yan Yean Road. Continuous safety barriers would run along the Project's length and are proposed in the median and behind outer kerbs along the mod-block sections of the carriageways.

The Project requires partial acquisition of a number of properties abutting Yan Yean Road and will result in the loss of one occupied dwelling associated with a business at the corner of Doctors Gully and Yan Yean Roads.

---

## SCOPE OF ASSESSMENT

On 14 October 2018, the Minister for Planning decided that an Environment Effects Statement (EES) is required under the *Environment Effects Act 1978* (EE Act) to assess the potential environmental effects of the Project. The *Scoping Requirements for Yan Yean Road (Stage 2) Upgrade Environment Effects Statement* (June 2019) (Scoping Requirements), prepared by the Department of Environment, Land, Water and Planning (DELWP) on behalf of the Minister for Planning, set out the specific environmental matters to be investigated and documented in the EES.

In response to the final EES Scoping Requirements, this social assessment will identify the social value of trees within the project area and determine the existing amenity and cultural significance of the trees that may be affected by the Project, including two heritage-listed Doreen River Red Gum trees co-located at the intersection of Yan Yean Road, Bridge Inn Road and Doctors Gully Road in Doreen. This report assesses the cultural value of the trees from a social perspective, while the cultural value from a heritage perspective is assessed in *Technical Report F: Aboriginal and Historical Cultural Heritage Impact Assessment*.

Informed by the Scoping Requirements, this social assessment will consider the existing conditions of the study area and residential communities with respect to the following:

- dislocation, loss and/or severance of residential areas, community facilities, valued places or open space
- disruption or changes to local access routes and/or connections
- amenity and land use as a result of property acquisition
- changes to community values.

The preliminary investigation identified a study area based on Statistical Area Level 1 (SA1) boundaries as defined by the Australian Bureau of Statistics 2016 Census of Population and Housing. It then divided the study area into three defined residential communities based on existing settlement patterns and suburb boundaries to assist with analysis. Figure 3.1 shows the SA1s which make up the study area.

Additional technical reports, including the *Technical Report G – Landscape Strategy*, *Technical Report B – Flora and Fauna Impact Assessment*, *Technical Report F – Aboriginal and Historical Cultural Heritage Impact Assessment* and *Technical Report C – Arboriculture Assessment* will also address the scoping requirements in relation to cultural values.

---

## ASSESSMENT CRITERIA

The assessment of impacts considers the scale and length of change to determine the level of impact as described in the table below.

HIGH	MEDIUM	MINOR
Change that is likely to have ongoing adverse consequences for the local community. May result in major changes to or the end of ongoing use of a space. Adverse publicity and community response is considered likely.	Change that is likely to extend beyond the household level and extend into the wider community. May result in changes to the use of a community space. Impact on local community is noticeable, however can be managed with additional mitigation.	Change confined to household or individual level. Can be managed through routine activities.



---

## SUMMARY OF ASSESSMENT

Overall, the Project will generate benefits for local community through increased safety, reduced congestion, and enhanced opportunities for non-vehicle transport. The following table summarises impacts investigated through this assessment.

IMPACT	DETAILS	ASSESSMENT
Potential removal of one dwelling	One residential building on Yan Yean Road will be directly impacted by the Project. It is understood that this dwelling is currently unoccupied, and that a current permit allows for demolition.	The building impacted by the Project is understood to be unoccupied due to the development of a new dwelling where the landholders reside, therefore this is considered low impact.
Acquisition of residential land (to varying degrees) including change of access to private properties.	No full land acquisition is required for residential land. A total of 60 partial private land acquisitions are required.	The Project avoids the full acquisition of the residential land and is limited to partial acquisition of land parcels and is assessed as moderate impact.
Partial acquisition of land impacting community facilities and places of significance.	<p>The Project is not anticipated to permanently or materially affect access to or operation of community facilities. Partial acquisition of land or changed conditions may impact the Yarrambat Veterinary Hospital, Hippity Hop Childcare Centre, Yarrambat Primary School, St Macarius Coptic Orthodox Church, Yarrambat Park Golf Course, Yarrambat Park, Werther Park, and Plenty Valley Christian College and Church.</p> <p>The Project will require partial land acquisition of the Doreen Recreation Reserve, including the tennis courts and oval highlighted in the City of Whittlesea's Doreen Recreation Reserve Master Plan.</p>	The Project will require partial land acquisition impacting the Doreen Recreation Reserve and may result in changes to a community space, which is considered low-medium impact.

IMPACT	DETAILS	ASSESSMENT
Changes to local character including loss of trees and vegetation.	<p>The shared user path would enhance the experience of the local area. However, the Project would result in permanent changes to the local environment and valued attributes of the local character in the public realm and private residences along the length of the upgrade corridor, as a result of tree loss and road widening.</p> <p>While the community and stakeholder feedback received during consultation supported the Project and its purpose, the scale of associated tree loss may impact the association residents have with their local area and community. Further information on the extent of native vegetation loss and tree removal is outlined within <i>Technical Report B2 – Biodiversity Impact Assessment</i>.</p> <p><b>Potential removal of Doreen River Red Gums</b></p> <p>The consistency of feedback received from the community during the consultation process, coupled with the increasing level of community activism for the “Save the Doreen Red Gums” indicated a significant level of attachment to the trees as landmarks and symbols of the local area. Removal of these trees would likely result in negative sentiment towards the Project and loss of trust in the proponent.</p>	<p>Due to the potential for noticeable, community wide change associated with the loss of trees and vegetation throughout the project area, this is considered a medium impact.</p> <p>The Project design avoids the removal of the Doreen River Red Gums. As such, the potential impact has been mitigated.</p>
Changes to local movement and regional connections including changes to traffic conditions and access.	<p>The Project will result in permanent changes to local access patterns with the introduction of the centre median in places impacting east west connectivity, and in places, U-turns being required to complete journeys. Upgrades to intersections along the corridor, the introduction of continuous shared user paths that support paths and trail connectivity will likely result in safety improvements and enhance the user experience which would be considered a positive overall outcome.</p> <p>The Project would improve movement between communities along the road corridor, particularly new communities to the north as well as to the service and employment centres to the south.</p>	<p>These changes are likely to have minimal journey time impacts, and will result in improved safety outcomes along with positive outcomes for regional connectivity and is, on balance, considered low impact.</p>

IMPACT	DETAILS	ASSESSMENT
Impacts on access to private property.	<p>The Project will result in changed access to properties fronting onto Yan Yean Road, however these changes are likely to improve safety and visibility for vehicles entering Yan Yean Road. Permanent adverse changes may be experienced by properties that will have certain access points permanently relocated, however alternative access arrangements will be in place and dislocation is considered unlikely.</p> <p>The Project will retain the general store, pet and stock supplies retailer, and associated dwelling on the corner of Yan Yean Road and Doctor Gully Road. Alternative access for these properties will need to be developed during detailed design.</p>	While the design will change access to private property, the overall social impact is considered low.
Impacts on private roadside memorials.	Two private roadside memorials (one located adjacent to the Yarrambat Horse and Pony Club, and one adjacent to Yarrambat Veterinary Hospital) will need to be removed or relocated to accommodate the works.	While this has the potential to cause stress for the victims' families and friends, the impacts are confined to the individual level and are therefore considered low.
Overall impact.	<p>Social impacts are considered to be highest during construction, when initial loss of passive open space and limitations to east-west connectivity and existing movement patterns will be most significant. Some permanent changes to access and movement post construction will likely increase journey times for some road users. However, these increases are likely to be minimal, and the resultant safety improvements are considered to deliver a net social benefit. Enhancements to the existing paths and trails network will also likely deliver positive social benefits and improve amenity.</p> <p>However, changes to amenity and liveability arising from the Project, including temporary and permanent property acquisition and tree and vegetation loss throughout the project area, may alter some residents' sense of place and connection to the local area.</p>	Due to the potential for community wide, noticeable change, particularly relating to the loss of trees and vegetation, the Project is considered to have an overall medium social impact.

---

## RISK ASSESSMENT

An environmental risk assessment (ERA) has been completed to identify environmental impacts associated with construction and operation of the Project. The risk-based approach is integral to the EES as required by Sections 3.1 and 4 of the Scoping Requirements and the *Ministerial guidelines for assessment of the environmental effects under the Environment Effects Act 1978*.

Primary environmental impact pathways were identified for social values and initial risk ratings were assessed by considering likelihood and consequence categories, and applying the risk significance matrix. The initial risk ratings were assessed assuming the implementation of standard controls. Standard controls include compliance with legislative requirements and best practice requirements typically incorporated into the construction contracts for the delivery of road projects. The standard controls do not include any Project-specific controls or requirements.

The risk impact pathways identified for social values are:

- potential impacts on social and cultural values such as community, educational, religious or recreational facilities due to changes to access or amenity
- potential impacts on social and cultural values such as isolation of community, educational, religious or recreational facilities, changes to amenity, or changed road conditions affecting access as a result of operation
- potential impacts on social and cultural values such as isolation of community, educational, religious or recreational facilities, changes to amenity, or changed road conditions affecting access as a result of maintenance activities
- loss of or damage to remnant, planted or regenerated vegetation during construction impacting on social and cultural values
- loss of or damage to remnant, planted or regenerated vegetation during operation impacting on social and cultural values
- loss of or damage to remnant, planted or regenerated vegetation during maintenance impacting on social and cultural values.

---

## ENVIRONMENTAL PERFORMANCE REQUIREMENTS

Environmental Performance Requirements (EPRs) have been informed by the ERA to set the minimum outcomes necessary to avoid, mitigate or manage environmental impacts and reduce environmental risks during delivery of the Project.

EPRs for the social impacts identified in this assessment focuses heavily on early, consistent and transparent communication and consultation with affected stakeholders and communities. A detailed and targeted consultation plan is required to support communications that are timely and consistent and meet the needs and requirements of impacted communities.



Table ES.1 Environmental Performance Requirements

EPR CODE	ENVIRONMENTAL PERFORMANCE REQUIREMENT	PROJECT PHASE
S1	<p><b>Social access and amenity</b></p> <p>To develop and implement measures to avoid and minimise impacts on social and cultural values, including:</p> <ul style="list-style-type: none"> <li>— design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on trees (see also EPR AR1)</li> <li>— detailed design to protect and, where practicable, improve access to amenity for potentially affected residents, users of the transport corridor (pedestrians, cyclists, horse riders and motorists), open space, social and community infrastructure and commercial facilities, and implementing the principles of Crime Prevention Through Environmental Design.</li> </ul>	Design and Construction
S2	<p><b>Implement a Communications and Stakeholder Engagement Plan</b></p> <p>Prior to construction, develop and implement a Communications and Stakeholder Engagement Plan to engage and consult the community and affected stakeholders and discuss progress of construction activities. The Communications and Stakeholder Engagement Plan must include measures to:</p> <ul style="list-style-type: none"> <li>— identify a process for identifying community issues and the recording, management and resolution of complaints from affected stakeholders including business owners, community service providers, education providers, public and active transport key user groups and residents, consistent with Australian Standard AS/NZS 10002:2014 Guidelines for Complaint Management in Organisations</li> <li>— communicate and engage with the community and potentially affected stakeholders in relation to: <ul style="list-style-type: none"> <li>— construction activities including temporary works and impacts that may affect the community, businesses or individual stakeholders (e.g. dust, noise, vibration and light) and relevant mitigation</li> <li>— changes to transport conditions and relevant mitigation (e.g. road closures, detours)</li> </ul> </li> <li>— ensure that communities are notified of construction and changes well in advance of works commencing as approved by MRPV</li> <li>— ensure that the consultation program includes provision for onsite signage of affected properties that provide a service to the local or regional community</li> <li>— continue consultation with people affected by the relocation of memorials</li> <li>— outline the timing of works that will affect particular local areas, to be updated to reflect current and anticipated conditions</li> </ul>	Design and Construction

EPR CODE	ENVIRONMENTAL PERFORMANCE REQUIREMENT	PROJECT PHASE
	<ul style="list-style-type: none"> <li>— communicate incidents and emergencies, including notification methods and timeframes in the event of a major incident or overrun</li> <li>— ensure the workforce has appropriate community awareness and sensitivity</li> <li>— implement innovative communications tools and methods to enhance the Project's ability to effectively communicate and engage with the community and stakeholders including best available technology in addition to conventional means</li> <li>— make provision for a 24-hour phone number to be available to the community to report concerns.</li> </ul>	
S3	To mitigate impact to community facilities and the community after construction, driveway and access will be reinstated. Where access cannot be reinstated, alternative access is required to be provided in consultation with stakeholders.	Design and construction
V1	<p>Design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on, high value vegetation as identified within the Landscape Strategy's 'Cultural Value of Vegetation Assessment'.</p> <p>Removal of vegetation will be phased wherever practicable to temporarily reduce visual impacts (see also EPRs E3 and AR4).</p>	Design and construction
EMF5	<p><b>Operation and maintenance</b></p> <p>Any potential impacts during operation and maintenance will be managed in accordance with the Department of Transport's environmental management system and standards for managing declared roads in Victoria.</p>	Operation and maintenance

# 1 INTRODUCTION

Major Road Projects Victoria (MRPV) proposes to duplicate Yan Yean Road from Kurrak Road to Bridge Inn Road as part of the Yan Yean Road Upgrade – Stage 2 (the Project).

On 14 October 2018, the Minister for Planning decided that an Environment Effects Statement (EES) is required under the *Environment Effects Act 1978* (EE Act) to assess the potential environmental effects of the Project. The EES process provides for identification and analysis of the potential environmental effects of the Project and the means of avoiding, minimising and managing adverse effects. It includes public involvement and allows stakeholders to understand the likely environmental effects of the Project and how they will be managed.

This social impact assessment report has been prepared for the EES in accordance with the Scoping Requirements released by the Minister for Planning in June 2019.

---

## 1.1 BACKGROUND

Yan Yean Road is a primary north-south arterial road and connects the growth suburb of Doreen, with major east west arterials such as Bridge Inn Road, Kurrak Road and Diamond Creek Road. The road runs through the townships of Yarrambat and Plenty and connects with established areas of Diamond Creek and Greensborough. There is a high demand for north-south travel from Doreen and surrounding towns to established northern suburbs for employment and services.

Stage 1 of the Yan Yean Road upgrade (Diamond Creek Road to Kurrak Road) was completed in 2019, and construction of Stage 2 (this Project) is to be completed by 2025.

---

## 1.2 PROJECT DESCRIPTION

The Project would duplicate a 5.5 km portion of Yan Yean Road between Kurrak Road and Bridge Inn Road, increasing the existing two lanes to four lanes (comprising two lanes in each direction). The design speed along Yan Yean Road is 70 km/h, with the exception of north of Bridge Inn Road which is 80 km/h. The design for the Project has 3.5 metre wide lanes with the majority of the Project using a 2.2 metre-wide central median. This cross section was adopted in design due to various constraints ranging from road safety issues, steep and rolling terrain, high cut and fill batters and subsequent retaining walls at certain locations, as well as seeking to limit impacts to existing properties, local accesses and trees along Yan Yean Road.

The Project will include:

- two new roundabouts (at Heard Avenue, and Youngs Road)
- five new signalised intersections (Bannons Lane, Jorgensen Avenue, North Oatlands, Orchard and Bridge Inn Roads)
- upgrades to one existing signalised intersection, including an additional right hand turning lane, slip lane, and traffic island (Ironbark Road)
- new street lighting at all intersections, road signage and landscaping.

The Project will also include a new 3 metre wide shared user path on the western side and 1.2 metre wide footpath on the eastern side of Yan Yean Road. The paths link Diamond Creek to Doreen and would improve safety and connectivity for pedestrians and cyclists.

Continuous safety barriers would run along the Project's length and are proposed in the median and behind outer kerbs along the mid-block sections of the carriageways.

The project area and key Project components are shown in Figure 1.1. The extended Project description is presented in Appendix F.

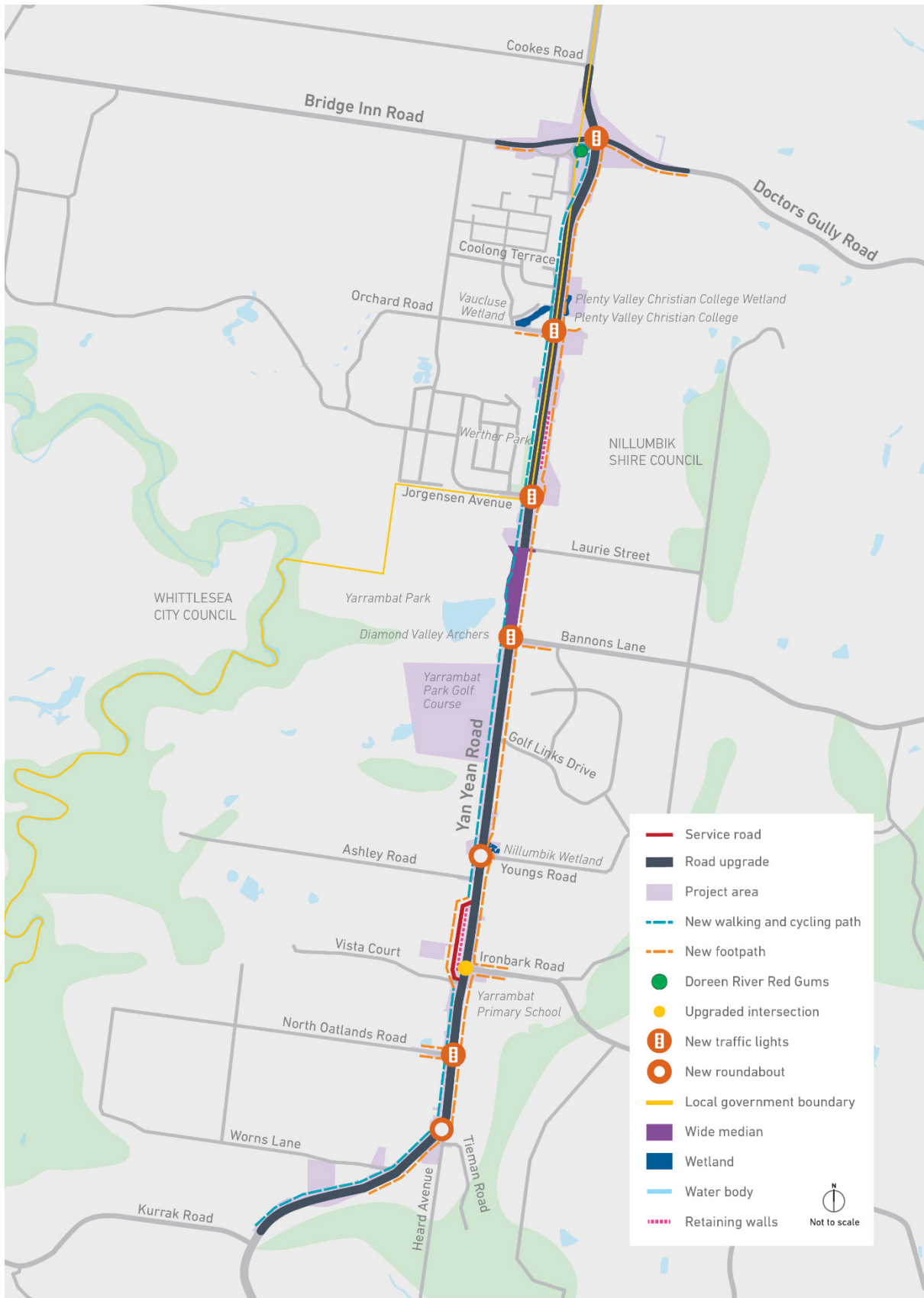
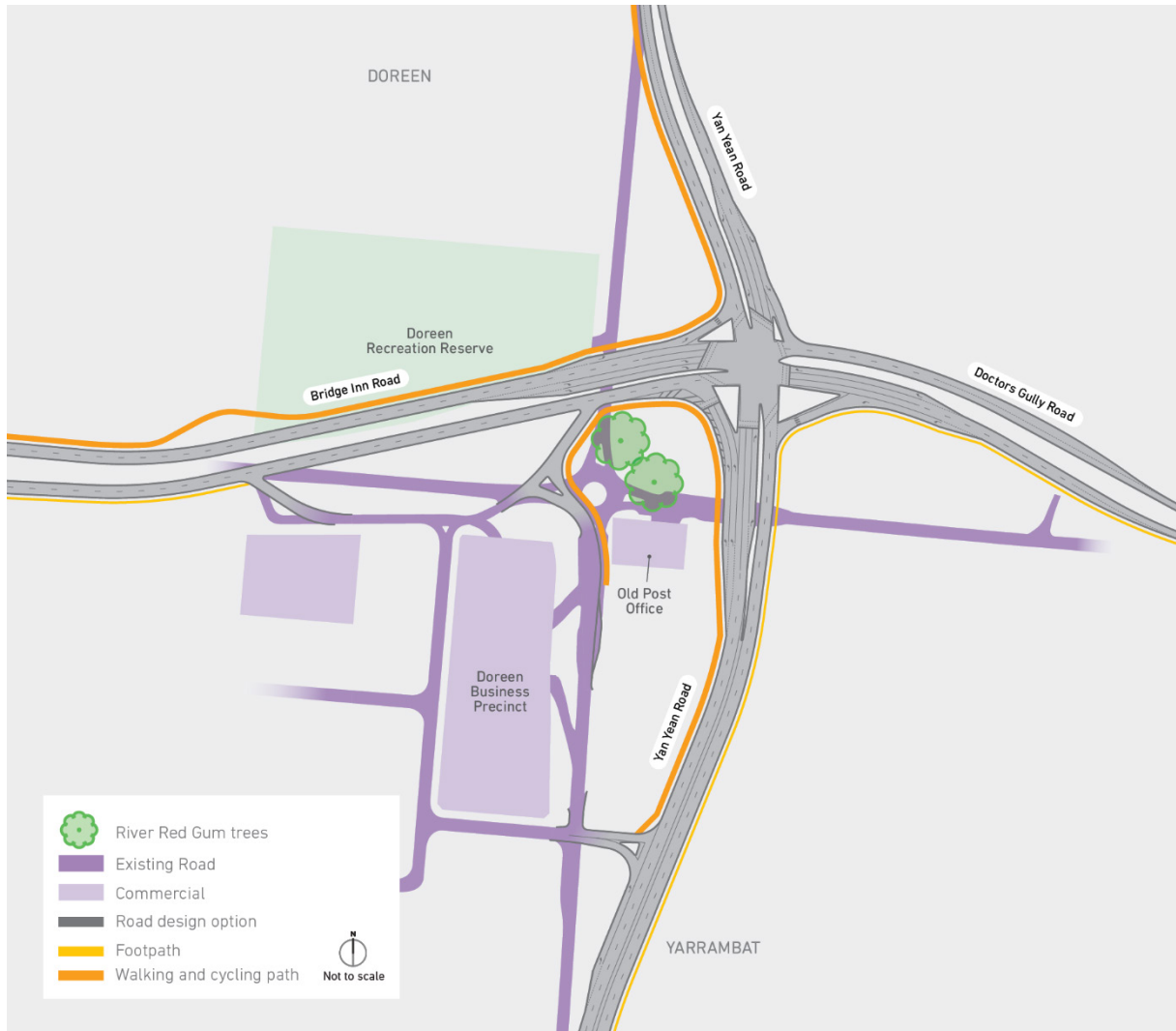


Figure 1.1 Project area and key Project components



### 1.2.1 YAN YEAN / BRIDGE INN / DOCTORS GULLY ROAD

The Yan Yean/Bridge Inn/Doctors Gully Road intersection has been designed to retain the two Doreen River Red Gums, General Store and Pet Supply/Stockfeed business situated adjacent to the current Doctors Gully and Yan Yean Road intersection by shifting the whole intersection to the north east (see Figure 1.2). This intersection design has been developed following community consultation and in response to arboricultural advice on the Doreen River Red Gums.



*For illustrative purposes only and subject to change*

Figure 1.2 Bridge Inn Road intersection design

### 1.2.2 CONSTRUCTION ACTIVITIES

Proposed construction activities would likely be standard road construction activities to be undertaken in accordance with the Environmental Performance Requirements for the Project. These construction activities would include:

- tree clearance and vegetation lopping and removal
- establishment of construction site compounds
- clearing and grubbing, temporary sediment and erosion control works
- establishment of environmental and traffic controls
- earthworks, including:
  - remediation of any existing contamination and removal of any hazardous material
  - protecting and relocating services
  - widening of existing rock cuttings (approximately 750 m of existing cut along the Project would be widened by approximately 20 metres)
  - new cuttings (approximately 1300 m of new rock cut would be required to a width of approximately 5 metres along the Project)
  - bulk earthworks and haulage
- civil and structure works, including:
  - roundabouts and intersection upgrades
  - shared user path and pedestrian path construction and connections
  - retaining walls
  - drainage works
  - pavement works
- 30–36 metre high fence along the edge of the Yarrambat Park Golf Course to avoid golf ball collisions with pedestrians, cyclists or vehicles
- traffic management systems and landscaping.

---

## 1.3 PROJECT OBJECTIVES

The Project aims to improve travel times and reliability to and from growing residential areas in Doreen and Mernda, enhance north-south travel in the area, and improve safety along the corridor. The objectives of the Project are set out below:

- **To improve road safety:** The Project will achieve this by isolating road users from hazards and improving access control through signalised intersections. Congestion and the complex road environment (poor sight lines due to undulating linear/perpendicular grades and adjacent terrain) are presently contributing to the poor safety record on Yan Yean Road.
- **To improve the customer experience:** The Project will achieve this by improving access, improving network connectivity, opportunities for active transport, and providing more road capacity.
- **To improve network efficiency:** The Project will achieve improved traffic flow and a reduction in travel times by increasing road capacity and reducing congestion.

## 2 EES SCOPING REQUIREMENTS

---

### 2.1 SCOPING REQUIREMENTS

The *Scoping Requirements for Yan Yean Road (Stage 2) Upgrade Environment Effects Statement* (June 2019) (Scoping Requirements) have been prepared by the Department of Environment, Land, Water and Planning (DELWP) on behalf of the Minister for Planning. The Scoping Requirements set out the specific environmental matters to be investigated and documented in the EES, which informs the scope of the EES technical studies.

The following matters of the Scoping Requirements are relevant to the social impact assessment:

#### *DRAFT EVALUATION OBJECTIVE*

*To avoid or minimise the adverse effects on social and cultural values, including landscape values, Aboriginal and historical cultural heritage values, and remnant, planted and regenerated vegetation, and to maximise the enhancement of these values where opportunities exist.*

#### *KEY ISSUES*

*Potential for adverse impacts on social and cultural values of trees.*

#### *EXISTING ENVIRONMENT*

*Identify the cultural and social value of trees within the project area and determine the existing amenity, cultural and ecological services value of the trees that may be affected by the project.*

#### *ENVIRONMENTAL MANAGEMENT FRAMEWORK*

*Management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes should be clearly described in the EMF. The EMF should describe proposed objectives, indicators and monitoring requirements, including for (but not limited to) managing or addressing:*

- *social outcomes and community engagement.*

The EMF will outline how potential adverse effects on social and cultural values will be avoided, minimised or mitigated.

## 3 METHODOLOGY

---

### 3.1 STUDY AREA

This preliminary investigation identified a study area based on Statistical Area Level 1 (SA1) boundaries as defined by the Australian Bureau of Statistics 2016 Census of Population and Housing. It then divided the study area into three defined residential communities based on existing settlement patterns and suburb boundaries to assist with analysis.

SA1s are the smallest level of output for the Census. SA1s are population based, usually covering populations of people. As such, in areas of low residential density, an SA1 can cover a large geographical area.

Figure 3.1 shows the SA1s which make up the study area. The study area is shaded blue with individual SA1s defined by a blue border, suburb boundaries are shown in maroon and the project area outlined in red.



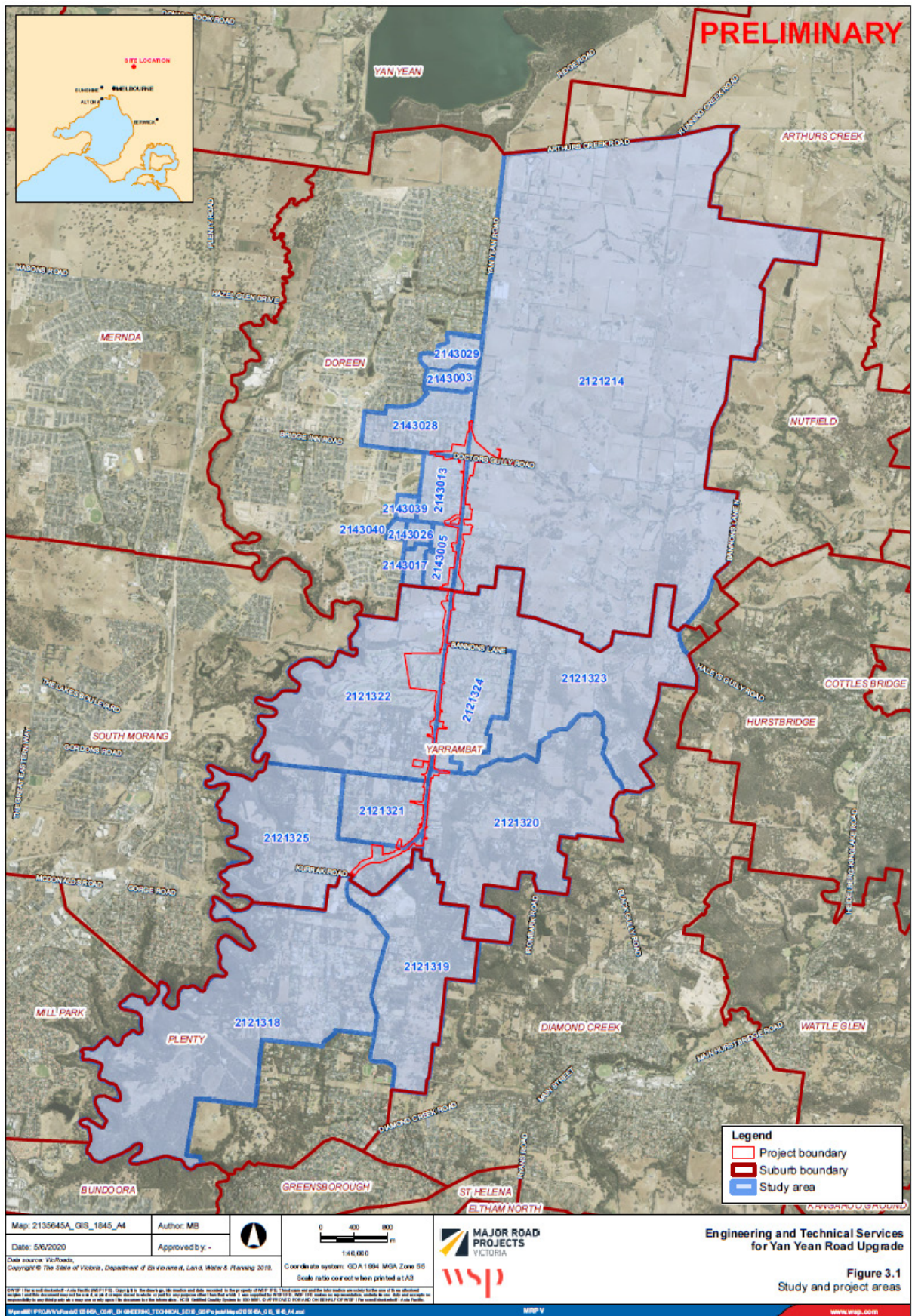


Figure 3.1 SA1s that comprise study area (2016)

---

## 3.2 EXISTING CONDITIONS

This assessment was prepared using the following methodology.

- desktop investigations of existing conditions including:
  - review of the Scoping Requirements
  - review of relevant state and local government policy and strategic documents to understand the current role and vision for the local area as well as preferred future directions
  - demographic profiling of current residential communities within the study area using publicly available data and indicators from the 2016 Census of Population and Housing
  - review of the local area access network including roads, public transport routes and pedestrian and cycle access to understand how areas are connected and how this influences accessibility for local communities
  - an audit of community facilities, public services and places of special interest drawing on council's database to identify likely locations of community activity and access patterns
- a site visit and consultation with City of Whittlesea and Nillumbik Shire
- review of feedback provided through community consultation undertaken by MRPV (then VicRoads/MRPA)
- review of the Symetree Culturally Significant Tree Project methodology to assess culturally significant trees within the project area.

---

## 3.3 RISK ASSESSMENT

An environmental risk assessment (ERA) has been completed to identify environmental impacts associated with construction and operation of the Project. The risk-based approach shown in Figure 3.2 is integral to the EES as required by Sections 3.1 and 4 of the Scoping Requirements and the *Ministerial guidelines for assessment of the environmental effects under the Environment Effects Act 1978*. The social risk register is provided at Appendix B and the key impacts are presented in Section 6.1.

Primary environmental impact pathways were identified for social values and initial risk ratings were assessed by considering likelihood and consequence categories (Table 3.2, Table 3.3, and Table 3.4) and applying the risk significance matrix (Table 3.1). The initial risk ratings were assessed assuming the implementation of standard controls. Standard controls include compliance with legislative requirements and best practice requirements typically incorporated into the construction contracts for the delivery of road projects. The standard controls do not include any Project-specific controls or requirements.

Environmental Performance Requirements (EPRs) have been informed by the ERA, to set the minimum outcomes necessary to avoid, mitigate or manage environmental impacts and reduce environmental risks during delivery of the Project. The development of the proposed EPRs was an iterative process with input from the technical specialists and MRPV. Section 8 provides further detail of the specific EPRs developed for social and cultural values.

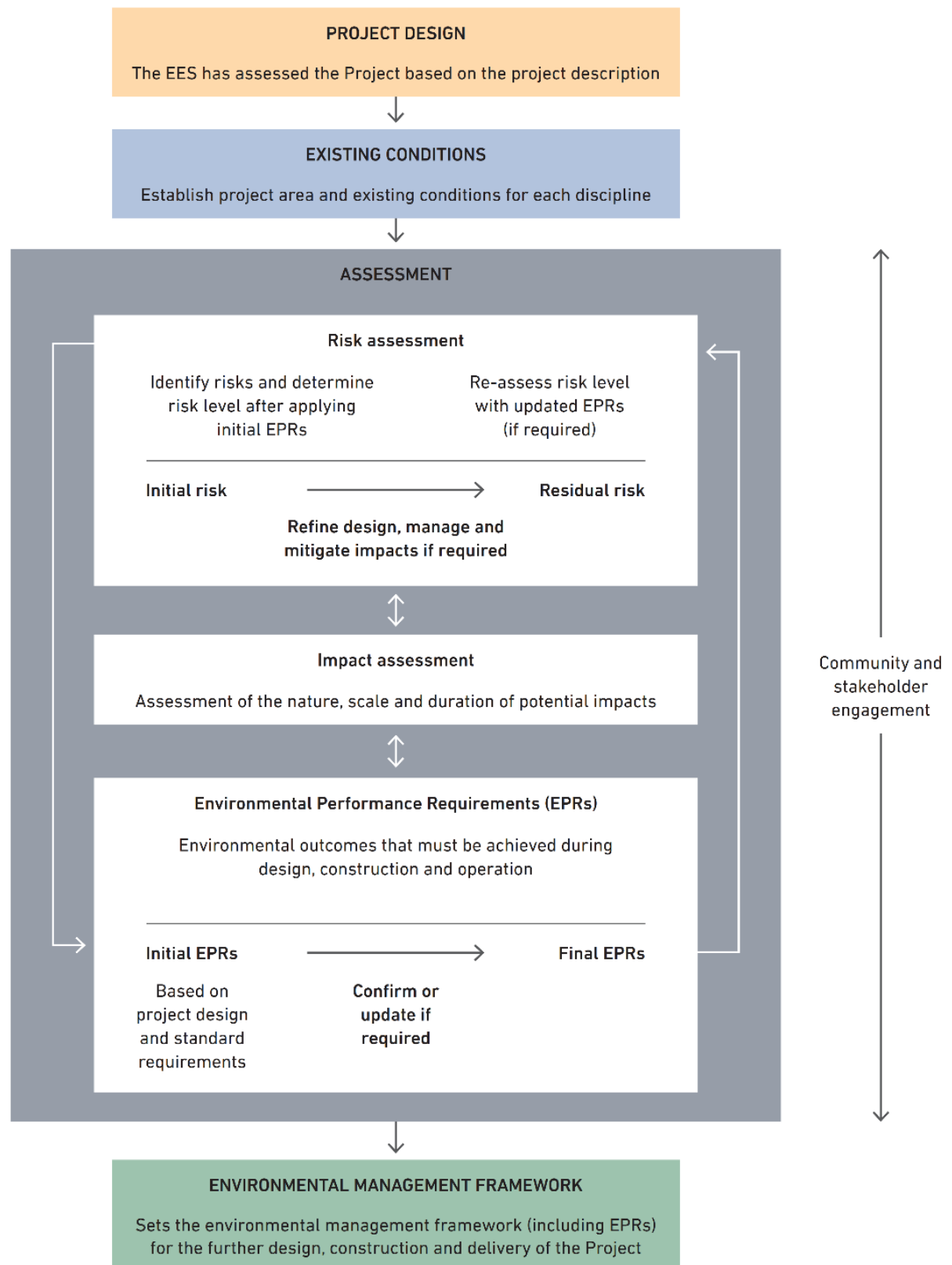


Figure 3.2 Environmental risk process



### 3.3.1 RISK ASSESSMENT PROCESS

The ERA has guided the environmental studies for the Project. The objectives of the ERA are to:

- identify primary environmental risks that relate to the construction and operation of the Project
- guide the level and extent of investigation and data gathering necessary for accurately characterising the existing environment and assessing the Project's environmental effects
- help identify performance requirements to avoid, minimise and mitigate environmental risks
- inform assessment of likely residual effects that are expected to be experienced after standard controls and proposed EPRs have been implemented.

The risk assessment process for the EES incorporates risk management requirements as detailed in MRPV's Environmental Risk Management Guideline. The process includes:

- an approach to environmental management which is aligned with *ISO 31000 Risk Management – Guidelines*
- systems used to manage environmental risk and protect the environment, and how these are implemented at different stages of road construction, operation and maintenance
- tools and reporting requirements which provide guidance in managing environmental issues throughout the Project.

The ERA identifies impact events for each relevant element of the environment, details the primary risks and has informed the level and range of technical reporting required to address predicted impacts. The ERA utilises a risk matrix approach where likelihood and consequence of an event occurring are considered (Table 3.1, Table 3.2, Table 3.3 and Table 3.4). Throughout the preparation of the EES, the likelihood and consequence categories were updated to ensure currency, as required.

Table 3.1 Risk significance matrix

LIKELIHOOD	CONSEQUENCE LEVEL				
	Insignificant	Minor	Moderate	Major	Critical
<b>Almost Certain</b>	Medium	Significant	High	High	High
<b>Likely</b>	Medium	Medium	Significant	High	High
<b>Possible</b>	Low	Medium	Medium	Significant	High
<b>Unlikely</b>	Low	Low	Medium	Medium	Significant
<b>Rare</b>	Low	Low	Low	Medium	Medium

Likelihood and generic consequence criteria, informed by the MRPV corporate risk matrix, are shown in Table 3.2 and Table 3.3.

Risk ratings were then reassessed following risk evaluation and risk treatment to generate a 'residual' risk rating. Both initial and residual risk ratings are documented in the risk register attached in Appendix B.

Table 3.2 Likelihood categories

LIKELIHOOD	DESCRIPTION
Almost certain	<p>76–99% Has occurred before and is expected to occur again.</p> <p>Is expected to occur each year or more frequently.</p> <p>All of the controls associated with the risk are extremely weak/non-existent. Without control improvement there is almost no doubt that the risk will eventuate.</p>
Likely	<p>51–75% Has occurred before with a chance of it occurring again.</p> <p>Has occurred several times at the Department, Group, Division, Program or Project before.</p> <p>The majority of the controls associated with the risk are weak. Without control improvement it is more likely than not that the risk will eventuate.</p>
Possible	<p>26–50% Has occurred before with a chance of occurring again.</p> <p>Has occurred at the Department, Group, Division, Program or Project once before.</p> <p>There are some controls that need improvement, however unless there is improvement the risk may eventuate.</p>
Unlikely	<p>6–25% Has occurred elsewhere before, therefore a small chance of occurring.</p> <p>The majority of controls are strong with no control gaps. The strength of this control environment means that is likely that the risk eventuating would be caused by external factors not known to the organisation.</p>
Rare	<p>0–5% Has never occurred but may occur.</p> <p>Is expected to occur 1/100 or more years.</p> <p>All controls are strong with no control gaps. The strength of this control environment means that if this risk eventuated, it is most likely as a result of external circumstances outside of the control of the organisation.</p>

Table 3.3 Generic consequence criteria

CONSEQUENCE	DESCRIPTION
Critical	A critical degree of impact on an environmental asset, value or use of moderate or higher significance.
Major	A high degree of impact on an environmental asset, value or use of moderate or higher significance.
Moderate	A moderate degree of impact on an environmental asset, value or use of moderate or higher significance.
Minor	A low degree of impact on an environmental asset, value or use.
Insignificant	A very low degree of impact on an environmental asset, value or use.

Table 3.4 Social consequence categories

ASPECT	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CRITICAL
Social	Local, small-scale, easily reversible change in access to community, educational, religious or recreational facilities and the communities of interest can easily adapt or cope with change.	Short-term (less than 1 year), recoverable changes in access to community, educational, religious or recreational facilities and the community has substantial capacity to adapt and cope with change.	Medium-term (1–5 years), recoverable changes in access to community, educational, religious or recreational facilities and the community has substantial capacity to adapt and cope with change.	Long-term (5–25 years), recoverable changes in access to community, educational, religious or recreational facilities and the community has limited capacity to adapt and cope with change.	Irreversible changes in access to community, educational, religious or recreational facilities and the community has no capacity to adapt and cope with change.

## 3.4 IMPACT ASSESSMENT

This assessment was prepared using the following methodology:

- review of the existing conditions and reference design
- development of a relevant impact assessment framework which considers the existing local context and possible impacts generated by the proposed Project
- assessment of potential impacts on local communities against the assessment criteria developed in response to the Scoping Requirements. Standard controls were considered, and recommendation of management and mitigation measures to address impacts identified.

## 3.5 CULTURALLY SIGNIFICANT TREES

This assessment focuses on the cultural significance in a social, non-indigenous context and does not include assessment of trees as part of the visual landscape or heritage assessment.

The scope of this assessment was informed by the *Assessment and Management Guidelines - Culturally Significant Tree Project*, prepared by Symetree<sup>1</sup>. The following outlines the context in which trees can be culturally significant.

*“Trees play an important role in elements of towns and cities such as approach roads, showgrounds, transport links, residential areas, important buildings, access roads, parks and nature strips. Trees help identify special places. They may have associations with individual people and communities or tell stories of other times and places.”*

It is noted that cultural significance of a place is not necessarily reflected through statutory or non-statutory heritage listing.

<sup>1</sup> Available here:

[https://www.lga.sa.gov.au/webdata/resources/project/Culturally\\_Significant\\_Trees\\_Review\\_2012\\_Guidelines.pdf](https://www.lga.sa.gov.au/webdata/resources/project/Culturally_Significant_Trees_Review_2012_Guidelines.pdf)

A literature review prepared for the Culturally Significant Tree Project ‘*Literature Review - Culturally Significant Tree Project*’ (Cassar, 2011) cites a description of cultural, social and health values of trees adapted from NSW governmental guidelines for the conservation and management of streets:

*“Trees play an important role in elements of towns and cities as approach roads, showgrounds, transport links, residential areas, important buildings, access roads, parks and strips. The definition distinguished between country towns and metropolitan areas by planting styles, locations and associations with various built form. Trees help recognize special places. Trees contribute to society’s health and physical wellbeing.”*

This is reflected in a Victorian Government Practice Note *Vegetation protection in urban areas* (August 1999), which notes that:

*“Vegetation can make an important contribution to the urban environment. It may be of botanical or scientific significance or have environmental, historical, aesthetic or cultural value. Vegetation may also be important to the community in defining and contributing to the character of a city, suburb or township.”*

This Practice Note guides the assessment of cultural significance using the Australian Heritage Commission’s (AHC) criteria for assessing places for listing on the *Register of the National Estate*. Which include:

- A. *“Importance in the course, or pattern, of Australia’s natural or cultural history*
- B. *Possession of uncommon, rare or endangered aspects of Australia’s natural or cultural history*
- C. *Potential to yield information that will contribute to an understanding of Australia’s natural or cultural history*
- D. *Importance in demonstrating the principal characteristics of a class of Australia’s natural or cultural places or environments*
- E. *Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group*
- F. *Importance in exhibiting a high degree of creative or technical achievement at a particular period (relevant to cultural heritage places rather than vegetation)*
- G. *Strong or special associations with a particular community or cultural group for social, cultural or spiritual reasons*
- H. *Special association with the life or works of a person, or group of persons, of importance in Australia’s natural or cultural history.”*

The National Trusts of Australia has also created a National Register of Significant Trees. The Register is based on a hierarchy of significance, so classified trees are listed as being of National, State, Regional or Local significance.

Stakeholder consultation and a review of council priorities, reflected in planning controls, were reviewed for evidence of community sentiment and values, in relation to trees and vegetation across the study area.



---

## 3.6 STAKEHOLDER ENGAGEMENT AND COMMUNITY FEEDBACK

Engagement with communities and stakeholders was undertaken at different stages throughout the Project to ensure issues and recommendations were known and understood. Engagement will be ongoing with the community after the EES is complete and will be managed through the Communications and Stakeholder Engagement Plan for the Project.

Engagement to date has sought to:

- gather stakeholder feedback on the initial concept design and subsequent designs
- build an understanding of community-related Project impacts, areas of concern, and constraints and opportunities relating to the study area
- inform stakeholders of the EES and planning process
- facilitate discussions with impacted land owners regarding land acquisition required for the Project.

Feedback to date has helped to:

- inform Project design refinements and the development of design alternatives
- understand anticipated Project impacts and opportunities to mitigate, manage or minimise adverse impacts
- ensure technical reports responded to key areas of concern for the community.

Engagement will continue during EES exhibition and public hearing (2020), when stakeholders will have the opportunity to review technical reports and the Project design and provide comment.

Please see EES *Attachment IV – Stakeholder & Community Engagement Report* for further details. Community feedback regarding values is also outlined in Section 5.2.3.

---

## 3.7 LIMITATIONS AND ASSUMPTIONS

The contents of this document reflect WSP's findings within the scope of this assessment only.

Furthermore, the constraints and assumptions made in the preparation of this assessment are outlined below:

- This study does not assess potential impacts to the local economy.
- This assessment has been prepared as part of a suite of technical assessments. This report assesses impacts associated with the described Project only. This assessment relies on information provided by MRPV including Project description.

The above limitations and assumptions have been managed through an ongoing technical review process. Feedback has been sought from a range of technical specialists during the development of this assessment to strengthen the content and findings.

# 4 LEGISLATION, POLICIES AND GUIDELINES

---

## 4.1 COMMONWEALTH LEGISLATION

No commonwealth policies were considered applicable as part of this assessment.

---

## 4.2 STATE LEGISLATION

### ENVIRONMENT EFFECTS ACT 1978

The EE Act provides for assessment of the Project (works) that may have a significant effect on the environment. Assessment under the EE Act will inform the approval decisions, but will not result in an approval in its own right.

### PLANNING AND ENVIRONMENT ACT 1987

The *Planning and Environment Act 1987* seeks to establish a planning framework to:

*“ensure that the effects on the environment are considered and provide for explicit consideration of social and economic effects when decisions are made about the use and development of land.”*

### TRANSPORT AND INTEGRATION ACT 2010

The Victorian *Transport Integration Act 2010* lays out a framework for an integrated and sustainable transport system that “*contributes to an inclusive and environmentally prosperous state.*”

Specifically, the Act specifies transport system objectives which include a social and economic inclusion objective which states that a transport system “*should provide a means by which persons can access social and economic opportunities to support individual and community wellbeing*”.

---

## 4.3 PLANNING POLICY FRAMEWORK

The Planning Policy Framework (PPF) is included in the municipal planning scheme for all Victorian councils. It outlines aspects of state planning policy that councils, as local planning authorities, must consider in their respective areas.

### 4.3.1 CLAUSE 11 – SETTLEMENT

Planning is to facilitate sustainable development that takes full advantage of existing settlement patterns and investment in transport, utility, social, community and commercial infrastructure and services.

### 4.3.2 CLAUSE 12 – ENVIRONMENT AND LANDSCAPE VALUES

Planning should help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity) and conserve areas with identified environmental and landscape values.

### 4.3.3 CLAUSE 13 – ENVIRONMENTAL RISKS AND AMENITY

Planning should strengthen the resilience and safety of communities by adopting a best practice environmental management and risk management approach.

#### 4.3.4 CLAUSE 15 – BUILT ENVIRONMENT AND HERITAGE

Planning must support the establishment and maintenance of communities by delivering functional, accessible, safe and diverse physical and social environments, through the appropriate location of use and development and through high quality buildings and urban design.

#### 4.3.5 CLAUSE 18 – TRANSPORT

Clause 18 of the PPF relates to transport and states that:

*“Planning should ensure an integrated and sustainable transport system that provides access to social and economic opportunities, facilitates economic prosperity, contributes to environmental sustainability, coordinates reliable movements of people and goods, and is safe.”*

#### 4.3.6 CLAUSE 19 – INFRASTRUCTURE

Clause 19 of the PPF relates to infrastructure. With respect to community infrastructure, the PPF states:

*“Planning for development of social and physical infrastructure should enable it to be provided in a way that is efficient, equitable, accessible and timely.”*

---

### 4.4 GUIDELINES

#### 4.4.1 TOWARDS ZERO 2016-2020, VICTORIA’S ROAD SAFETY STRATEGY & ACTION PLAN

Provides an integrated strategy that involves government, communities, vehicle manufacturers, transport companies with an implementation budget of \$1 billion and has a goal of reducing road deaths to 200 or below by 2020. It also aims to reduce serious injuries by 15% over this period. The Project will upgrade, improve and increase the capacity of the road. The provision of separated footpaths and shared use paths as well as safety barriers will have a positive impact on safety in line with the objectives of Towards Zero.

#### 4.4.2 MOVEMENT AND PLACE, 2018

VicRoads *Movement and Place 2018* supersedes the VicRoads *SmartRoads Guidelines 2015* and outlines a new approach to network planning by recognising that transport links perform two functions: movement of people and goods, and serving as a place. This approach encourages movement and placemaking to be considered simultaneously when developing the network and helps manage competing land use and transport interests.

The Movement and Place approach aims to:

*“help identify innovative opportunities for transport and land use integration, to activate and enable a sense of place through developing sustainable, vibrant and accessible community precincts”*

Key priorities of *Movement and Place 2018* include:

- to create better places by supporting the design of people-friendly streets.
- to prioritise travel modes for different streets and contexts
- to define the way in which problems are understood to better consider future needs, and look at the best outcomes for cycling, walking, and place making.
- to support productivity by facilitating movement of goods and people.

Yan Yean Road is a 12 km section of roadway, classified as an M3 road for “*Moderate movement of people and/or goods within a municipality*” in accordance with the Department of Transport (DoT)’s Movement and Place in Victoria Framework 2019. It currently functions as a key route between Diamond Creek Road and Bridge Inn Road and a local road between Bridge Inn Road and Arthurs Creek Road. The Project extent was classified as a council road until around 2015, when VicRoads took ownership and the road was declared as a secondary arterial road.

Yan Yean Road is currently serviced by two public bus routes including the 381 (Mernda Station to Diamond Creek Station) and 385 (Greensborough to Mernda North). During the morning and evening peaks there is a combined frequency of 4 to 5 buses per hour (per direction). The DoT Movement and Place in Victoria Framework 2019 classification at the intersection with Bridge Inn Road is a P4 – Place of Neighbourhood importance due to the local off-street convenience centre. Between Bridge Inn Road and Jorgensen Avenue, Yan Yean Road is part of the Principal Bicycle Network (PBN) and provides connectivity north to Arthurs Creek and Yan Yean Reservoir and connects to the east-west running PBN along Bridge Inn Road with access to Mernda Station. There are currently no formal facilities for cycling on-road and the narrow width of the road is likely to currently discourage its use by cyclists. Furthermore, footpaths are provided along 25 per cent of Yan Yean Road, generally only on one side. There are short lengths of footpaths generally found in the vicinity of Plenty Valley Christian College (Orchard Road to Bridge Inn Road) and Yarrambat Primary School (around Ironbark Road) typically to provide access to local bus stops and local residential areas.

#### 4.4.3 PLAN MELBOURNE

*Plan Melbourne 2017–2050* is the Victorian Government’s strategic vision for Melbourne through to 2050. It seeks to integrate long-term land-use, infrastructure and transport planning to meet the population, housing and employment needs of the future.

Plan Melbourne was reviewed in 2015 and a refreshed *Plan Melbourne 2017–2050* was released in March 2017.

*Plan Melbourne 2017–2050* includes the following key directions:

- transform Melbourne’s transport system to support a productive city
- improve transport in Melbourne’s outer suburbs
- improve access to jobs across Melbourne and closer to where people live
- create neighbourhoods that support safe communities and healthy lifestyles
- create a city of 20-minute neighbourhoods
- create development opportunities at urban renewal precincts across Melbourne.

A primary outcome identified in *Plan Melbourne 2017–2050* is outcome 3: “*Melbourne has an integrated transport system that connects people to jobs and services and goods to market.*” Two key directions related to the Project supporting this outcome are:

- “*transform Melbourne’s transport system to support a productive city*”
- “*improve transport in Melbourne’s outer suburbs*”.

These have associated policies relating to improving arterial road connections across Melbourne, specifically Policy 3.2.1 *improve roads in growth areas and outer suburbs*. Policy 1.2.1 seeks to ‘*support the development of a network of activity centres, linked by transport*’.

#### 4.4.4 NORTH GROWTH CORRIDOR PLAN

Growth Corridor Plans were developed in 2012 by the then Growth Areas Authority (now Victorian Planning Authority) to provide an integrated approach to planning land use, transport and services in Melbourne's outer growth areas.

The northern section of Yan Yean Road forms the eastern boundary of the northern growth corridor. A key objective of the *North Growth Corridor Plan* is:

*“extending the northern region's public transport and arterial road networks into the Growth Corridor so that future residents and workers will enjoy a similar level of accessibility to those living and working in established parts of the north”.*

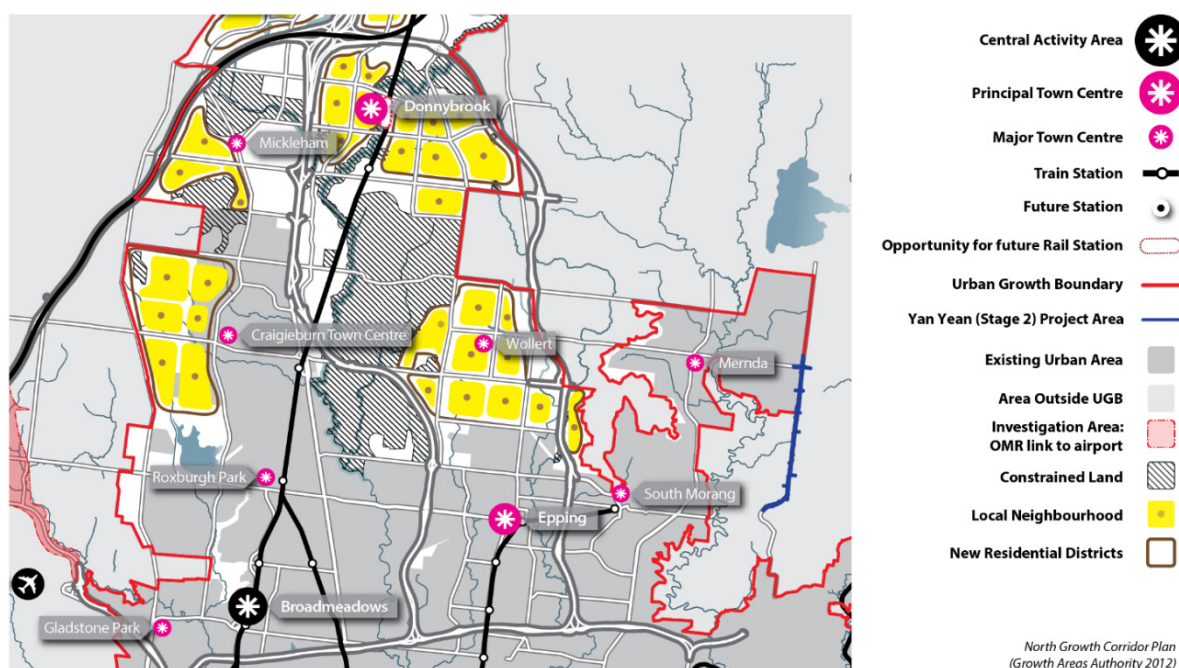


Figure 4.1 North Growth Corridor Plan – Community concept plan

Figure 4.1 shows the northern growth corridor with associated activity areas. Designated town centres have been created to focus economic and employment opportunities across the region. Yan Yean Road and associated arterials serve to connect the growth area of Doreen with the Mernda and South Morang activity centres.

#### 4.4.5 NORTHERN HORIZONS 2016

The *Northern Horizons: 50 Year Infrastructure Strategy for Melbourne's North* (NORTH Link 2016) is an update of the original 2014 report that sets out a 50-year infrastructure strategy for Melbourne's northern metropolitan region and peri-urban fringe. The strategy, developed as a collaboration between Regional Development Australia and eight northern councils, assesses current infrastructure provision in the region and sets out targets for future development to support economic and population growth.

The strategy identifies short-term (to 2021), medium-term (to 2033) and long-term (beyond 2033) priority infrastructure programs and projects for Melbourne's northern suburbs. In the strategy, the Yan Yean Road upgrade (Kurrak Road to Bridge Inn Road) is identified as a short-term priority project to improve existing connections north of the M80 Ring Road and east of the Hume Highway. In addition to the other projects identified for the north-east, these connections are necessary to take the pressure off the Hume Freeway and other existing arterial roads.

Bridge Inn Road, between Epping Road and Yan Yean Road, is also identified as a key corridor to support new developments in the region.

---

## 4.5 LOCAL GOVERNMENT

The project area falls across two municipalities: City of Whittlesea and Nillumbik Shire. The following summarises the Whittlesea and Nillumbik Planning Scheme, land use policies and local strategies that may influence future growth in the region.

### 4.5.1 NILLUMBIK PLANNING SCHEME

Clause 21-02 of the Municipal Strategic Statement (MSS) acknowledges the importance of the Nillumbik Green Wedge to Melbourne and the need to protect rural amenity and ecological biodiversity. The MSS further notes the growing pressures on local road and transport infrastructure as a result of sustained growth in the Whittlesea Urban Growth Area.

Clause 21-05-5 of the MSS relates to the effective provision and management of infrastructure throughout the shire, specifically Objective two seeks *“to provide safe and efficient roads and road links within the municipality and to the wider region”*. Yan Yean Road has been identified as a key transport link that requires special planning considerations to minimise the impacts that capacity constraints and upgrades have on local amenity. Further, Clause 21.03 of Nillumbik's MSS states: The construction of new roads or road upgrades be considerate of potential impacts on the rural amenity and should be consistent with environmental values. The MSS in general identifies the importance of regional recreation resources which are serviced by Yan Yean Road including Plenty Gorge Parklands and Yarrambat Park. One of the listed recommendations within the *Nillumbik Open Space Strategy 2005* is to *liaise with Parks Victoria and encourage the extension of the trail network along the Plenty River from Greensborough to Yarrambat Park, through the Plenty Gorge Parklands*. It also identifies that *opportunities should be created to provide dedicated bicycle lanes along major roads, including Yan Yean Road*.

Two River Red Gum trees located on the northeast corner of the Yan Yean/Bridge Inn/Doctors Gully Road intersection are affected by a Heritage Overlay under the Nillumbik Planning Scheme (HO191).

### 4.5.2 WHITTLESEA PLANNING SCHEME

The MSS sets out key policy and strategic planning objectives within the municipal planning scheme. The following summarises key directions as included in the MSS for Whittlesea.

Clause 21.11 of the MSS relates to transport. This clause states council's commitment:

*“...to establish an efficient, interconnected multi-modal transportation system which increases the level of accessibility and choice within and beyond the City of Whittlesea.”*

A key strategy (1.2) of Clause 21.11-1 Integrated Transport is *to provide new and improved arterial roads to enable the provision of trunk public transport services between activity areas, railway stations and public transport interchanges*.

Whittlesea City Council is committed to the protection of biodiversity and native vegetation; however, it is noted that the section of Yan Yean Road adjacent to the urban growth boundary is not within an area identified as a significant environmental or landscape feature (Clause 21.05 Environmental and Landscape Values). Of relevance to this Project is the objective of Clause 22.10 River Red Gum Protection Policy *to ensure that the development of existing and future urban and rural areas takes into account the presence of and plans for the retention, enhancement and long-term viability of River Red Gum trees*.

The Whittlesea Planning Scheme MSS recognises the value of environmental assets, but does not include any policy objectives specifically relating to open space.



#### 4.5.2.1 INFRASTRUCTURE

The Whittlesea Planning Scheme recognises the implications of rapidly growing populations on demand for and access to a range of community facilities and services. The MSS seeks to improve connectivity and access around the city for all members of the community.

#### 4.5.3 TRANSPORT

The *Whittlesea Integrated Transport Strategy* outlines the priorities and key actions to meet the transport needs of the municipal community. The strategy seeks to identify an integrated package of actions that Council, the State Government and stakeholders can work towards to improve transport within Whittlesea. The strategy states the following vision:

*“The City of Whittlesea has an integrated transport system that supports the development of liveable, prosperous and sustainable communities. People and businesses are connected within the municipality and with the rest of Melbourne to access jobs and opportunities in ways that meet their access needs, while minimising the environmental, social and economic costs of their travel.”*

The vision is underpinned by the development of an accessible and integrated transport system including:

- accessibility to regional and metropolitan activities
- accessibility to local activities supports the development of vibrant communities
- the increased use of public transport and sustainable transport modes to reduce car dependence.

The strategy notes that Whittlesea is one of the fastest growing municipalities in Australia, with many new families establishing themselves in Melbourne’s northern growth areas. It is noted that many residents commute daily to work elsewhere.

Nillumbik Shire does not have an integrated transport strategy.

#### 4.5.4 ACTIVE AND PUBLIC TRANSPORT

##### 4.5.4.1 NILLUMBIK SHIRE

The *Nillumbik Major Activity Centre: Sustainable Transport Study Strategy* (Nillumbik Shire Council 2009) considered future growth projections for the shire and established a framework to promote both active and public transport modes as a means to access the municipalities designated activity centres, Eltham and Diamond Creek. The Strategy primarily focuses on local movement within the activity centres however does identify Yan Yean Road as key public transport corridor covering the east of the shire.

##### 4.5.4.2 CITY OF WHITTLESEA

The *Whittlesea Integrated Transport Strategy* promotes active transport including walking and cycling through the following objectives:

*“Council will provide a safe urban environment where walking is encouraged through appropriate infrastructure and a built environment that encourages walking.*

*Council will enable the community to adopt cycling as a viable alternative to the car for a wide variety of trips within the municipality and our neighbouring municipalities, through provision of infrastructure, encouragement programs and supporting infrastructure.”*

In supporting active transport, the strategy recognises a number of challenges including:

- improving continuity and safety (actual and perceived) of cycling and walking routes to reduce barriers and provide safe and convenient access to major destinations
- providing activities within walking and cycling distance of homes to provide viable non-car transport options.



Plenty Road, Bridge Inn Road, Childs Road and Bush Boulevard are identified as existing components of the existing Principle Bicycle network. The *City of Whittlesea Bicycle Plan 2016-2020* supports and implements the *Whittlesea Integrated Transport Strategy*.

## 4.5.5 OPEN SPACE AND RECREATION

### 4.5.5.1 NILLUMBIK SHIRE

Nillumbik Shire Council adopted the *Open Space Strategy* in November 2005 to guide the long-term planning and management of the municipal open space system. The strategy is particularly important within Nillumbik given its designation as a green wedge shire and the high proportion of open space land that is under the ownership of Council, government agencies or is Crown Land managed by Parks Victoria. The Strategy identifies opportunities for future open space and developing linkages between existing areas and trail systems.

The vision of the strategy is:

- Nillumbik will provide a diversity of open space with a range of high quality regional, district and neighbourhood parks linked by a network of trails
- Nillumbik's open space network will be easily accessible and provide all residents and visitors with a range of passive and active recreation opportunities
- Nillumbik will ensure its open space is developed and managed on a sustainable basis to meet the needs of the community and protect environmental values for present and future generations.

As mentioned above, the strategy notes collaborating with VicRoads (MRPV) to create dedicated bicycle lanes on Yan Yean Road as a direction.

### 4.5.5.2 CITY OF WHITTLESEA

The City of Whittlesea adopted an *Open Space Strategy* in 2016. The strategy sets out the strategic direction for the future planning, provision, design and management of open space in the City of Whittlesea through to 2026. Open space surrounding the Project in Whittlesea fits into: State open space (PGPR); Municipal open space (Doreen Recreation reserve); Local open space (Wether Park) according to the Whittlesea open space strategy. Table 4.1 outlines the open space hierarchy for the City of Whittlesea.

Table 4.1 Whittlesea open space hierarchy

TYPES OF OPEN SPACE	ROLE	PROVISION BENCHMARK
State open space	State significance including biodiversity values, potable water, or heritage values.	500 m walking catchment.
Regional open space	Caters to a broader regional recreational catchment or biodiversity protection purpose at a broader scale beyond the municipal boundaries.	500 m walking catchment.
Municipal open space	Provides for the recreational needs of the municipality and includes sporting facilities, historical gardens and major recreational facilities such as large play spaces and skate/BMX facilities.	500 m walking catchment. Preferred size: 7–8 hectares (minimum: 3 hectares). Travel catchment within one kilometre of 95% of dwellings and workplaces.

TYPES OF OPEN SPACE	ROLE	PROVISION BENCHMARK
Neighbourhood open space	Provides for unstructured recreation and a range of character and facilities within walking distance of home or the workplace.	Minimum size: 1 hectare. Safe walking catchment of 400 metres from home or workplaces.
Local open space	Informal recreation in proximity to home or workplace.	Preferred size: up to 1 hectare, or large enough to hold two activities in one space. Safe walking catchment of 300 metres from home or workplaces.
Small local open space	Informal space, smaller than local open space.	Preferred size: up to 0.5 hectare, or large enough to hold one activity. Safe walking catchment of 200 metres from home or workplaces.
Small local link	Provide improved connectivity between streets and open space.	Preferred size: Less than 0.5 hectares.

#### 4.5.6 GREEN WEDGE MANAGEMENT

##### 4.5.6.1 NILLUMBIK SHIRE

The project area falls within the Nillumbik Green Wedge, as shown in Figure 4.2 below. The *Nillumbik Green Wedge Management Plan* was recently updated and released in November 2019. The plan:

*“...brings together new actions and Council’s ongoing strategies to guide funding, resourcing and service delivery for the green wedge.”*

The vision of the plan is:

*‘Management of the Nillumbik green wedge will lead the way in supporting a vibrant, resilient, connected and diverse community; living in the landscape to enhance the environmental, social and economic sustainability of Nillumbik’s green wedge.’*

that the plan notes local transport issues, particularly poor quality and congested roads and lack of good public transport, safe cycling and horseriding options.

Key Action A1.9 of the plan seeks to: Advocate for improved public transport, traffic management and reduced road congestion.



Figure 4.2 Nillumbik Green Wedge (area shaded olive)

# 5 EXISTING CONDITIONS

This report considers the local policy context, demographic profile of local residential communities and distribution of community services and places of significance to investigate possible social risks and vulnerable communities that may be impacted by changes generated through construction and operation of the Project.

---

## 5.1 SUMMARY OF POLICY CONTEXT

The state, metropolitan and local government policies, strategies and plans relevant to this investigation generally support the objectives of the Project and align with its anticipated benefits. The upgrade will improve access to, and for, the northern growth areas and provide greater capacity to support rapidly expanding populations.

Identified in the Nillumbik Planning Scheme as a public transport corridor for the east of the Shire, the Project will also support improved public transport services along Yan Yean Road including regional connections, local services, school buses and bus services connecting Mernda Station via Bridge Inn Road.

The shared use path enhances opportunities for local connections, active transport, and improved health and wellbeing. Enhancing and formalising networks for non-vehicle traffic supports an integrated transport network.

---

## 5.2 COMMUNITY PROFILE

The Whittlesea region is an area currently in transition with older established suburbs in the south merging into newer Greenfield development forming the Melbourne peri-urban fringe. Of relevance to the area's future growth is the Urban Growth Boundary that runs to the north of the project area and defines the extent of existing and planned urban settlements. In contrast, the majority of land within the Shire of Nillumbik is designated green wedge and as such exhibits vast tracts of open space and remnant vegetation.

Doreen, the northern most suburb in the study area is covered by two municipalities, with Yan Yean Road forming the boundary. The City of Whittlesea area of Doreen to the west of Yan Yean Road is designated growth area and as such represents the bulk of the suburbs official population, whereas the Nillumbik Shire area of Doreen to the east is designated green wedge and predominately rural by nature.

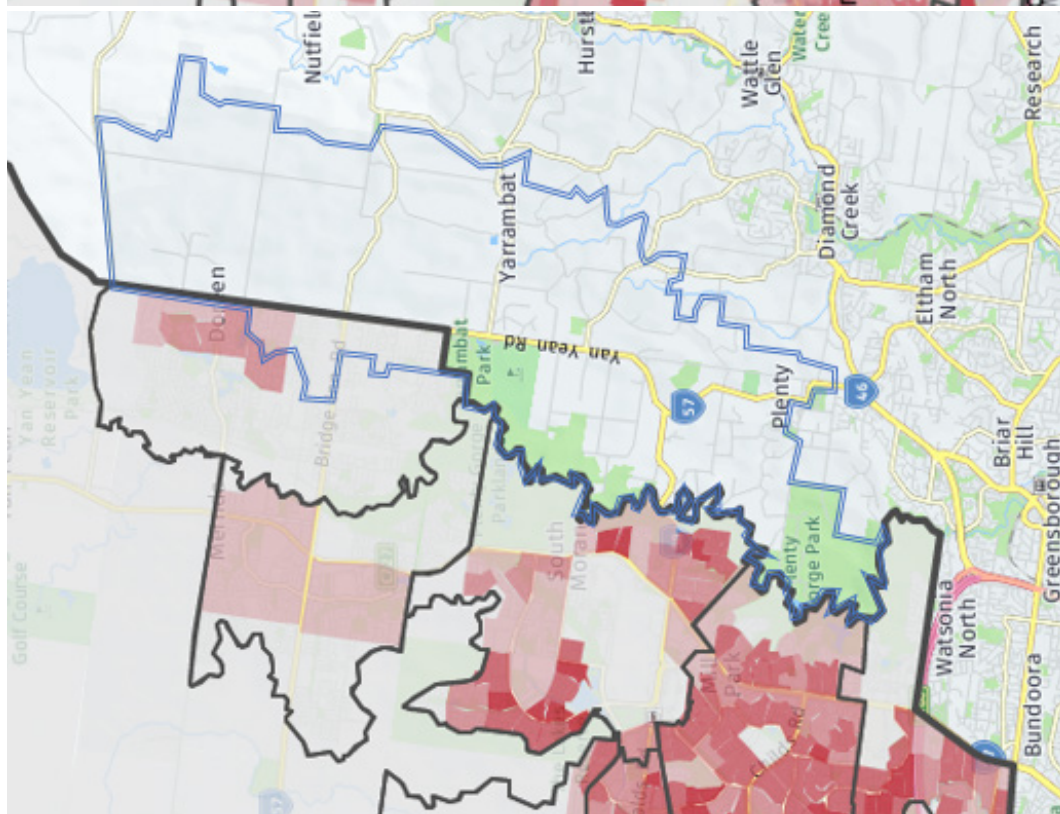
A demographic profile of residential communities found that residential population density is generally low throughout the study area. Residential densities are most concentrated to the south of the study area, and the northern growth area of Doreen as illustrated in Figure 5.1 and Figure 5.2. Comparison of population densities at 2011 and 2016, shows that this trend continues, as population increases in Doreen and new subdivisions in Whittlesea.

Between 2011 and 2016, the population of Doreen alone almost doubled, increasing from 10,963 to 21,298. Doreen is anticipated to reach a population of 26,800 by 2036, with the bulk of population growth in the City of Whittlesea growth areas.

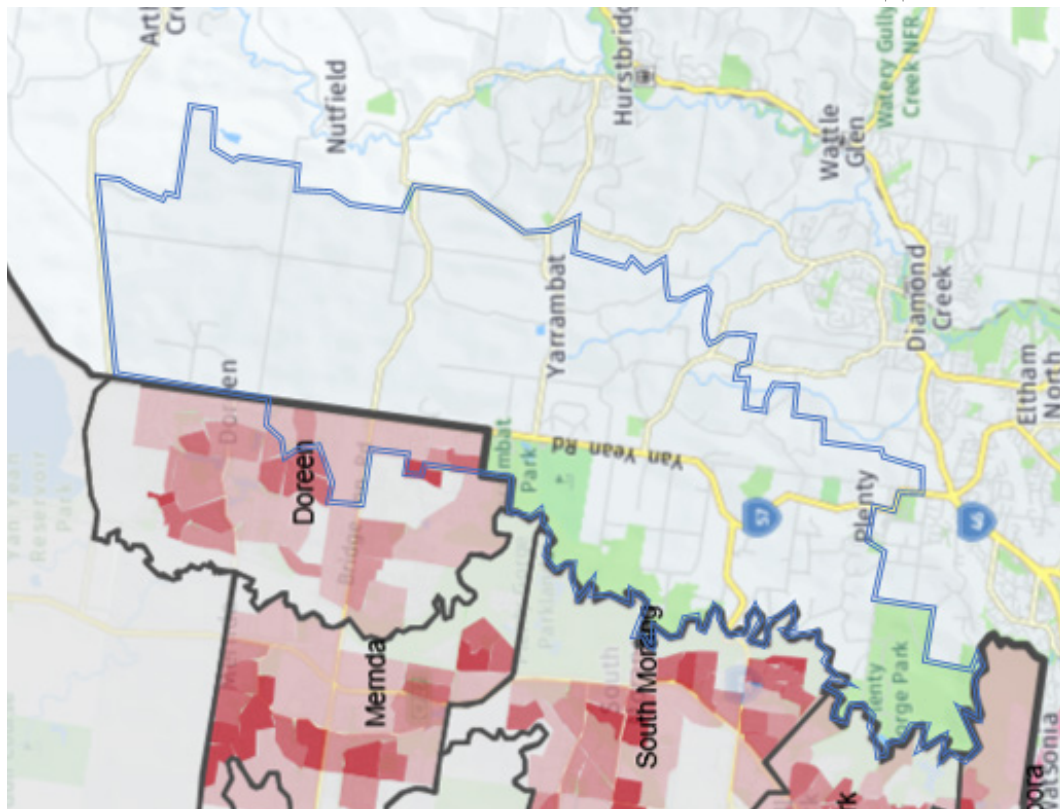
Yarrambat, in the south of the study area is a small rural township with a collection of local services and low density rural lifestyle residential blocks. The Yarrambat-Plenty area experienced moderate population growth increasing from 3,618 to 3,995 between 2011 and 2016, reflecting a 9.3% increase over this time. The rate of population growth is projected to increase, with Yarrambat-Plenty expanding to a population of 5,500 by 2036.



Whittlesea, 2011



Whittlesea, 2016

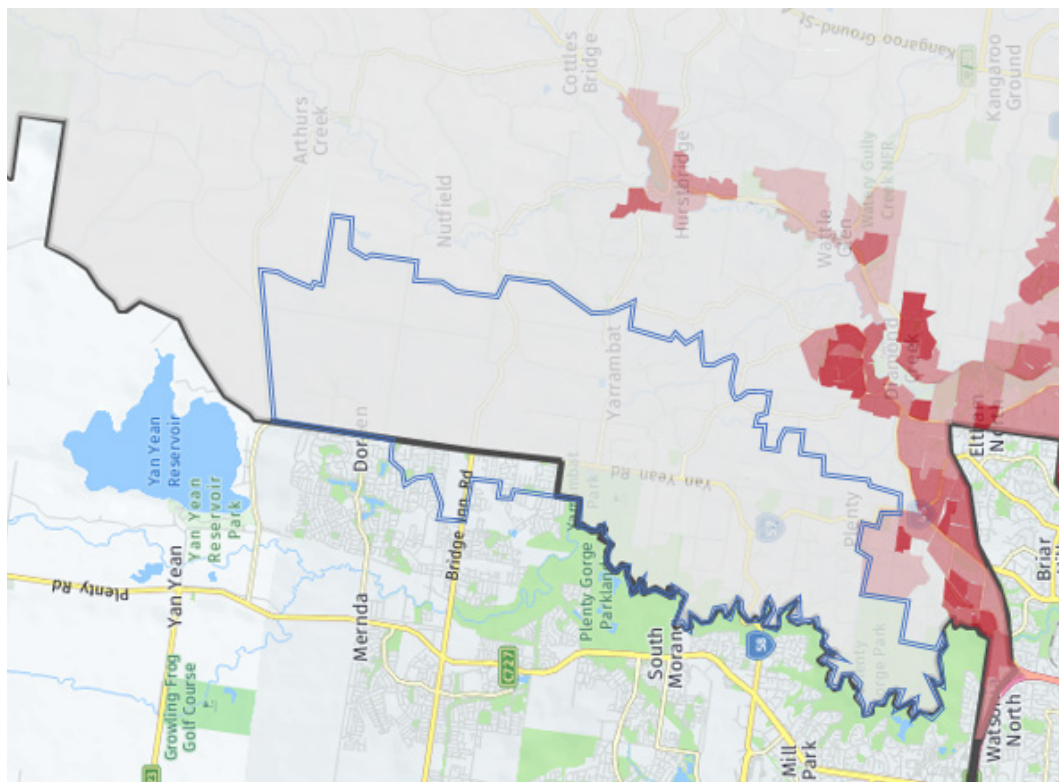


**Legend:**

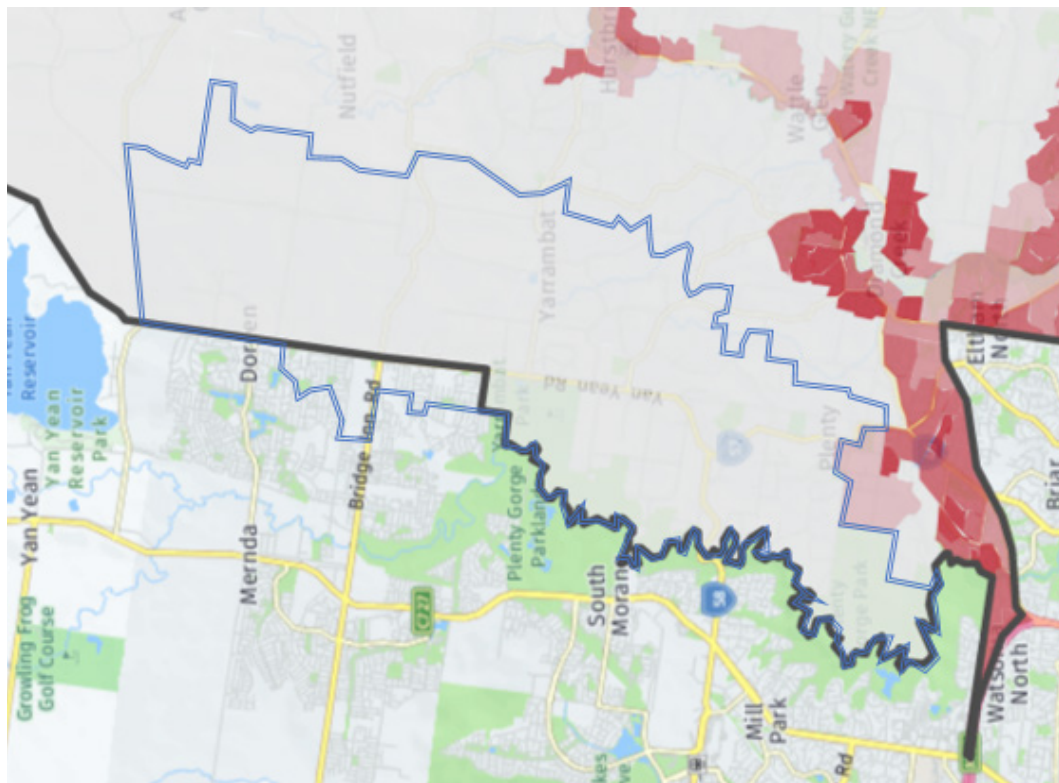
- 0.01 to 8.25 people
- 8.26 to 19.61 people
- 19.62 to 29.19 people
- 29.20 to 37.54 people
- 37.55 to 66.19 people

Figure 5.1 Comparison of residential population density – Whittlesea (2011, 2016)

Nillumbik, 2011



Nillumbik, 2016



**Legend:**

- 0.06 to 2.98 people
- 2.99 to 8.05 people
- 8.06 to 15.13 people
- 15.14 to 21.37 people
- 21.98 to 32.79 people

Figure 5.2 Comparison of residential population density – Nillumbik (2011, 2016)

## 5.2.1 STUDY AREA COMMUNITIES

Three study area communities were identified to assist with this analysis based on distribution of residential settlements, and suburb boundaries (Figure 3.1). These are shown in Table 5.1.

Table 5.1 provides a summary of key population characteristics as of 2016 for the residential communities by suburb within the study area. A demographic profile of each study area community, Doreen, Yarrambat and Plenty, is provided in Table 5.1.

This provides a snapshot of population diversity which can be used to infer how community needs may vary across the study area. The three communities defined within the study area are made up of the SA1s. For ease of description, the communities have been categorised by the suburb they are located within. However, it must be noted that these study area communities are not representative of the entire suburb population, only the population located within the study area SA1s.

Table 5.1 Summary of key study area population characteristics

STUDY AREA COMMUNITY	STUDY AREA SUMMARY
Doreen	<p><b>Total residents:</b> 4,310 <b>Total Dwellings:</b> 1,475</p> <p><b>Local Government Area:</b> City of Whittlesea, Nillumbik Shire</p> <p><b>Community profile:</b></p> <p>Residential growth area within the Nillumbik Green Wedge comprising predominantly separate housing, but with comparatively higher levels of semi-detached terrace or town houses when compared with other communities within the study area.</p> <p>Community predominantly comprises family households with children, but has the largest proportional representation of single parent households within the study area.</p> <p>Included some pockets of low income households, however historical SEIFA data indicates that the community is an area of relative socio-economic advantage.</p> <p>Some pockets of lower rates of household car ownership, however car ownership is generally high suggesting increased car dependency.</p> <p>Highest proportion of infant children of all communities within the study area and comparatively high proportion of primary school aged children.</p> <p>Lowest proportion of elderly residents of communities within the study area.</p> <p><b>Geographical barriers:</b></p> <p>Low residential densities and rural land uses on the outskirts of the residential settlement.</p> <p>Plenty Gorge Parklands and river corridor to the south-west.</p> <p>Major arterials: Yan Yean Road, Bridge Inn Road/Doctors Gully Road.</p> <p><b>Likely service centres:</b> Doreen, Mernda.</p>



STUDY AREA COMMUNITY	STUDY AREA SUMMARY
Yarrambat	<p><b>Total residents:</b> 1,589 <b>Total Dwellings:</b> 533  <b>Local Government Area:</b> Nillumbik Shire</p> <p><b>Community profile:</b></p> <p>Low density rural residential settlement within the Nillumbik Green Wedge, comprised almost entirely of separate house dwellings.</p> <p>Family households comprising a couple and children are the predominant household type, however the Yarrambat community has a higher proportion of lone person households when compared against other communities within the study area.</p> <p>Slightly higher proportion of low income households, particularly to the east of Yan Yean Road, when compared against other communities within the study area.</p> <p>High rates of household car ownership suggest increased car dependency.</p> <p>Lowest rates of infant and primary school aged children of all communities within the study area.</p> <p>Higher proportion of elderly residents than all other communities within the study area.</p> <p><b>Geographical barriers:</b></p> <p>Plenty Gorge Parklands and river corridor to the west and hilly topography to the east.</p> <p>Low residential densities and open space.</p> <p>Major arterials: Yan Yean Road, Ironbark Road.</p> <p><b>Likely service centres:</b> Greensborough, Diamond Creek.</p>
Plenty	<p><b>Total residents:</b> 927 <b>Total Dwellings:</b> 300  <b>Local Government Area:</b> Nillumbik Shire</p> <p><b>Community profile:</b></p> <p>Corridor of established low density residential settlement within the Nillumbik Green Wedge. Separate houses are the predominant dwelling stock.</p> <p>Family households comprising couples with children are the predominant household type.</p> <p>Generally high rates of household car ownership suggest increased car dependency.</p> <p>Comparatively higher rates of primary school aged children and elderly residents when compared against other communities within the study area.</p> <p>Rate of low income households generally consistent with other study area communities, with the Plenty community exhibiting the highest level of relative advantage on the SEIFA scale.</p> <p><b>Geographical barriers:</b></p> <p>Plenty Gorge Parklands and River corridor to the west and hilly topography to the east.</p> <p>Low residential densities and open space.</p> <p>Major arterials: Yan Yean Road, Memorial Drive, Sutherland Road.</p> <p><b>Likely service centres:</b> Greensborough, Diamond Creek.</p>

### 5.2.2 IDENTIFIED VULNERABLE COMMUNITIES

Community profiles assist in determining the type and level of demand generated for various types of community facilities and services, and provide insight into communities that are likely to be less resilient or more vulnerable to change.

In the context of this review, vulnerable communities are assumed to be those with higher rates of, or multiple indicators of, socio-economic disadvantage, reduced mobility (lower car ownership, reduced access to public transport), or greater reliance on local facilities and services.

Vulnerable communities may include higher proportions of unemployed residents, lower average household incomes, and higher proportions of elderly residents, family households with school aged children and/or infant children, single parent families, or large communities of newly arrived migrants.

The following summarises the indicators of vulnerability identified in study area communities.

- **Family households:** Areas with higher proportions of children aged 0 to 4 years are likely to experience comparatively higher demand for local family and children's services, including Maternal and Child Health (MCH), kindergartens and Primary Schools. These areas may also have increased demand for pedestrian and cycle connectivity and public transport access as secondary school-aged children begin to travel independently.

*Within the study area, Doreen has the highest portion of all family households including single parent families, and infant and Primary School aged children. Couple households with children are the predominant household type in Plenty. Despite a comparatively lower proportion of family households, Yarrambat has a high proportion of Secondary School aged residents.*

- **Elderly residents:** Areas with significantly higher proportion of older residents may experience greater demand for accessible community services, non-car transport and aged care accommodation. Areas with higher proportions of retirees and old-age pensioners can also correspond to a greater incidence of low income and lone person households. Areas with significantly higher proportions of elderly residents also include residential aged care facilities and retirement communities. It is assumed that these facilities are likely to be self-contained, provide essential services on site, and operate private resident transport services. *In the study area, the Yarrambat and Plenty communities have a significantly higher proportion of elderly residents when compared to Doreen. The absence of any designated retirement of aged care accommodation could indicate that elderly residents have chosen to age in place and remain in their homes and may be reliant on the arterial road network for homecare and transport assistance.*

- **Low income households:** Low income households and areas with lower rates of household car ownership are reliant on services within their local area or good public transport connectivity to access higher level services and facilities and employment opportunities. Socio-Economic Indexes for Areas (SEIFA) also provides a relative ranking of communities that are experiencing relative socio-economic disadvantage based on a range of population characteristics. Where available, SEIFA provides a useful summary of disadvantage across communities.

In 2011, SEIFA data indicated that communities within the study area generally experienced relative socio-economic advantage.

*The study area includes pockets of low income households throughout all communities and with rates of low income households sitting at 7% in Doreen and Plenty and 8% in Yarrambat. However, all communities overall exhibit relatively high levels of advantage. Pockets of disadvantage are concentrated in new residential developments in Doreen to the South of Bridge Inn Road and west of Yan Yean Road.*

- **Cultural and linguistic diversity:** Culturally and linguistically diverse (CALD) communities and populations with lower rates of English proficiency can face barriers to engagement and may be reliant of local networks and family for assistance. These communities may have lower resilience to altered or unfamiliar environments or movement networks because of barriers to communication and understanding. Culturally and linguistically diverse, and newly arrived communities may be more vulnerable during periods of transitions or change because of language barriers, and access to (and knowledge of) local services. *Demographic indicators suggest low level of cultural and linguistic diversity in study area communities with only 1% of residential populations having low or no English proficiency in Doreen and Plenty and less than 1% in Yarrambat.*

For the purposes of this assessment, multiple indicators of vulnerable communities have been identified in:

- Yarrambat – higher proportions of elderly residents
- Doreen – higher proportions of single parent families, infant and school aged children.

### 5.2.3 COMMUNITY VALUES AND LOCAL ISSUES

An assessment of community values has been undertaken using feedback from consultation activities undertaken by MRPV, then VicRoads, for the Project and discussions with affected property owners and stakeholders.

Consultation activities included:

- individual meetings with landowners and tenants of directly impacted properties. Issues and concerns that were raised by the stakeholders included: noise, access, landscaping, intersection upgrades, safety, and land acquisition
- community information sessions between April and May 2018. Session participants shared their input in matters such as environment, local access changes, safety and traffic congestion
- ongoing consultation with Project stakeholders including City of Whittlesea, Nillumbik Shire Council, agencies, utilities and service providers. Other stakeholder meetings included:
  - meetings with Yarrambat Primary School and Plenty Valley Christian College to discuss the proposed design, impact on the school property (including any land acquisition) and any disruptions due to the proposed works
  - service providers such as Yarra Valley Water, Telstra and AusNet who were contacted to discuss the relocation of services, procurement and timing of such works in order to minimise disruption to the public and to work collaboratively
- establishment of a Community Reference Group (CRG) in 2018 as part of Stage 1 of the Yan Yean Road Upgrade. The first meeting was held in March 2018. The CRG has provided input to the Project team to develop better solutions over a range of disciplines including environmental, social and road design
- during consultation and until May 2018, supporting communications included the project website, mail outs providing details of community information sessions, and targeted mail outs to directly affected landowners
- as part of the draft Scoping Requirements consultation, community members provided additional feedback on the Project with the main themes surrounding the Doreen River Red Gums and overall environment along the Project.

Feedback covered a range of topics including project design, traffic and transport, amenity, access, land acquisition, construction and the environment. This feedback, relevant to the SIA, is summarised in Table 5.2 and has informed development of the project design and preparation of the EES.

Table 5.2 Summary of community values

COMMUNITY VALUES	VALUES AND CHARACTER	LOCAL ISSUES EMERGING THROUGH CONSULTATION
Local character and quality of life	<p>Residents in the central study area note that they enjoy the rural aspect, privacy and peace and quiet of the area. This is also supported by council and protected through planning controls. It is generally acknowledged that the area has changed in recent years due to the development in the northern growth area and increasing populations.</p> <p>For long-time residents, this change is not always seen as positive, as it has disrupted the tranquil rural atmosphere that they value.</p>	<p>A number of residents impacted by acquisition noted that removal of trees and land would bring traffic closer to their residences and make their properties more visible from the road and were concerned about noise impacts and loss of privacy.</p> <p>Some residents expressed concern that these changes would restrict some uses such as keeping horses or having space to maintain a tennis court, which was why they chose to live in the area.</p>
Sense of community and belonging	<p>MRPV, then VicRoads, met with impacted landowners to explain the Project and the acquisition and compensation process. Landowner responses ranged from little concern to significant distress.</p> <p>Some property owners were aware that the Project had been a long-term plan, and understood there is a requirement for property acquisition.</p> <p>Property owners were informed about the acquisition and compensation process and shared their desire to retain the current residential uses and quality of life.</p>	<p>Several directly impacted landowners were particularly concerned about the impact of acquisition affecting the potential to subdivide their land in the future. Some landowners noted that they had considered subdivisions as part of their future financial security.</p> <p>Despite anticipated impacts and acquisition, most residents and landowners recognised the need for the Project to address increasing congestion and to provide for current and future population growth in the area. A considerable number of affected landowners remain opposed to acquisition. Some of the residents oppose the land acquisition, however acknowledge the need for the Project.</p>

COMMUNITY VALUES	VALUES AND CHARACTER	LOCAL ISSUES EMERGING THROUGH CONSULTATION
Access and connectivity	<p>The Project will affect many properties that currently gain access directly from Yan Yean Road. While landowners were concerned that the Project would result in altered access to their property, increasing congestion meant that access directly onto Yan Read Road can be difficult and dangerous at peak times, particularly for larger vehicles or vehicles towing trailers. It was generally acknowledged that additional lanes would improve access from their properties.</p> <p>Improved safety for cyclists and pedestrian was generally seen as a positive outcome from the Project. The shared user path was broadly supported, although some local community members questioned whether the median strip would restrict east-west access for residents.</p> <p>Improving safety and access to Yan Yean Road and neighbouring centres was also supported by emergency services.</p>	<p>On being reassured that all legal access points to Yan Yean Road would be retained, owners were generally comfortable with the changes to their private access. Residents opposite to Yarrambat Park requested a service lane.</p> <p>However, many noted that the central median strip would mean that they would no longer have two-way access from their properties and were concerned that having to double back to execute a U-turn would add extra time to their trip. In some instances, landowners were satisfied with having access provided onto a side road rather than directly onto Yan Yean Road.</p> <p>Several landowners were concerned that acquisition would reduce off-street parking at the front of their property, or reduce driveway space making access difficult.</p>
Sentiment toward the Project	Residents noted that increasing populations and growth area development has placed extra pressure on Yan Yean Road in recent years and that change is required to maintain local and regional access and to increase the north-south capacity of the road network.	Stakeholders and communities are generally in favour of the Project. Throughout the study area, it is generally acknowledged that congestion is increasing and the Project will enhance safety and reduce travel time delays.

---

## 5.3 SERVICES, FACILITIES AND PLACES OF SIGNIFICANCE

### 5.3.1 COMMUNITY SERVICES AND FACILITIES

A desktop audit and feedback from community and stakeholder consultation has informed an assessment of the distribution, provision and significance of facilities, services and places of interest surrounding the study area.

The audit found that limited services and facilities are provided within the study area. This is consistent with the small population in the south of the study area. The provision of community facilities and services generally reflects the population distribution with the bulk of facilities located in Doreen. The full audit is available in Appendix C and a map showing locations of community facilities is available in Appendix D.

#### 5.3.1.1 DOREEN

Residents of Doreen are generally well provided with local level council services, but may experience a shortage of some regional facilities including community arts, library and learning, seniors and youth spaces and aquatic facilities. Local residents are likely to access additional services in Mernda, relying heavily on Yan Yean Road and Bridge Inn Road to access these centres.

It is anticipated that additional services and facilities will be provided in Mernda and Doreen as growth area communities continue to grow. Furthermore, the development of the Mernda Rail Extension and future town centre will further bolster local and regional provision of retail, commercial and community services.

The current and planned retail centres of Doreen are located further east of Yan Yean Road. However, the current road corridor includes pockets of retail and community facilities to support the local community. The intersection of Bridge Inn Road includes a newly developed service centre including petrol station and two fast food outlets.

#### *PLENTY VALLEY CHRISTIAN COLLEGE AND VALLEY PRESBYTERIAN CHURCH*

The Plenty Valley Christian College, co-located with the Valley Presbyterian Church is situated to the east of Yan Yean Road. The land is owned by the Presbyterian church. The main entry to the site is located off the roundabout at the intersection of Orchard Road. The main site structures are set back from Yan Yean Road.

#### *WERTHER PARK*

Werther Park, owned by the City of Whittlesea, is a linear reserve located on the western side of Yan Yean Road. It comprises passive open space and provides a buffer between the existing road and residences facing onto Werther Way. A short-shared user path runs through the park, but does not connect to the local network.

#### *DOREEN RECREATION RESERVE*

Doreen Recreation Reserve comprises an area of approximately 1.2 hectares located on the north west corner of the Bridge Inn Road intersection. Its facilities include barbecue, cricket ground, toilets, tennis courts and car parking.

#### *HIPPITY HOP CHILDCARE CENTRE*

Council approval for the use of land at 6 Youngs Road for a Childcare Centre was approved in May 2019. The approval allows for the use and development of land for a Childcare Centre for 80 children. The childcare centre is not currently operational however will form a community services and facility once operational.

### 5.3.1.2 YARRAMBAT

Residents are provided with some local level council services, but may experience a shortage in maternal and child health and regional facilities including community arts, library and learning, seniors and youth spaces and aquatic facilities. Local residents are likely to access local and regional services in Diamond Creek, Doreen or Greensborough. As such, Yan Yean Road is a vital connection for residents of Yarrambat for both private vehicle and public transport, while Ironbark Road is an important connection to Diamond Creek.

The rural settlement of Yarrambat is centred around the intersection of Yan Yean Road and Ironbark Road, which includes Yarrambat Primary School, General Store, post office, coffee shop, St Michael's Anglican Church, a dance school, Yarrambat War Memorial Hall, and Yarrambat War Memorial Park sports fields. The Yarrambat CFA is also housed in a recently renovated facility in Ironbark Road, a short distance from the intersection with Yan Yean Road. A childcare facility and Yarrambat Veterinary Hospital are located to the west of Yan Yean Road adjacent to Yarrambat Primary School.

Further north along Yan Yean Road at Ashley Road is the St Macarius Orthodox Church and two private dog boarding facilities. The North of Yarrambat also includes a number of regional attractions such as the Yarrambat Public Golf Course and Diamond Valley Archers, Yarrambat Park and Harness Track, and Greensborough Model Aircraft Club. It is anticipated that these facilities would be accessed by local commuters and visitors from outside the area, generating additional traffic on Yan Yean Road, particularly during weekends and holidays.

South of the Yarrambat town centre, on Kurrak Road, Rivers of Yarrambat is a popular community meeting place and function venue.

#### *YARRAMBAT VETERINARY HOSPITAL*

Located on the west of Yan Yean Road, south of the intersection with Ironbark Road, the Yarrambat Veterinary Hospital services a regional catchment.

Access to the hospital is provided off Yan Yean Road, and is shared with the neighbouring childcare centre. The facility is set back from the current road, behind two paddocks which are currently used by the hospital to keep horses. The paddocks are screened from the existing roadway by a row of trees and fencing. This services to keep horses contained.

#### *ST MACARIUS COPTIC ORTHODOX CHURCH*

The St Macarius Coptic Orthodox Church is located on the west side of Yan Yean Road, with access from Ashley Road. The site includes a church building and on-site parking for visitors. The church operates predominantly on weekends.

#### *YARRAMBAT PRIMARY SCHOOL*

Yarrambat Primary School is located on the eastern side of Yan Yean Road on the southern side of the intersection at Ironbark Road. The duplication will use the western side of Yan Yean Road to avoid acquisition of school land.

#### *YARRAMBAT PARK AND YARRAMBAT PARK PUBLIC GOLF COURSE*

Yarrambat Park, located north of the Yarrambat township in the western side of Yan Yean Road, is the primary open space asset and recreation precinct for the Yarrambat and regional community. As well as providing passive open space for casual recreation and linkages to the Plenty River Corridor, the precinct also includes a harness racing track and Yarrambat Horse and Pony Club, Greensborough Model Aircraft Club, Diamond Valley Archers and Yarrambat Park Public Golf Course.

The park dominates the western side of the central study area and reflects the rural character of the area which is valued by local residents.



### 5.3.1.3 PLENTY

The southernmost extent of the study area falls within the suburb of Plenty. Local level services in Plenty are limited to community meeting space. This reflects the relatively small and dispersed local population.

Given its proximity, it is likely that Plenty operates as an extension of the Greensborough centre. As such, it is assumed that residents will primarily access local and regional level services in Greensborough. It is not considered that residents in the south of the study area will be as reliant on the north of Yan Yean Road for daily activities and services.

### 5.3.2 OPEN SPACE AND RECREATION

Open spaces are valued community assets. The Nillumbik Green Wedge and waterways characterise the central study area, maintaining low residential densities, agricultural uses and passive open space. Planning policies, including the *Nillumbik Green Wedge Management Plan* (2019) recognise the value of open space throughout the study area and seek to protect and maintain it.

In the Yarrambat township and surrounds, the Yarrambat War Memorial Park, Yarrambat Primary School, Yarrambat Park and Yarrambat Park Public Golf Course provide facilities for active recreation and organised sports. The retention of the rural character of Yarrambat was the most consistent theme identified by the community during consultation undertaken by Nillumbik Shire Council on the proposed Yarrambat Township Plan. Based on this feedback, Council are currently developing a Public Realm Masterplan for the Yarrambat township that seeks to maintain its rural character.

In the City of Whittlesea, the study area encompasses suburbs planned to experience rapid residential growth and development. The Whittlesea *Open Space Strategy 2016* notes that municipal open space in these areas will be planned and provided in line with State Government planning guidelines, implemented through precinct structure planning processes.

Currently, there is a large network of recreational reserves and parkland throughout the study area, however large tracts of undeveloped private land and major arterials such as Yan Yean Road, Bridge Inn Road and Plenty Road can inhibit connections across the region. The construction of the Mernda Rail extension may also further inhibit regional connections by impeding east-west connection, however this is considered of little consequence given the significance of the Plenty Gorge as a barrier in the area.

The City of Whittlesea in consultation with residents, community groups, sporting clubs and associations has developed the Doreen Hall and Recreation Reserve Master Plan to guide the future use of Doreen Recreation Reserve located at the northern intersection of Bridge Inn Road and Yan Yean Road. As part of the master plan, Doreen Hall has been removed to accommodate a new community facility and open space for sporting and community events.

Similarly, the Yarrambat Park Masterplan was adopted to guide the future development of the Yarrambat Park Golf Course and parkland. It aims to enhance the business, tourism and community use opportunities of the park while preserving its natural character. Yarrambat Park incorporates an 18-hole golf course, driving range and several clubs.

A map showing open space provision in the study area is available in Appendix D.

### 5.3.3 SIGNIFICANT COMMUNITY ACTIVITIES

Festivals and events are an important way for councils to foster community integration and connections. The City of Whittlesea and Nillumbik Shire host a calendar of local activities, as well as municipal events. Significant annual events are listed in Table 5.3. Any impacts that the Project may have on these events, for example restricted routes during construction, must be considered. Management of these risks may include providing notifications and detour routes to festival organisers.

Table 5.3 Annual community activities

EVENT	DATE	LOCATION
Whittlesea Community Festival	March	Lalor
Mernda Community Fair	March	Mernda
Hurstbridge Wattle Festival	August	Hurstbridge
Diamond Creek Town Fair	September	Diamond Creek
Whittlesea Agricultural Show	November	Whittlesea
Eltham Town Fair	November	Eltham
Nillumbik Pet Expo	December	Diamond Creek

### 5.3.4 CULTURALLY SIGNIFICANT TREES

Using the AHC's criteria for assessing places for listing on the *Register of the National Estate*, an assessment was undertaken to identify individual trees or groups of trees meeting this description (see document linked in section 3.6 for further details of assessment).

The AHC criteria for assessing places for listing on the *Register of the National Estate* include:

- A. *"Importance in the course, or pattern, of Australia's natural or cultural history"*
- B. *Possession of uncommon, rare or endangered aspects of Australia's natural or cultural history*
- C. *Potential to yield information that will contribute to an understanding of Australia's natural or cultural history*
- D. *Importance in demonstrating the principal characteristics of a class of Australia's natural or cultural places or environments*
- E. *Importance in exhibiting particular aesthetic characteristics valued by a community or cultural group*
- F. *Importance in exhibiting a high degree of creative or technical achievement at a particular period (relevant to cultural heritage places rather than vegetation)*
- G. *Strong or special associations with a particular community or cultural group for social, cultural or spiritual reasons*
- H. *Special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history."*

The assessment found two trees in the study area, identified as Trees 1264 and 1265 in Technical Report C – Arboriculture Assessment, meet criteria E and G above for culturally significant trees. Both criteria have been highlighted through community consultation with MRPV, community petitions received by VicRoads, a change.org petition "*Save the Doreen Red Gums*", social media groups, print media and metropolitan talk back radio.

Trees 1264 and 1265 are River Red Gums and are also referred to as the Doreen River Red Gums (Figure 5.3). These trees, co-located at the intersection of Yan Yean Road, Bridge Inn Road and Doctors Gully Road in Doreen, have been identified by the community as having significant cultural value and are a prominent remnant landscape feature in the local area which is undergoing increasingly intensified development. A map showing the location of the two identified Red River Gum is available in Appendix D.

These trees are covered by Heritage Overlay HO191 'River Red Gums (2)' in the Nillumbik Planning Scheme', which seeks to conserve and protect places of natural heritage significance.

One of the two trees (Tree 1265, Figure 5.4) is also listed on the National Trust of Australia's Significant Tree Register as a tree of regional level significance for primarily social reasons, being the size and age of make a significant contribution to the surrounding landscape and provides an important landmark for the community<sup>2</sup>. Specifically, the National Trust listing states that this tree is "*significant for aesthetic and social reasons at Regional level*". The listing also describes the significance of Tree 1265 in the following terms: "*The large size of this River red gum at a height of 30m, and spread of between 20-27m makes a significant contribution to the surrounding landscape, located on a major road in Doreen it is passed by thousands of people daily. The tree is significant to the local community in providing an important landmark at the intersection of Doctors Gully and Yan Yean Road, Doreen and opposite the 1895 Doreen Store*".

The National Trust of Australia (Victoria) is an independent, not-for-profit organisation that classifies a number of heritage places. Listing on the National Trust of Australia's Significant Tree Register does not impose any statutory protection, however often National Trust listings are supported by the local council Planning Scheme or the Victorian Heritage Register.



Source: City of Whittlesea Heritage Study, 1990

Figure 5.3 Two River Red Gums

---

<sup>2</sup> [https://trusttrees.org.au/tree/VIC/Doreen/25\\_Doctors\\_Gully\\_Road](https://trusttrees.org.au/tree/VIC/Doreen/25_Doctors_Gully_Road)



Source: [https://trusttrees.org.au/tree/VIC/Doreen/25\\_Doctors\\_Gully\\_Road](https://trusttrees.org.au/tree/VIC/Doreen/25_Doctors_Gully_Road)

Figure 5.4 Red Gum Tree 1265

#### 5.3.4.1 SOCIAL AND CULTURAL VALUES OF TREES

The community sentiment towards the Project, but specifically regarding the scale of the proposed loss of trees, was manifested during the consultation phase on the scoping requirements for the Project. This is highlighted by the stakeholder submissions, where 62 of 76 submissions referred to the two River Red Gum Trees on the corner of Yan Yean Road, Bridge Inn Road and Doctors Gully Road. Other stakeholder submissions focussed on the loss of total trees along the alignment, including ecosystem concerns, protection of wildlife and wildlife corridors.

While community sentiment has registered opposition to the scale of the proposed loss of a large number of trees associated with the Project, the overwhelming sentiment has been directed toward the two River Red Gums on the Yan Yean/Bridge Inn/Doctors Gully Road intersection.

In addition to the Doreen River Red Gums, the natural landscape and trees and vegetation are highly valued within the study area, which comprises a predominantly low density residential and rural living area within the metropolitan Green Wedge. This is evidenced in the local government planning schemes that seek to protect and conserve green wedge land for its agricultural, environmental, historic, landscape recreational and tourism opportunities, and mineral and stone resources.

Nillumbik Shire Council's Municipal Strategic Statement (MSS) identifies the Plenty/Yarrambat Corridor area has ongoing pressure for low density residential development and has further growth potential. Its proximity to central Melbourne, the Whittlesea Growth Corridor and improved road access provided by the Western Ring Road places increased pressure on this area from development. With respect to infrastructure development issues, Clause 21.03 of Nillumbik's MSS identifies key influences are *"the high level of car usage and projected population increase may encourage the upgrade of arterial roads in the municipality. The construction of new roads or road upgrades should be considerate of potential impacts on the rural amenity and should be consistent with local environmental values"*. The clause highlights Nillumbik's rural areas as highly valued by residents and visitors for its strategic environmental and landscape qualities.



Clause 21.05-3 of Nillumbik's MSS identifies sites of environmental significance within vicinity of the Project include the Plenty Gorge Parkland and Plenty River and in excess of 100 km of significant roadside vegetation. The Shire Council also seek to "*protect and enhance sites of environmental significance*" within the municipality through the management of threatening processes that cause environmental degradation. Measures to achieve this include restricting development and land uses that may impact native flora and fauna, implementing the Nillumbik Shire Council Roadside Management Plan 2012 and using indigenous vegetation in roadside reservations.

Whittlesea City Council also identify the importance of trees and vegetation within the Whittlesea City Council Local Planning Framework through clause 22.10, which states "*Existing and future urban areas such as Mill Park, South Morang, Mernda/Doreen and Wollert contain significant River Red Gum trees and associated habitat.*" Clause 22.10 seeks to ensure that development of existing and future urban and rural areas takes into account the presence of and plans for the retention, enhancement and long term viability of River Red Gum trees.

Both Whittlesea and Nillumbik councils acknowledge the importance of roadside trees and vegetation within their municipalities and the importance of the protection of these assets for community and environmental benefit.

The local social value placed on the natural environment and trees was shared during consultation where many local residents noted low densities, large blocks, trees and privacy as reasons for living in the area.

---

## 5.4 ACCESS AND MOVEMENT

### 5.4.1 BARRIERS

Geographical barriers affect the way communities move through and relate to their local and regional environment. Barriers may take a variety of forms and may include:

- **Physical barriers** such as infrastructure and built form including, roads, railway lines, bridges or walls.
- **Topographical barriers** such as rivers, coast lines, mountains or vegetation.
- **Land use barriers** such as industrial or heavy commercial land uses, large open spaces or exclusion zones.
- **Perceived barriers** such as areas perceived to be unsafe, have a bad reputation or are exclusive to specific groups.

Some places of significance can also act as attractors or anchors for some communities. These may include services and facilities for specific cultural or linguistic groups, or facilities that experience high demand because of their good reputation in the local community. In some instances, these factors may reduce the influence of geographical barriers. However, this assessment does not include consideration of attractors.

A review of geographical barriers in and around the study area can indicate likely community catchments and access patterns. From this, assumptions can be made regarding the level of cohesion or isolation between communities in the study area.

The major barriers identified in the study area are:

- large tracts of undeveloped private land between new estate developments to the north of the study area
- Plenty Gorge Parklands and Plenty River corridor to the west of the study area
- Yarrambat Park Public Golf Course
- Yarrambat Park
- arterial road network including Yan Yean Road and Bridge Inn Road
- extensive network of Semi-Rural subdivisions
- Sawpit Creek Park.

Identified impacts relating to these existing barriers are discussed in section 7.

## 5.4.2 PUBLIC TRANSPORT

The project area is serviced by three bus routes which utilise Yan Yean Road. These services connect study area settlements to commercial, retail and community services and the metropolitan rail network in the major centres of Greensborough, South Morang and Mernda.

Bus stops are provided, concentrated around residential settlements and attractions, either with shelters, or as unsheltered indentations along Yan Yean Road. However, at Plenty Gorge Park, the bus stop is located off the left-hand slip lane and does not include dedicated space for buses to pull away from traffic turning left.

The *Whittlesea Integrated Transport Strategy 2014* identified service provision and frequency, particularly in the growth areas as major transport issues facing the region. Existing bus services in growth areas are constrained by the issues with the local road network. Congestion caused by rapid population growth and the curvilinear layout of new estates hampers service provision and access.

Completion of the Mernda Rail Extension in late 2018 added additional capacity to areas currently only serviced by the local work and has alleviated some of the issues identified in the strategy. The new Mernda Station is located on Bridge Inn Road which intersects with the north of the Project. The opening of the new station coincided with the rerouting of several local bus services to enhance connections between the station and surrounding residential and commercial areas.

The route 381 service (Mernda Station to Diamond Creek) utilises Yan Yean Road to connect the suburbs of Doreen and Yarrambat with Laurimar Town Centre and metropolitan rail network. Similarly, the route 385 service (Mernda Station to Greensborough) utilises Yan Yean Road to connect communities in Plenty and Yarrambat to Greensborough and Mernda.

Both councils are supported by the *Link Community Transport* initiative, a not for profit organisation which provides subsidised door to door transport options to disadvantaged members of the community including wheelchair accessible vehicles.

Public Transport network maps are available in Appendix E.

## 5.4.3 PATHS AND TRAILS

Currently, the City of Whittlesea has almost 500 kilometres of on and off-road cycling infrastructure including paths, trails and cycling lanes on local and arterial roads. Key projects identified in the *Whittlesea Bicycle Plan 2016-2020* include plans to nearly double existing infrastructure to 1,000 kilometres of paths and trails throughout the municipality.

Within the project area, the section of Yan Yean Road between Bridge Inn Road and Jorgensen Avenue is part of the PBN. This bicycle network provides connectivity north to Arthurs Creek and Yan Yean Reservoir, and connects to the east-west running PBN along Bridge Inn Road with access to Mernda Station.

However, incomplete paths and missing connections have been identified as major barriers to cycling and pedestrian activity within the *Whittlesea Integrated Transport Plan 2014*, particularly in growth areas. Extensive path networks in newer estates provide safe internal pedestrian links however patchwork greenfield development has led to large gaps in the path network which inhibits safe pedestrian and cyclist movement.

The *Nillumbik Trails Strategy 2011* acknowledges the importance of fostering a safe and efficient active transport network for both recreational and commuter purposes. The strategy sets out a direction and action plan to extend and upgrade the existing trails network however there is little mention of upgrading connectivity within the study area.

The Plenty River Trail off-road trail follows the Plenty River corridor to the west of Yan Yean Road. This trail, popular with walkers, cyclists and runners, continues through Banyule and Whittlesea City Councils.



At present, pedestrian and cycling infrastructure is limited with significant gaps identified throughout the Shire, including the population centres to the south. This lack of infrastructure inhibits active transport choices and increases motor vehicle dependence.

Roadside paths along Yan Yean Road are discontinuous and sometimes unsealed. Sealed paths are concentrated in established residential areas and town centres. In several places, the footpath diverts from the road through grade separation, fencing or a landscaped buffer. Through the central study area, Ironbark Road provides the only signalised pedestrian crossing across Yan Yean Road, north of Kurrak Road.

While separating the footpath from the carriage way can provide protection for pedestrians and cyclists, the discontinuous nature of current provision restricts non-vehicle access along the Yan Yean Road corridor, as well as restricting east-west crossing points and disability access through the central study area.

To the north of the study area, sealed footpaths are provided along Yan Yean Road, including pedestrian refuge points at major intersections and accessible crossings.

Nillumbik Shire is also a destination for equestrian activities, including trail riding. The Yarrambat Horse and Pony Club operate out of the Yarrambat Park which also includes a harness racing track. Horse riding takes place on shared trails throughout Nillumbik. While the Yan Yean Corridor is not currently a high traffic area for horse riding, it provides crossing points for riders. The Nillumbik Horse Action Group seeks to maintain access for horse riders on shared recreational trails including reserves and on roadside verges.

A map showing the existing and future paths network is available in Appendix D.

#### 5.4.4 VEHICLE ACCESS

Yan Yean Road is the main north-south arterial road in the study area and the principal connection between the growth areas of Doreen with the facilities and services in major activity centres to the south. While residents in Doreen can alternatively access Plenty Road to the west, east west connections are limited to a few single lane arterials due to the Plenty Valley Corridor.

In the study area, continuous access to the west of Yan Yean Road is restricted to Bridge Inn Road and Kurrak Road, with topographical barriers, large land parcels and green field developments resulting in otherwise staggered cross routes. Bannons Lane and Ironbark Road provide connections with communities and centres to the east of the study area. While Orchard Road, Jorgensen Avenue, Golf Links Drive, Youngs Road, Ashley Road, Heard Avenue and North Oatlands Road are the primary access routes to local residential communities.

It is noted that Bridge Inn Road will be upgraded as a part of the Suburban Roads Upgrade (Northern Package) and will ~~to~~ help facilitate more traffic from Doreen to utilise Plenty Road.

# 6 RISK ASSESSMENT

---

## 6.1 RISK ASSESSMENT

The residual environmental risks identified for social impacts are provided in Table 6.1. The residual risk ratings consider the standard controls and proposed EPRs. The proposed EPRs are set out in Table 8.1 in Section 8.

Table 6.1 Summary of social and vegetation (social and cultural values) risk assessment

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
<b>SITE ESTABLISHMENT</b>					
14	Social	Potential impacts on social and cultural values such as community, educational, religious or recreational facilities due to changes to access or amenity.	<p>To develop and implement measures to avoid and minimise impacts on social and cultural values, including:</p> <ul style="list-style-type: none"> <li>— designing permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on the two Doreen River Red Gums</li> <li>— minimising where practicable, impact to the former Post Office and General Store in consultation with the existing owners, tenants and Councils</li> <li>— continue one-on-one consultation with all owners and tenants, particularly the tenants and owner of 920/920A Yan Yean Road (former Post Office and General Store and Stockfeeds store), to outline the acquisition and compensation process (if required), and provide clear timelines of proposed action</li> <li>— detailed design to protect and, where practicable, improve access to amenity for potentially affected residents, open space, social and community infrastructure and commercial facilities, and implementing the principles of Crime Prevention Through Environmental Design.</li> </ul> <p>Develop and implement a Communications and Stakeholder Engagement Plan to engage and consult the community and affected stakeholders and discuss progress of construction activities and operation. The Communications and Stakeholder Engagement Plan must consider measures to:</p> <ul style="list-style-type: none"> <li>— maintain community safety through appropriate measures such as providing convenient and safe access across Yan Yean Road at all bus stops, activity nodes and places of community significance</li> </ul>	EPR S1 EPR S2	Significant

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
			<ul style="list-style-type: none"> <li>— ensure that the construction program considers the use of facilities, operating hours and peak visitation times</li> <li>— ensure that communities are notified well in advance of construction and changes well in advance of works commencing</li> <li>— ensure that the consultation program includes provision for onsite signage of affected properties that provide a service to the local or regional community</li> <li>— engage impacted residents in the preparation of a landscaping plan to offset the impacts of trees removed through acquisition and construction, and help ensure that the landscaping adds to the valued character of the local area</li> <li>— attempt to contact memorial makers to organise relocation</li> <li>— make provision for a twenty-four hour phone number to be available to the community to report concerns.</li> </ul>		
20	Vegetation – Social and Cultural Values	Loss of or damage to remnant, planted or regenerated vegetation during construction impacting on social and cultural values.	<ul style="list-style-type: none"> <li>— Design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on high value vegetation as identified within the Landscape Strategy's 'Cultural Value of Vegetation Assessment'. Where required, removal of vegetation should be phased wherever practicable to temporarily reduce visual impacts.</li> <li>— Prior to construction commencing works, develop a Tree Management Plan based on the recommendations of Australian Standard 4970-2009 Protection of Trees on Development Sites. This should be in consultation with the City of Whittlesea and Nillumbik Shire Council and informed by a Project arborist (with a minimum qualification of Diploma in Arboriculture (AQF level 5 or equivalent)).</li> </ul>	EPR V1	Significant

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
<b>EARTHWORKS</b>					
34	Social	Potential impacts on social and cultural values such as community, educational, religious or recreational facilities due to changes to access or amenity.	<p>To develop and implement measures to avoid and minimise impacts on social and cultural values, including:</p> <ul style="list-style-type: none"> <li>— designing permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on the two Doreen River Red Gums</li> <li>— minimising where practicable, impact to the former Post Office and General Store in consultation with the existing owners, tenants and Councils</li> <li>— continue one-on-one consultation with all owners and tenants, particularly the tenants and owner of 920/920A Yan Yean Road (former Post Office and General Store and Stockfeeds store), to outline the acquisition and compensation process (if required), and provide clear timelines of proposed action</li> <li>— detailed design to protect and, where practicable, improve access to amenity for potentially affected residents, open space, social and community infrastructure and commercial facilities, and implementing the principles of Crime Prevention Through Environmental Design.</li> </ul> <p>Develop and implement a Communications and Stakeholder Engagement Plan to engage and consult the community and affected stakeholders and discuss progress of construction activities and operation. The Communications and Stakeholder Engagement Plan must consider measures to:</p> <ul style="list-style-type: none"> <li>— maintain community safety through appropriate measures such as providing convenient and safe access across Yan Yean Road at all bus stops, activity nodes and places of community significance</li> </ul>	EPR S1 EPR S2	Medium

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
			<ul style="list-style-type: none"> <li>— ensure that the construction program considers the use of facilities, operating hours and peak visitation times</li> <li>— ensure that communities are notified well in advance of construction and changes well in advance of works commencing</li> <li>— ensure that the consultation program includes provision for onsite signage of affected properties that provide a service to the local or regional community</li> <li>— engage impacted residents in the preparation of a landscaping plan to offset the impacts of trees removed through acquisition and construction, and help ensure that the landscaping adds to the valued character of the local area</li> <li>— attempt to contact memorial makers to organise relocation</li> <li>— make provision for a twenty-four hour phone number to be available to the community to report concerns.</li> </ul>		
40	Vegetation – Social and Cultural Values	Loss of or damage to remnant, planted or regenerated vegetation during construction impacting on social and cultural values.	<ul style="list-style-type: none"> <li>— Design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on high value vegetation as identified within the Landscape Strategy's 'Cultural Value of Vegetation Assessment'. Where required, removal of vegetation should be phased wherever practicable to temporarily reduce visual impacts.</li> <li>— Prior to construction commencing works, develop a Tree Management Plan based on the recommendations of Australian Standard 4970-2009 Protection of Trees on Development Sites. This should be in consultation with the City of Whittlesea and Nillumbik Shire Council and informed by a Project arborist (with a minimum qualification of Diploma in Arboriculture (AQF level 5 or equivalent)).</li> </ul>	EPR V1	Significant



RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
<b>CIVILS AND STRUCTURES</b>					
54	Social	Potential impacts on social and cultural values such as community, educational, religious or recreational facilities due to changes to access or amenity.	<p>To develop and implement measures to avoid and minimise impacts on social and cultural values, including:</p> <ul style="list-style-type: none"> <li>— designing permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on the two Doreen River Red Gums</li> <li>— minimising where practicable, impact to the former Post Office and General Store in consultation with the existing owners, tenants and Councils</li> <li>— continue one-on-one consultation with all owners and tenants, particularly the tenants and owner of 920/920A Yan Yean Road (former Post Office and General Store and Stockfeeds store), to outline the acquisition and compensation process (if required), and provide clear timelines of proposed action</li> <li>— detailed design to protect and, where practicable, improve access to amenity for potentially affected residents, open space, social and community infrastructure and commercial facilities, and implementing the principles of Crime Prevention Through Environmental Design.</li> </ul> <p>Develop and implement a Communications and Stakeholder Engagement Plan to engage and consult the community and affected stakeholders and discuss progress of construction activities and operation. The Communications and Stakeholder Engagement Plan must consider measures to:</p> <ul style="list-style-type: none"> <li>— maintain community safety through appropriate measures such as providing convenient and safe access across Yan Yean Road at all bus stops, activity nodes and places of community significance</li> </ul>	EPR S1 EPR S2	Significant

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
			<ul style="list-style-type: none"> <li>— ensure that the construction program considers the use of facilities, operating hours and peak visitation times</li> <li>— ensure that communities are notified well in advance of construction and changes well in advance of works commencing</li> <li>— ensure that the consultation program includes provision for onsite signage of affected properties that provide a service to the local or regional community</li> <li>— engage impacted residents in the preparation of a landscaping plan to offset the impacts of trees removed through acquisition and construction, and help ensure that the landscaping adds to the valued character of the local area</li> <li>— attempt to contact memorial makers to organise relocation</li> <li>— make provision for a twenty-four hour phone number to be available to the community to report concerns.</li> </ul>		
60	Vegetation – Social and Cultural Values	Loss of or damage to remnant, planted or regenerated vegetation during construction impacting on social and cultural values.	<ul style="list-style-type: none"> <li>— Design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on high value vegetation as identified within the Landscape Strategy's 'Cultural Value of Vegetation Assessment'. Where required, removal of vegetation should be phased wherever practicable to temporarily reduce visual impacts.</li> <li>— Prior to construction commencing works, develop a Tree Management Plan based on the recommendations of Australian Standard 4970-2009 Protection of Trees on Development Sites. This should be in consultation with the City of Whittlesea and Nillumbik Shire Council and informed by a Project arborist (with a minimum qualification of Diploma in Arboriculture (AQF level 5 or equivalent)).</li> </ul>	EPR V1	Significant

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
<b>REINSTATEMENT</b>					
74	Social	Potential impacts on social and cultural values such as community, educational, religious or recreational facilities due to changes to access or amenity.	<p>To develop and implement measures to avoid and minimise impacts on social and cultural values, including:</p> <ul style="list-style-type: none"> <li>— designing permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on the two Doreen River Red Gums</li> <li>— minimising where practicable, impact to the former Post Office and General Store in consultation with the existing owners, tenants and Councils</li> <li>— continue one-on-one consultation with all owners and tenants, particularly the tenants and owner of 920/920A Yan Yean Road (former Post Office and General Store and Stockfeeds store), to outline the acquisition and compensation process (if required), and provide clear timelines of proposed action</li> <li>— detailed design to protect and, where practicable, improve access to amenity for potentially affected residents, open space, social and community infrastructure and commercial facilities, and implementing the principles of Crime Prevention Through Environmental Design.</li> </ul> <p>Develop and implement a Communications and Stakeholder Engagement Plan to engage and consult the community and affected stakeholders and discuss progress of construction activities and operation. The Communications and Stakeholder Engagement Plan must consider measures to:</p> <ul style="list-style-type: none"> <li>— maintain community safety through appropriate measures such as providing convenient and safe access across Yan Yean Road at all bus stops, activity nodes and places of community significance</li> </ul>	EPR S1 EPR S2	Medium

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
			<ul style="list-style-type: none"> <li>— ensure that the construction program considers the use of facilities, operating hours and peak visitation times</li> <li>— ensure that communities are notified well in advance of construction and changes well in advance of works commencing</li> <li>— ensure that the consultation program includes provision for onsite signage of affected properties that provide a service to the local or regional community</li> <li>— engage impacted residents in the preparation of a landscaping plan to offset the impacts of trees removed through acquisition and construction, and help ensure that the landscaping adds to the valued character of the local area</li> <li>— attempt to contact memorial makers to organise relocation</li> <li>— make provision for a twenty-four hour phone number to be available to the community to report concerns.</li> </ul>		

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
80	Vegetation – Social and Cultural Values	Loss of or damage to remnant, planted or regenerated vegetation during construction impacting on social and cultural values.	<p>Reinstatement to be in accordance with the Project's Landscape Strategy to maximise the enhancement of vegetation values where opportunities exist including:</p> <ul style="list-style-type: none"> <li>— provide replacement screening vegetation where feasible to reduce impacts to visual amenity</li> <li>— enhance existing vegetation along the road corridor and around infrastructure elements</li> <li>— provide contextual planting along roads and walking and cycling paths where feasible to achieve tree canopy cover for shade, shelter and habitat creation</li> <li>— seek to improve user amenity through identifying opportunities within public open space in accordance with relevant Council masterplans</li> <li>— enhance intersections and identified gateways with distinctive native plantings to act as visual marker along the road corridor.</li> </ul>	EPR V1	Significant
<b>OPERATIONS</b>					
94	Social	Potential impacts on social and cultural values such as isolation of community, educational, religious or recreational facilities, changes to amenity, or changed road conditions affecting access as a result of operation.	To mitigate impact to community facilities and the community after construction, driveway and access should be reinstated. Where this is not possible, engage with the community to organise alternatives.	EPR S3	Low

RISK NO.	ASPECT	IMPACT PATHWAY	MITIGATION MEASURES TO INFORM ENVIRONMENTAL PERFORMANCE REQUIREMENT	EPR	RESIDUAL RISK RATING
100	Vegetation – Social and Cultural Values	Loss of or damage to remnant, planted or regenerated vegetation during operation impacting on social and cultural values	<p>Mitigation measures have been applied during the design and construction phases (i.e. avoidance of vegetation, minimisation of footprint). As such, the risk of impact on remnant, planted or regenerated vegetation during operation of Yan Yean Road Stage 2 is considered to be low.</p> <p>Any potential impacts during operation and maintenance will be managed in accordance with the Department of Transport's standards for managing declared roads in Victoria.</p>	EPR EMF5	Low
<b>MAINTENANCE</b>					
114	Social	Potential impacts on social and cultural values such as isolation of community, educational, religious or recreational facilities, changes to amenity, or changed road conditions affecting access as a result of maintenance activities.	To mitigate impact to community facilities and the community after construction, driveway and access should be reinstated. Where maintenance works will affect access, engage with the community to organise alternatives.	EPR S3	Low
120	Vegetation – Social and Cultural Values	Loss of or damage to remnant, planted or regenerated vegetation during maintenance impacting on social and cultural values.	<p>The road upgrade will be maintained in accordance with the Landscape Management Strategy.</p> <p>Any potential impacts during operation and maintenance will be managed in accordance with the Department of Transport's standards for managing declared roads in Victoria.</p>	EPR EMF5	Low



# 7 IMPACT ASSESSMENT

This section considers the likely social impacts resulting from changes generated by the Project. For the purpose of this investigation, impacts are considered to be any change from the existing situation resulting from the construction or operational stages of the Project. This investigation recognises that impacts are not necessarily negative, and can include changes that provide lasting social benefits.

The assessment of impacts considers the scale and length of change to determine the level of impact as described in the table below.

Table 7.1 Impact risk categories

HIGH	MEDIUM	LOW
Change that is likely to have ongoing adverse consequences for the local community. May result in major changes to or the end of ongoing use of a space. Adverse publicity and community response is considered likely.	Change that is likely to extend beyond the household level and extend into the wider community. May result in changes to the use of a community space. Impact on local community is noticeable, however can be managed with additional mitigation.	Change confined to household or individual level. Can be managed through routine activities.

## 7.1 DISLOCATION

Dislocation can occur where land is acquired and residents or uses are disrupted, displaced or severed from networks, connections and activities, or where acquisition or changing environments render existing uses unviable or untenable.

Dislocation can be temporary, such as during construction or in transitional phases, or may be permanent.

The primary cause of dislocation is acquisition of land or dwellings.

### 7.1.1 ACQUISITION OF DWELLINGS

Access will be altered to the General Store and Pet Supply/Stockfeed business on the Yan Yean/Bridge Inn/Doctors Gully Road intersection. The businesses will be retained with changed access and parking arrangements. One residential dwelling on Yan Yean Road will be directly impacted by the Project. It is understood that this dwelling is currently unoccupied, and that a current permit allows demolition of the dwelling. It is understood that a new replacement dwelling has been developed on the affected property, and as such the dwelling that will be removed as part of the Project will not result in residential displacement.

#### 7.1.1.1 ASSESSMENT OF IMPACTS

The Project impacts one dwelling, which has an existing permit for its removal due to a replacement dwelling that has already been constructed and alters access to businesses at the Yan Yean/Bridge Inn/Doctors Gully Road intersection. Access options for these properties would need to be developed during the detailed design, however as permanent dislocation of residents or businesses is not proposed, the impact is considered to be low.

### 7.1.2 ACQUISITION OF PRIVATE LAND

The permanent loss of private land will alter the functionality of some properties with respect to onsite parking and vehicles movements, and will require the removal or relocation of some existing driveways and crossovers.

Reduction in total property size and plot layout may also result in functional changes to activities undertaken on private residences including horse keeping, recreational spaces and passive enjoyment of private open space.

Acquisition of private land, including partial acquisition, can also impact on the future development of a site including prospects for subdivision and/or redevelopment. This can result in uncertainty for landowners, particularly where development potential was factored into future financial plans of landowners.

The potential loss of land has caused stress for some impacted residents as it will result in unanticipated changes to their property, predominantly during construction. Concern has been raised regarding the impacts of noise and loss of privacy for some residents, as well as potential impacts to property values or potential plans for future development.

MRPV is in discussion with directly affected landowners and will continue to consult as the Project progresses. Consultation includes an explanation of the land acquisition and compensation process managed by Major Transport Infrastructure Advisory in conjunction with Department of Transport as the acquiring authority.

#### 7.1.2.1 ASSESSMENT OF IMPACTS

While the design seeks to minimise acquisition where practicable, the Project will result in the partial or full acquisition of a number of parcels of land as described below.

Full acquisition would be required for 21 linear road reserve parcels, owned by Nillumbik Shire Council, within the project area.

A total of 75 partial land acquisitions are required, comprising of:

- seven parcels of land owned by council (two by Whittlesea and five by Nillumbuk)
- 60 parcels of land privately owned
- eight parcels of land owned by the state or public utilities (three by the Department of Education, one by DELWP, one by the Department of Transport, two by Telstra and one by Yarra Valley Water).

Acquisition of these parcels is predominately along boundaries that currently face Yan Yean Road. The private parcels subject to acquisition along Yan Yean Road are predominantly residential and rural residential in nature. Some noise and amenity impacts are anticipated, to the associated dwellings. While it is acknowledged that land acquisition will impact the sense of community and belonging for many residents, overall the acquisition of private land is considered to result in moderate impacts, with acquisition limited to partial land parcels and impacts limited to the household level.

### 7.1.3 IMPACTS ON COMMUNITY FACILITIES

The Project does not include acquisition or displacement of community facilities and places of local significance. However, partial acquisition or changed conditions will impact the following community facilities and services:

- Yarrambat Primary School – Changed access and parking conditions resulting from the upgrade of the Ironbark Road intersection to a signalised intersection. This is not likely to impact the ongoing operation of the school and will likely improve pedestrian and cyclist safety as a result of improved crossing facilities.
- St Macarius Coptic Orthodox Church – Loss of roadside land will not impact existing structures or use, however changed conditions including the introduction of the centre median will restrict access to ‘left in, left out’ with U-turn provision on Yan Yean Road.

- Yarrambat Park Golf Course – The Project will require either the construction of a 30–36 metre fence to protect motorists from golf balls. This may temporarily impact users during the fence construction. Hippiity Hop Childcare Centre – the Project will require partial acquisition along Youngs and Yan Yean Road aspects of the childcare centre. The endorsed plans provided by Nillumbik Shire Council illustrate a 10 metre buffer along the Yan Yean Road boundary, however minimal setback has been provided for the childcares irrigation area.
- Yarrambat Park – Loss of roadside land will in places significantly reduce the buffer between the road and existing uses, the archery club, however, outside of a possible increase in vehicle noise, this is not considered to have an ongoing impact on existing uses. Loss of land will also significantly alter access patterns with the introduction of a centre median, where direct access will be changed to left in, left out only.
- Werther Park – Loss of roadside land will result in a reduction in passive open space, however the loss of open space is considered minimal and inconsequential given it is located adjacent to Yarrambat Park. Acquisition will also result in improvements to existing paths through the park likely enhancing user experience.
- Plenty Valley Christian College and Church – Acquisition of roadside land will not impact existing structures or use of site, however intersection upgrades will result in changes to access resulting from the upgrade of the Orchard Road intersection to a signalised intersection. This is not likely to impact the ongoing operation of the school and will likely improves pedestrian and cyclist safety as a result of improved crossing facilities.
- Doreen Recreation Reserve – The Project will require partial land acquisition of the Doreen Recreation Reserve, including the tennis courts and oval highlighted in the City of Whittlesea’s Doreen Recreation Reserve Master Plan. This would require a re-design of the Master Plan and a change to a community space and is considered to be medium impact.

#### 7.1.3.1 ASSESSMENT OF IMPACTS

The wider Project is not anticipated to permanently or materially affect access to or operation of community facilities. Overall, impacts to community facilities are considered to be minor.

#### 7.1.4 *IMPACT ON ROADSIDE MEMORIALS*

There are two private roadside memorials that will be impacted by the Project, requiring removal or relocation.

##### 7.1.4.1 ASSESSMENT OF IMPACTS

While it is acknowledged that the necessitated relocation of roadside memorials may cause stress for the memorial maker and family and friends of the victim, the impacts are confined to the individual level and are therefore considered low.

---

## 7.2 COMMUNITY VALUES

Community cohesion can be impacted where changed environments disrupt the social fabric or valued character of the area. Impacts to cohesion may be the result of physical changes or changes to the structure and operation of communities.

The open space and rural character, typified by Yarrambat and the central study area, is highly valued by local communities. Many local residents noted low densities, large blocks, trees and privacy as reasons for living in the area.

Clauses within Municipal Strategic Statements and Local Planning Policy Frameworks within both Nillumbik and Whittlesea council's support the protection of trees and vegetation to retain open space and rural character within the municipalities. A tension between these objectives and the transport needs exists within the Project has the potential to impact the social and cultural value the community have with trees and vegetation associated with the Project.

Local character has been adversely impacted by increasing traffic and congestion along Yan Yean Road over time, and the duplication and increased road capacity will reduce traffic and congestion during the operational stage of the Project. However, acquisition, resulting in loss of trees and land will bring the road closer to some residences, reducing privacy and increasing noise. Although acquisition will result in the loss of a significant number of trees along the road corridor, and there is acknowledged community resistance to the scale of tree removal, it will not significantly impact major features of the local areas such as Yarrambat Park.

The broad community acknowledges the need for road upgrades in the area to support the increasing population. Furthermore, the shared user path and additional east-west crossing points will enhance access and opportunities for local residents to engage with and enjoy the natural environment through passive recreation and active transport and is consistent with the intent of the *Nillumbik Trails Strategy (2011)*.

### 7.2.1 CULTURALLY SIGNIFICANT TREES

The Minister for Planning EES decision guidelines specify "the potential for significant effects on biodiversity values as a result of the proposed clearance of a very large number of trees and habitat" as a reason for requiring an EES to be prepared. The issue of native vegetation loss will be investigated through the detailed flora and fauna assessments being undertaken as part of this EES. Similarly, artefacts, including trees, of Aboriginal cultural significance and European historical significance will be assessed through the respective technical assessment reports.

There has been significant community opposition to the potential removal of the Doreen River Red Gums. A petition of 530 hard copy signatures was received by VicRoads in the early stages of the planning process, and a change.org petition "Save the Doreen Red Gums" has, at the time of writing, exceeded 5,000 signatures<sup>3</sup>. Likewise an associated Facebook group, which has garnered over 1,300 followers, has been established where the local community regularly interacts and places calls to action. The issue has also featured in local print media and on metropolitan talk back radio.

The predominate themes emerging from the community and protest regarding the Doreen River Red Gums relates to the historical significance they play as landmarks for the area, and the perceived environmental impacts and the potential loss of rural character that is occurring in the area, as a result of ongoing urbanisation.

Additionally, tree loss and impacts to native flora and fauna along the entire Project corridor were consistent themes throughout the consultation process.

During the consultation phase on the scoping requirements for the Project, 76 submissions were provided by stakeholders. Of the 76 stakeholder submissions, 62 submissions referred to the two Doreen River Red Gum Trees on the corner of Yan Yean and Doctors Gully Road. A total of nine submissions referred to trees in general. Other stakeholder submissions focussed on the loss of total trees along the alignment, including ecosystem concerns, protection of wildlife and wildlife corridors.

#### 7.2.1.1 ASSESSMENT OF IMPACT

The shared use path will enhance the experience of the local area. However, the Project will result in permanent changes to the local environment and valued attributes of local character in public realm and private residences along the length of the Project corridor as a result of tree loss and road widening.

---

<sup>3</sup> <https://www.change.org/p/save-the-doreen-red-gums>

While there is support for the Project and its purpose, the potential loss of trees along the entire alignment may impact the association residents have with their local area and community. In relation to the community values identified through consultation activities, these changes have the potential to impact local character and quality of life, as well as sense of community and wellbeing for residents and visitors.

The Project design at the Yan Yean/Bridge Inn/Doctors Gully Road intersection retains the two Doreen River Red Gums. The preservation of these culturally significant trees is likely to garner strong support from within the local community and this is assessed as low impact.

---

## 7.3 ACCESS

In any project, changes to the local environment are likely to result in temporary or permanent disruptions. These can include restricted access to areas or services, or altered access or operations of facilities, places or uses.

In this instance, disruption is considered as changes to the base case established in the existing conditions assessment and further expanded through consultation and detailed investigations.

During construction, the Project will disrupt and alter the existing local access network, in particular, east-west movement across the corridor. Post construction, local movement patterns will be permanently altered due to the introduction of the centre median and removal of right hand turn capabilities outside of intersections.

### 7.3.1 ACCESS TO PRIVATE PROPERTY

Access to private properties on Yan Yean Road will be changed during construction both as a result of acquisition and temporary construction activities. This will result in changed access requirements for some private properties and may include diversions to side streets in the short term.

It is understood that the majority of existing access points will be reinstated, although some may change as a result of acquisition or design parameters. In some instances, permanent alternative access arrangements will be developed due to design and safety limitations. While new access points should provide for safer access for entering traffic, it may also alter on-site parking and movement on private properties.

The introduction of a centre median will restrict access to most Yan Yean Road properties to left in, left out turns with provisions for U-turns along the alignment. This may increase travel distance for local trips and may be seen as an inconvenience for some local residents. However, this arrangement increases safety and efficiency for vehicles entering Yan Yean Road from private properties and uncontrolled side streets by removing uncontrolled right hand turns onto Yan Yean Road.

#### 7.3.1.1 ASSESSMENT OF IMPACT

The Project will result in changed access to properties fronting onto Yan Yean Road, however these changes are likely to improve safety and visibility for vehicles entering Yan Yean Road. Permanent adverse changes may be experienced by properties that will have certain access points permanently relocated, however alternative access arrangements will still be in place and dislocation is considered unlikely.

The Project retains the dwelling associated with the general store and pet suppliers and stock retailer, however altered access to this property is required. This is to be determined during detailed design.

These impacts are confined to the household or individual level and therefore are considered a low impact.

### 7.3.2 LOCAL MOVEMENT

A central median will reduce permeability between residences and facilities, communities and public transport infrastructure the adjacent side of Yan Yean Road, where communities currently have informal access. However, the inclusion of breaks in the median barrier will provide pedestrians, cyclists and horse riders with safe access at designated locations.

The centre median will restrict direct access for vehicles turning right out of properties fronting Yan Yean Road. Furthermore, restricting right turns from private properties fronting Yan Yean Road will alter the travel patterns for some local residents. While provision for U-turns is included in the design, this will result in some residences back tracking and increasing the length of some local trips. In some instances, this has potential to alter travel behaviours whereby residents may perceive greater convenience in continuing to travel straight ahead to access facilities and services rather than turn around at a U-turn point to access facilities or services which may be closer.

The introduction of signalised intersections at Bannons Lane as well as North Oatlands Road, Ironbark Road, Orchard Road and Bridge Inn Road will improve east-west connections for pedestrians and improve safety.

A shared use path will improve the currently discontinuous network of footpaths and provide enhanced safety and access for pedestrians, cyclists, horse riders and people using mobility devices. In doing so, this provides opportunity for greater access to surrounding centres, communities and facilities for children and the elderly who do not drive, encourage the use of active transport and reduce car dependence for short trips.

All existing bus stops will be retained in the vicinity of existing infrastructure, with the exception of the north bound stop at Jorgensen Avenue which will be relocated a short distance south. Improved traffic flow will provide benefits for public bus routes and school buses including safer passenger access and more reliable travel times.

#### 7.3.2.1 ASSESSMENT OF IMPACT

The Project will result in permanent changes to local access patterns with the introduction of the centre median in places impacting east west connectivity, and in places, U-turns being required to complete journeys. Similarly, the introduction of the centre median is likely to result in changes to the existing formal and informal horse riding trails in the area both during construction and operation. These changes are likely to have minimal impacts to journey time and movement patterns in the long-term. During the consultation program, the community noted that that despite changing the way that they would access some roads, they understand how the centre median barrier will make it safer to drive through the area.

Additionally, the Project will result in improved safety outcomes for both road users, horse riders and cyclists/pedestrians and as such it is considered a low impact. Upgrades to intersections along the corridor, the introduction of continuous shared use paths that support paths and connectivity will overall result in safety improvements and enhance the user experience which would be considered a positive overall outcome.

### 7.3.3 REGIONAL CONNECTIVITY

Once operational, the Project will improve convenience and safety for local communities and through traffic. Settlement and movement patterns in the region are heavily influenced by the high prevalence of geographical barriers noted in section 5.4.1. There are limited opportunities for east-west regional movement across the study area, with Yan Yean Road being the primary local and regional access corridor.

The construction program will result in temporary disruptions throughout the study area in the form of reduced access, diversion and changed traffic conditions. This is likely to result in greater congestion during peak constructions activities.

Duplication and increased capacity will ease congestion and improve travel time for vehicles travelling north south on Yan Yean Road. In addition to enhancing connections to new communities and service centres in the north of the study area increased capacity may improve environments which are currently adversely impacted by congestion and high traffic volumes.

#### 7.3.3.1 ASSESSMENT OF IMPACT

Overall, it is anticipated that the Project will result in positive outcomes for regional connectivity.



### 7.3.4 OVERALL ASSESSMENT OF IMPACT

Social impacts are considered to be highest during construction, when initial loss of passive open space and limitations to east-west connectivity and existing movement patterns will be most significant. Some permanent changes to access and movement post construction will likely increase journey times for some road users. However, these increases are likely to be minimal, and the resultant safety improvements are considered to deliver a net community benefit. Enhancements to the existing paths and trails network will also likely deliver positive social benefits and improve local amenity.

However, changes to amenity and liveability arising from the Project, including temporary and permanent property acquisition and tree and vegetation loss throughout the project area, may alter some residents' sense of place and connection to the local area. Due to this potential for community wide, noticeable change, particularly relating to the loss of trees and vegetation, the Project is considered to have an overall medium social impact.

## 7.4 MITIGATION

Table 7.2 outlines the mitigations proposed for the residual impacts, following implementations of standard controls. Mitigation focusses heavily on continued targeted consultation with directly affected properties and services, and clear and timely public messages to build Project awareness and understanding of changes.

Table 7.2 Summary of impacts and mitigation by study area community

IMPACT	PROJECT STAGE	MITIGATION	RESPONSIBILITY
Potential removal of one dwelling	— Planning	— Continue one-on-one consultation with affected landowners and tenants in accordance with legislative requirements and the Environmental Performance Requirements (EPRs) for the Project to outline the acquisition and compensation process, discuss changed access arrangements and provide clear timelines of proposed action.	MRPV
Acquisition of residential land (to varying degrees) including change of access to private properties.	— Planning — Construction — Operation	<ul style="list-style-type: none"> <li>— Continue to engage with impacted residents via one-on-one meetings to understand potential attenuation measures, and needs for all activities undertaken on private land in accordance with legislative requirements and the Environmental Performance Requirements (EPRs) for the Project.</li> <li>— Notify communities well in advance of construction commencing.</li> <li>— Where illegal access is removed, liaise with residents to understand access requirements and investigate alternative options.</li> <li>— Provide convenient and safe access across Yan Yean Road maintain availability of the centre median at all bus stops, activity nodes and places of community significance.</li> <li>— Retain east-west access pedestrian and cycle crossing points.</li> </ul>	MRPV

IMPACT	PROJECT STAGE	MITIGATION	RESPONSIBILITY
Partial acquisition of land impacting community facilities and places of significance.	<ul style="list-style-type: none"> <li>— Planning</li> <li>— Construction</li> <li>— Operation</li> </ul>	<ul style="list-style-type: none"> <li>— Continue to engage with impacted facilities to understand potential attenuation measures, and needs staff and users of the site.</li> <li>— Implement a construction program that considers the use of facilities, operating hours and peak visitation times.</li> <li>— Notify communities well in advance of any construction commencing.</li> <li>— Deliver a consultation program that includes provision for onsite signage of affected properties that provide a service to the local or regional community.</li> <li>— Retain convenient and safe access for bus stops and accessible routes servicing affected sites.</li> <li>— Retain east-west access pedestrian and cycle crossing points.</li> </ul>	MRPV
Changes to local character	<ul style="list-style-type: none"> <li>— Planning</li> <li>— Construction</li> <li>— Operation</li> </ul>	<ul style="list-style-type: none"> <li>— Prepare a detailed and targeted consultation strategy to build awareness of the Project among residents and local communities, including its drivers and objectives, and beneficial outcomes for the community. Include in the consultation plan a provision for a single point of contact for affected communities, and an avenue to provide feedback on both the construction and consultation approaches.</li> <li>— Prepare a detailed Landscape Strategy to address impacts relating to trees and vegetation and the associated social and cultural value.</li> <li>— Prepare a Landscape Concept Plan designed to add to the character of the local area and help offset the impacts of trees removed through acquisition.</li> <li>— Investigate opportunities to work with City of Whittlesea and Nillumbik Shire to assist in community development initiatives or events.</li> </ul>	MRPV

IMPACT	PROJECT STAGE	MITIGATION	RESPONSIBILITY
Changes to local movement and regional connections including changed traffic conditions and reduced access by introduction of a centre median and wire rope safety barrier.	<ul style="list-style-type: none"> <li>— Planning</li> <li>— Construction</li> </ul>	<ul style="list-style-type: none"> <li>— Prepare a detailed and targeted consultation strategy to inform residents and local communities well in advance of any disruptions including regular updates about ongoing and planned works and alternative routes. Include in the consultation plan a provision for a single point of contact for affected communities, and an avenue to provide feedback on both the construction and consultation approaches.</li> <li>— The construction program should minimise and avoid disruptions where possible, and keep them to a minimal timeframe. Construction management should seek to maintain existing travel patterns and behaviours wherever possible.</li> <li>— Continue to consult with communities regarding disruptions, the impact of changed traffic conditions and identify opportunities to carry out works at night or during off-peak times to minimise disruptions.</li> <li>— Liaise with emergency services, including Yarrambat CFA, to provide notification well in advance of any planned disruptions and provide a nominated point of contact should any concerns arise.</li> <li>— Maintain 24-hour access for all emergency services.</li> <li>— Retain pedestrian, cycle and horse riding access wherever possible during construction so that local communities have access to safe and convenient active modes of transport, particularly between residential areas and service centres such as Yarrambat township and major recreational hubs such as Yarrambat Public Golf Course and Yarrambat Park.</li> <li>— Consult with local communities early and throughout to inform the design of the shared user path and landscaping element in response to community needs and build understanding of the existing use of the area.</li> </ul>	MRPV

IMPACT	PROJECT STAGE	MITIGATION	RESPONSIBILITY
		<ul style="list-style-type: none"> <li>— Liaise with local schools, including Yarrambat Primary School and Plenty Valley Christian College with regard to altered access and disruptions to school bus routes.</li> <li>— Liaise with local bus companies to minimise impacts to timetables and existing routes and bus stops and investigate opportunities to enhance existing infrastructure.</li> </ul>	
Impacts on access to private property.	<ul style="list-style-type: none"> <li>— Construction</li> <li>— Operation</li> </ul>	<ul style="list-style-type: none"> <li>— Prepare a detailed and targeted consultation strategy to inform residents and local communities well in advance of any disruptions to access and where applicable any permanent changes to access and alternative access arrangements.</li> </ul>	MRPV
Removal or relocation of private memorial.	<ul style="list-style-type: none"> <li>— Operation</li> </ul>	<ul style="list-style-type: none"> <li>— Continue consultation with memorial makers to organise relocation (as per VicRoads policy guidelines in relation to memorials).</li> <li>— Install a 'notice of intent to modify, relocate or remove' at the site if unable to make contact with the memorial maker.</li> </ul>	MRPV

## 8 ENVIRONMENTAL PERFORMANCE REQUIREMENTS

Table 8.1 lists the proposed EPRs relevant to the social impact assessment.

Table 8.1 EPRs relevant to social assessment

PERFORMANCE OBJECTIVE	APPLICABLE LEGISLATION, POLICY AND GUIDELINE	EPR CODE	RISK NO.	ENVIRONMENTAL PERFORMANCE REQUIREMENT	PROJECT PHASE
<b>Effects on social and cultural values:</b> To avoid or minimise the adverse effects on social and cultural values, including landscape values, Aboriginal and historical cultural heritage values, and remnant, planted and regenerated vegetation, and to maximise the enhancement of these values where opportunities exist.					
<b>Social</b> To avoid where possible, and otherwise minimise adverse effects on social and cultural values, and maximise the enhancement of these values where opportunities exist.	<i>Planning and Environment Act 1987</i> <i>Land Acquisition and Compensation Act 1986</i>	S1	14, 34, 54 and 74	<b>Social access and amenity</b> To develop and implement measures to avoid and minimise impacts on social and cultural values, including: <ul style="list-style-type: none"> <li>— design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on trees (see also EPR AR1)</li> <li>— detailed design to protect and, where practicable, improve access to amenity for potentially affected residents, users of the transport corridor (pedestrians, cyclists, horse riders and motorists), open space, social and community infrastructure and commercial facilities, and implementing the principles of Crime Prevention Through Environmental Design.</li> </ul>	Design and Construction
		S2	14, 34, 54 and 74	<b>Implement a Communications and Stakeholder Engagement Plan</b> Prior to construction, develop and implement a Communications and Stakeholder Engagement Plan to engage and consult the community and affected stakeholders and discuss progress of construction activities. The Communications and Stakeholder Engagement Plan must include measures to: <ul style="list-style-type: none"> <li>— identify a process for identifying community issues and the recording, management and resolution of complaints from affected stakeholders including business owners, community service providers, education providers, public and active transport key user groups and residents, consistent with Australian Standard AS/NZS 10002:2014 Guidelines for Complaint Management in Organisations</li> </ul>	Design and Construction



PERFORMANCE OBJECTIVE	APPLICABLE LEGISLATION, POLICY AND GUIDELINE	EPR CODE	RISK NO.	ENVIRONMENTAL PERFORMANCE REQUIREMENT	PROJECT PHASE
				<ul style="list-style-type: none"> <li>— communicate and engage with the community and potentially affected stakeholders in relation to: <ul style="list-style-type: none"> <li>— construction activities including temporary works and impacts that may affect the community, businesses or individual stakeholders (e.g. dust, noise, vibration and light) and relevant mitigation</li> <li>— changes to transport conditions and relevant mitigation (e.g. road closures, detours)</li> </ul> </li> <li>— ensure that communities are notified of construction and changes well in advance of works commencing as approved by MRPV</li> <li>— ensure that the consultation program includes provision for onsite signage of affected properties that provide a service to the local or regional community</li> <li>— continue consultation with people affected by the relocation of memorials</li> <li>— outline the timing of works that will affect particular local areas, to be updated to reflect current and anticipated conditions</li> <li>— communicate incidents and emergencies, including notification methods and timeframes in the event of a major incident or overrun</li> <li>— ensure the workforce has appropriate community awareness and sensitivity</li> <li>— implement innovative communications tools and methods to enhance the Project's ability to effectively communicate and engage with the community and stakeholders including best available technology in addition to conventional means</li> <li>— make provision for a 24-hour phone number to be available to the community to report concerns.</li> </ul>	
		S3	94 and 114	To mitigate impact to community facilities and the community after construction, driveway and access will be reinstated. Where access cannot be reinstated, alternative access is required to be provided in consultation with stakeholders.	Design and construction

PERFORMANCE OBJECTIVE	APPLICABLE LEGISLATION, POLICY AND GUIDELINE	EPR CODE	RISK NO.	ENVIRONMENTAL PERFORMANCE REQUIREMENT	PROJECT PHASE
<b>Vegetation</b> To avoid where possible, and otherwise minimise adverse effects on remnant, planted or regenerated vegetation, and maximise the enhancement of these values where opportunities exist.	<i>Planning and Environment Act 1987</i>	V1	20, 40 and 60	Design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on, high value vegetation as identified within the Landscape Strategy's 'Cultural Value of Vegetation Assessment'.  Removal of vegetation will be phased wherever practicable to temporarily reduce visual impacts (see also EPRs E3 and AR4).	Design and construction
<b>Environmental Management Framework</b> To provide a transparent framework with clear accountabilities for managing and monitoring the environmental effects associated with the Project	Legislation and policy as identified in all EPRs	EMF 5	100 and 120	<b>Operation and maintenance</b> Any potential impacts during operation and maintenance will be managed in accordance with the Department of Transport's environmental management system and standards for managing declared roads in Victoria.	Operation and maintenance

## 9 CONCLUSIONS

This assessment considered change from the existing situation established through preliminary review and found that the most impacts on local communities are anticipated during the construction phase, with respect to disruptions and restricted or altered local access.

From a transport perspective, the Project will generate benefits for the local community through increased safety, reduced congestion, and enhanced opportunities for non-vehicle transport. The upgraded Yan Yean Road will likely improve connections and accessibility between communities and service centres within the study area, and a shared use path will enhance non-vehicle amenity and may reduce car dependence for local trips by providing opportunities for active transport.

Full acquisition would be required for 21 linear road reserve parcels within the project area. A total of 75 partial land acquisitions are required, comprising of:

- seven parcels of land owned by council (two by Whittlesea and five by Nillumbuk)
- 60 parcels of land privately owned
- eight parcels of land owned by the state or public utilities (three by the Department of Education, one by DELWP, one by the Department of Transport, two by Telstra and one by Yarra Valley Water).

While changed conditions will impact some community facilities, such as Yarrambat Primary School and the Plenty Valley Christian College, these are not considered significant. The Yarrambat Veterinary Hospital has been identified as a facility likely to experience the greater impacts, although they are not considered significant overall. The Project will require partial land acquisition of the Doreen Recreation Reserve, including the tennis courts and oval highlighted in the City of Whittlesea's Doreen Recreation Reserve Master Plan.

Overall, there is community resistance to the scale of the tree removal associated with the Project, both from an environmental perspective and the perceived loss of rural amenity that many local residents value. The Project design at the Yan Yean/Bridge Inn/Doctors Gully Road intersection retains the two Doreen River Red Gums. However, the loss of native vegetation along the project area would result in a noticeable community-wide change and is the source of much community concern as shared during consultation. Further information on the extent of native vegetation loss and tree removal is outlined within *Technical Report B2 – Biodiversity Impact Assessment*.

While the community and stakeholder feedback received during consultation supported the Project and its purpose, the scale of associated tree loss may affect this level of support, and in the long term may impact the association residents have with their local area and community. However, it is considered that the sustained patterns of residential development to the north would result in increasing demands on the local road network, and conversely impacts to local amenity.

Mitigation for the social impacts identified in this assessment focusses heavily on early, consistent and transparent communication with affected stakeholders and communities. A detailed and targeted consultation plan is required to guide communication that is timely and consistent and meets the needs and requirements of impacted communities.

The Project is considered to have an overall medium social impact.

# 10 REFERENCES

- Australian Bureau of Statistics, 2016, *Census of Population and Housing*.
- Booz & Co, 2009, Nillumbik Major Activity Centres Sustainable Transport Study and Strategy.
- Cassar, 2011, Literature Review – Culturally Significant Tree Project.
- City of Whittlesea, 2016, *Bicycle plan 2016–2020*.
- City of Whittlesea, 2014, Whittlesea Integrated Transport Strategy.
- City of Whittlesea, 2016, South Morang Future Transport Network.
- City of Whittlesea, 2012, Whittlesea Recreation Strategy 2012–2017.
- City of Whittlesea, 2015, *Draft Open Space Strategy*.
- Growth Areas Authority, 2011, *North Growth Area Plan*.
- Growth Areas Authority, 2012, Growth Corridor Plans: Managing Melbourne’s Growth.
- Nillumbik Shire, 2009, Nillumbik Shire Municipal Activity Centre Sustainable Transport Study Strategy.
- Nillumbik Shire, 2019, Nillumbik Green Wedge Management Plan.
- Nillumbik Shire, 2011, Nillumbik Trails Strategy.
- Ryder Preliminary Tree Assessment Report, 2018.
- VicRoads, 2015, Corporate Plan 2016–20.
- Victorian State Government, 2010, Victorian Transport and Integration Act.
- Victorian State Government, 2012, *Plan Melbourne*.
- Victorian State Government, 2015, Plan Melbourne Refresh Discussion Paper.

# APPENDIX A

## DEMOGRAPHIC PROFILES







# A1 DEMOGRAPHIC PROFILE OF STUDY AREA COMMUNITIES

2016 CENSUS	DOREEN		YARRAMBAT		PLENTY	
Total dwellings	1,475		533		300	
Total residents	4,310		1,589		927	
% Separate house	1,288	87%	526	99%	290	97%
Semi-detached, row or terrace house, townhouse (one storey)	139	9%	0	0%	0	0%
Semi-detached, row or terrace house, townhouse (2+ storeys)	38	3%	0	0%	0	0%
Flat, unit or apartment in a one or two storey block	0	0%	0	0%	0	0%
Occupied private dwellings	1386	94%	496	93%	278	93%
Unoccupied private dwellings	95	6%	38	7%	25	8%
households earning less than \$600 per week	107	7%	45	8%	20	7%
No motor vehicles	16	1%	0	0%	3	1%
No Internet connection	86	6%	32	6%	14	5%
One family household: Couple family with children	688	47%	230	43%	153	51%
One family household: One parent family	155	11%	18	3%	12	4%
Lone person household	135	6%	65	12%	26	9%
Female	2225	52%	758	48%	437	47%
Male	2082	48%	828	52%	484	52%
0–4 years	458	11%	56	4%	56	6%
5–11 years	527	12%	129	8%	116	13%
12–17 years	346	8%	161	10%	89	10%
70+ years	175	4%	152	10%	80	9%
Speaks English not well or not at all	39	1%	4	0%	13	1%
Needs assistance with core daily activities	150	3%	65	4%	27	3%



# APPENDIX B

## RISK REGISTER







[illegible]







# APPENDIX C

## COMMUNITY FACILITY AUDIT





# C1 COMMUNITY FACILITY AUDIT

TYPE	NAME	ADDRESS	SUBURB	POSTCODE
Primary School	Doreen Primary School	75 Doctors Gully Rd	Doreen	3745
Primary School	Laurimar Primary School	1 Armidale Rd	Doreen	3745
Primary School	St Paul the Apostle Catholic Primary School	80 Bassetts Rd	Doreen	3745
Primary School	Yarrambat Primary School	540 Yan Yean Rd	Doreen	3745
P-12 School	Hazel Glen College	115 Eminence Blvd	Doreen	3745
P-12 School	Ivanhoe Grammar School - Secondary	730 Bridge Inn Rd	Doreen	3745
P-12 School	Plenty Valley Christian College	840 Yan Yean Rd	Doreen	3745
Community Centre	Orchard Road Community & Early Learning Centre	121 Orchard Rd	Doreen	3745
Community Centre	Brookwood Community Centre	25 Hazel Glen Dr	Doreen	3745
Community Centre	Laurimar Community Activity Centre	110 Hazel Glen Dr	Doreen	3745
Meeting Space	Yarrambat War Memorial Hall	448 Ironbark Road	Yarrambat	3091
Meeting Space	Plenty Town Hall	21 Memorial Dr	Plenty	3090
Child Care	Bassett's Road Early Learning Centre	11 Aspect Dr	Doreen	3745
Child Care	Butterflies Childcare and Early Learning Centre	2/4 Orchard Rd	Doreen	3745
Child Care	Guardian Early Learning - Laurimar	59 Painted Hills Rd	Doreen	3745
Child Care	Laurimar Child Care and Early Learning	35 Flaxen Hills Rd	Doreen	3745
Child Care	Orchard Road Community and Early Learning Centre	121 Orchard Rd	Doreen	3745
Child Care	Laurimar Township Child Care and Kindergarten	9 Bulimba Dr	Doreen	3745
Maternal and Child Health	Hazel Glen Maternal and Child Health Centre	65 Eminence Blvd	Doreen	3745
Maternal and Child Health	Laurimar Maternal and Child Health Centre	110 Hazel Glen Dr	Doreen	3745
Maternal and Child Health	Orchard Road Community and Early Learning Centre	121 Orchard Rd	Doreen	3745
Kindergarten	Hazel Glen Kindergarten	65 Eminence Blvd	Doreen	3745
Kindergarten	Laurimar Kindergarten	110 Hazel Glen Dr	Doreen	3745
Kindergarten	Orchard Road Kindergarten	121 Orchard Rd	Doreen	3745
Kindergarten	Smiling Children Early Learning Centre	553 Yan Yean Road	Yarrambat	3091
Kindergarten	Yarrambat Plenty Preschool	450 Ironbark Rd	Yarrambat	3091



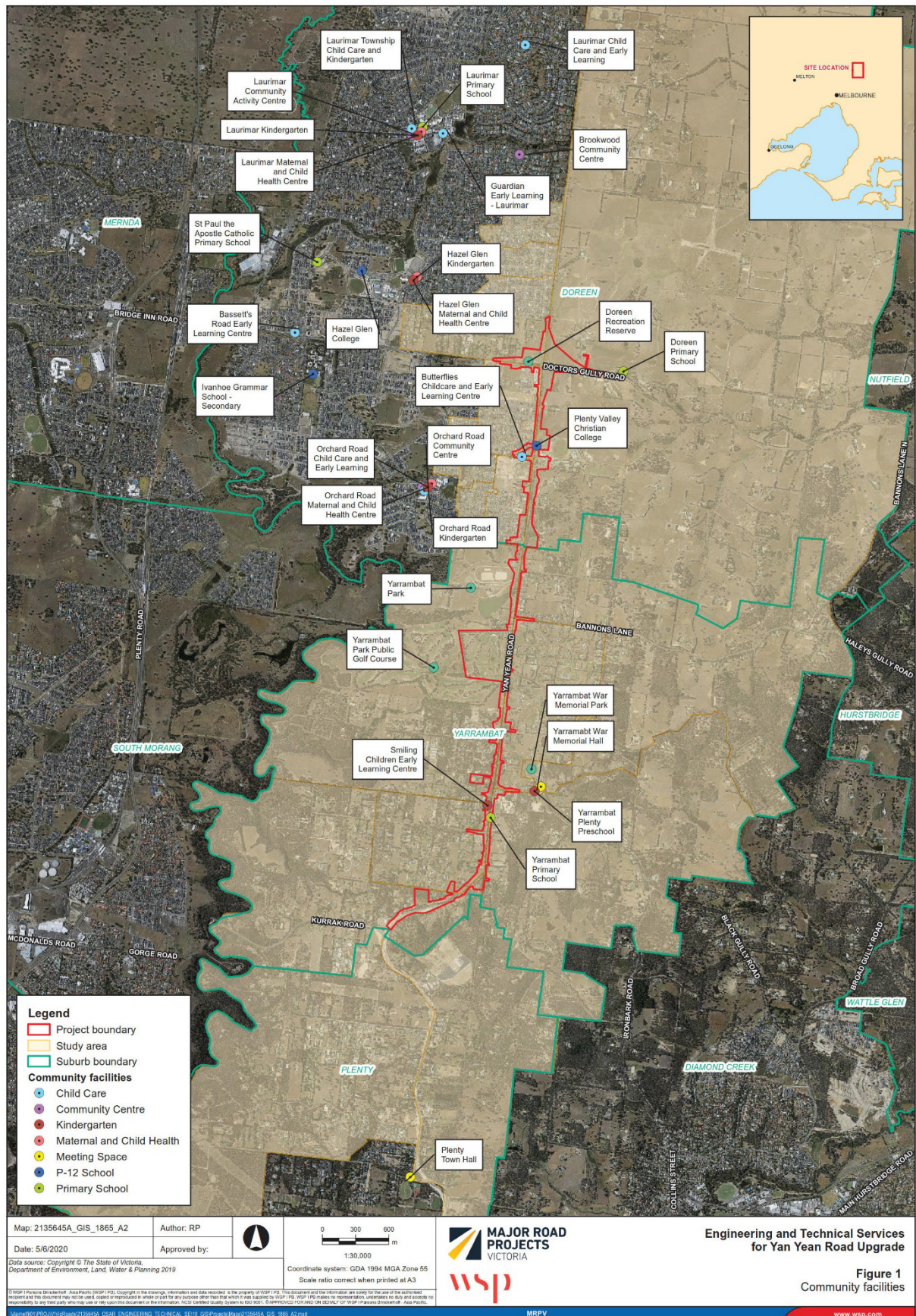


# APPENDIX D

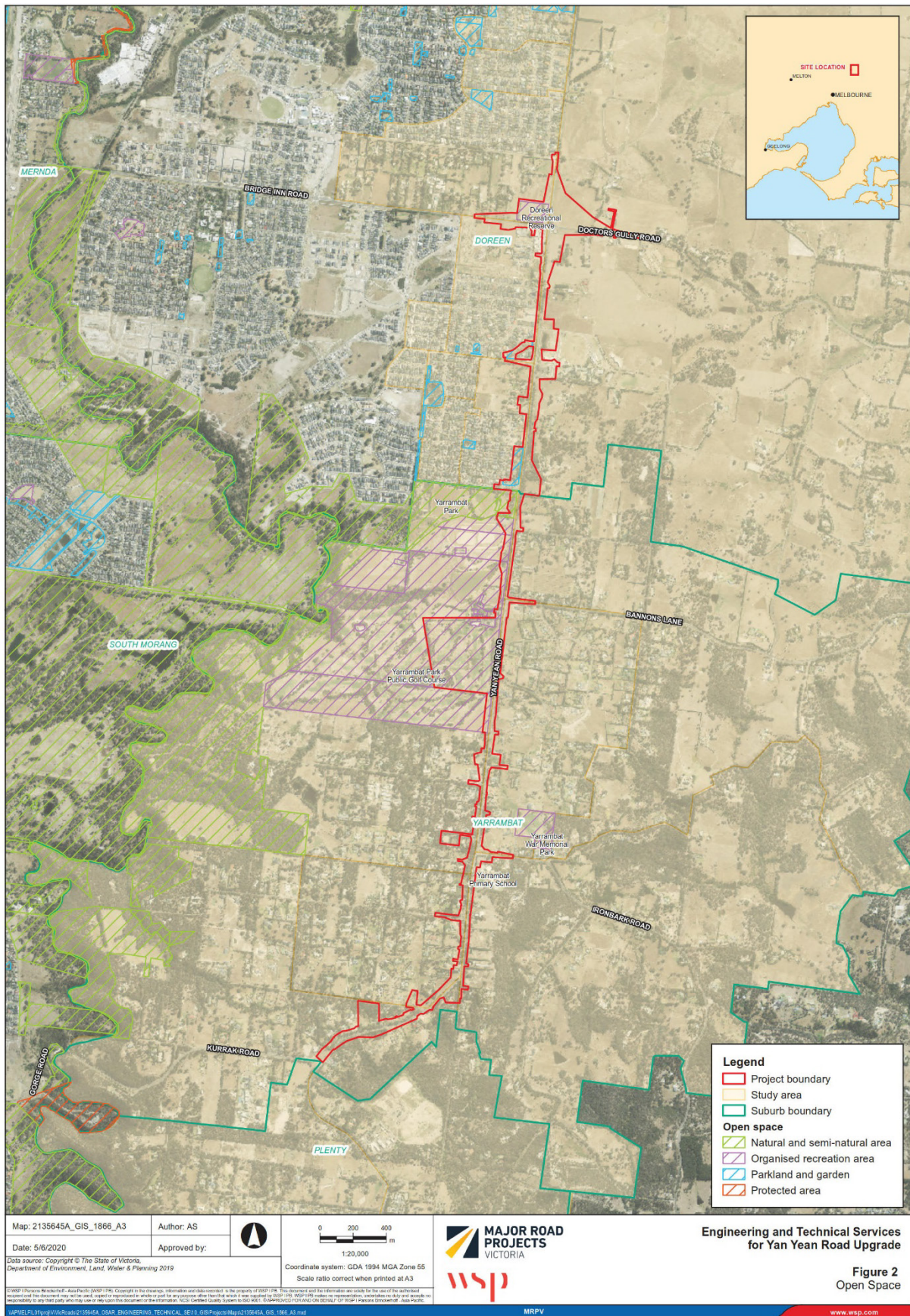
## MAPS



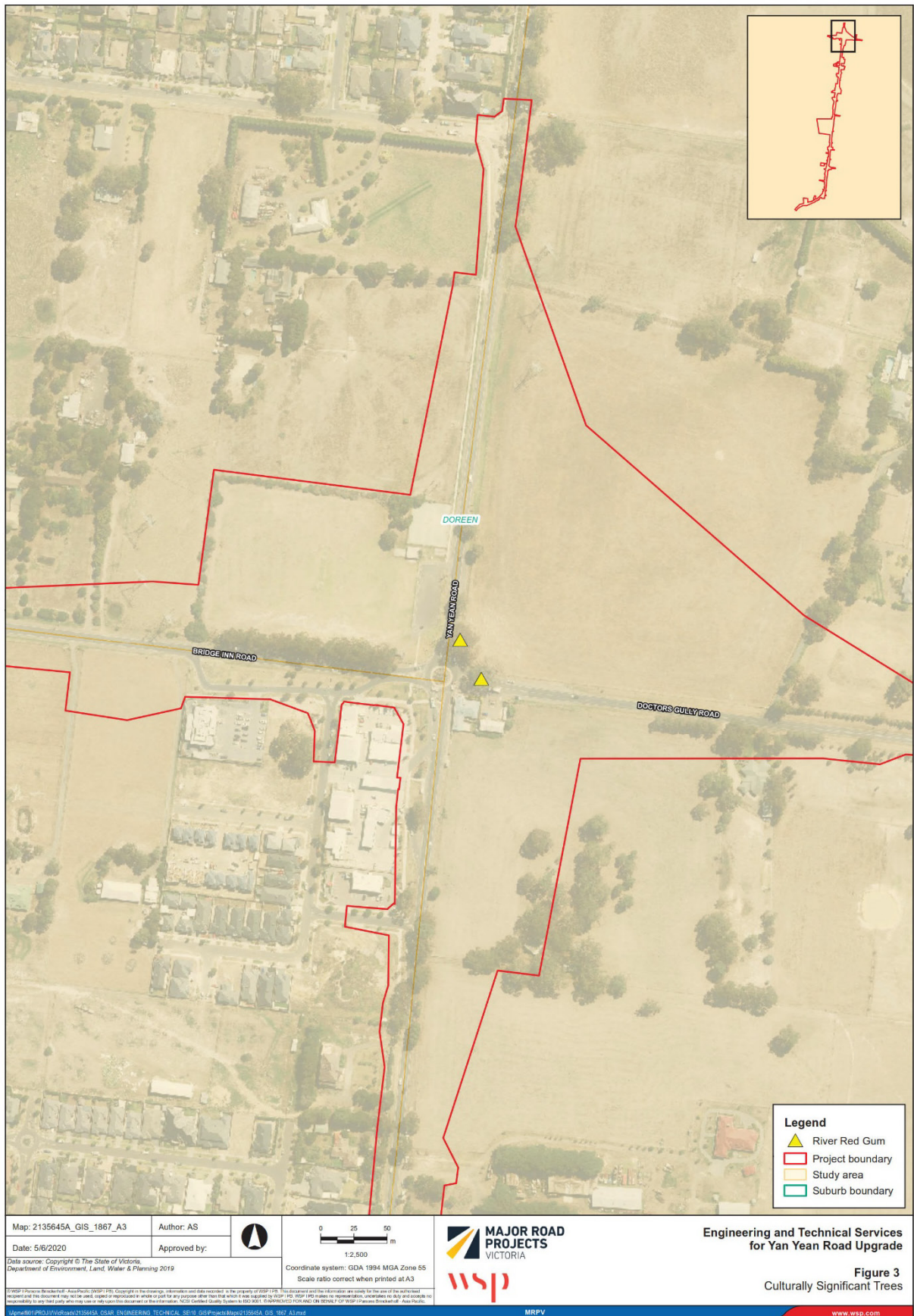




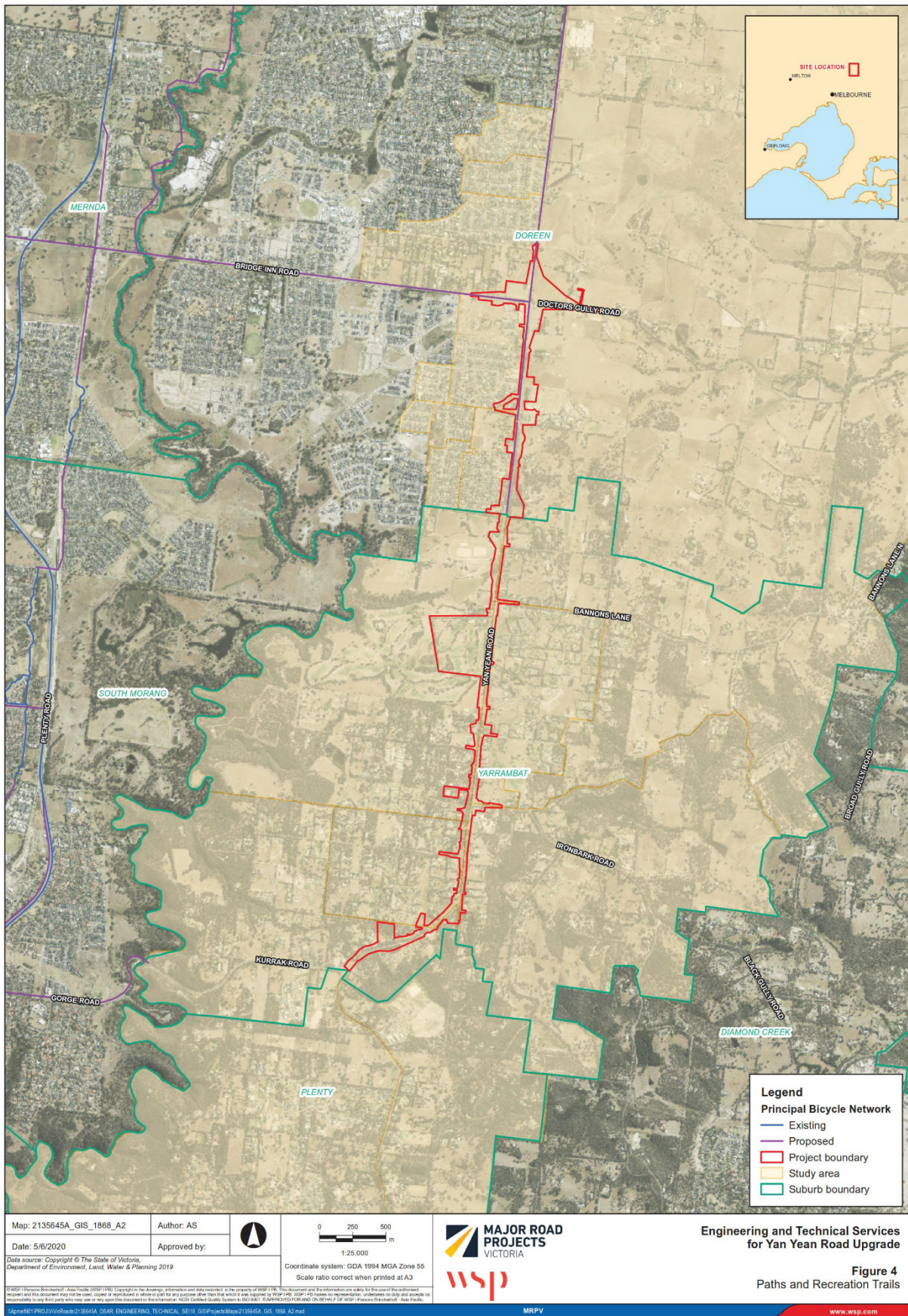












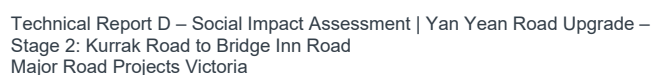
# APPENDIX E

## PUBLIC TRANSPORT MAPS



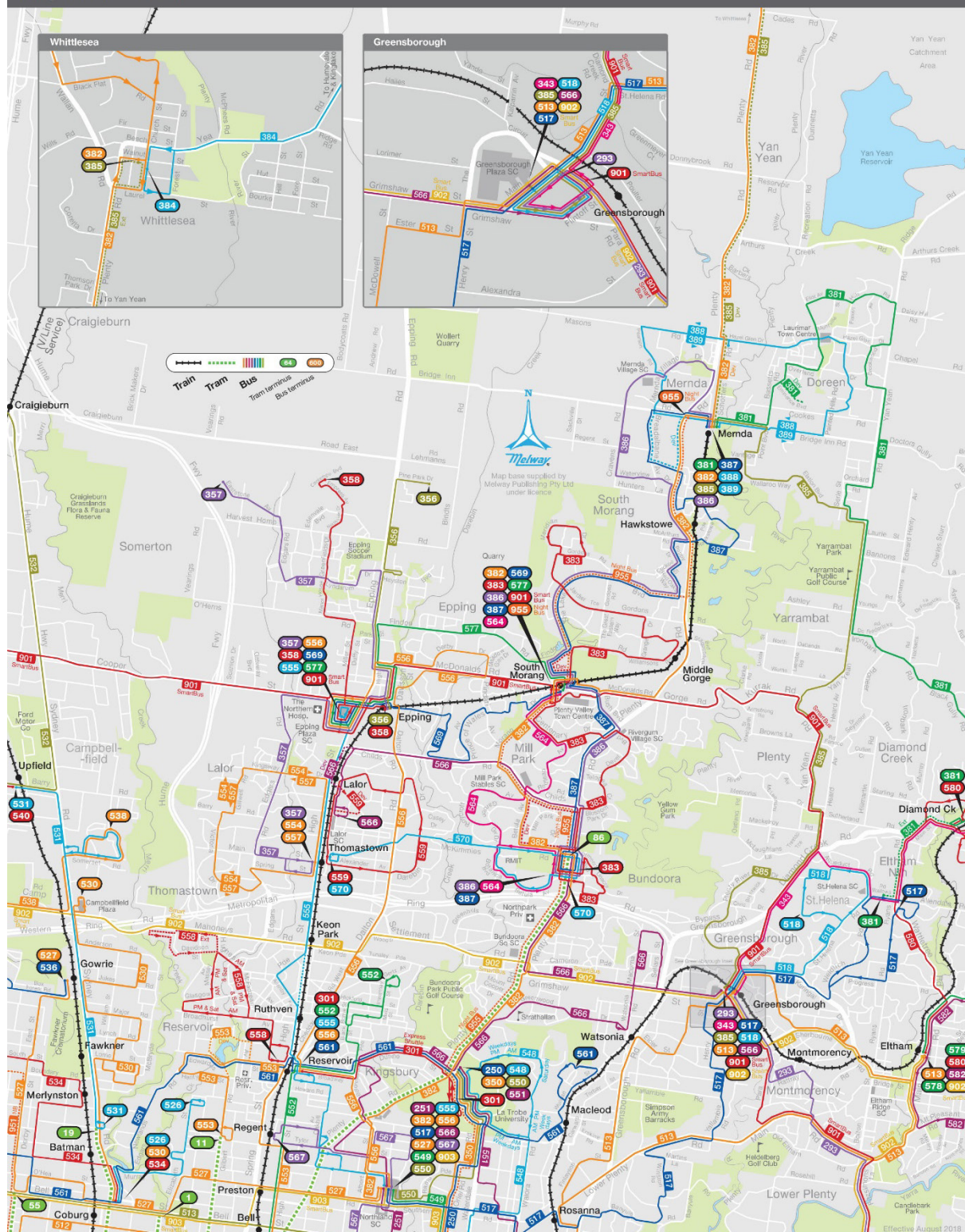








## City of Whittlesea



# APPENDIX F

## PROJECT DESCRIPTION









PART 1 INTRODUCTORY CHAPTERS

# 5 Project Description

SECTION	PAGE	SECTION	PAGE
5.1 Introduction	5.2	5.3.6 Sustainability and climate change	5.15
5.2 Project overview	5.2	5.3.7 Land acquisition	5.15
5.3 Project design	5.6	5.4 Project construction	5.16
5.3.1 Road design	5.6	5.4.1 Construction activities	5.16
5.3.2 Active transport design elements	5.13	5.4.2 Construction laydown areas	5.16
5.3.3 Utilities	5.14	5.4.3 Construction method	5.16
5.3.4 Drainage design	5.14	5.4.4 Working hours	5.17
5.3.5 Landscaping and urban design	5.15	5.5 Project operation and maintenance	5.17

## 5.1 Introduction

This chapter describes the proposed design, construction and operation of the duplication of Yan Yean Road between Kurrak Road and Bridge Inn Road (the Project). The chapter should be read in conjunction with Attachment VI *Map Book*, which contains detailed plans and drawings of key elements of the Project.

This Project description has been developed to provide an understanding of all components, processes and development stages of the Project to enable assessment of the Project's potential environmental effects. The description includes specific design elements to address the potential for the Project to generate adverse environmental effects and impacts.

## 5.2 Project overview

Yan Yean Road is a significant north-south arterial road servicing the Shire of Nillumbik and the City of Whittlesea, providing connectivity for the City of Whittlesea's growing suburbs of Doreen and Mernda to the townships of Plenty and Yarrambat. Yan Yean Road connects with major east-west arterials such as Bridge Inn Road, Kurrak Road and Diamond Creek Road and also provides a connection to employment and services in established neighbouring suburbs such as Greensborough and Diamond Creek.

Stage 1 of the Yan Yean Road upgrade (Diamond Creek Road to Kurrak Road) was completed in 2019, and construction on Stage 2 (the subject of this EES) is scheduled for completion by 2025.

The Project seeks to upgrade an existing road in hilly terrain, largely within the existing road reserve. The surrounding environment is characterised by low density residential and rural living areas such as farmland and agricultural areas, with the suburb of Doreen experiencing rapid change from rural living to higher density residential developments. The Project alignment and immediate surrounds intersect a range of land uses including residential, open space, rural living, commercial and education.

Key land uses along the alignment include Yarrambat Park and the Yarrambat Park Golf Course, Plenty Valley Christian College, Yarrambat Primary School, St Macarius Coptic Orthodox Church and the Doreen business precinct.

### Terms used in this project description

**Carriageway:** lanes where traffic would be travelling, plus shoulders and auxiliary lanes

**Cross section:** shows the width of the road with the position and number of traffic lanes, medians, walking and cycling paths and footpaths

**Cutting:** ground excavation that is required to create a smooth base for construction of a road

**Land parcel:** the smallest unit of land able to be transferred within Victoria's cadastral system

**Median:** the area between two opposing carriageways

**Mid-block:** a section of road between key intersections

**Outer edge / shoulder:** the area next to a roadway that provides clearance between the roadway and roadside

**Road reserve:** all the area of land that is within the boundaries of a road

**Roadside:** any land that is within the boundaries of a road (other than the shoulders of the road) which is not a roadway or pathway

**Roadway:** the area of the public road that is open to or used by members of the public and is developed by a road authority for the driving or riding of motor vehicles

**Signalised intersections:** intersections controlled by traffic lights



The Project would duplicate a 5.5 kilometre section of Yan Yean Road between Kurrak Road and Bridge Inn Road, increasing the existing two lanes to four lanes (comprising two lanes in each direction). The design speed along Yan Yean Road within the extent of the project area is 70 kilometres per hour, with the exception of north of Bridge Inn Road where the design speed is 80 kilometres per hour. This is consistent with existing speed limits. The design for the Project assessed in this EES has 3.5-metre-wide lanes, with the majority of the Project using a central 2.2 metre-wide median. This design was adopted due to various constraints: road safety issues, steep and rolling terrain, high cut and fill batters and subsequent retaining walls at certain locations.

The design also seeks to limit impacts to existing properties, local accesses and trees along Yan Yean Road. The existing road alignment has been retained due to constraints around the topography and land uses adjacent to the road corridor. The exception is at the Bridge Inn Road intersection, which would be shifted to the north east to retain two River Red Gums (referred to as the Doreen River Red Gums) and two businesses. The project area is shown in Figure 5.1 and key components of the Project are shown in Figure 5.2.

The Project includes:

- Two new roundabouts: one at Heard Avenue and one at Youngs Road
- Five new signalised intersections at Bannons Lane, Jorgensen Avenue, North Oatlands Road, Orchard Road and Bridge Inn Road
- Upgrades to one existing signalised intersection at Ironbark Road, including an additional right-hand turning lane, slip lane and traffic island
- New street lighting at all intersections, road signage and landscaping
- A new walking and cycling path on the western side and a footpath on the eastern side of Yan Yean Road, linking Diamond Creek to Doreen and improving safety and connectivity for pedestrians and cyclists
- Continuous safety barriers running along the Project's length, proposed in the median and behind outer kerbs along the mid-block sections of the carriageways
- A wide median between Bannons Lane and Jorgensen Avenue to provide for additional landscaping opportunities and potential avoidance of existing biodiversity values and large trees.



Figure 5.1 Project area

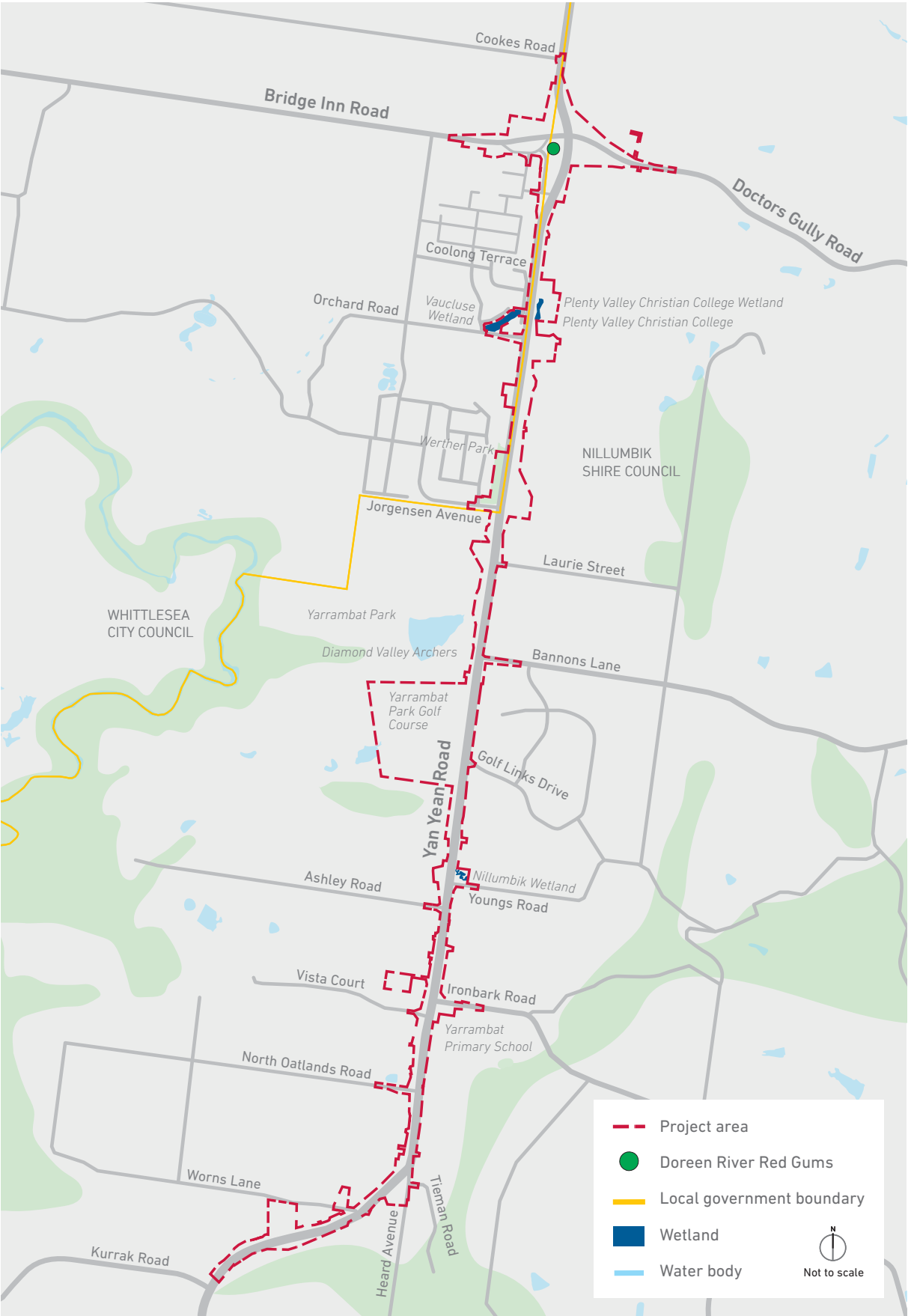
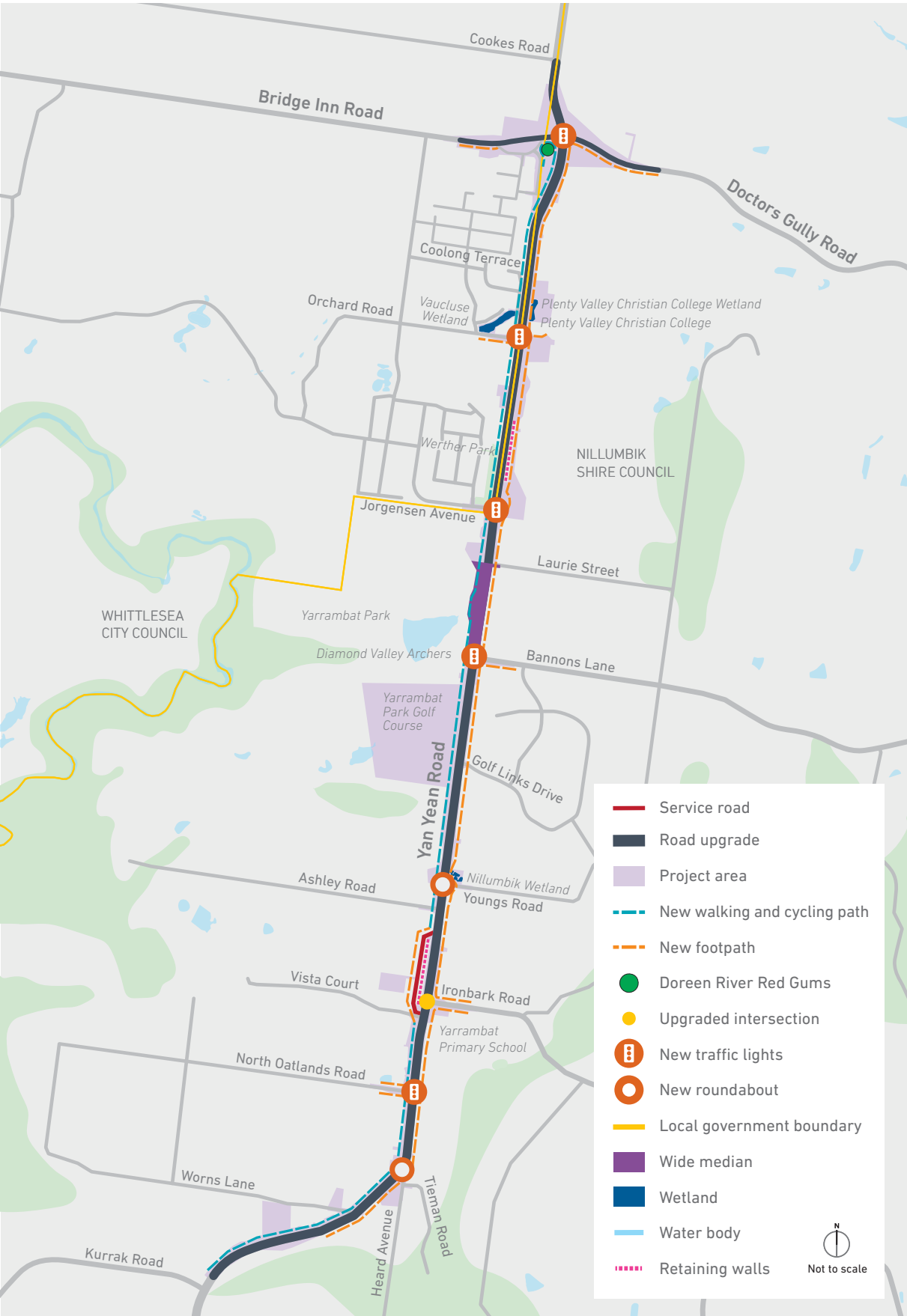


Figure 5.2 Key components of the Project



## 5.3 Project design

### 5.3.1 Road design

There are a number of elements to the road design of Yan Yean Road:

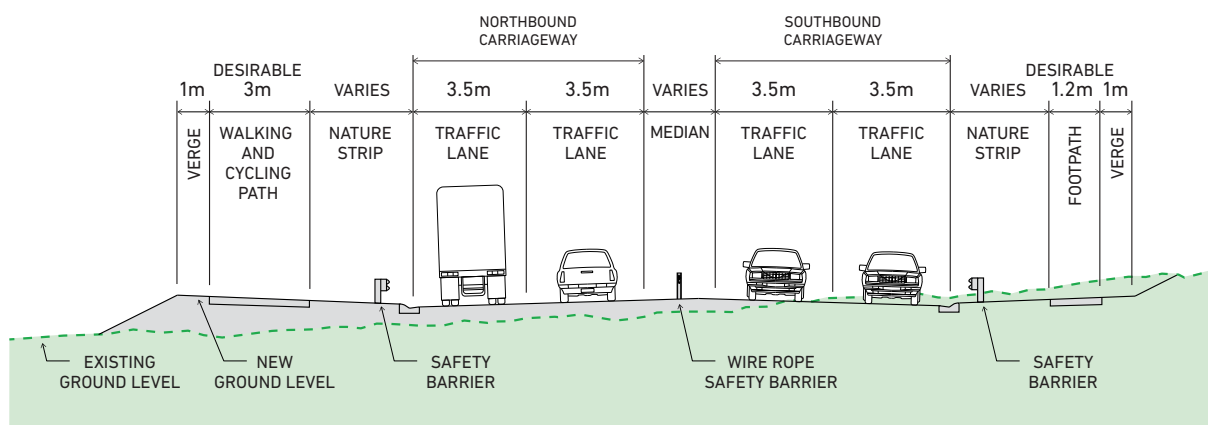
- Typical cross section
- Intersections
- Access
- Wide median
- Safety barriers
- Retaining walls
- Fencing
- Car parks
- Bus facilities.

#### Typical cross section

The following diagram indicates the typical cross section of the road design for the Project. At some locations along the alignment, such as intersections or roundabouts, this cross section would be slightly different and wider. Figure 5.3 shows the preferred mid-block cross section design, which allows for duplication with a 2.2 metre median with safety barriers.

The installation of safety barriers provides opportunities for tree planting in closer proximity to the road carriageway than would be otherwise permissible, in accordance with the Project's Landscape Strategy (Technical Report G). The total road reserve width along most of the proposed design is 24.2 metres increasing to 33 metres between Bannons Lane and Jorgensen Avenue to accommodate the widened median at this location. The current typical roadway width is eight metres.

**Figure 5.3 Yan Yean Road preferred cross section design**



*For illustrative purposes only.*


### Intersection design

The scope of the Project includes modifications to a number of intersections. Signalised intersections are proposed to improve safety, provide U-turn opportunities and increase the capacity of existing intersections, and roundabouts are proposed to improve safety and provide larger U-turn opportunities. Intersection works include:

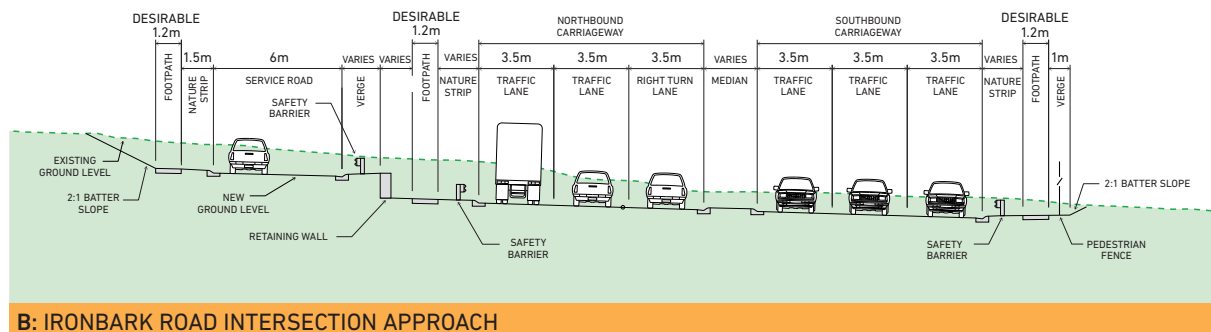
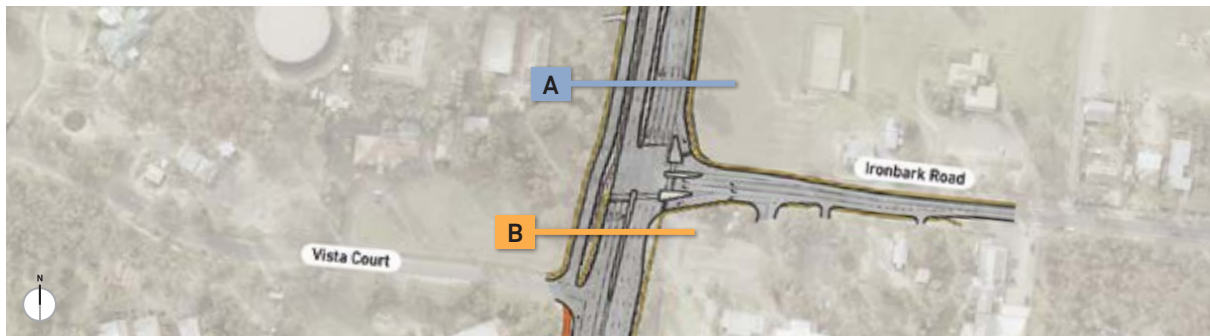
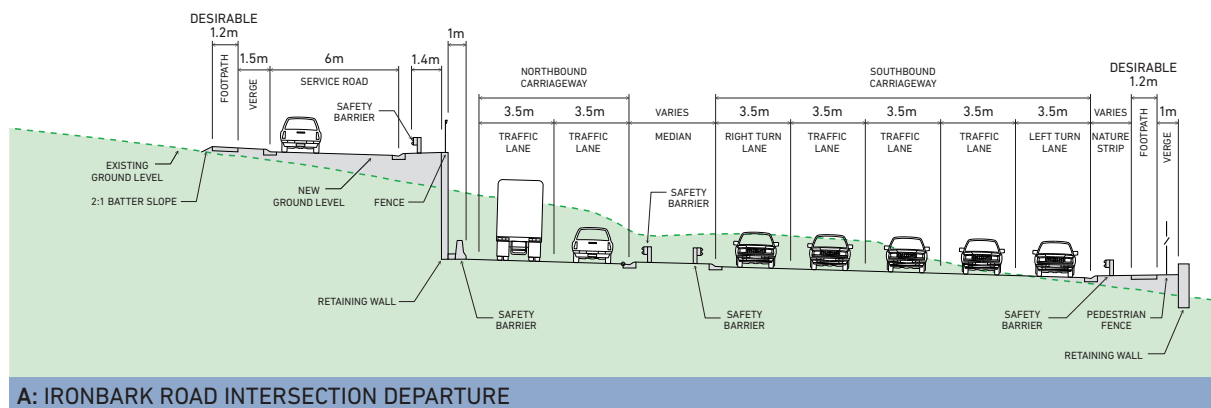
- Signalised intersections at North Oatlands Road, Ironbark Road (refer to Figure 5.4), Bannons Lane, Jorgensen Avenue, Orchard Road and Bridge Inn Road (refer to Figure 5.5)
- Roundabouts at Heard Avenue and Youngs Road
- Proposed left in / left out arrangements at all other intersections, including:
  - Yan Yean Road / Activity Way
  - Yan Yean Road / Laurie Street
  - Yan Yean Road / Golf Links Drive
  - Yan Yean Road / Ashley Road
  - Yan Yean Road / Service Road A exit (left out only)
  - Yan Yean Road / Vista Court
  - Yan Yean Road / Worns Lane
  - Yan Yean Road / 807 Yan Yean Road access
  - Yan Yean Road / Service Road B (between Kurrak Road and Worns Lane)
  - Residential properties and businesses along the alignment
- Auxiliary lanes provided for all left turns (and where applicable, right turns) from Yan Yean Road into key intersections to separate turning traffic from the main traffic flow to reduce collisions and improve the road capacity.

The project design at Bridge Inn Road would retain the two Doreen River Red Gums situated adjacent to the Bridge Inn Road and Yan Yean Road T-intersection and the General Store / former post office and Pet Supplies and Stockfeeds Store on the corner of Doctors Gully Road. It proposes shifting the whole intersection to the north-east corner of Yan Yean Road / Bridge Inn Road with two lanes in each direction.

The design at Bridge Inn Road has been refined following community consultation and in response to additional arboriculture advice on the Doreen River Red Gums, which are situated south-west of the proposed intersection (refer to Figure 5.5).



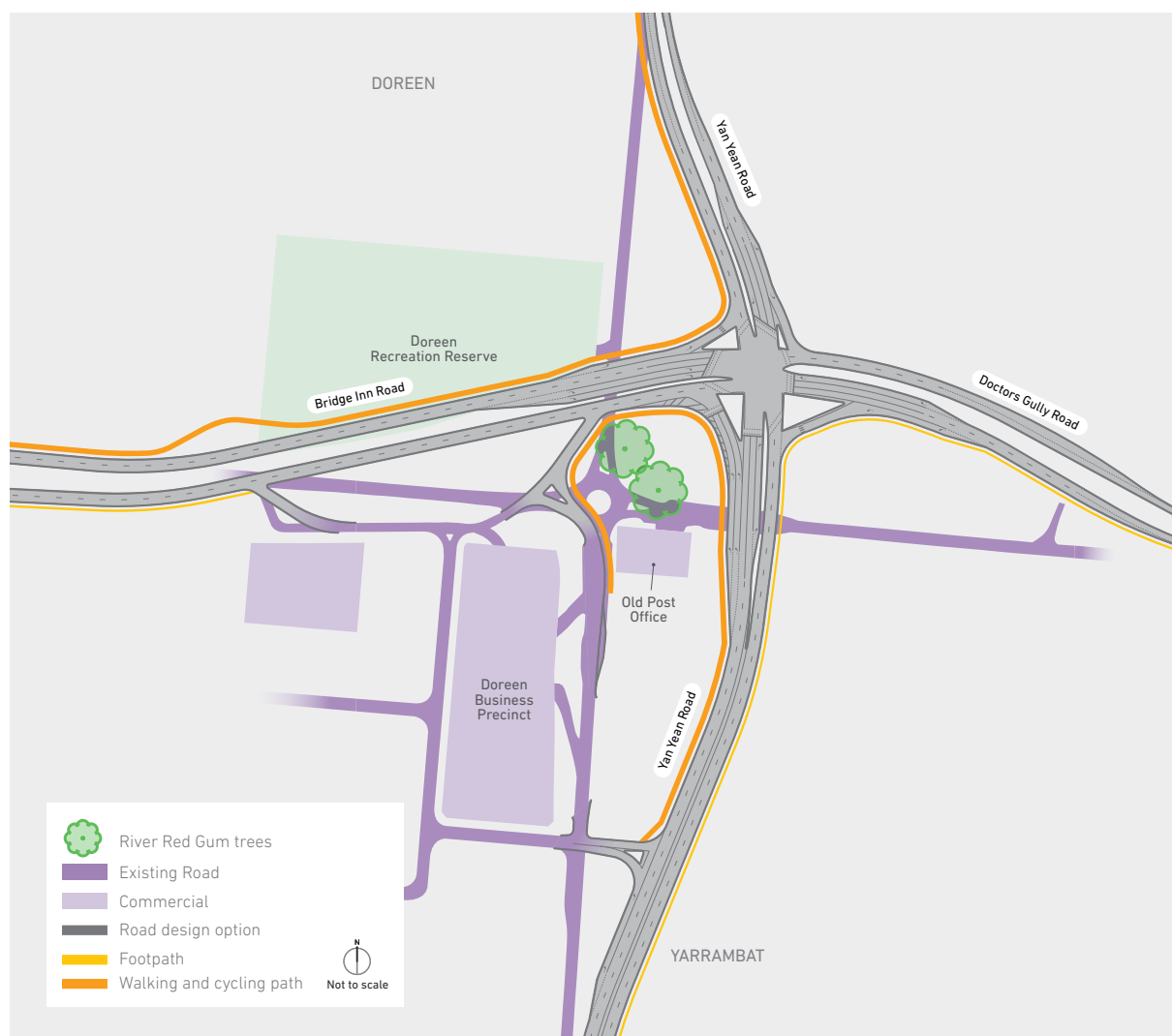
The project design at Bridge Inn Road would retain the two Doreen River Red Gums situated adjacent to the Bridge Inn Road – Yan Yean Road T-intersection and the General Store.

**Figure 5.4 Typical signalised intersection cross section – Ironbark Road (northbound)**

*For illustrative purposes only.*



**Figure 5.5 Bridge Inn Road intersection design**



*For illustrative purposes only.*

### Access design

All existing accesses would be changed to left in / left out arrangements to allow for the installation of a centre median and safety barriers. U-turn lanes would be provided at the following locations to allow for the safe turning of vehicles wishing to travel in the opposite direction:

- Bridge Inn Road signalised intersection (cars only)
- Orchard Road signalised intersection (cars only)
- Jorgensen Avenue signalised intersection (cars only)
- Bannons Lane signalised intersection (cars only)
- Youngs Road roundabout (cars, cars with trailers / horse floats, semi-trailers and trucks)
- Ironbark Road signalised intersection (cars only)
- North Oatlands Road signalised intersection (cars only)
- Heard Avenue roundabout (cars, cars with trailers / horse floats, semi-trailers and trucks).

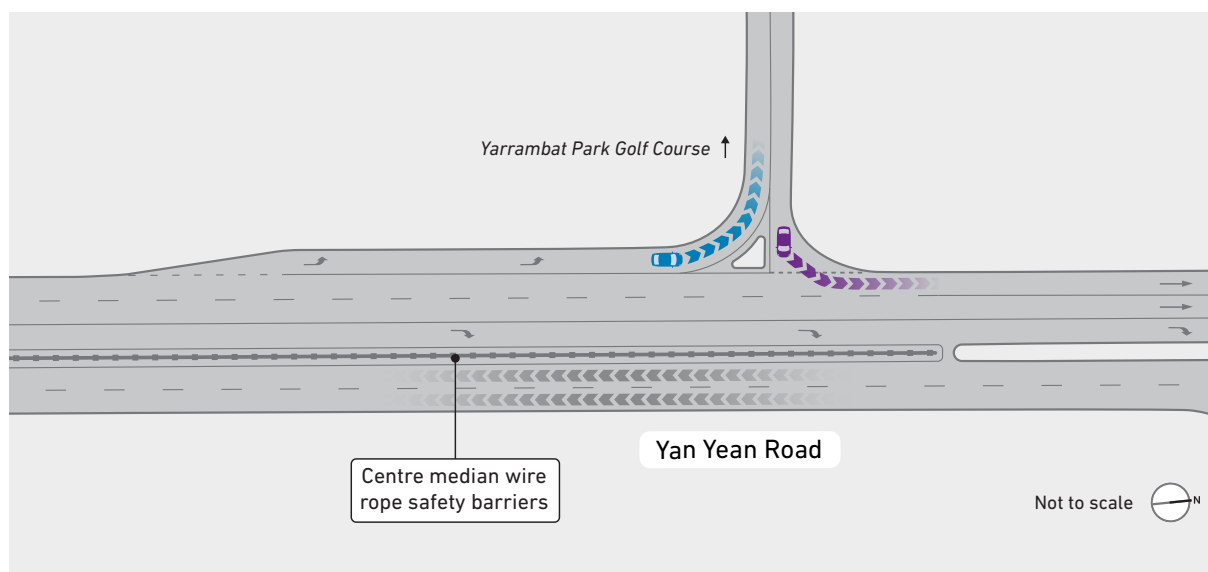


All existing Council approved property access and driveways are proposed to be maintained with minor tie-in works. Access for properties at the western side of Yan Yean Road from Vista Court to Ashley Road would be via a service road due to the steep grade and level differences between properties and Yan Yean Road (refer to Figure 5.4 and Attachment VI *Map Book*).

Access conditions at Yarrambat Primary School and Plenty Valley Christian College would be revised due to intersection upgrades impacting existing access and carpark arrangements.

The proposed design includes a left in / left out arrangement (refer to Figure 5.6) to the Yarrambat Park Golf Course.

**Figure 5.6 Left in / left out arrangement – Access to Yarrambat Park Golf Course**



*For illustrative purposes only.*

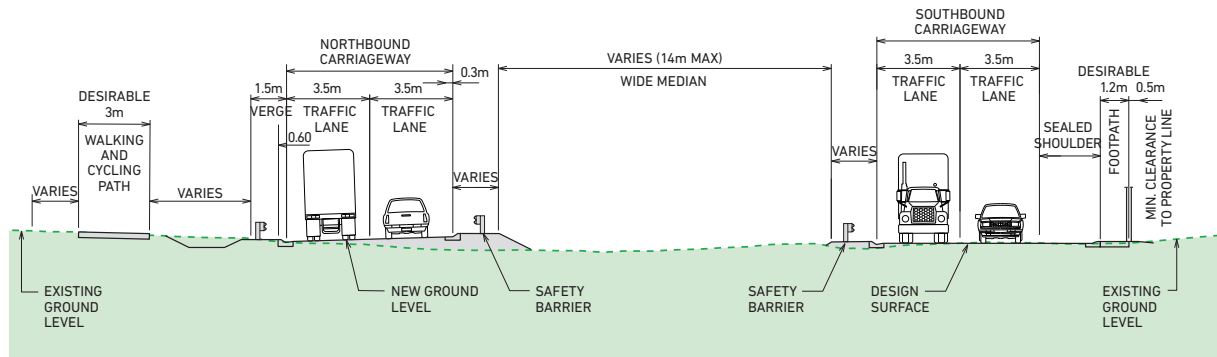
### Wide median

A divided carriageway (boulevard design) increases the median width of Yan Yean Road from 2.2 metres to approximately 14 metres by realigning the northbound carriageway between Bannons Lane and Jorgensen Avenue (refer to Figure 5.7). The maximum road reserve width at this point would be approximately 33 metres, although the cross section would taper at either end to tie back into the standard cross section of 24.2 metres, as described above. A wider median at this location would provide for additional landscaping opportunities and potential avoidance of existing biodiversity values (including Matted Flax-lily) and large trees in accordance with the Project's Landscape Strategy (Technical Report G).

The southbound carriageway is aligned to follow the existing carriageway edge to retain the existing separation distance between driveways, residences and Yan Yean Road.

The wide median section of the road design tapers back to the standard cross section width at Bannons Lane. This allows the safe tapering of the road back to the standard road width while avoiding private land acquisition further south of the golf course.

**Figure 5.7 Wide median cross section design**



*For illustrative purposes only.*

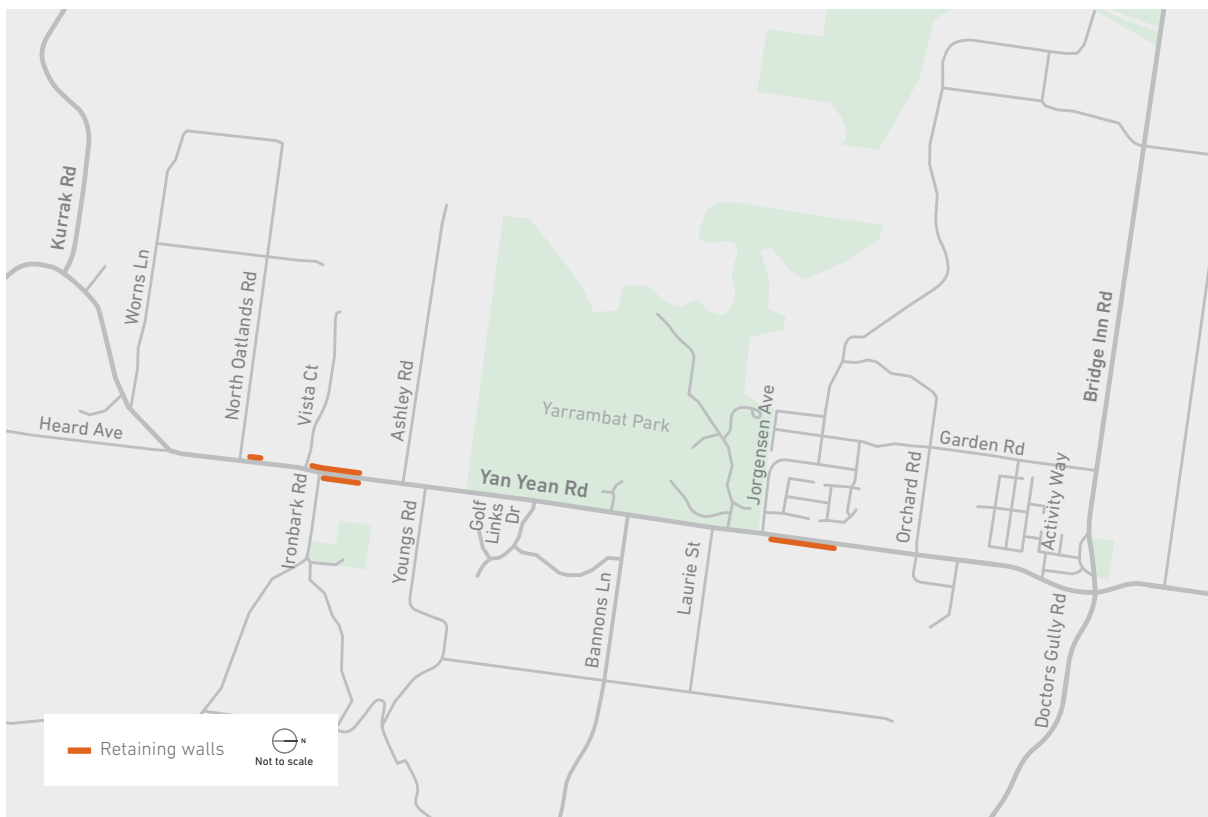
### Safety barrier design

Continuous safety barriers are proposed in the median and behind most outer kerbs (where there are not intersections). Safety barriers would be installed at various setbacks from the kerb ranging from 0.6 to 1 metre, depending on factors such as speed limit, topography and barrier type. Safety barriers require a cleared area behind them to maintain the integrity of their effectiveness. This includes clearance from walking and cycling paths, as well as footpaths. Proposed safety barriers include guardrail, wire rope and concrete barriers if deemed required.

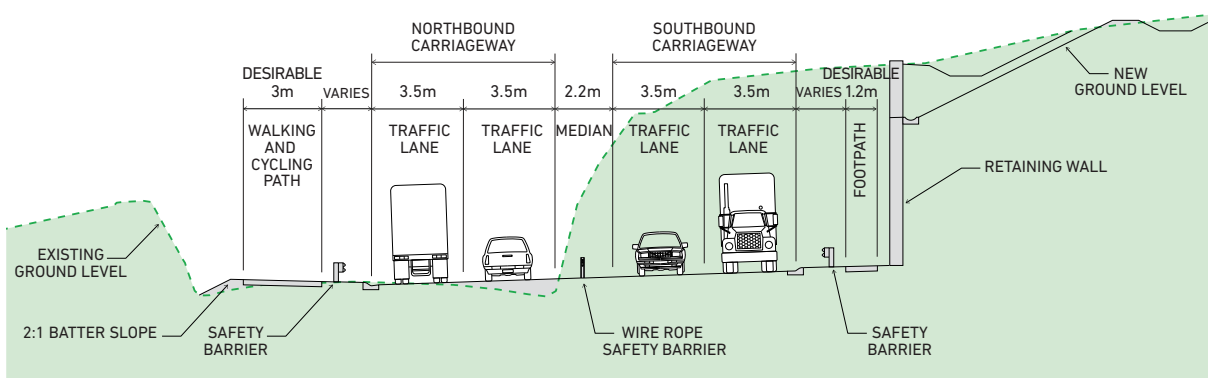
### Retaining walls design

Retaining walls have been proposed at selected locations along Yan Yean Road to minimise the extent of land acquisition on adjacent properties, provide access to properties abutting Yan Yean Road, maximise the retention of existing trees and reduce the extent of cut earthworks. The design of retaining walls would be carried out in accordance with guidelines in the Project's Landscape Strategy (Technical Report G). Retaining walls are likely to be installed at the following locations (refer to Figure 5.8 and Figure 5.9):

- Between Service Road A and Yan Yean Road: a 270 metre long wall with an approximate maximum height of 3.6 metres. This retaining wall has been proposed to retain access to existing properties abutting Yan Yean Road and minimise impacts to existing trees
- At the north-east corner of Ironbark Road: a 230 metre long wall with an approximate maximum height of 2.4 metres. This retaining wall has been proposed to minimise the extent of land acquisition at the adjacent property
- North of North Oatlands Road along the western verge of Yan Yean Road: a 50 metre long wall with an approximate maximum height of 1.1 metres. This retaining wall has been proposed to minimise the extent of land acquisition at the adjacent property and minimise the impact to the existing driveway arrangement
- North of Jorgensen Avenue along the eastern verge of Yan Yean Road: a 220 metre long wall with an approximate maximum height of 8 metres. This retaining wall has been proposed to avoid impacting the existing telecommunication tower on the abutting property, maintain access to the adjacent property and telecommunication tower, maximise the retention of existing trees and reduce the extent of cut works.

**Figure 5.8 Retaining wall locations**

*For illustrative purposes only.*

**Figure 5.9 Retaining wall cross section – north of Jorgensen Avenue intersection (northbound)**

*For illustrative purposes only.*

### Fencing design

The Project is required to ensure adequate safety measures are in place so that golf balls from Yarrambat Park Golf Course do not land on the walking and cycling path or road. This EES assumes that a 30-36 metre-high and 360 metre long fence along the edge of the golf course is included in the design to avoid golf ball collisions with pedestrians, cyclists or vehicles.

The proposed fence would incorporate elements to increase its visibility to Swift Parrot and other bird species. The alternative option to building a fence is to reconfigure golf course holes 1, 10 and 18 to increase their distance from the road and reduce the risk of golf balls landing on the new road and walking and cycling path to an acceptable level. This would not reduce the number of holes at the golf course.

A 1.8 metre timber paling fence has been designed to mitigate the risk of arrows from the Diamond Valley Archers facility affecting the road or walking and cycling path.

### **Plenty Valley Christian College and Yarrambat Primary School**

Access to Plenty Valley Christian College and Yarrambat Primary School directly adjacent to the project area would be maintained during the Project's construction and operation. Some temporary arrangements may be required during construction to manage roadworks adjacent to the schools.

The Project would reconfigure and reinstate an existing car park at Plenty Valley Christian College. This includes a new access road to tie into the existing road. The dam at Plenty Valley Christian College would also require reconfiguration. This would be completed in collaboration with the school.

Land currently used by Yarrambat Primary School for informal car parking would require reconfiguration.

To facilitate these changes, partial land acquisition would be required along the frontage of both schools. This would be limited in extent and would not result in a long-term change to the existing land use; however, it would result in a permanent reduction in the land area on both school sites (refer to Attachment VI *Map Book*).

### **Bus facilities**

Existing bus stops are proposed to be reinstated at the same location or within close proximity, in consultation with the Department of Transport and Public Transport Victoria. The project area allows for indentations around bus stops along the alignment if required.

## **5.3.2 Active transport design elements**

### **Walking and cycling path and footpath**

The design provides a walking and cycling path on the western side of Yan Yean Road in the following locations (refer to Figure 5.2):

- Adjacent to the northbound carriageway of Yan Yean Road from Kurrak Road to Bridge Inn Road, connecting to the existing walking and cycling path at both ends
- Adjacent to the eastbound carriageway of Bridge Inn Road, to be connected to existing walking and cycling paths.

Between Bannons Lane and Jorgensen Avenue, the walking and cycling path is realigned through Yarrambat Park and Shire of Nillumbik land to avoid the removal of more trees on the western side of Yan Yean Road. The walking and cycling path north of Jorgensen Avenue follows the existing footpath for the same purpose. The walking and cycling path would generally be three metres wide and would reduce slightly in width at various locations to allow the retention of trees.

In addition, a footpath, generally 1.2 metres wide, is proposed on the eastern side of Yan Yean Road in the following locations (refer to Figure 5.2):

- Adjacent to the southbound carriageway of Yan Yean Road from Bridge Inn Road to Kurrak Road to connect into the existing footpath
- Adjacent to the northbound carriageway of Yan Yean Road, along Service Road A from Vista Court to Ashley Road to connect to the proposed walking and cycling path extents
- Along Doctors Gully Road to Yan Yean Road to connect into the existing footpath.

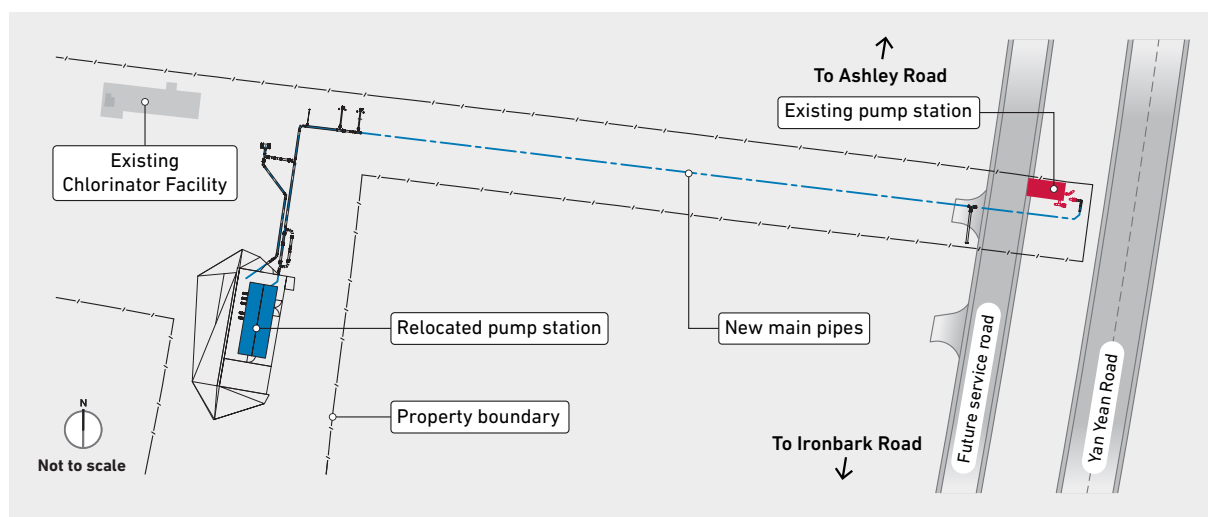
### 5.3.3 Utilities

New utility service upgrades, relocations and protection works may be required along the length of the Project. Where utility services cannot be avoided, protection / relocation / diversion works would occur adjacent to the proposed road pavement. Relocation of power lines along the alignment is anticipated to involve a combination of above ground and underground power. Works associated with existing water mains, sewer, gas and telecommunications assets may also require relocation and/or diversion adjacent to the road pavement. As such, a minimum allowance of five metres from the outermost construction extent (toe / top of batter, retaining wall, etc.) has been made to allow for potential utility upgrades and service relocations within the project area.

#### Relocation of Yarra Valley Water pump station

The project area includes a Yarra Valley Water pump station, near Ironbark Road on the western side of the existing Yan Yean Road, which the Project may be required to relocate. The tank may be re-located and new connecting infrastructure installed, all on existing Yarra Valley Water land. Refer to Figure 5.10 for the indicative relocation plan. MRPV continue to investigate design opportunities that could avoid the requirement to relocate the pump station.

**Figure 5.10 Yarrambat pump station relocation indicative plan**



*For illustrative purposes only.*

### 5.3.4 Drainage design

New drainage works, upgrades and relocations would occur along the length of the Project. Drainage along the alignment has been developed based on a flood model and expected outfall locations (which were determined by existing topography); however, the Project is also required to comply with water sensitive urban design (WSUD) requirements from Melbourne Water. This approach aims to make better use of stormwater in urban areas and reduce the harm it causes to the natural water cycle, rivers and creeks. Meeting Melbourne Water's requirements is likely to comprise grassed swale drains (where practicable), detention basins and water treatment basins.

The project area provides for a minimum 10 metres offset from the top of each drainage swale to allow for construction. In areas where drainage swales are not required, a minimum allowance of five metres from the outermost construction extent (toe / top of batter, retaining wall, etc.) has been provided in the project area to allow adequate construction space. The Project would coordinate closely with local schools to ensure the functionality of existing car parks and outdoor playing fields is maintained if these areas are impacted by drainage works.

Detention basin sites for surface water management have also been allowed for within the project area in proximity to Worns Lane, Heard Avenue, Youngs Road, Orchard Road (Melbourne Water wetland) and Bridge Inn Road.

### 5.3.5 Landscaping and urban design

A Landscape Strategy (Technical Report G) has been developed in consultation with Councils and other key stakeholders to ensure that the Project fits sensitively into the built, natural and cultural environment of Doreen and Yarrambat. The strategy would ensure that landscaping undertaken as part of the Project is well designed and contributes to the character and functioning of the Yan Yean Road corridor and the surrounding area, as well as to the accessibility and connectivity of people within the wider region and community. The Project would provide new and reinstated landscapes that are appropriate to the local conditions and consistent with the existing varied character of the area. Wherever possible, the Project would provide opportunities to increase canopy cover and improve amenity in the public realm.

The Landscape Strategy provides overarching principles to guide the Project landscape design, with a particular focus on minimising impacts on trees along the road corridor. Planting typologies have been considered to enhance the experience of drivers, pedestrians and cyclists, provide visual interest, screen infrastructure elements, improve habitat values and provide subtle wayfinding clues. Planting adjacent to the shared path would provide shelter and shade to improve user amenity. The activation of remnant open space would be explored to provide increased amenity to the local community where feasible.

### 5.3.6 Sustainability and climate change

MRPV is committed to delivering projects that optimise social, economic and environmental outcomes over the long term. To fulfil this commitment, MRPV would ensure:

- Sustainability risks and opportunities are identified and refined into project-appropriate performance objectives and requirements
- Delivery partners are monitored to ensure achievement of sustainability performance objectives and requirements
- Project sustainability performance is measured, verified and publicly reported on.

Key sustainability opportunities for the Project include:

- Ensuring the Project is resilient to the challenges of climate change by preparing and implementing a climate risk assessment and adaptation plan
- Optimising the use of recycled content in infrastructure materials
- Reducing greenhouse gas emissions, material lifecycle impacts and waste generation during the Project's construction and operation
- Protecting and enhancing the built, natural and cultural environment within and adjacent to the project area.

### 5.3.7 Land acquisition

The existing road corridor is not of sufficient width to accommodate the duplication and supporting infrastructure such as service roads, walking and cycling path and drainage. The Project would require the partial or full acquisition of 96 parcels of land. In most cases, partial acquisition of the land would be required along the frontages of landholdings.

This acquisition would be limited in extent and would not result in a long-term change in the existing land use, but it would result in a permanent reduction in the land area on those land parcels.

The land acquisition process would be undertaken in accordance with the *Land Acquisition and Compensation Act 1986* and would include consultation with affected landowners. Compensation would be provided for all land acquired for the Project. Refer to Attachment VI *Map Book* for the proposed Public Acquisition Overlay (PAO).

The landowner status of proposed land acquisition for the Project includes:

- Shire of Nillumbik: 24 land parcels
- City of Whittlesea: four land parcels
- Private: 60 land parcels
- Public Authorities / State: eight land parcels.



## 5.4 Project construction

### 5.4.1 Construction activities

Construction details would be subject to further refinement as the Project progresses; however, any changes to the activities and requirements outlined below would need to be in accordance with the Environmental Performance Requirements (EPRs) set out in Chapter 12 *Environmental Management Framework*.

Proposed construction activities would be standard road construction activities to be undertaken in accordance with the EPRs for the Project.

Site establishment would involve tree clearance and vegetation lopping and removal within the project area, establishment of construction site compounds, clearing and grubbing, temporary sediment and erosion control works, and establishment of environmental and traffic controls.

Earthworks would involve remediation of any existing contamination and removal of any hazardous material, as appropriate, protecting and relocating services, widening of existing rock cuttings (approximately 750 metres of existing cut along the Project would be widened by approximately 20 metres), new cuttings (approximately 1,300 metres of new rock cut would be required to a width of approximately five metres along the Project), and bulk earthworks and haulage. Some of the cutting locations would require retaining walls. Refer to Figure 5.8 for the location of proposed retaining walls in the Project and Figure 5.9 for a representative retaining wall cross section.

Civil and structure works would involve construction of infrastructure, including intersection upgrades, walking and cycling paths, retaining walls, drainage works and pavement works.

Reinstatement would involve implementing traffic management systems and landscaping in accordance with the Landscape Strategy (Technical Report G) for the Project.

### 5.4.2 Construction laydown areas

To minimise disruption at and around the Project site, one or more separate site compounds (or 'laydown areas') would be established for site offices, storage of materials and plant, amenities for workers, secure container storage, short-term storage for waste and potentially workforce parking. The laydown area(s) would be required to be in use for the full duration of Project construction.

Construction laydown areas have not yet been identified for the Project, other than those included in the project area. Following the engagement of a contractor, they would identify one or more sites that are suitable for this purpose on the basis of minimal environmental impact. Depending on the site(s) selected, a separate planning approval process may be required which would need to be informed by site investigation and consultation.

The project area has allowed for a site on the western side of Yan Yean Road in close proximity to the Yarrambat Horse and Pony Club, which is currently being used as laydown area by Yarra Valley Water. The Project may also utilise the existing Department of Transport owned land at 423-437 Yan Yean Road Yarrambat at the southern end of the project area. Vegetation removal would avoid the no-go zones identified in Attachment VI *Map Book*.

The laydown area(s) would be reinstated following works to their pre-Project condition, or as agreed with the landholder. The nature of reinstatement and any improvement works would be agreed with the landowner and any other relevant stakeholders, potentially Council and the Department of Transport.

### 5.4.3 Construction method

The construction methods adopted would seek to develop the Project in discrete stages to the extent practicable. This would assist with localising construction impacts for each stage of works. Maintaining traffic flow throughout the Project would be a key component of the construction methodology. Constructing new lanes 'offline' would be integral to maintaining traffic flow, including diverting traffic into new lanes as staged sections were completed. As traffic is diverted into newly constructed lanes, old lanes would be upgraded to assist in maintaining traffic flow.

Temporary road closures and diversions would be required for the construction of intersections. Road closures and diversions would be managed through community consultation and detailed traffic management plans.

Spoil is defined as waste soil or rock resulting from excavation activities. Spoil generated by construction activities would be managed in accordance with EPA requirements applicable at the time of construction.

The final spoil disposal strategy would be developed in accordance with EPA Victoria requirements, particularly in regard to managing any contamination entrained within the soil, and whether spoil would be stockpiled or taken immediately to landfill. Haulage routes would be constrained to arterial roads, including Yan Yean Road. Where roads other than Yan Yean Road or designated arterials are required to be used, this would be done in consultation with the Department of Transport and the relevant local authority, with appropriate notice given to any affected residents.

#### 5.4.4 Working hours

Construction work for the Project would be undertaken in accordance with EPA requirements applicable at the time of construction. Standard construction work hours are:

- Monday to Friday, 7am to 6pm
- Saturday, 7am to 1pm.

Construction outside standard hours might occur at discrete stages to enable particular tasks to be undertaken more safely than could otherwise be achieved. Night works would also be required to minimise impacts on traffic or nearby stakeholders. Works proposed for outside standard hours would need to be approved in advance by MRPV, following consultation with all relevant stakeholders.

## 5.5 Project operation and maintenance

When complete, Yan Yean Road would be owned by the Department of Transport and operated in accordance with its environmental management approach. Ongoing monitoring and associated management and mitigation measures set out in the EPRs would be implemented during operation of the Project by the relevant organisation.

Maintenance of the infrastructure would be undertaken by Department of Transport, or local Councils for pathways and service roads, in accordance with the *Road Management Act 2004 – Code of Practice*.

## ABOUT US

WSP is one of the world's leading engineering professional services consulting firms. We are dedicated to our local communities and propelled by international brainpower. We are technical experts and strategic advisors including engineers, technicians, scientists, planners, surveyors, environmental specialists, as well as other design, program and construction management professionals. We design lasting Property & Buildings, Transportation & Infrastructure, Resources (including Mining and Industry), Water, Power and Environmental solutions, as well as provide project delivery and strategic consulting services. With 36,000 talented people in more than 500 offices across 40 countries, we engineer projects that will help societies grow for lifetimes to come.

