Environment Effects Act 1978
Planning and Environment Act 1987

Environment Effects Statement Inquiry and Advisory Committee Report

Yan Yean Road (Stage 2) Upgrade

15 February 2021

VICTORIA State Government | Planning Panels Victoria

Environment Effects Act 1978

Inquiry pursuant to section 9

Planning and Environment Act 1987

Advisory Committee persuant to section 151

Amendment GC92

Yan Yean Road (Stage 2) Upgrade

15 February 2021

Con Tsotsoros, Chair

Elissa Bell, Member

Kate Partenio, Member

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Glossary and abbreviations

the Amendment	draft Amendment GC92 affecting the Nillumbik and Whittlesea Planning Schemes
CEMP	Construction Environmental Management Plan
CFA	Country Fire Authority
dB	Decibel
DELWP	Department of Environment, Land, Water and Planning
the Doreen River Red Gums	The two river red gums at 25 Doctors Gully Road, Doreen subject to the Heritage Overlay (HO191)
DoS	Degree of saturation
EE Ministerial Guidelines	Ministerial Guidelines for Assessment of Environmental Effects under the EE Act 1978
EES	Environment Effects Statement
EES Act	*Environment Effects Act 1978*
EMF	Environmental Management Framework
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)*
EPR	Environmental Performance Requirement
ERS	Environment Reference Standards
EVC	Ecological Vegetation Class
FFG Act	*Flora and Fauna Guarantee Act 1988*

IAC	Inquiry and Advisory Committee
IEA	Independent Environmental Auditor
Incorporated Document	Yan Yean Road (Kurrak Road to Bridge Inn Road) (Stage 2) Upgrade Project Incorporated Document
Jamluk and the Doreen Committee	Jamluk Pty Ltd and the Doreen Traders and Landowners Committee
LoS	Level of service
modified Option B	Version of the Bridge Inn Road intersection in Technical Note 3 (document 10)
MRPV	Major Road Projects Victoria (the Proponent)
NAC	Neighbourhood Activity Centre
NO_2	Nitrogen dioxide
NV Guidelines	Guidelines for the removal, destruction or lopping of native vegetation
Option A, B or C	Exhibited Bridge Inn Road intersection Option A, B or C
PAO	Public Acquisition Overlay
Plan Melbourne	Plan Melbourne 2017-2010: Metropolitan Planning Strategy
PM_n	Particulate matter with an aerodynamic diameter (millimetres) shown as a subscript number
the Project	Yan Yean Road (Stage 2) Upgrade
proposed road design	Exhibited version of the proposed road design, including Bridge Inn Road intersection Option B
RARE Northern Nillumbik	Roads and Roadside Ecology Northern Nillumbik
SEPP	State Environment Protection Policy
UGB	Urban Growth Boundary

Note: Any number following a zone or overlay code refers to a schedule number

Overview

Project	
The Project	Yan Yean Road (Stage 2) Upgrade
The Proponent	Major Road Projects Victoria
Project area	The project area is shown at Figure 1
Victorian statutory approvals	Cultural Heritage Management Plan – *Aboriginal Heritage Act 2006* Planning Scheme Amendment GC92 – *Planning and Environment Act 1987*
Commonwealth statutory approval	The Project – *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)*
Exhibition	31 August to 9 October 2020
Submissions	69 submissions received, as shown in Appendix A

Inquiry process	
The Inquiry	Con Tsotsoros (Chair), Elissa Bell, Kate Partenio
Assisted by	Kimberly Martin, Office of Planning Panels Victoria
Directions Hearing	27 October 2020 by video conference
Hearing	30 November and 1, 2, 3, 7, 8, 9, 10, 14, 15 and 16 December 2020 by video conference
Parties to the Hearing	Shown in Appendix C
Site inspections	Unaccompanied, 24 November 2020
Citation	Yan Yean Road (Stage 2) Upgrade Project (EES) [2021] PPV
Date of this Report	15 February 2021

Executive summary

(i) The Project

Yan Yean Road is a north-south arterial road predominantly servicing the Shire of Nillumbik and the City of Whittlesea. It is approximately 25 kilometres north-east of Melbourne's Central City, about 12 kilometres long, and located mostly outside of Melbourne's Urban Growth Boundary. Yan Yean Road forms part of a sparse road network. Plenty Road is the closest north-south arterial road about over 3.3 kilometres to the west. Bridge Inn Road and Kurrak Road intersect with Yan Yean Road at about 5.5 kilometres apart.

Increased traffic volumes from Melbourne's rapidly growing urban areas resulted in the need to duplicate Yan Yean Road between Diamond Creek Road and Kurrak Road. This was completed in 2019. Traffic volumes along Yan Yean Road between Kurrak Road and Bridge Inn Road have increased to between 20,000 and 24,000 vehicles each day. There has been an increase in accidents with congestion. Major Road Projects Victoria (MRPV) proposes to upgrade this section of Yan Yean Road to improve road safety, road capacity and network efficiency, and connections.

The Yan Yean Road Stage 2 Upgrade Project (the Project) includes: duplicating Yan Yean Road from two to four lanes; two new roundabouts; five new signalised intersections including Bridge Inn Road; upgrades to the existing Ironbark Road intersection; new street lighting, road signage, safety barriers, and landscaping; new shared use path on the western side and a footpath on the eastern side of the road.

The Minister for Planning determined that an Environment Effects Statement (EES) was required for the Project under the *Environment Effects Act 1978*.

Draft Planning Scheme Amendment GC92 (the Amendment), prepared concurrently with the EES, proposes Project related changes to the Nillumbik and Whittlesea Planning Schemes. The Amendment seeks to apply the Public Acquisition Overlay to land needed for the Project area, apply Specific Control Overlay Schedule 13 to project land, and incorporate the *Yan Yean Road (Kurrak Road to Bridge Inn Road) (Stage 2) Upgrade Project Incorporated Document* into the relevant planning schemes.

(ii) The Inquiry and Advisory Committee process

The Minister for Planning appointed the Inquiry and Advisory Committee on 26 August 2020 to consider the EES in accordance with his approved Terms of Reference (see Appendix A). In summary, the IAC is required to:

- review and consider the EES and public submissions received
- consider and report on the potential significant effects of the Project
- identify any measures necessary and effective to avoid, mitigate or manage the environmental effects of the Project
- report its findings and recommendations to the Minister for Planning.

The EES and the Amendment were exhibited from 31 August to 9 October 2020 and received 69 submissions. An 11-day public hearing was held by video conference from 30 November to 16 December 2020.

(iii) Inquiry and Advisory Committee findings

On balance, considering the overall negative and beneficial environmental effects, the IAC considers the environmental effects of the Project can be managed to an acceptable level and the Project approvals should be granted. This is subject to changes associated with Inquiry and Advisory Committee's findings and recommendations.

Bridge Inn Road intersection

The Inquiry and Advisory Committee finds the Option B Bridge Inn Road intersection design, as modified by MRPV, to be acceptable subject to the following findings.

Old Doreen Store and Doreen River Red Gums

The Old Doreen Store at 920A Yan Yean Road, Doreen has sufficient local heritage significance, though it is not formally recognised through the Heritage Overlay. The Bridge Inn Road intersection design should retain the Old Doreen Store's heritage significance.

The Doreen River Red Gums are subject to the Heritage Overlay (HO191) and should be retained and appropriately managed through the Bridge Inn Road intersection design.

Trees

Effort should be made to avoid and minimise impacts on the River Red Gums at 990 Yan Yean Road when finalising the road design. Any trees able to be avoided should be included in the updated no-go zones.

Doreen Neighbourhood Activity Centre

A direct right turn should be provided into the Bridge Inn Road service road and the Activity Way/Yan Yean Road intersection should be signalised to better support access at the Doreen Neighbourhood Activity Centre.

There should be an additional Environmental Performance Requirement (EPR) which requires business related measures for the Activity Centre to be prepared and implemented in consultation with Department of Transport, Nillumbik Council and Whittlesea Council.

Pedestrian and cycling connectivity

Pedestrian and cyclist connectivity at the Bridge Inn Road intersection requires improved access to the Doreen Neighbourhood Activity Centre from the proposed shared path and bus stops, and along Doctors Gully Road to the Doreen Primary School. The final design plans should include:

- a link from the shared path into the southern end of the Doreen Neighbourhood Activity Centre
- a footpath along Doctors Gully Road linking to the Doreen Primary School
- improved connectivity between bus stops on Yan Yean Road and the Doreen Neighbourhood Activity Centre.

Individual property impacts

To ensure suitable access, either a direct right turn out of the Doreen Recreation Reserve, or a U-turn facility to the north of the exit, should be provided to enable traffic to exit to the south.

The impact on 25 Doctors Gully Road resulting from partial land acquisition will not be significant if the U-turn facility shown in modified Option B is provided. The Project design should be refined to minimise the extent of acquisition required at 25 Doctors Gully Road and to consider a direct right turn out of the property.

Modified Option B will result in a significant, but reasonable and justified land acquisition at 900 Yan Yean Road.

Cookes Road intersection

There is sufficient traffic justification to extend the duplication of Yan Yean Road further north beyond Bridge Inn Road to Cookes Road. This should be progressed through a separate environmental assessment. Duplication north of the Project area should be pursued as a separate concurrent project so that its environmental impacts can be assessed without delaying the Stage 2 Project.

Visual impact, surplus land and master plan

The Landscape Strategy and the Environmental Performance Requirements (EPRs) will ensure that Bridge Inn Road intersection will result in an acceptable visual impact on its surrounds.

A Surplus Land Master Plan should be prepared for the Bridge Inn Road intersection, six surplus land areas and the Doreen Recreation Reserve in consultation with Nillumbik and Whittlesea Councils.

Yarrambat Park environs

Yarrambat Park public golf course fence

The proposed 36-metre tall fence along the Yarrambat Park public golf course interface with Yan Yean Road will not result in acceptable impacts on the surrounding ecology and landscape. It should be removed from the Project. The extent of native vegetation removal outside the Project area and the Specific Controls Overlay should be resolved during the detailed design. The IAC does not a support a separate approvals process for this aspect.

Median vegetation

The proposed wide median between Bannons Lane and Laurie Street represents an opportunity to minimise the Project's potential native vegetation impacts. However, it is not necessary to avoid any significant environmental impact in this location. The median is unlikely to avoid the impacts on the matted flax-lily plants and studley park gum and should not be treated as a design constraint if a better outcome can be achieved.

Traffic and access

The Project design from the Yarrambat Park southern entry to Jorgensen Avenue does not provide for safe and efficient access for abutting uses, particularly the Country Fire Authority, Pony Club, 724 Yan Yean Road and the Neighbourhood Safer Place.

Opportunities should be explored, and informed by a road safety audit, to get a better net outcome in this area that considers property access and visual amenity. The detailed design process should consider:

- more direct access to the Yarrambat Park golf course from the north when the site is used as a Neighbourhood Safer Place

- signalised access for the Country Fire Authority
- safe and efficient egress from the Pony Club including for southbound horse floats
- U-turns for long vehicles on Yan Yean Road, ideally in north and south directions near the Yarrambat Park northern access
- a service road along the frontage of the residential properties between Bannons Lane and Laurie Street
- allowing a car and caravan to stop outside 724 Yan Yean Road without obstructing passing traffic
- provision for cyclists from the residential properties between Laurie Street and Bannons Lane to ride to and from the shared path on the west side of Yan Yean Road.

Ironbark Road environs

The design of Ironbark Road should ensure that the bus stop and right turns on Ironbark Road into the Yarrambat Primary School do not adversely impact the performance and safety of the road network. Provision should be made for cyclists on Ironbark Road in the Project area.

The design for pedestrian and cyclist paths at the Vista Court intersection should be reviewed to minimise potential conflicts with motorists. EPR TP1, modified with the requirement of a road safety audit, is sufficient to manage this review.

The Project design should be reviewed so that it adequately accommodates the Yarrambat Primary School traffic. EPR TP1 is adequate to manage this impact.

The environmental impact on 540-550 Yan Yean Road has been appropriately managed.

Childcare and early learning centre and veterinary hospital

The impact on the Smile Child Care Centre by the loss of the direct right turn is mitigated by the U-turn facility at North Oatlands Road and improvements to road safety and capacity brought about by the duplication of Yan Yean Road.

The need for a left turn deceleration lane into the Centre should be investigated as a part of the process of optimising the design of the road under EPR TP1. This is sufficient to manage this issue.

North Oatlands Road intersection

There will be impacts on properties around the North Oatlands Road intersection due to the road widening on Yan Yean Road and North Oatlands Road. The EPRs proposed to help minimise these impacts are appropriate.

St Michael's Anglican Church

The Project should better respond to the heritage significance of St Michael's Anglican Church at 469-475 Ironbark Road, Yarrambat, by amending EPRs HH1, HH3 and the Incorporated Document.

Traffic, transport and access

Property access

EPR TP1 as proposed to be modified by MRPV will provide adequate assurance that the road design will address design issues relating to individual property access points.

The spacing of U-turns for long vehicles is reasonable subject to providing U-turns at or near Bridge Inn Road.

Orchard Road and Youngs Road intersections

It is reasonable to signalise the Orchard Road intersection. The Project will negatively impact numerous properties in Orchard Road, however the EPRs are sufficient to minimise impacts. Affected owners subject to the public land acquisition can pursue compensation through the *Land Acquisition and Compensation Act 1986*.

The need for pedestrian signals at the Youngs Road roundabout should be addressed through the guidance of EPR TP1.

Road safety, construction impact and operational traffic volume

EPR TP1 is sufficient to ensure that lighting is provided to an appropriate standard. The reduction of speed limits is outside the ambit of this project.

EPR TP2 should be modified to require mitigation of construction impacts that have a significant safety or operational risk. The success of any medium to long term mitigation measures should be assessed after implementation.

The traffic redistribution on local roads resulting from the Project does not require management by MRPV following completion of construction.

Other matters

The Ironbark Road designation and Pioneer Road are outside the Terms of Reference of the Inquiry. There is no demonstrated need for the Project to seal Pioneer Road.

Ecology

Native vegetation

The final impacts on native vegetation are uncertain and will remain high. The EES has applied an appropriate approach to native vegetation, however it would have benefitted from exhibiting a complete assessment. Preparatory works involving the clearance of native vegetation should not be exempt from the requirement for the Environmental Management Framework (EMF). It is appropriate to provide information for all Application Requirements under the *Guidelines for the removal, destruction or lopping of native vegetation* up front.

The Project should provide mitigation for consequential losses from fences needing to be relocated as a result of partial land acquisition.

Trees

The Arboriculture report and Landscape Strategy have appropriately characterised the existing trees in the Project area and their social and cultural values. The Project will result in a significant number of trees being removed. The final number of trees to be impacted is

uncertain, but likely to remain significant. The EPRs are appropriate for tree avoidance, mitigation and management.

All project works including site compounds outside the Project area should be subject to the EMF and EPRs.

Significant communities and species

The proposed impact to *Flora and Fauna Guarantee Act 1988* listed communities is not likely to be significant.

The potential effects on the matted flax-lily and studley park gum are unlikely to be significant to the species even under the worst-case scenario. The existing EPRs could be tightened with respect to avoidance measures for the studley park gum and other listed flora species.

The EES has appropriately assessed the potential effects on listed fauna species. The Project is unlikely to have a significant impact on these fauna species if it implements recommendations in this report.

Potential habitat for significant fauna species, such as for the grey-headed flying fox, brush-tailed phascogale and tussock skink, should be mapped to inform management measures.

Trees with hollows should be identified for additional avoidance efforts before mitigating and minimising loss by relocating hollows through a new EPR. Alternatively, it could be achieved by adjusting the scientific criteria for the Landscape Strategies 'Cultural Value of Vegetation Assessment'.

Swift parrot

The potential for significant and cumulative impacts on the swift parrot have been assessed consistent with the Ministerial Guidelines for assessment of environmental effects under the *Environment Effects Act 1978*.

The Project is unlikely to cause significant impacts to the swift parrot when considered alone or when considered cumulatively with other nearby projects therefore, a Swift Parrot Rehabilitation Plan is not warranted to mitigate any significant effects.

The EPRs provide for replacement planting of preferred foraging tree species however, given the time taken for trees to grow to a large size which would be preferred by the swift parrot, the IAC does not consider this mitigation measure will be particularly effective in the short term.

Fauna management

The potential for impacts to wildlife has been considered, however there is insufficient detail of mitigation measures for the IAC to determine the effectiveness of proposed EPRs. The EPRs are deficient with respect to potential measures to minimise collision risks with kangaroos and other large non-arboreal animals, and with providing habitat connectivity.

Environment

Air quality, greenhouse gases and sustainability

The Project will result in acceptable operational air quality. The existing EPR, as amended by Mr Conway, is appropriate to managing potential impacts.

The EES appropriately considered potential impacts of greenhouse gases. An EPR informed by the sustainability mitigation measure for risks 16 and 36 should be included in the final EPRs. An EPR to ensure Timber Reuse Strategies are implemented should be included in the final EPRs.

Surface water

The Project is unlikely to have a significant impact on surface water environments. Subject to minor changes, the EPRs are appropriate to manage potential changes to stormwater flows and risks to receiving water environments.

Noise and vibration

An EPR requirement for a Construction Noise and Vibration Management Plan would further assist in informing the implementation and effectiveness of proposed mitigation measures. Reference to the VicRoads Traffic Noise Reduction Policy (2005) in EPR N2 should be removed as it will not provide effective mitigation. A requirement to mitigate potential significant noise effects on sensitive receptors in consultation with property owners should be included in the EPRs.

Construction laydown areas and bushfire management

The five potential construction laydown areas have been appropriately nominated, subject to them being reinstated to their original condition after the Project is completed.

The Incorporated Document does not need to require an environmental audit before preparatory works commence on a laydown area with non-sensitive land uses if the Project does not propose to introduce a sensitive land use or transport soil offsite.

Planning and urban design

The proposed partial land acquisitions are appropriate and justified. They will result in an acceptable impact on private properties and existing public open space if the relevant EPRs are implemented.

The Project generally responds appropriately to potential amenity impacts. However, privacy should be considered during the detailed design stage if existing screening on private property is removed or privacy eroded as a result of the road reserve being brought closer to a dwelling.

The Project design can appropriately respond to the area's landscape character if the relevant EPRs set out in Appendix E of this report are implemented.

Economic and social issues

The Project will result in:

- acceptable economic impacts if the IAC's recommendations for the Bridge Inn Road intersection are implemented
- an acceptable impact on social and cultural values if it implements EPRs recommended in Appendix E.

Private financial impact and property value are outside the scope of the Inquiry.

Other issues

Matters outside the scope of the Project include:

- sewerage connection to private properties
- capacity and potential contaminated land and groundwater at the Nillumbik recycling and recovery centre
- Diamond Creek Road and the Civic Drive roundabout in Greensborough
- 40-60 Pioneer Road, Yarrambat and 175-199 and 219 Ironbark Road, Diamond Creek.

Nillumbik Council should consider leading discussions with Yarra Valley Water to provide sewerage connections to 722-758 Yan Yean Road during the construction phase. If Yarra Valley Water does not agree, the Project design should consider taking a precautionary approach by enabling space for a connecting pipe under the roadway to minimise works and costs when the relevant authority is ready to commence sewerage works.

Environmental Management Framework

MRPV should inform the Minister for Planning of changes made to the EMF between exhibition and seeking approval from the Minister. MRPV is the appropriate approver of the Construction Environmental Management Plan (CEMP). The IEA's role in reviewing the CEMP and other relevant plans should be included in the EPRs.

Further oversight of the detailed design process is required to ensure impacts are mitigated as much as possible. Six monthly audits should be the minimum requirement. The EPRs could more explicitly allow for continuous improvement resulting from audits and complaints reporting.

Integrated assessment

On balance, considering the negative and beneficial environmental effects overall, the Inquiry and Advisory Committee finds the environmental effects of the Project can be managed to an acceptable level subject to implementing the recommendations in this report. The Project approvals should be granted.

The version of the EPRs in Appendix E and the Incorporated Document in Appendix F can appropriately facilitate the Project.

There is unlikely to be significant impact on matters of national environmental significance subject to changes to the EPRs recommended in this report.

The Amendment is well founded, strategically justified and will deliver net community benefit and sustainable development, as required by Clause 71.02-3. It should progress subject to:

- extending the Specific Controls Overlay to include Yarrambat Park public golf course land where greens are proposed to be reconfigured
- rezoning Yan Yean Road Stage 2 land from Road Zone Category 2 to Road Zone Category 1
- other changes which address more specific issues raised in submissions.

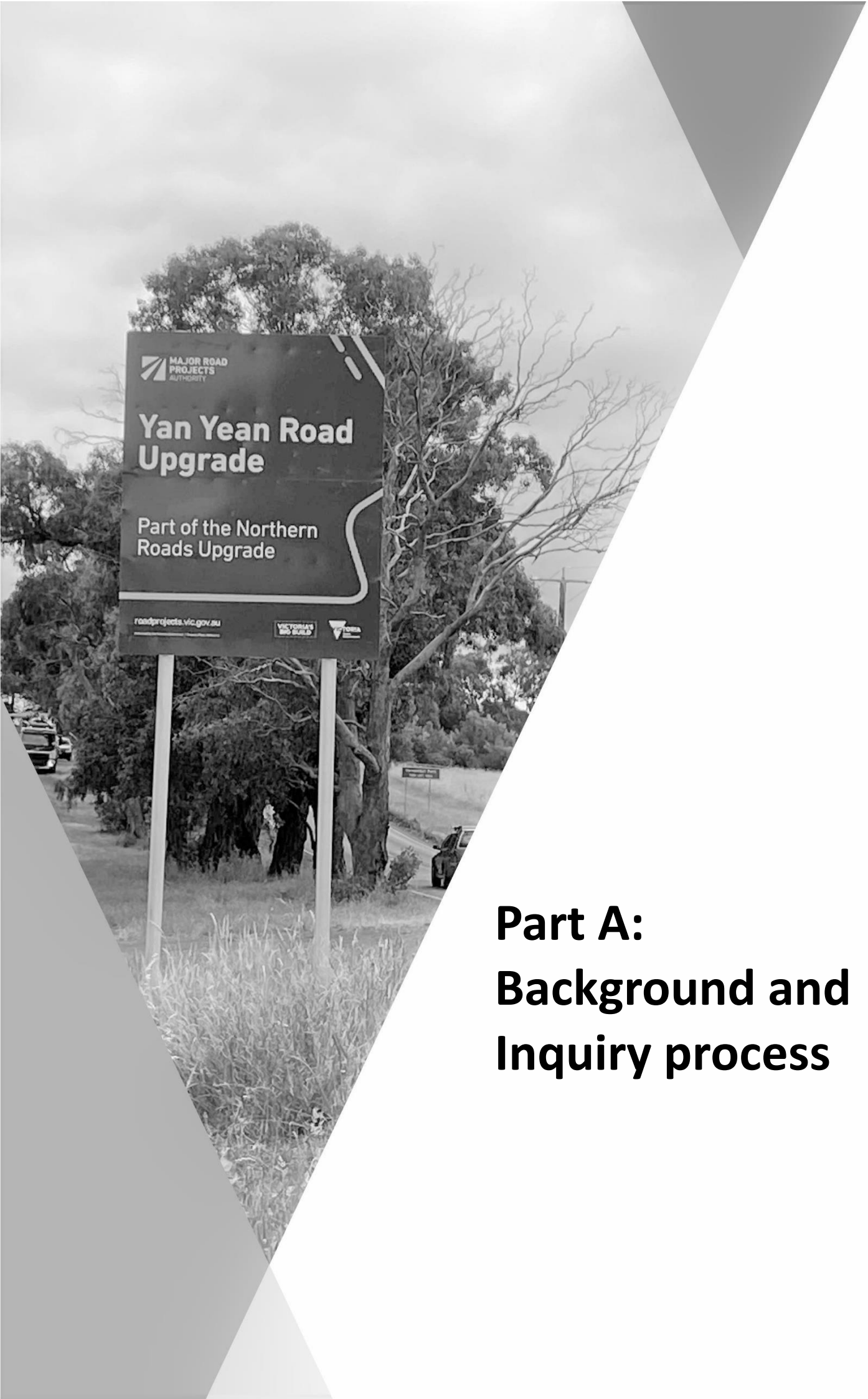
(iv) Recommendations

Based on the reasons set out in this report, the Inquiry and Advisory Committee recommends that the Yan Yean Road Stage 2 Project be approved subject to the following changes:

1. **Adopt the Environmental Effects Statement Environmental Performance Requirements shown in Appendix E.**
2. **Prepare, adopt and approve Planning Scheme Amendment GC92 subject to:**
    a) **extending the Specific Controls Overlay to include Yarrambat Park public golf course land required for the proposed golf course realignment works.**
    b) **revising the Incorporated Document as shown in Appendix F**
    c) **rezoning Yan Yean Road Stage 2 land from Road Zone Category 1 to Road Zone Category 2.**

The Inquiry and Advisory Committee makes the following further recommendations:

3. **That Major Road Projects Victoria:**
    a) **assess, through a separate concurrent project, the duplication of Yan Yean Road further north beyond Bridge Inn Road to Cookes Road so that its environmental impacts can be assessed without delaying the Yan Yean Road Stage 2 Project**
    b) **update the Cultural Value of Vegetation heatmap assessment to:**
        - **attribute scientific value to listed flora species to assist in avoiding and minimising impacts on these species through the implementation of Environmental Performance Requirements AR1 and V1**
        - **attribute scientific value to hollow bearing trees.**



Part A: Background and Inquiry process

1 Introduction

1.1 The Inquiry

On 14 October 2018, the Minister for Planning determined that an Environment Effects Statement (EES) was required for the Yan Yean Road Stage 2 Upgrade Project (the Project) under the *Environment Effects Act 1978* (EES Act). Reasons for his decision were:

- The project has the potential for significant effects on biodiversity values as a result of the proposed clearance of a very large number of trees and habitat, including its contribution to potential cumulative effects on the critically endangered *Lathamus discolor* (Swift Parrot) listed under the *Flora and Fauna Guarantee Act 1988* and the *Environment Protection and Biodiversity Conservation Act 1999.*
- Assessment of aspects of the design and potential refinements is required to understand their associated impacts, including where further avoidance and minimisation of tree loss is possible (in particular loss of preferred foraging trees for Swift Parrots and high retention trees of ecological and cultural value).

Planning provisions for Stage 1 of the Yan Yean Road duplication were introduced into the Nillumbik Planning Scheme through Amendment C67 on 4 October 2012.

The Minister for Planning appointed the Inquiry and Advisory Committee (IAC) on 26 August 2020 to consider the Project's EES in accordance with the Terms of Reference approved by the Minister for Planning on 16 August 2020. The IAC comprised Con Tsotsoros (Chair), Elissa Bell and Kate Partenio.

The Terms of Reference are provided at Appendix A.

The Project was determined a controlled action under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 15 February 2019 due to potential impacts on listed threatened species and communities. The EES process is an accredited process for the purposes of assessment of the matters of national environmental significance and therefore the Minister for Planning's assessment under the EE Act will be provided to the Commonwealth Minister for the Environment to inform that approval decision. The Terms of Reference require the IAC to report specifically on matters of national environmental significance to inform this communication.

1.2 Draft Planning Scheme Amendment GC92

Draft Amendment GC92 (the Amendment) affects the Nillumbik and Whittlesea Planning Schemes and seeks to facilitate the Project by:

- applying the Public Acquisition Overlay to land in the Project area needed to be acquired
- amending the existing Public Acquisition Overlay Schedules 1 and 2 in the Nillumbik and Whittlesea Planning Schemes respectively to change the purpose of the acquisition to "road purposes" and make the Head of Transport for Victoria the acquiring authority
- applying Specific Control Overlay Schedule 13 to project land to:
  - allow land to be used and developed in accordance with the controls in the *Yan Yean Road (Kurrak Road to Bridge Inn Road) (Stage 2) Upgrade Project Incorporated Document* (Incorporated Document)
  - exempting the need for further planning permits.

The Amendment applies to land shown in Figure 1.

The Incorporated Document requires an Environmental Management Framework (EMF) and Environmental Performance Requirements (EPRs) addressing various environmental and social aspects. The EMF will set out the process and timing for development of various plans and procedures including the CEMP. The EMF will need to be approved by the Minister for Planning before works commence (excluding preparatory works).

Various conditions are included in the Incorporated Document relating to native vegetation, heritage, dry stone walls, green wedge land, utilities and other aspects.

The Amendment exhibited with the EES is included in the EES Attachment I.

To streamline the assessment of the Project, the Minister for Planning appointed the Inquiry members as an Advisory Committee under section 151 of the *Planning and Environment Act 1987* to consider the Amendment.

1.3 Terms of Reference

The Terms of Reference shown in Appendix A of this report require the IAC to produce a report to inform the Minister for Planning's Assessment of the Project under the *Environment Effects Act 1978*, advise the Minister whether the Amendment contains appropriate provisions, and to recommend any changes to it.

Terms of Reference sections 32 and 33 set out what the IAC's written report must include. Chapter 18 of this report explains how the report responds to each of these requirements.

1.4 Procedural issues

(i) Hearing format

In late March 2020, the Victorian government introduced physical distancing restrictions in response to a Coronavirus disease pandemic, otherwise known as COVID-19. These restrictions did not enable a public hearing to be held in person.

The *COVID-19 Omnibus (Emergency Measures) Act 2020* (COVID-19 Act) was introduced on 25 April 2020. This Act states that a "*panel is not required to hear the person in person, but may instead require the person or their representative to appear and be heard at a specified time by electronic means*".

On 15 October 2020, the IAC advised submitters that the Directions Hearing would be conducted by video conference using Zoom because government restrictions did not enable it to be held in person.

At the Directions Hearing, the IAC informed parties of its intention to conduct the Hearing by video conference and sought comments on the appropriateness of recording it. No party objected to this format or to the recording, although there were some unresolved logistical issues related to recording the Hearing. The IAC subsequently decided not to record the Hearing for resource and logistical reasons.

The Hearing was publicly live-streamed each day.

(ii) Scope of submissions

The IAC advised parties at the Direction Hearing and in formal directions, the scope of its consideration is limited by, and specified in, the Terms of Reference. Submissions must relate to the proposed Yan Yean Road Upgrade (Stage 2) Project and its environmental effects. Any submission made outside of this scope is not further addressed in this report.

1.5 Structure of this report

The IAC considered the exhibited EES and Amendments, all submission and evidence provided at the Hearing by parties listed in the Overview table and all written submissions. In addressing the issues raised in those submissions, the IAC has been assisted by the information provided to it as well as its observations from the site inspection.

There were three key locations in the Project area where environmental aspects needed to be further considered to guide the most suitable design. These locations were the Bridge Inn Road intersection, Yarrambat Park area and Ironbark Road area. In this report, the IAC first addresses and considers all environmental aspects of these three areas before assessing the individual environmental aspects of the Project as a whole.

This Report sets out the issues under the following headings:

Part A: Background and Inquiry process

- The Project
- Inquiry approach to key issues and assessment of effects
- Legislative and policy framework

Part B: Environmental Effects Assessment

- Bridge Inn Road intersection
- Yarrambat Park environs
- Ironbark Road environs
- Traffic, transport and access
- Ecology
- Environment
- Planning and urban design
- Economic and social issues
- Other issues
- Environmental Management Framework
- Integrated assessment
- Structure and content of the Amendment

Part C: Matters of national environmental significance

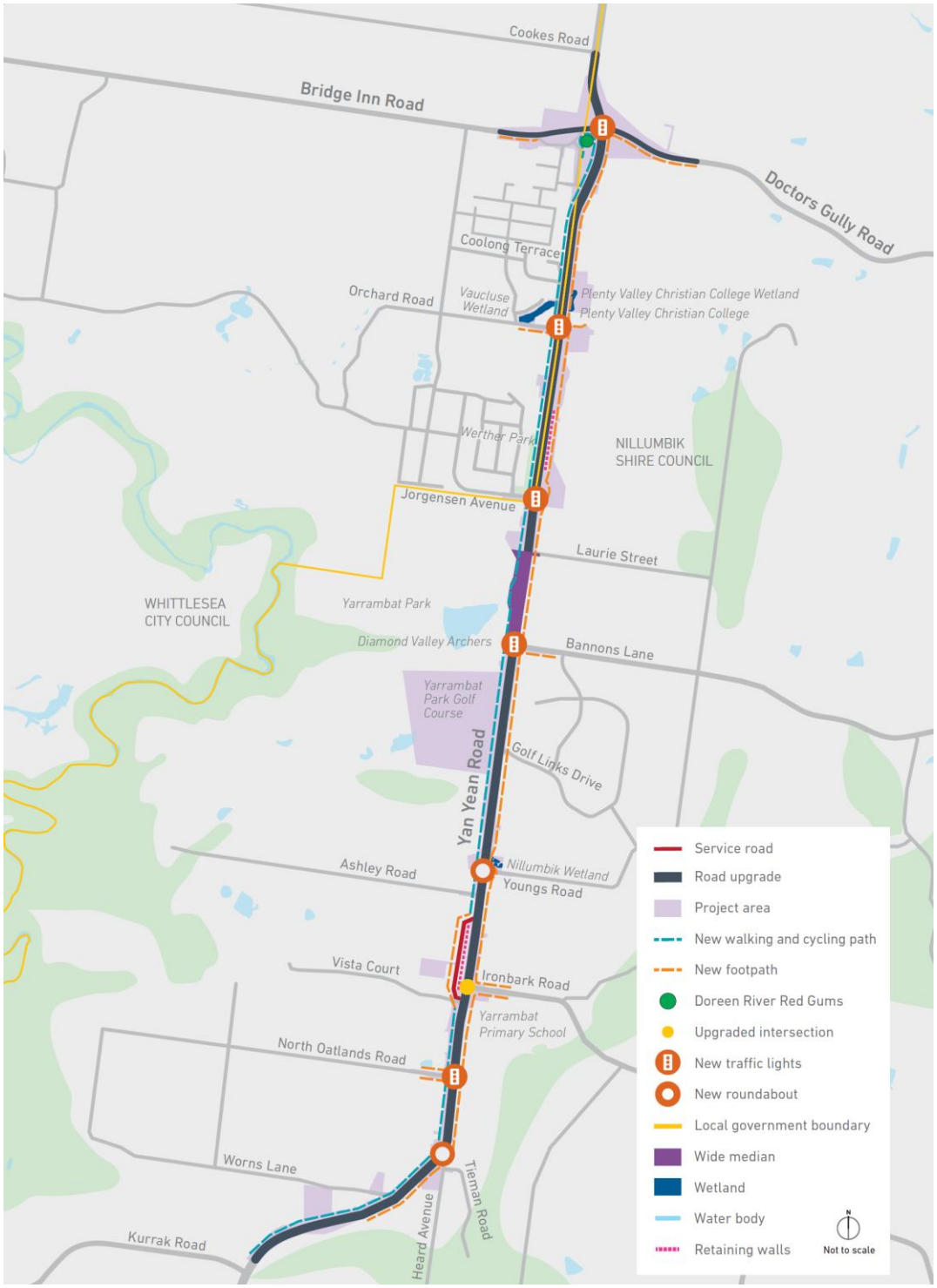
- Swift parrot, matted flax-lily and grey-headed flying fox
- Response to Terms of Reference.

2 The Project

2.1 The Project area and surrounds

Yan Yean Road is a significant north-south arterial road servicing the northern suburbs approximately 25 kilometres north-east of Melbourne's Central Business District. The Project area is provided in Figure 1.

Figure 1 Project area and surrounds



The EES describes it as *"the area for which all planning and environmental approvals are being sought for the Project and within which all impacts are proposed"*. The Project area includes the existing road reserve and land required for all options being considered. The surrounding environment is characterised by low density residential, rural conservation land and public park and recreation, being the Yarrambat Park public golf course.

2.2 The Project

The Project proposes to duplicate a 5.5 kilometre portion of Yan Yean Road between Kurrak Road, Yarrambat and Bridge Inn Road, Doreen. The Project includes:

- duplicating the existing two lanes to four (two in each direction)
- two new roundabouts at Heard Avenue and Youngs Road
- five new signalised intersections at Bannons Lane, Jorgensen Avenue, North Oatlands Road, Orchard Road and Bridge Inn Road
- upgrades to the 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
- new 3-metre-wide shared use path on the western side and 1.2-metre-wide footpath on the eastern side of Yan Yean Road
- installation of continuous safety barriers running along both sides of the road and in the centre median to protect against tree and car collisions.

2.3 Relevant alternatives

The EES considered three options to improve the safety of this section of road. The first option represented the absolute minimum of works necessary to improve safety including installation of guard rails, wire rope safety barriers, minor upgrades to improve access and the use of signage. Carriageways, intersections, pedestrian and cycling facilities would remain the same under this option.

The second option was to fully upgrade Yan Yean Road between Kurrak Road and Jorgensen Avenue only. The third and preferred option was to extend the Option 2 area to Bridge Inn Road.

In developing the Project design, the preferred cross-section was chosen to achieve a balance between minimising the Project's footprint (and therefore impacts) and achieving the project objectives. Key features of the Project design included a design speed of 70 kilometres per hour, a 2.2 metre centre median with wire rope safety barrier, walking and cycling paths and flexible guard fence between traffic and shared use lanes to avoid vehicle run-off. In total, this design resulted in a cross-section width of 24.2 metres.

Several options for the Bridge Inn Road intersection were considered before the EES adopted Option B as the preferred option for its detailed assessment. Following public consultation, MRPV supported a modified version of Option B (modified Option B) as set out in Technical Note 3.

The IAC directed further details be provided regarding the application of the *Guidelines for the removal, destruction or lopping of native vegetation* for assessing options and estimating potential impacts. This is discussed further in chapters throughout this report.

3 Inquiry approach to key issues and assessment of effects

3.1 Draft evaluation objectives

Draft evaluation objectives are provided in the EES Scoping Requirements. The Scoping Requirements explain the objectives:

> are intended to identify desired outcomes in the context of key legislative and statutory policies as well as the principles of ecologically sustainable development and environment protection, including net community benefit. They provide a framework to guide an integrated assessment of environmental effects, in accordance with the Ministerial Guidelines, and for evaluating the overall implications of the project. These objectives may be refined by the proponent or DELWP as the EES is prepared.

Chapter 4 of the EES sets out draft evaluation objectives which were adopted from the Scoping Requirements as shown in Table 1.

Table 1 Draft evaluation objectives

Draft evaluation objective	Relevant legislation
Transport capacity and connectivity To provide for an effective corridor through the northern outer suburbs of Melbourne, to improve travel efficiency, road safety, and capacity.	*Road Management Act 2004* *Transport Integration Act 2010* *Planning and Environment Act 1987* *Major Transport Projects Facilitation Act 2009*
Biodiversity To avoid or, at least, minimise adverse effects on native vegetation (including remnant, planted, regenerated and large old trees), listed migratory and protected species/ecological communities and then to address offset requirements consistent with relevant state and commonwealth policies.	*Environment Protection and Biodiversity Conservation Act 1999* *Flora and Fauna Guarantee Act 1988* *Wildlife Act 1975* *Catchment and Land Protection Act 1994* *Planning and Environment Act 1987*
Social and cultural values 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.	*Aboriginal Heritage Act 2006* *Heritage Act 2017* *Planning and Environment Act 1987* *Transport Integration Act 2010*

The EES Scoping Requirements:

- provided for a focused assessment based on the above three evaluation objectives
- tasked the EES with identifying any other potential adverse environmental effects of the Project, such as on social, land use, community amenity and planning, and canvass any environmental management approach and performance measures to ensure any effects are identified and avoided, minimised or mitigated.

3.2 EES identified key issues

The EES Scoping Requirements set out key issues or risks that the Project poses to achieve the draft evaluation objectives. These were also adopted by the EES and formed the focus of investigations.

Traffic capacity and connectivity

The EES identifies key issues as:

- Contribution to an integrated and sustainable transport system, including active transport
- Transport connectivity and capacity across the northern outer suburbs of Melbourne, including network resilience and redundancy
- Effects of any redistribution of traffic and implications for residents, residential areas and businesses during construction and operation
- Connectivity of pedestrian and cycling networks across the northern outer suburbs of Melbourne and opportunities for future linkages
- Reliability of predictions of future travel behaviour and transport demand over time.

Biodiversity

The EES identifies key issues as:

- potential for significant effects on biodiversity values including effects associated with threatening processes listed under the EPBC Act and Flora and Fauna Guarantee Act 1988 (FFG Act) including the swift parrot, matted flax-lily, studley park gum and large old trees
- potential for direct or indirect impact on vegetation and other landscape elements used by fauna listed under the EPBC Act, FFG Act and/or Department of Environment, Land, Water and Planning (DELWP) Advisory Lists
- potential loss or degradation of habitat (and/or habitat connectivity) including tree hollows, existing canopy and woody debris, due to removal of trees
- potential impacts to matters of national environmental significance through erosion, sedimentation and contamination of watercourses and groundwater near and downstream from the project area resulting from construction and operation.

Social and cultural

The EES identifies key issues as:

- Potential for adverse impacts on social and cultural values of trees, such as the Doreen River Red Gums located on the corner of Yan Yean Road and Doctors Gully Road.
- Potential for adverse impact on local amenity including visual impact, such as through reduction in canopy cover.
- Potential adverse effects on Aboriginal cultural heritage places and values.
- Potential adverse effects on historical cultural heritage values, especially buildings, properties, trees, archaeological sites and precincts.
- Potential adverse effects on the urban landscape that provide a range of functions (e.g. visual amenity, cooling from vegetation and shade).

3.3 Evaluation framework

Consistent with the Scoping Requirements, MRPV undertook a risk-based assessment to understand the potential impact of the Project on the environment. Key steps undertaken in this approach, outlined in Chapter 4 of the EES were to:

- Characterise existing conditions
- Undertake consultation to further understand key issues
- Undertake an environmental risk assessment
- Assess key impacts associated with key issues and risks
- Specify fundamental requirements for environmental performance (EPRs) which would govern the Project's further design, construction and operation.

The risk and impact assessments were iterative in that initial and residual risk ratings were considered following the assumed implementation of standard environmental practice and project-specific EPRs, respectively. Risk ratings were categorised in increasing severity from Low to High. These were underpinned by likelihood and consequence criteria provided in the Environmental Risk Report[1].

Table 2 Likelihood criteria

Likelihood	Description
Almost certain	- 76-99% Has occurred before and is expected to occur again - Is expected to occur each year or more frequently - 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
Likely	- 51-75% Has occurred before with a chance of it occurring again - Has occurred several times at the Department, Group, Division, Program or Project before - 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
Possible	- 26-50% Has occurred before with a chance of occurring again - Has occurred at the Department, Group, Division, Program or Project once before - There are some controls that need improvement, however unless there is improvement the risk may eventuate
Unlikely	- 6-25% Has occurred elsewhere before, therefore a small chance of occurring - 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
Rare	- 0-5% Has never occurred but may occur - Is expected to occur 1/100 or more years - 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

[1] EES Attachment III

external circumstances outside of the control of the organisation

Source: Chapter 4 of EES

Table 3 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 moderate degree of impact on an environmental asset, value or use of moderate or higher significance
Insignificant	A very low degree of impact on an environmental asset, value or use

Source: Chapter 4 of EES

Table 4 Risk matrix

Likelihood	Consequence level				
	Insignificant	Minor	Moderate	Major	Critical
Almost certain	Medium	Significant	High	High	High
Likely	Medium	Medium	Significant	High	High
Possible	Low	Medium	Medium	Significant	High
Unlikely	Low	Low	Medium	Medium	Significant
Rare	Low	Low	Low	Medium	Medium

3.4 Discussion

The IAC has examined each of the objectives under the headings used by MRPV in the EES and has made findings on the adequacy of work completed to date, commented on submissions made to the IAC and, in some cases, makes recommendations for further work. The identified key issues were considered by the IAC in assessing the appropriateness of elements of the reference design. In particular for key areas such as the Bridge Inn Road intersection, Yarrambat Park environs and Ironbark Road environs.

The IAC considers that the evaluation objectives adopted by MRPV in the EES are complete and do not need further refinement or additional items.

The IAC has adopted the likelihood and consequence criteria used by MRPV and has reported impacts accordingly, where relevant.

4 Legislative and policy framework

4.1 State approval process

As identified in Chapter 1, the Project requires assessment under the State EE Act.

The EES process is an assessment process only, it does not result in approval for the Project, instead it informs project approvals. The key State project approval required is a Planning Scheme Amendment under the *Planning and Environment Act 1987*. The Incorporated Document to be introduced to the planning schemes is the key statutory instrument for environmental management of the Project.

The Project may require several other approvals as outlined in the EES, including:

- an approved Cultural Heritage Management Plan under the *Aboriginal Heritage Act 2006* to manage works in areas of cultural heritage sensitivity
- a permit to remove listed flora and fauna under the *Flora and Fauna Guarantee Act 1988*
- an authority to take or disturb wildlife under the *Wildlife Act 1975.*

4.2 Commonwealth approval process

As identified in Chapter 1, the Project was deemed a 'controlled action' under the EPBC Act and the EES process is an accredited process to assess impacts on matters of national environmental significance.

Under the EPBC Act, the Minister for Environment will make a decision on whether or not to approve the Project or to approve it subject to conditions.

4.3 State and local planning policy

Technical Report H (Planning and land use impact assessment) sets out the relevant State and local planning policy clauses, as summarised below.

Clause 11: Settlement

Clause 11 seeks to:

- promote sustainable growth and development (11.01-1S Settlement)
- link activity centres by transport (11.01-1R Settlement – Metropolitan Melbourne, 11.03-1S Activity Centres and 11.03-1R Activity Centres – Metropolitan Melbourne)
- facilitate orderly development and the timely delivery of infrastructure (11.02-2S Structure Planning)
- locate urban growth close to transport corridor and services (11.03-2S Growth areas).

Clause 12: Environmental and Landscape Values

Clause 12 seeks to:

- protect and conserve Victoria's biodiversity (12.01-1S Protection of Biodiversity)
- ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation (12.01-2S Native Vegetation Management)

- protect and enhance river corridors, waterways, lakes and wetlands (12.03-1S River Corridors, Waterways, Lakes and Wetlands).

Clause 13: Environmental Risks and Amenity

Clause 13 seeks to:

- strengthen the resilience of communities by seeking to ensure that settlements and land uses appropriately respond to risks and environmental constraints, including flooding (13.03-1S Floodplain Management), land contamination (13.04-1S Contaminated and Potentially Contaminated Land)
- ensure amenity is not prejudiced by noise and air quality emissions (13.05-1S Noise Abatement, 13.06-1S Air Quality Management).

Clause 14: Natural Resource Management

Clause 14 seeks to:

- protect the State's agricultural base by preserving productive farmland (14.01-1S Protection of agricultural land, 14.01-R Protection of agricultural land – Metropolitan Melbourne)
- protect and restore catchments, water bodies, ground water and the marine environment (14.02-1S Catchment Planning and Management)
- protect water quality (14.02-2S Water Quality).

Clause 15: Built Environment and Heritage

Clause 15 seeks to:

- protect and enhance Melbourne's urban environments, including along transport corridors by embodying the principles of place making, managing road space, and the creation of boulevards in existing urban areas and growth areas (15.01-1S Urban Design, 15.01-1R Urban design - Metropolitan Melbourne)
- create healthy and sustainable neighbourhoods that encourage walking and cycling (15.01-4S Healthy Neighbourhoods, 15.01-4R Healthy Neighbourhoods – Metropolitan Melbourne, 15.02-1S Energy and Resource Efficiency)
- conserve areas of cultural heritage significance (15.03-1S Heritage Conservation, 15.03-2S Aboriginal Cultural Heritage).

Clause 18: Transport

Clause 18 seeks to:

- integrate land use and transport planning (18.01-1S Land Use and Transport Planning), the transport system (18.01-2S Transport system), sustainable personal transport within inner and outer Melbourne (18.02-1S Sustainable Personal Transport, 18.02-1R Sustainable Personal Transport - Metropolitan Melbourne), principal public transport network (18.02-2S Public Transport, 18.02-2R Principal Public Transport Network)
- ensure an adequate supply of car parking that is appropriately designed and located (18.02-4S Car Parking)
- develop the road system to include freight links in inner and outer Melbourne (18.02-3S Road System, 18.05-1S Freight Links, 18.05-1R Freight Links – Metropolitan Melbourne).

Clause 19: Infrastructure

Clause 19 seeks to facilitate the timely provision of planned infrastructure to communities through the collection and implementation of development contributions (19.03-1S Development and Infrastructure Contributions Plans).

(i) Whittlesea Planning Scheme

Clause 21.02: Municipal Profile

Clause 21.02 states *"north-south road capacity is currently severely limited beyond the City" and "public transport services in existing growth areas of Epping North and Mernda-Doreen have not kept pace with urban development. The lack of north-south road capacity and continuous east west movements in the established parts of the municipality pose a significant constraint on future growth and development of the City. These movements are important for private car based travel, freight movements and public transport routes".*

Clause 21.03: Council Vision and Strategic Framework

Clause 21.03-1 Community plan identifies the major land use planning objectives and key strategic directions of the 'Shaping our Future' Community Plan 2030 including *"accessibility in, out and around our City".*

Clause 21.04: Settlement

Clause 21.04:

- states that constructing roads and providing mixed use employment generating centres are of key importance
- seeks to ensure that rapid urban growth is carefully managed so that environmental assets are not lost and non-urban areas are not threatened
- states the City of Whittlesea contains several significant parks
- includes Strategy 1.7 which seeks to *"provide growth areas with adequate, good quality open space as they develop".*

Clause 21.08: Built Environment and Heritage

Clause 21.08 seeks to protect and enhance Whittlesea's urban environments by supporting places and spaces that connect people, and to progressively upgrade the image and appearance of the City by focussing on the retention of local environmental, historic and cultural features, as well as landscape qualities and urban design improvements.

Clause 21.11: Transport

A key focus is the development of an integrated transport system. Clause 21.11-1 seeks to *"establish an efficient, interconnected multi-modal transportation system which increases the level of accessibility and choice within and beyond the City of Whittlesea".*

Roads are part of this integrated transport framework and it is acknowledged that existing and future activity centres should be serviced by high capacity rail and have good access to the arterial road network.

Strategy 1.2 seeks 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".*

Strategy 1.12 seeks to *"improve the level of accessibility to services and facilities within growth areas so that individual communities are more self-sufficient and do not rely on access to existing services and facilities in existing communities".*

Clause 22.03: Bushfire Management Policy

Clause 22.03:

- applies to Yan Yean Road, as it is on the western edge of a designated Bushfire Prone Area
- includes a policy to seek, and take into account, the views of the Country Fire Authority (CFA) and relevant publications when deciding on a planning scheme amendment.

Clause 22.04: Heritage Conservation Policy

Clause 22.04:

- applies to land with the Heritage Overlay and seeks to identify, protect and maintain the integrity and character of Whittlesea's heritage places
- discourage changes to the shape and position of roads and footpaths if these are contributory elements of a heritage place or precinct.

Clause 22.10: River Red Gum Protection Policy

Clause 22.10:

- outlines the importance of River Red Gum trees within the municipality
- states that "*Existing and future urban areas such as Mill Park, South Morang, Mernda/Doreen and Wollert contain significant River Red Gum trees and associated habitat"*
- 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.

(ii) Nillumbik Planning Scheme

Clause 21.03: Municipal Profile and Key Influences

The Plenty/Yarrambat Corridor area has ongoing pressure for low density residential development and has further growth potential. Key infrastructure development 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".*

Clause 21.04: Vision – Strategic Framework

The framework plan under Clause 21.04-4 identifies a low density residential corridor at Plenty and Yarrambat and the need for a "*road network which joins the centres and allows access to and from non-urban and urban areas"*.

Clause 21.05: Settlement and Housing

A key objective of this Clause is to cater for the projected increase in households through the provision of a range of housing types within the municipality that reflect the neighbourhood character, and protect natural and cultural heritage values.

Another key objective is "*to contain urban development and maintain non-urban breaks between existing urban areas and townships, and between townships."*

Clause 21.05: Rural Land Use

Clause 21.05-2:

- seeks to limit the fragmentation of land in rural areas and to protect and enhance rural landscape character
- identifies that the Nillumbik Shire Council Roadside Management Plan should be consulted in relation to works on roadsides.

Clause 21.05-3: Environment, Conservation Landscape

Clause 21.05-3 seeks "*to protect and enhance sites of environmental significance*" within the municipality through the management of threatening processes that cause environmental degradation.

Clause 21.05: Infrastructure

Clause 21.05-5:

- outlines the importance of providing appropriate infrastructure services, including transport networks, with a key objective to provide safe and efficient roads and road links within the municipality and to the wider region
- acknowledges the increase in traffic levels along Yan Yean Road resulting from residential development within the Whittlesea Growth Corridor
- seeks to ensure that land use adjacent to Yan Yean Road is compatible with the long-term arterial road transport function of the road and that direct access to properties from Yan Yean Road is minimised
- identifies the need for Yan Yean Road to be duplicated from Diamond Creek Road to Kurrak Road, and encourages setbacks for development and use on properties with road frontage along this section of road.

Clause 22.05: Aboriginal Cultural Heritage Policy

Clause 22.05 seeks to:

- identify sites of Aboriginal cultural significance and the appropriate level of management in consultation with the local Aboriginal community
- ensure new uses, developments and works do not impede on or detract from sites and features of Aboriginal cultural heritage and archaeological significance.

Clause 22.06: Roadside Management Policy

Clause 22.06 Roadside Management Policy:

- applies to all roadsides throughout the Shire and aims to maintain biodiversity and vegetation on roadsides
- seeks to *"maintain and enhance the environmental, historical and landscape values of the roadsides in the Shire"*, through the Nillumbik Roadside Management Plan 2012.

Clause 22.12: Neighbourhood Character Policy

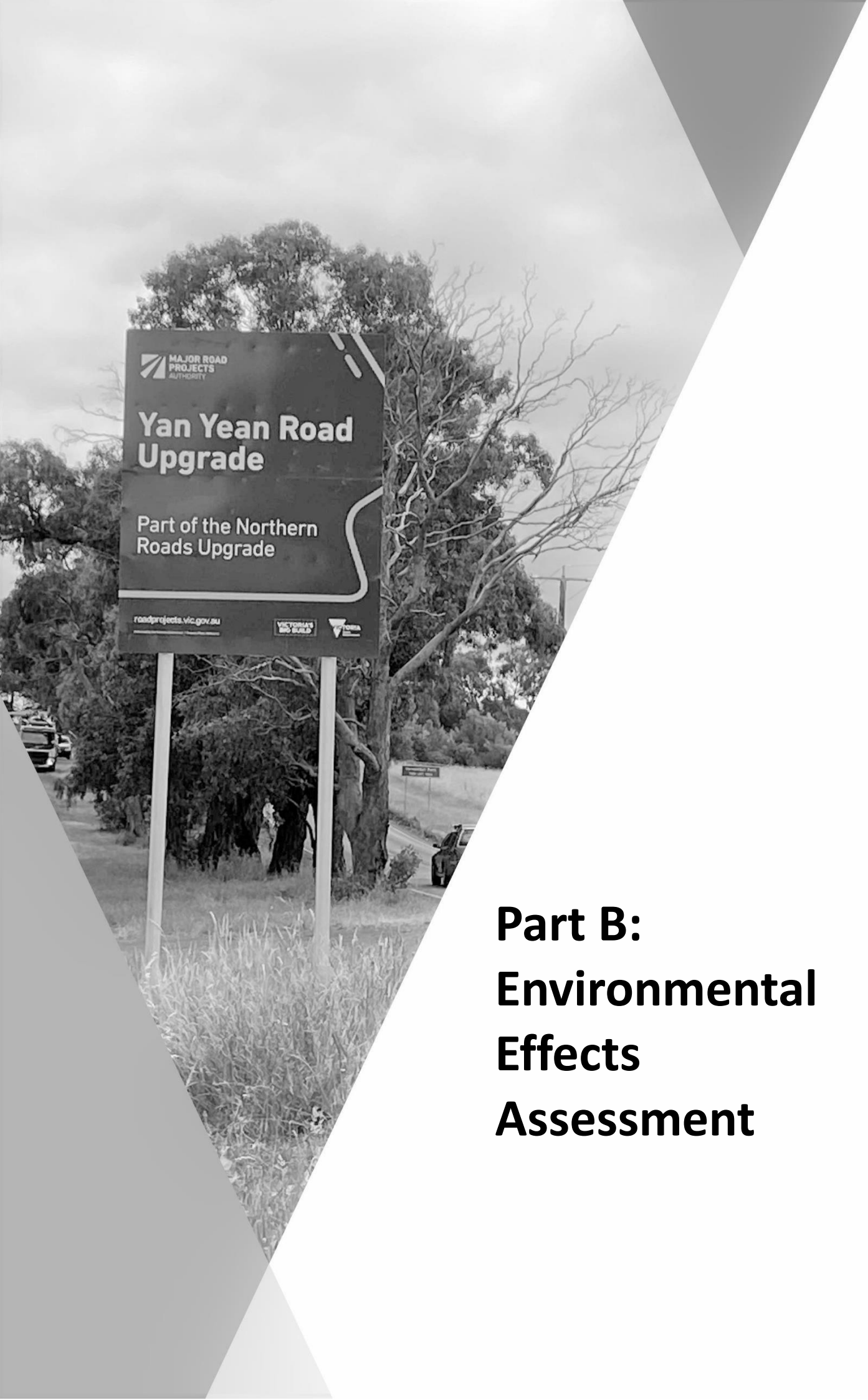
Clause 22.12:

- applies to development and works in the General Residential, Residential Growth, Neighbourhood Residential, Low Density Residential and Township zones within the Nillumbik Planning Scheme
- seeks to ensure development follows community and environmental values, and that development is "*responsive to the preferred future character of the area*".

Clause 22.13: Wildfire Management Policy

Clause 22.13:

- applies to land identified in the Bushfire Prone Area maps
- seeks to avoid intensifying local wildfire risk to people and property through inappropriately located, designed or managed uses or development.



Part B: Environmental Effects Assessment

5 Bridge Inn Road intersection

Chapter 5 reviews issues related to the intersection of Yan Yean Road, Bridge Inn Road and Doctors Gully Road.

5.1 EES design options

The EES states that initial community consultation identified the Doreen River Red Gums on the northeast corner of the Bridge Inn Road intersection as important assets for the community. The Heritage Overlay (HO191) applies to the two trees.

Five alterative options where developed for the Bridge Inn Road intersection: Options A – E. Options D and E were not preferred due to safety concerns. Chapter 3 in the EES provides a brief qualitative assessment of exhibited Bridge Inn Road intersection Options A, B and C. Figure 2 shows Options A, B and C.

Option A was discounted due to impacts on the Doreen River Red Gums. Option B was adopted as the preferred design over Option C due to concerns about the limited queueing distance between the two staggered intersections created in Option C.

The EES Technical reports only considered Option B.

The EES states in Technical Report A that the intersection performance targets adopted for the Project for design year 2031 are:

- A degree of saturation (DoS) of 0.9 or lower
- An overall intersection level of service (LoS) D or better
- 95th percentile queue lengths that are generally contained within the proposed turn lanes.

Table 8.7 in Technical Report A indicates that these targets are meet with Option B with a PM peak DoS of 0.9 and LoS D.

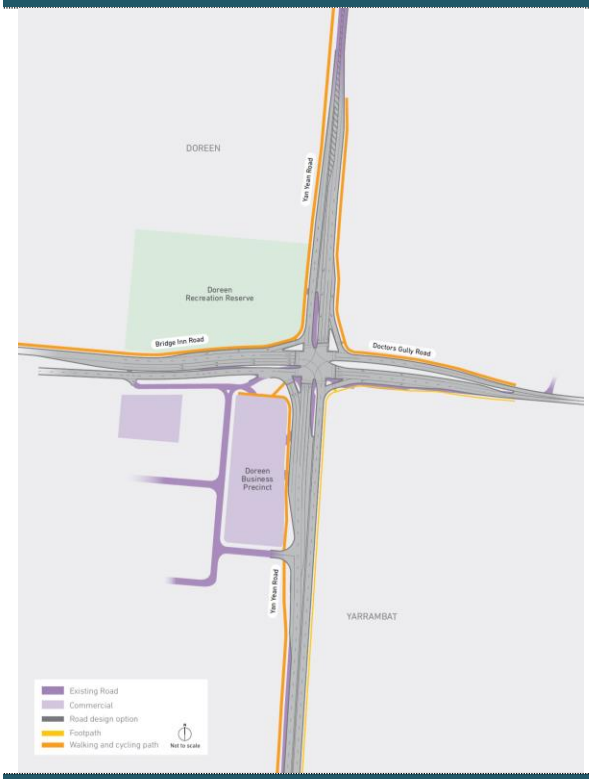
Modified Option B

Technical Note 3 was provided in response to the IAC direction to explain any further changes considered for the Bridge Inn Road intersection. Technical Note 3 presents a modified Option B plan which includes among other changes:

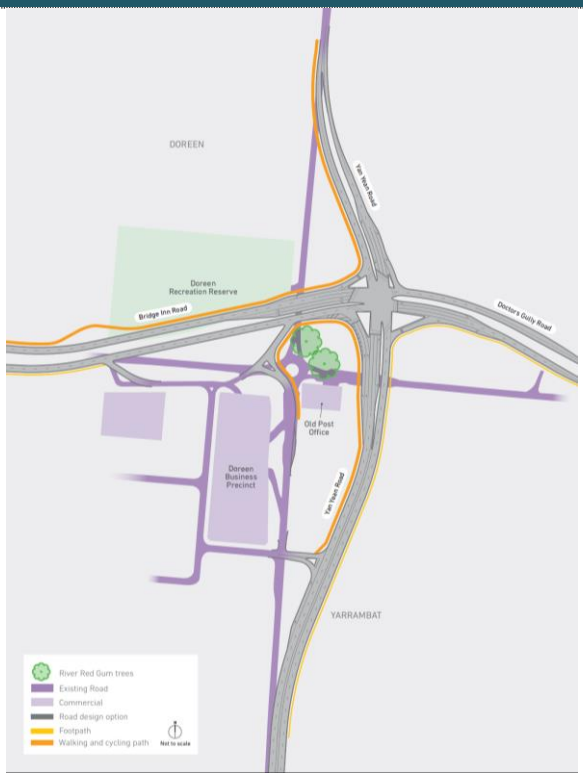
- U-turn facilities for cars and trucks on Doctors Gully Road (to the east of driveway to 25 Doctors Gully Road) and on Bridge Inn Road to allow vehicles to return to Yan Yean Road
- relocated the Doreen Neighbourhood Activity Centre (NAC) entry on Yan Yean Road to the south of Activity Way
- bus facilities along Yan Yean Road, including bus bays and priority bus lanes through the signalised intersection.

Figure 2 Bridge Inn Road intersection design options

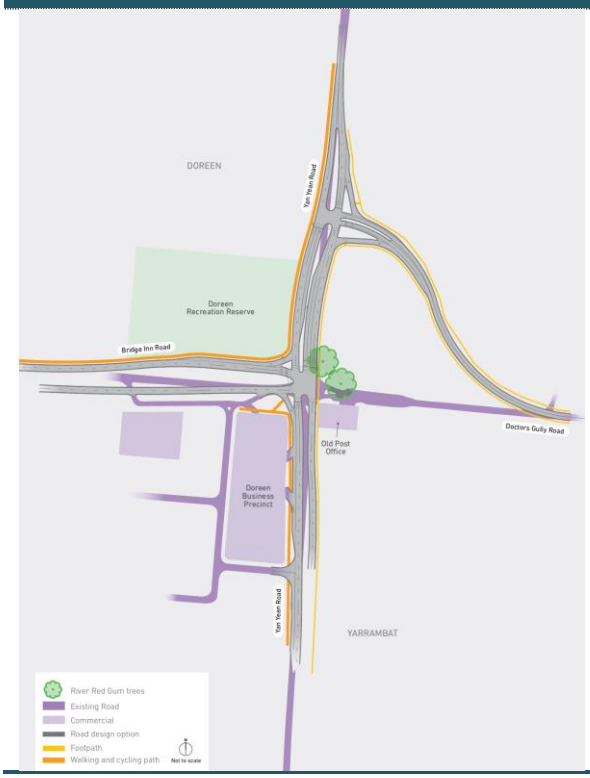
Option A



Option B



Option C



Three design options were subject to further community consultation in May 2020:

- Option A – Duplication on the existing alignment
- Option B – Shifting intersection north east to retain the two Doreen River Red Gums
- Option C – Split intersection north to retain the two Doreen River Red Gums.

The Project adopts Option B.

Source: EES Chapter 5, p5.9

5.2 920 Yan Yean Road, Doreen (Old Doreen Store)

(i) The issues

The issues are:

- whether the Old Doreen Store at 920 Yan Yean Road has sufficient local heritage significance to justify its retention
- whether the Bridge Inn Road intersection design should ensure that it retains any heritage significance
- which EES intersection design option would retain any heritage significance.

(ii) Background

The Nillumbik Planning Scheme does not apply the Heritage Overlay to 920 Yan Yean Road, Doreen. Technical Report F states that the Old Doreen Store does not have statutory protection but has heritage potential. The EMF does not include a specific EPR for this site.

The City of Whittlesea Heritage Study 1990 categorised the Old Doreen Store as Grade D and did not recommend Planning Scheme protection. The North West Nillumbik Heritage Study 2016[2] found that the Old Doreen Store had heritage significance and met Planning Practice Note 1 Criteria A, B, D, G and H. The relevant statement of significance explains:

> **What is significant?**
>
> The Doreen Post Office and General Store. The original form, materials and detailing of the Corner Store, Storeroom and attached residence and their setting contribute to the significance of the place.
>
> **How is it significant?**
>
> The Doreen Post Office and General Store 920 Yan Yean Road, Doreen is of local historic, aesthetic and social significance to the Shire of Nillumbik.
>
> **Why is it significant?**
>
> The Doreen Post Office and General Store is historically significant as an early social centre for the township of Doreen, particularly in connection with the ownership by the Owens during the 1930s. The Owen family was the longest serving storekeepers, and the current building relates to the heyday of their occupation and community involvement in the 1930s. William Owen was also a councillor for the Morang riding of the Whittlesea Shire from 1934 until at least 1942. The Post Office and Store also has associations with the tourism history of the Shire. From the late nineteenth the General Store facilitated excursionists from the city en route to the scenic points of interest in the district. It is one of only a few surviving premises that evidence the early township of Doreen and at this key crossroads within the Shire. There was formerly a Blacksmith to the east of the store, another store across the road on the north east corner and the Doreen Public Hall on the diagonal corner. (Criteria A, B & H)
>
> The Doreen Post Office and General Store is aesthetically significant for its surviving 1930s brick store with attached residence constructed in the early 20th century. The corner location on a crossroads is also evocative of what was the centre of social activity in the town. The shop retains its original brick walls, parapet with cornice, corner entry and shop windows. The residence retains its original roof form, weatherboard walls and front appearance with verandah across the front. The later

[2] document 56

> store on the south side contributes to the site and demonstrates the changing needs and expansion of the store. (Criterion D)
>
> The Doreen Post Office and General Store is socially significant to the Shire of Nillumbik as the social centre of the Doreen district since its establishment in c1890 until the present day. Its location on a busy crossroads means it is a landmark in the area and a central point of information and supplies for residents and visitors to the area. (Criterion G)

The Heritage Study recommended that the Heritage Overlay be applied to 920 Yan Yean Road.

(iii) Evidence and submissions

Heritage significance

Jamluk Pty Ltd and the Doreen Traders and Landowners Committee (Jamluk and the Doreen Committee) submitted that the EES gives significant weight to a local building which the Nillumbik Planning Scheme and Heritage Victoria do not recognise as having heritage significance. They added the property:

- did not meet recognised heritage tests
- was not recommended for heritage protection in the City of Whittlesea Heritage Study 1990.

Jamluk and the Doreen Committee understood the Old Doreen Store may be structurally unsound and infested by white ant. Similarly, Mr and Mrs Huitt submitted the building is a "*termite ridden old house*" which should be demolished.

In response to a question from the IAC, Nillumbik Council advised that it had not requested an interim Heritage Overlay for 920A Yan Yean Road from the Minister for Planning since the Project was announced. Nillumbik Council submitted that it proposes to apply the Heritage Overlay to the site through a future planning scheme amendment.

MRPV called expert evidence on heritage from Ms Gray of Lovell Chen. Having reviewed the 2016 Heritage Study statement of significance, she considered the Old Doreen Store is likely to meet the threshold for local significance and justify the Heritage Overlay. She found the draft assessment to be generally consistent with Planning Practice Note 1.

Ms Gray stated the condition of a heritage place is generally not considered when assessing heritage significance. She added that the historical location of most heritage places contributes to their significance and they should only be relocated as an action of last resort.

Ms Gray recommended a new EPR or expanding HH1 to address the Old Doreen Store, including its retention and protection and preparation of a heritage impact statement.

No party called opposing heritage evidence.

In response to Ms Gray's evidence, MRPV proposed the following EPR changes:

- HH1 – add "*and retain the Post Office and General Store building at 920 Doctors Gully Road, Doreen*"
- HH1 – add a requirement to design permanent and temporary works to avoid where possible, and otherwise minimise, potential impacts on heritage values of the "*Post Office and General Store building at 920 Doctors Gully Road, Doreen*"
- HH3 – include the "*former Post Office and General Store building at 920 Doctors Gully Road, Doreen*" in the Cultural Heritage Awareness Induction.

Intersection design options

In response to IAC questions, MRPV submitted that the Project can achieve net community benefit without having to choose between expanding the road and retaining the Old Doreen Store. Options B and C enabled both.

Nillumbik Council supported Option C, noting that it protected the Old Doreen Store and better retained rural character but with a poor interface. It requested that Option C be redesigned to better respect the building.

Nillumbik Council referred to advice[3] from Samantha Westbrooke Pty Ltd, one of the authors of its 2016 heritage study. Ms Westbrooke considered the Option B design responded better than Option C. Reasons included:

- Option B – enables more options to reuse and appreciate the building; easier to stop and appreciate the building; and retains its road frontage, former setting, and relationship with the Doreen River Red Gums
- Option C – retains its road frontage; the road's proximity and size will compromise the building, making it difficult to interpret and mitigate; and likely crash barriers would detract from the building's appearance.

Ms Gray noted the Old Doreen Store would be demolished in Option A. She stated that retaining the heritage place at the current Yan Yean Road intersection through Option B is a significant benefit. She explained the relationship of the crossroads contributes to the appreciation of the Store's heritage values. She acknowledged the intersection had already undergone significant changes including the roundabout, demotion of Doreen Hall on diagonally opposite corner and the development of the Doreen NAC.

Mr Gray found that Option C would significantly change the Old Doreen Store's immediate context. This includes the increased scale and altered form of Yan Yean Road. She cautioned that road infrastructure changes such as crash barriers and signals near the building may detract from its presentation.

Ms Gray stated that Options B and C maintained access to the Old Doreen Store to support its ongoing use.

(iv) Discussion

Heritage significance

The IAC accepts the evidence of Ms Gray and agrees the 2016 Heritage Study statement of significance has appropriately assessed 920 Yan Yean Road. The Study concludes the Old Doreen Store has sufficient local heritage significance to be a candidate for the Heritage Overlay. The IAC makes no further comment because the property may be subject to further review through a future Nillumbik Planning Scheme amendment. However, it is satisfied the Old Doreen Store should be retained through any future intersection design.

No party presented evidence to demonstrate the building was structurally unsound or infested by termites. The heritage fabric is therefore likely to exist by the time Nillumbik Council progresses a planning scheme amendment proposing to apply the Heritage Overlay.

[3] document 59

The IAC supports MRPV's proposed changes to EPRs HH1 and HH3 which seek to respond to the Old Doreen Store's heritage significance, subject to correcting the street address to 920 Yan Yean Road.

Intersection design options

At the time of its construction and for most its history, the Old Doreen Store has stood alone. The IAC has considered each intersection design option based on:

- the building's heritage significance not relying on its relationship with the more recent Doreen NAC west of Yan Yean Road
- enabling the building to be practically used or readapted so that its heritage fabric can be maintained.

Options B and C provide an opportunity to expand the Bridge Inn Road intersection without losing the Old Doreen Store. Option A does not.

The IAC disagrees with Nillumbik Council that Option C would better retain the rural character around the Old Doreen Store. This option would significantly widen the existing intersection by acquiring land in the Doreen NAC, paving most of the large grassed area on the west side of Yan Yean Road, and bringing the footpath and road lanes closer to the Old Doreen Store.

Option C is likely to require more crash barriers near the kerb in front of the building in addition to the existing barrier at the Yan Yean and Bridge Inn Road south-east corner. However, this inferior design response is unlikely to diminish the building's heritage significance below the necessary threshold.

From a heritage perspective, Option B would result in a better outcome for the building's heritage significance. It would generally retain the existing setting around the Old Doreen Store by realigning the larger scale and high volume traffic area to the east.

(v) Findings

The Inquiry and Advisory Committee finds:

- The Old Doreen Store at 920 Yan Yean Road, Doreen has sufficient local heritage significance to justify its retention, though not formally recognised through the Heritage Overlay.
- The Bridge Inn Road intersection design should retain the Old Doreen Store's heritage significance.
- Bridge Inn Road intersection design Options B and C would retain the heritage significance at 920 Yan Yean Road, although Option B would result in a better outcome.

5.3 The Doreen River Red Gums

(i) The issues

The issues are:

- whether the Doreen River Red Gums should be retained and appropriately managed through the proposed Bridge Inn Road intersection design
- whether the proposed Project design can appropriately manage the Doreen River Red Gums.

(ii) Background

The Heritage Overlay (HO191) applies to two river red gums at 25 Doctors Gully Road on the north-east corner of Yan Yean Road and Doctors Gully Road. They are otherwise known as the Doreen River Red Gums or referred to in Technical Report C as trees 1264 (along Yan Yean Road) and 1265 (along Doctors Gully Road).

Plan Melbourne 2017-2010: Metropolitan Planning Strategy (Plan Melbourne) sets out the following heritage related outcome, direction and policies:

- **Outcome 4**: Melbourne is a distinctive and liveable city with quality design and amenity
- **Direction 4.4**: Respect Melbourne's heritage as we build for the future
- **Policy 4.4.1**: Recognise the value of heritage when managing growth and change
- **Policy 4.4.4**: Protect Melbourne's heritage through telling its stories.

Bridge Inn Road intersection design Options B and C retain the Doreen River Red Gums.

(iii) Evidence and submissions

Ms Benns, Ms Hunter, Mr and Mrs Yeoman, and the owner of 920 and 920A Yan Yean Road (Old Doreen Store and stockfeed buildings) supported the Doreen River Red Gums being retained as part of the new intersection. Mr and Mrs Yeoman and Ms Benns supported an intersection design which saved the trees without destroying the front paddock at 25 Doctors Gully Road.

Mr and Mrs Huitt submitted that the Doreen River Red Gums are deteriorating, with one in its early dying stage and the other not far behind. They preferred the Option A intersection design which would remove both trees.

Jamluk and the Doreen Committee observed the tree 1264 had poor health, a fair structure and expected to live 10 to 20 years. They noted the other river red gums listed on the National Trust of Australia's Significant Tree Register such as tree 1265 were expected to live more than 20 years. They submitted that Option B sought to retain trees 1264 and 1265 at the cost of $10 million while losing other equally significant trees.

Nillumbik and Whittlesea Councils did not support Option A because it would remove the two significant heritage trees. Nillumbik Council supported the other options which retained the Doreen River Red Gums, and both Councils preferred Option C. Whittlesea Council requested that the design and innovative construction techniques or solutions for Option C be slightly amended to better protect one of the significant trees.

MRPV called expert evidence on arboriculture from Mr Ryder of Ryder Consulting Pty Ltd. He explained that a review of existing road services and the exhibited version of the proposed road design, including Bridge Inn Road intersection Option B (proposed road design), review of tree protection zone encroachments and a non-destructive root investigation informed Technical Report C. Having reviewed Technical Note 3, he found:

- moving the intersection further northeast:
  - should provide greater offset to the trees and assist with minimising impacts
  - will greater separate machinery and the construction process, reducing the risk for damage during the construction phase
  - will help minimise tree related risk, such as branch failure, to road users

- removing and remediating the old road and sub-base will, in the long-term, provide better conditions for root growth and tree health.

Regarding Option C, Mr Ryder found:

- the road would be constructed closer to the two Doreen River Red Gums than Option B
- construction activities may cause health and/or structural decline, though the exact offsets and distances from the trees are unclear
- the depth of excavation and proposed cut and fill requirements are unclear and may exceed what has previously been investigated
- there is a higher potential for damage by construction machinery and it would be harder to achieve adequate protection
- additional infrastructure such as signage, traffic pedestals and barriers are likely to be required in the tree protection zone
- the trees may not be able to be retained because EPR AR4 is based on Option B and has not been tested on Option C
- vehicles stationary under the canopy of tree 1265 are likely to be at risk of potential branch failure.

(iv) Discussion

The IAC does not question the heritage significance of the Doreen River Red Gums because their significance is formally recognised through the Heritage Overlay (HO191). The Heritage Overlay enables a permit to demolish or remove the heritage fabric. However, the IAC considers that this should only be considered when there is no alternative option and the net community benefit of needing greater road capacity outweighs the local heritage significance.

Options B and C offer an alternative design which would retain the Doreen River Red Gums. The question is how well each option would manage the heritage fabric.

Having reviewed Technical Report C, the IAC considers that previous roundabout road works have already encroached into the tree zones and affected the health of the two trees. This is particularly the case for tree 1264. The IAC agrees with Mr Ryder that improved surrounds may improve their health and prolong their life expectancy. While both options retain the trees, Option B offers a preferred environment for managing, if not partly restoring, the health of each tree.

Option C would maintain, and potentially deteriorate, the substandard surrounds of each tree. This option has a higher potential to cause damage to the trees by construction and would make it harder to provide adequate long-term protection for the trees.

(v) Findings

The Inquiry and Advisory Committee finds:

- The Doreen River Red Gums should be retained and appropriately managed through the Bridge Inn Road intersection design.
- Option C would retain both trees, however it would not provide a favourable environment to support their health, and is likely to cause an unacceptable risk to motorists and cyclists stationary under the canopy of tree 1265.

- Option B and its modified version provide a better outcome for managing the health of both trees.

5.4 Trees

(i) The issue

The issue is whether Project design appropriately responds to trees and the relevant draft EES evaluation objective.

(ii) Background

Modified Option B would remove a stand of at least eight river red gums (tree numbers 5626, 5627, 5631, 5632, 5633, 5634, 5639 and 5640) at 990 Yan Yean Road. The Arboricultural report finds that:

- at least one has a very high retention value and four have high retention value
- two of these trees have hollows, one is larger than both of the Doreen River Red Gums and two are larger than the smaller of the two Doreen River Red Gums (size being an indication, though not determination, of age).

Option C would not impact these trees.

The row of sugar gum trees on the north side of Bridge Inn Road adjacent to the Doreen Recreation Reserve would be removed. The Arboriculture report finds these trees to be of 'moderate' significance. From an ecological point of view, these trees were not considered potential habitat for swift parrot as no sugar gums in the Project area were considered appropriate potential habitat due to flowering time generally not coinciding with their presence on the mainland. About 20 of these trees are identified as harbouring hollows which may provide habitat at least for common wildlife species. The Doreen Recreation Master Plan had indicated these trees would be removed to make way for the road upgrade.

With swift parrot foraging habitat, Options B and C retain the Doreen River Red Gums which are considered large secondary foraging trees. Option B would remove three most preferred foraging trees being two near the entrance of Activity Way (1130 and 1135) and one of the river red gums at 990 Yan Yean Road. Seven of the remaining river red gums at 990 Yan Yean Road to be removed for this option are also considered large secondary foraging trees. Option C would also remove the two trees near the entrance of Activity Way.

Modified Option B would remove around 27 hollow bearing trees (many described above already and five more on Doctors Gully Road). Option C may only remove two hollow bearing trees – depending on the extent of the sugar gums which would be able to be retained.

(iii) Evidence and submissions

MRPV provided Technical Note 14 which states:

- modified Option B provides an opportunity to retain tree 1130, one of the preferred swift parrot foraging trees
- Option C would not retain tree 1130.

MPRV called expert evidence on swift parrots from Mr Weller of SMEC and on ecology from Ms Jenny Forbes of SMEC. Mr Weller considered Option C to be slightly favourable relative

to tree impacts. Ms Forbes opined that both options would remove 1,988 native trees. She favoured Option C because modified Option B would remove six more large trees than Option C.

The owners of 990 Yan Yean Road submitted the main objective of Option B to save the Doreen River Red Gums did not make sense considering there was about a dozen big river red gums on their property which would potentially be impacted. They submitted one of these was in excellent condition and comparable to the Doreen River Red Gum on the corner closer to the store. At the Hearing, they submitted that either way the sugar gums on Bridge Inn Road ought to go as to save them for Option C would cause too much impact on the Doreen Recreation Reserve and, considering they had been lopped several times for the powerlines, they were all *"sucker regrowth"*.

Ms McKinnon noted the significance of the river red gums at 990 Yan Yean Road and highlighted the fact that many of the EES documentation and Fact Sheets included maps of Option B with only the Doreen River Red Gums identified indicating there were no other trees in the vicinity.

(iv) Discussion

From an ecological perspective, the focus on the Doreen River Red Gums at the expense of other trees in the area was unwarranted. Especially to the extent that some maps did make it look like they were the only trees in the area.

When considering the impact on all trees, Option C is slightly favourable. The sugar gums on Bridge Inn Road were not considered in the biodiversity impact assessment as they are planted and not considered to provide foraging habitat for the swift parrot. Irrespective, had they been included in the biodiversity impact assessment it is not considered this would have resulted in a significant difference to the weighing of options from an ecological perspective. It is likely the hollows provide habitat to common wildlife species and EPRs address tree hollows discussed further at Chapter 9.

The IAC recognises the impact assessment has adopted a worst-case approach with EPRs providing opportunities for avoidance and minimisation of impacts. The IAC has considered the footprint of modified Option B with the Arboriculture maps and considers it likely that avoiding most of the river red gums at 990 Yan Yean Road would be feasible during detailed design. This can be achieved through existing EPRs. It seems two high value trees and some lesser value trees would be impacted.

(v) Findings

The Inquiry and Advisory Committee finds:

- There is no significant ecological difference between Options B and C, although Option C is slightly favourable.
- At this stage, the design has not sought to minimise effects on trees generally, instead focused on the Doreen River Red Gums.
- Effort should be made to avoid and minimise impacts on the river red gums at 990 Yan Yean Road when finalising the design.

5.5 Doreen Neighbourhood Activity Centre access

(i) The issues

The issues are:

- whether Project design (Option B) will provide suitable access to the Doreen Neighbourhood Activity Centre (Doreen NAC)
- whether Option C would provide a better access outcome.

(ii) Background

The EES describes the Doreen NAC as a convenience centre with food outlets and a petrol station.

The Doreen NAC currently has access from both Yan Yean Road and Bridge Inn Road. Access from Yan Yean Road is by Activity Way at the southern end of the centre as well as direct access into the service station complex by separate in and out driveways. All movements to and from Yan Yean Road are restricted by double lines to left turns only. A roundabout at the Bridge Inn Road intersection facilitates U-turns. Access from Bridge Inn Road is by a one-way service road, with right turns permitted into and out of the service road at its respective ends.

The Project, based on the exhibited Option B, will change the access to the centre as follows.

Access to the Doreen NAC from the south along Yan Yean Road will continue to occur from the existing Yan Yean Road carriageway which will in effect become a two-way service road. However, the service road will not exit at its northern end back onto Yan Yean Road, rather it will be diverted into the Bridge Inn Road service road. Traffic wishing to return to Yan Yean Road will need to head south on the Yan Yean Road service road and then turn left (northbound) into Yan Yean Road to continue their journey. To return south along Yan Yean Road, traffic will need to travel up to the new Bridge Inn Road intersection to do a U-turn, however this U-turn will be limited to cars only. The diversion for cars undertaking a U-turn at the new intersection in comparison with U-turning at the existing roundabout is around 450 metres. No provision is made in the Project design for trucks to U-turn elsewhere.

Right turns to and from Bridge Inn Road into the existing Bridge Inn Road service road will be prevented by a median on Bridge Inn Road. Vehicles approaching from the west along Bridge Inn Road will need to do a U-turn at the new Yan Yean Road intersection to enter the centre, however this U-turn is for cars only. No provision is made in the exhibited plans for vehicles to do a U-turn when departing the Doreen NAC onto Bridge Inn Road to return to the east to access Yan Yean Road or Doctors Gully Road.

Table 2.1 of Technical Report A states that the scoping requirements include "*characterising the extent to which the project will affect the local access of the community to residential areas, schools, stand-alone businesses, retail centres, activity centres, community facilities and open spaces*". Table 8.13 assesses Movement and Place alignment with adjacent land uses and states there will be:

- Improved access to centre via active transport through continuous footpath and shared use path along Yan Yean Road.
- Improved access to centre for general traffic as a result of reduced congestion.

(iii) Evidence and submissions

Regarding the Doreen NAC, Whittlesea Council submitted that Option C maintains existing access arrangements, with access and visibility important considerations.

McDonald's Doreen submitted that the Project would have an adverse impact on its business in the Doreen NAC due to access restrictions on Bridge Inn Road.

Jamluk and the Doreen Committee submitted that the Project will create convoluted access arrangements and reduce visibility of the centre on the Yan Yean Road approaches to the Doreen NAC which will deter and reduce local and passing trade They raised concerns that the access impacts of Option B as it relates to the Doreen NAC are not assessed in the EES. They supported Option C.

MRPV submitted Technical Note 5 which notes a two-way service road in Option B is the preferred access arrangement for the Doreen NAC from a transport safety and efficiency perspective, and aligns with the access category for Yan Yean Road.

MRPV called expert evidence on traffic from Mr Kelly of WSP. Mr Kelly considered that both modified Option B and Option C provide LoS D for the 2031 project scenario, with Option C having a slightly lower DoS but a higher overall travel time, particularly in the afternoon peak (9 seconds higher than modified Option B). This data assumed the Cookes Road intersection to the north is upgraded.

Mr Kelly was concerned that, while the distance between the two staggered T-intersections in Option C was sufficient for the storage requirements of the right turn queues, it did not allow distance for deceleration before the queue. Sensitivity testing indicated the queueing distance may be insufficient by the year 2035.

Department of Transport supported this queueing concern and submitted that it did not support Option C, noting the potential for a see-through effect with two closely spaced sets of traffic signals and Option C will have flow breakdown earlier than Options A and B.

Regarding the travel times accessing the Doreen NAC, Mr Kelly advised:

> Generally, trips via the service station under Option C are shorter. It should be noted however, that the trip to the Activity Centre is relatively similar for both options. The additional distance is generally in the departure route.
>
> While 200-300m may be less convenient, as part of the longer commuter trips, these differences are considered relatively small.

Mr Kelly noted there will be an overall net increase in the travel distance to the service station under Option B and recommended:

> Consideration should be given to improving access to the Activity Centre (particularly from the west) and in reviewing the signing strategy to maximise the awareness of the Activity Centre.

He advised that the EES had not identified the existing right turns into the Bridge Inn Road service road, and that the U-turns from the west at the signalised intersection would conflict with the heavy left turn from the southern approach on Yan Yean Road. To reduce this impact he recommended that a direct right turn be provided into the Bridge Inn Road service road.

MRPV provided Technical Note 15 in response to the evidence from Mr Kelly. The Technical Note shows how a right turn lane can be provided into the Bridge Inn Road service road, with the service road changed to support two-way traffic.

MRPV called expert evidence on planning from Mr Barlow of Urbis. Mr Barlow discussed the impact of Option B on the accessibility of the Doreen NAC. He stated that Option B provides:

> Less intuitive access to businesses from Bridge Inn Road travelling east for both private vehicles and commercial vehicles and southbound vehicles on Yan Yean Road (as it requires a U turn at a distance from the centre).
>
> …
>
> Potential lack of identity for commercial centre, resulting from lack of direct access from the major road and possible diminution in passing trade.

Mr Barlow considered the refinements in modified Option B, including the additional U-turn facilities and modification to the entry to the Doreen NAC from the south on Yan Yean Road "*will improve accessibility to the centre to a level generally consistent with the current arrangements – albeit requiring additional manoeuvres in some cases*."

Mr Barlow supported advance advisory signage with sufficient notice along the roadside. He considered that Option C could potentially create a larger barrier between the Doreen NAC and the Old Doreen Store.

Jamluk and the Doreen Committee called expert evidence on traffic from Mr Walsh. Mr Walsh opined that the Option B design points approaching traffic away from the Doreen NAC with the new Yan Yean Road carriageway being located 60 metres offset from the southern edge of the Doreen NAC increasing to 90 metres at its northern end and the Bridge Inn Road carriage offset 70 metres from the Doreen NAC at its eastern end. He considered visibility to the Doreen NAC could be further eroded by landscaping or any future development on the surplus land created by the Project.

Regarding travel distances, Mr Walsh found the Project design would increase the travel distance on Bridge Inn Road for traffic approaching from the west by 150 metres and for vehicles exiting to Yan Yean Road to head north or turn at the Bridge Inn Road intersection Option B adds 355 metres to the travel distance. He explained that accessing the Doreen NAC from the north option B adds 95 metres to the travel distance.

To ameliorate the impacts of Option B on the Doreen NAC, Mr Walsh recommended:

- a right turn facility on Bridge Inn Road to provide direct access to the Doreen NAC
- a signalised intersection at the Yan Yean Road/Activity Way intersection.

Notwithstanding this, Mr Walsh advised that Option C would have a significantly less impact on the access to the Doreen NAC as it retains the existing alignment of Yan Yean Road and Bridge Inn Road in relation to the centre. He added given that Option C provides a similar level of traffic performance while requiring less land acquisition, it was preferable to Option B.

Mr Walsh noted that the modified Option B design includes bus priority lanes through the Bridge Inn Road intersection along Yan Yean Road which increase the size of the intersection. Given the low number of buses on this route, he did not consider that these lanes were necessary.

Mr Walsh stated he may prefer a modified version of Option D to access the Doreen NAC than Option B, but he had not done the traffic analysis to check its capacity.

The owners of 25 Doctors Gully Road submitted that Option B would:

- make it easier for them to access the petrol filling station with long vehicles
- enable a right turn into the service station from the two-way Yan Yean Road service road off the Bridge Inn Road service road rather than circulating around the Doreen NAC to enter from the front.

(iv) Discussion

The IAC considers the proposed road design will negatively impact the Doreen NAC's access and function.

As noted by Mr Kelly the traffic surveys failed to identify all of the critical movements at the centre resulting in an underestimate of future U-turns on Bridge Inn Road. No consideration was given to the need for large vehicles to U-turn at the intersection and elsewhere as a result of the loss of the roundabout and direct right turns on Bridge Inn Road. These omissions are highlighted by the provision of the various Technical Notes provided before and during the Hearing recommending improvements to Option B.

The Doreen NAC, by both its location on the corner of two primary arterial roads and its present offering of vehicle related services and fast food, is a car-based centre and will remain so for some time as it services not just the local residential area to its southwest but also areas to the north of Bridge Inn Road and more remote properties along Yan Yean Road and Doctors Gully Road outside its walking catchment, as well as passing traffic. The IAC accepts the evidence of Mr Walsh that the relocation of the Bridge Inn Road intersection and diversion of the approach roads away from the centre will reduce the visibility of the centre and result in drivers needing to make a decision to access the centre prior to being able to fully appreciate its location and access points. This would rely on good advance signage.

The proposed U-turn on Bridge Inn Road shown in modified Option B adds a 500 metre round trip for southbound cars from the Doreen NAC and 1 kilometre round trip for trucks that have to turn into Doctors Gully Road to access a U-turn facility. This is considered a negative impact. However, Option C is not without its own impacts on the Doreen NAC, including making trips to and from Doctors Gully Road longer and the proximity of the exit from the petrol filling station complex due to the double left turn lanes on Yan Yean Road.

The issue of U-turns is particularly significant noting that this area is in a rural setting and not afforded a 1.6 kilometre spacing of an arterial road grid network that is typically found in an urban area. Kurrak Road is about 4.8 kilometre to the south and the next north-south arterials to the west are:

- Plenty Road (about 3.3 to 3.7 kilometres to the west)
- Epping Road (about 9.3 kilometres to the west).

U-turn movements at the Bridge Inn Road intersection will conflict with the primary arterial traffic movements at the intersection adversely impacting capacity. This will add future pressure to upgrade the intersection, as discussed late in this chapter.

The IAC sees merit in providing a right turn facility into the Doreen NAC on Bridge Inn Road and a signalised access at Activity Way on Yan Yean Road to reduce the impacts on the

centre and minimise traffic movements, particularly U-turns at the Bridge Inn Road intersection, which can disproportionally impact intersection performance.

(v) Finding

The Inquiry and Advisory Committee finds the modified Option B would provide a better outcome to Option C subject to:

- providing a direct right turn into the Bridge Inn Road service road
- signalising the Activity Way/Yan Yean Road intersection.

5.6 Doreen Recreation Reserve

(i) The issues

The issues are whether:

- the impact on the Doreen Recreation Reserve due to property acquisition is acceptable, and
- suitable access can be provided.

(ii) Background

The Project design (Option B) realigns Bridge Inn Road so that it crosses the south-eastern corner of the Doreen Recreation Reserve. Technical Report D identifies that the Project will necessitate a redesign of the Doreen Recreation Reserve Masterplan and a change to a community space. This was considered to be a medium impact.

(iii) Evidence and submissions

Whittlesea Council submitted:

- Doreen Recreation Reserve is used as an overflow venue for several sporting clubs due to a delay in delivering other nearby sporting reserves
- it adopted the Doreen Recreation Reserve masterplan in 2014
- Option B would make its masterplan redundant.

In response to a request by Whittlesea Council, MRPV provided[4] concept plans of the Doreen Recreation Reserve accounting for the high voltage electrical transmission lines. Whittlesea Council considered the concept plans to be inadequate because:

- the cricket pitch was too short for competitive cricket, including under 12-year-olds
- there was reduced passive surveillance opportunities from the car park to the playground, gathering space and community building
- structures located under the transmission easement may not comply with Ausnet restrictions.

Whittlesea Council submitted that Option C will have a slightly greater impact in terms of land acquisition however it considers that the masterplan could be delivered under Option C with some changes and further property acquisition.

[4] Technical Note 9, Tabled Document 63.

MRPV called expert evidence on landscape and visual design from Mr Knight of ARUP. Mr Knight provided revised masterplans in response to Options B and C in his evidence. He explained the Project would need to acquire about 7,700 square metres of the Doreen Recreation Reserve but, surplus land to the east of the reserve resulting from the road realignment, the net loss would add 4,000 square metres. Option C requires 6,600 square metres of the Doreen Recreation Reserve.

Mr Barlow considered that Option B included suitable surplus land to offset the loss along the southern side of the Doreen Recreation Reserve, though not like for like. He acknowledged the transmission easement constrained the use of the Doreen Recreation Reserve for competitive sport. He added:

- the current facilities to be modest and could be replaced and upgraded
- the Doreen Recreation Reserve could be further integrated within the transmission easement to the north and west, subject to consent of landowners in the future if required.

MRPV provided Technical Note 5 which shows that access to the Doreen Recreation Reserve will be left in and left out onto Yan Yean Road with U-turns available at the Bridge Inn Road intersection for cars arriving from the north to reach the reserve.

Option C provides for U-turns at the realigned Doctors Gully Road intersection to allow vehicles departing the Doreen Recreation Reserve to return south. Option B does not provide for this movement.

(iv) Discussion

The Doreen Recreation Reserve concept plans for both Option B and C include passive and non-competitive active recreation with similar facilities and car parking sought by Whittlesea's masterplan.

The IAC acknowledges that Whittlesea Council is using the Doreen Recreation Reserve for overflow competitive sports until it can deliver its own facilities elsewhere. The Project is not responsible for providing sports facilities, including an oval which meet specifications. However, the revised plans for the reserve presented at the Hearing provide confidence that there may be an opportunity to achieve a mutual outcome. Whittlesea Council and MRPV should pursue this through continued discussions.

There appears to be an opportunity to improve passive surveillance from the car park through detailed design.

Regarding access from Yan Yean Road, given the catchment for the Doreen Recreation Reserve and the lack of a U-turn opportunity at and beyond the next intersection at Cookes Road, it is important that either a right turn out or a U-turn facility be provided. In this regard, Option C is considered preferable in that it allows for a U-turn manoeuvre at the Doctors Gully Road intersection for vehicles wishing to head back south to the Bridge Inn Road intersection. However, the IAC considers that the design of Option B could be modified to accommodate this movement.

(v) Findings

The Inquiry and Advisory Committee finds that:

- The impacts resulting from Option B on the Doreen Recreation Reserve due to land acquisition are acceptable.
- To ensure suitable access, either a direct right turn out of the Doreen Recreation Reserve, or a U-turn facility to the north of the exit, should be provided to enable traffic to exit to the south.

5.7 25 Doctors Gully Road, Doreen

(i) The issues

The issues are:

- whether suitable provision is being made for trucks to exit 25 Doctors Gully Road and head west
- whether the amount of property acquisition will have a significant impact on business operations.

The potential economic impact on 25 Doctors Gully Road is discussed at sub-chapter 12.1.

(ii) Background

The Option B design deviates Doctors Gully Road into 25 Doctors Gully Road so that the Bridge Inn Road intersection can deviate north of the two river redgums located in the southwestern corner of the property. The road design results in the property access being restricted to left in and left out and impacts the paddocks used for horse breeding and training.

(iii) Evidence and submissions

Technical Note 7 removes a portion of the Project area that was to be acquired from 25 Doctors Gully Road to provide alternative access to that site as it is no longer needed.

The property owners supported Option B because it protected the Doreen River Red Gums. They advised that the modified Option B plan includes a U-turn facility which addresses their concern in relation to truck egress.

Ms Rachael Benns submitted that the reduced offset of the road from the foaling paddocks will increase noise to a sensitive use. She questioned why Doctors Gully Road needs to be four lanes and the feasibility of semi-trailers undertaking a U-turn, and would prefer to maintain a direct right turn out.

(iv) Discussion

Doctors Gully Road carries around half the traffic that Yan Yean Road carries and does not meet the volume trigger for duplication, which Mr Kelly advised was at least 16,000 vehicles per day. The EES does not clarify:

- why a four-lane divided road is needed for that extent
- why access at the property needs to be restricted to left in and left out.

The IAC considers the modified Option B design to be appropriate, however MRPV should pursue any opportunity to reduce the impact on 25 Doctors Gully Road. There are suitable EPRs provided to guide such an improvement to the design.

(v) Findings

The Inquiry and Advisory Committee finds:

- The impact on 25 Doctors Gully Road resulting from partial land acquisition will not be significant if the U-turn facility shown in modified Option B is provided.
- The Project design should be refined to minimise the extent of acquisition required at 25 Doctors Gully Road and to consider a direct right turn out of the property.

5.8 870 - 910 Yan Yean Road, Doreen

(i) The issue

The issue is whether the potential land use acquisition proposed for 870-910 Yan Yean Road is appropriate and justified.

(ii) Background

870 - 910 Yan Yean Road is a rural property with two dwellings and open grazing paddocks. The dwellings are located at 900 and 880 Yan Yean Road. Modified Option B would reduce the current dwelling setback for 900 Yan Yean Road from 75 metres to 15 metres. The current setback for dwellings and outbuildings at 880 Yan Yean Road is between 65 and 230 metres, the preferred alignment will reduce these setbacks by approximately 10 to 15 metres. Modified Option B requires 17,200 square metres of land while Option C requires about 2,000 square metres. Access is not expected to be changed.

(iii) Evidence and submissions

Mr Barlow gave evidence that although the maximum acquisition under modified Option B is equivalent to approximately a third of the lot size for 900 Yan Yean Road, as this address is part of a combined landholding which is estimated to be approximately 36 hectares, the acquisition will not prevent the landholding from continuing to be used for rural activities.

The subject property owners opposed the extent of land proposed to be acquired from 900 Yan Yean Road through Option B. They considered this design was the result of:

- Whittlesea Council not allowing enough room on the south west corner of the land
- seeking to save *"a termite ridden old house, that being the Old Post Office and two deteriorating old gum trees".*

(iv) Discussion

Option A would provide the least land acquisition, particularly for 900 Yan Yean Road.

Option B and its modified version require significantly more land, however its scale and alignment in response to retaining heritage and enabling a well-scoped intersection is justified and appropriate. Option B is reasonably acquiring what it needs from the subject property.

Option C requires significantly less land to be acquired from the subject property.

The IAC discusses the values of the Old Doreen Store, Doreen River Red Gums and Doreen Recreation Reserve in sub-chapters 5.2, 5.3 and 5.6 respectively.

(v) Finding

The Inquiry and Advisory Committee finds that modified Option B will result in a significant, but reasonable and justified land acquisition at 900 Yan Yean Road.

5.9 Bus stops, pedestrian and cycling connectivity

(i) The issue

The issue is whether suitable pedestrian and cyclist connectivity is being provided at and around the Bridge Inn Road intersection, including to bus stops.

(ii) Background

The EES plans show a two-way shared path running along the west side of Yan Yean Road.

From the south, the shared path runs up to the Bridge Inn Road intersection and turns left along the frontage of the Old Doreen Store and then turns left down the eastern side of the old Yan Yean Road, terminating at the only bus stop shown at this intersection.

From the north the shared path turns to the west along Bridge Inn Road.

EPR TP1 includes a requirement to maintain, and where practicable, enhance pedestrian movements.

(iii) Evidence and submissions

Nillumbik Council and other submitters raised concerns with pedestrian accessibility to the Old Doreen Store and to the Doreen Primary School located on Doctors Gully Road.

The modified Option B plan shows a potential pedestrian path network and notes that the bus stop locations and associated paths would be subject to further consultation.

The plan shows a path along the northern side of Doctors Gully Road to link back to the existing path to access the primary school and links to the Old Doreen Store.

The signalisation of the Bridge Inn Road intersection will include pedestrian crossings.

The shared path is shown linking into the Doreen NAC but is also subject to further design consideration.

A southbound bus stop is shown as being accessed from the Bridge Inn Road intersection while the northbound bus stop is shown as being accessed from Activity Way.

Mr Kelly recommended that EPR TP1 be modified to include a reference to bus stops, in the third dot point.

(iv) Discussion

Pedestrian safety crossing at the Bridge Inn Road intersection will be significantly improved by the provision of traffic signals at the intersection.

The IAC is concerned about the travel distance between the bus stops and the Doreen NAC and considers that this is not likely to encourage the use of public transport to access the Doreen NAC. The IAC is also concerned about the need to use different travel routes to

access the northbound and southbound bus stops and considers that this is likely to result in confusion by users and increased walk distances.

It is difficult to locate the northbound stop close to Bridge Inn Road due to the double left turn lanes before the intersection. A possible solution may be to group the two bus stops near Activity Way on Yan Yean Road. This would require the provision of a safe crossing point to be provided to access the southbound stop, which could be incorporated into a signalised intersection addressing the access issues discussed in sub-chapter 5.3.

(v) Findings

The Inquiry and Advisory Committee finds:

- Option B pedestrian and cyclist connectivity at the Bridge Inn Road intersection is inadequate and requires improved access to the Doreen Neighbourhood Activity Centre from the proposed shared path and bus stops, and along Doctors Gully Road to the Doreen Primary School.
- The final design plans should include:
  - a link from the shared path into the southern end of the Doreen Neighbourhood Activity Centre
  - a footpath along Doctors Gully Road linking to the Doreen Primary School
  - improved connectivity between bus stops on Yan Yean Road and the Doreen Neighbourhood Activity Centre.

5.10 Cookes Road intersection

(i) The issue

The issue is whether the Project should be extended to include the Cookes Road intersection, located to the north of Bridge Inn Road.

(ii) Background

EES Chapter 3 states that three Project options were considered, essentially:

1. no duplication (minor safety works only)
2. duplication from Kurrak Road to Jorgensen Avenue
3. duplication from Kurrak Road to Bridge Inn Road.

At Chapter 7.5.2 it states that the Project will provide:

> More efficient intersection performance at all intersections compared to existing performance, with the intersection at Bridge Inn Road operating at a LoS D and all other intersections operating a LoS C (or better).

Technical Report A at chapter 4.7.1 states:

> The intersection performance targets adopted for the Project includes:
>
> - A degree of saturation (DoS) of 0.9 or lower
> - An overall intersection level of service (LoS) D or better
> - 95th percentile queue lengths that are generally contained within the proposed turn lanes.

(iii) Evidence and submissions

Technical Note 5 was provided at the direction of the IAC to provide a more detailed comparison of each option for the Bridge Inn Road intersection. Technical Note 5 drew together information from a number of MRPV's expert witnesses' statements. It stated that both modified Option B and Option C meet the traffic performance targets outlined above, subject to the upgrade of the Cookes Road intersection to the north.

Mr Kelly gave evidence that the Bridge Inn Road intersection would operate with a LoS E in the PM peak (2031 scenario) with a DoS greater than 1.0 under both modified Option B and Option C unless the Cookes Road intersection was upgraded.

He advised that Yan Yean Road is carrying around 17,000 vehicles per day at Cookes Road. and a typical warrant for duplication was a volume of 16,000 vehicles per day. In his evidence at Table 5.12 he listed the traffic volumes for a number of recent duplication projects. That table included two roads, Koo Wee Rup Road and Lathams Road, as carrying only around 15,000 vehicles each day before duplication.

He concluded that the Cookes Road / Yan Yean Road intersection needs to be considered as part of the Stage 2 upgrade.

The land owners of 25 Doctors Gully Road submitted that there a number of river red gums and a billabong on their property which may be impacted by any widening of the Cookes Road intersection and accordingly they have concern about the environmental impacts of works at that location which have not been considered in the EES.

MRPV in its closing statement submitted:

> there are several years between the opening of the upgraded Yan Yean Road (expected to be 2024 – 2025) and the point at which the absence of any upgrade to Cookes Road is likely to impact on the operation of Yan Yean Road (2031) and there is nothing to prevent Cookes Road from being upgraded during that time as a complementary project.

Whittlesea Council in its closing submitted:

> Regardless of the apparent benefits in an upgrade to Cookes Road, Council submits that such an option must be first subject to:
>
> - Proper analysis of traffic benefits, balanced against environmental impacts;
> - Consultation with both Council and the Shire of Nillumbik, to ensure such a treatment is in keeping with its road management processes;
> - Consideration of the extension of the Project area to include a greater part of this intersection, allowing an upgrade to be afforded consultation, design and approval processes.

(iv) Discussion

The IAC does not accept MRPV's argument that there are several years between the opening of the upgraded Yan Yean Road and the need to upgrade Cookes Road as this has not been shown by the evidence and was not considered at all in the EES documentation. Indeed, Mr Kelly's evidence is that by 2031 the Bridge Inn Road intersection will be operating at a DoS of 1.03 in the PM peak hour without an upgrade to the capacity of Cookes Road. Clearly that means that sometime before that the intersection would exceed the intersection performance target of a DoS of 0.9.

The IAC is concerned that the 2031 design year only provides around a seven year operating horizon in any event before more works may be triggered. For such a substantial project, this is a very short horizon, which is shown in Mr Kelly's evidence by the inclusion of sensitivity testing for the year 2035.

Based on Mr Kelly's evidence, the IAC is satisfied that there is sufficient traffic justification to extend and duplicate the Project beyond Cookes Road. The IAC is mindful however that the EES has not considered the environmental impacts for an upgrade of the Cookes Road intersection as it was outside the defined project boundary, accordingly it would be premature to include it in any approval process without further consultation with relevant parties and an environmental assessment.

(v) Findings

The Inquiry and Advisory Committee finds:

- There is sufficient justification to extend the duplication of Yan Yean Road further north beyond Bridge Inn Road to around Cookes Road.
- Duplication north of the Project area should be pursued as a separate concurrent project so that its environmental impacts can be assessed without delaying the Stage 2 Project.

5.11 Visual impact

(i) The issue

The issue is whether the proposed Bridge Inn Road intersection will result in an acceptable visual impact on its surrounds.

(ii) Evidence and submissions

Nillumbik Council preferred Option C because its reduced footprint would result in a reduced visual impact.

In his evidence, Mr Knight set out the positive and negative aspects of the Option B and C design. He stated that Option B would:

- assist in reducing the visual impact of the road widening while providing some additional public amenity for businesses and residents if they were appropriately landscaped
- move the road footprint further east, thereby reducing the clear delineation between urban and rural zones.

Regarding the Option C design, Mr Knight stated that Option C would:

- have less impact on the landscape character of the eastern rural area because it is mostly in a widened alignment of the existing Yan Yean Road
- likely required all large sugar gum trees along the southern boundary of Doreen Recreation Reserve to be removed
- create a large land parcel on 25 Doctors Gully Road that:
  - is bordered by roads and unlikely to be suitable for public access
  - would need to be carefully considered to continue to contribute to the surrounding rural landscape's character.

Mr Knight found that the Landscape Strategy and the EPRs would ensure that either intersection design result in an acceptable landscape outcome.

Ms Hunter was concerned that people would perceive the realigned Bridge Inn Road further east as Melbourne's Urban Growth Boundary (UGB) rather than the existing Yan Yean Road alignment.

(iii) Discussion

The IAC considers that visual impact is a matter of design, and not necessarily scale.

As outlined earlier, the IAC does not support Option A because it would require two identified heritage trees and a candidate heritage building (Old Doreen Store) to be removed to accommodate asphalted lanes and a footpath.

Option C retains the trees and Old Doreen Store, however, its tight fit within an expanded existing roadway would result in minimal footpaths, including the one abutting the Old Doreen Store. This is likely to result in safety barriers to protect people and the heritage place, thereby resulting in a negative visual impact at this location. Option C would also be less visually legible than Option B, particularly for motorists and cyclists seeking to understand how to cross Yan Yean Road while travelling along Doctors Gully Road. However, these negative aspects of the design would not result in an unacceptable visual impact on surrounding land.

Option B realigns Yan Yean Road on greenfield land away from the constraints of the existing road reserve. The IAC considers this relatively modest realignment to the east will not negatively impact the rural surrounds. The IAC is satisfied the Landscape Strategy and the EPRs will appropriately manage any potential visual impacts.

The IAC accepts Mr Knight's evidence regarding the visual impact of Bridge Inn Road intersection design Options B and C.

(iv) Finding

The Inquiry and Advisory Committee finds the Landscape Strategy and the Environmental Performance Requirements will ensure that Bridge Inn Road intersection design Options B and C will result in an acceptable visual impact on its surrounds.

5.12 Economic impact

(i) The issue

The issue is whether the proposed Bridge Inn Road intersection will result in an acceptable economic impact on the Doreen NAC and 25 Doctors Gully Road.

(ii) Background

Plan Melbourne defines a NAC as a centre that provides access to local goods, services and employment opportunities and serves the needs of the surrounding community. There is no structure plan for the Doreen NAC.

EES Chapter 10, which assesses the effects on businesses, was informed by Technical Report E (Business Impact Assessment). The EMF includes the following EPRs:

- B1 – Avoid and minimise business disruption
- B2 – Implement a Trader Engagement Plan
- B3 – Business access and car parking.

(iii) Submissions

Mr Benns, Jamluk and the Doreen Committee, a few local residents, and Roads and Roadside Ecology Northern Nillumbik (RARE Northern Nillumbik) were concerned that road's design and construction phase would negatively impact the commercial viability of businesses along the road alignment and in the Doreen NAC.

Ms Benns submitted the Project would negatively affect the rural business at 25 Doctors Gully Road. Noise and lights from the road's proximity would affect the health of horses which would then reduce revenue. She requested that the road be realigned away from the horses.

Jamluk and the Doreen Committee submitted that the Doreen NAC:

- provides convenience-oriented retail goods and services to local residents and passing trade
- had established businesses which required corner main road frontages along Yan Yean Road and Bridge Inn Road to visually connect with motorists.

Jamluk and the Doreen Committee added that realigning the road 200 metres northeast of the Doreen NAC through Option B would remove existing frontages and detrimentally impact the centre. This is because potential customers would be disinterested in accessing the more complicated road alignment and access arrangements. It submitted that Option C would result in a better outcome for the Doreen NAC.

Jamluk and the Doreen Committee questioned the Business Impact Assessment and submitted:

- it was prepared during State government Covid-19 related lockdown restrictions
- existing businesses were not contacted to understand their clients and trade.

They considered an assessment would typically have assessed existing retail sales in a centre, resident catchment from which sales are drawn, share of trade captured from passing traffic, and the likely impacts on trade levels resulting from the road works and alignment.

Whittlesea Council submitted that only intersection design Option C would be acceptable for Doreen NAC businesses because visibility and access would be similar to existing conditions. It considered signage along the modified Option B design to be an adequate substitute for the prominence of the businesses in the Doreen NAC. Whittlesea Council added that MRPV had not established that signage would rectify visibility issues.

MRPV submitted that the Project impacts:

- would be acceptable on businesses in the Project area, including the Doreen NAC
- will be appropriately managed through EPRs B1, B2 and B3.

MRPV advised that:

- it has consulted and engaged with the Doreen NAC business representatives, including a recent onsite meeting on 17 November 2020
- it will continue to seek to further minimise impacts through detailed design.

In response to the Jamluk and the Doreen Committee submission, MRPV proposed a new EPR B4 specifically for the Doreen NAC:

> **Doreen Neighbourhood Activity Centre**
>
> Develop and implement measures as part of the Project in consultation with the Department of Transport, Whittlesea City Council and Nillumbik Shire Council to avoid and minimise loss of exposure of the Doreen Neighbourhood Activity Centre to the arterial road network, including:
>
> - Design permanent and temporary works to the extent practicable to ensure that a reasonable level of visibility of the Doreen Neighbourhood Activity Centre is maintained when approaching the Doreen Neighbourhood Activity Centre on Yan Yean Road or Bridge Inn Road;
> - Installation of wayfinding, directional and/or business identification signage to provide advanced notice to motorists on Yan Yean Road or Bridge Inn Road of the Doreen Neighbourhood Activity Centre in accordance with relevant Department of Transport guidelines.

(iv) Evidence

Mr Barlow stated the proposed Bridge Inn Road intersection (Option B) may potentially:

- result in less intuitive access to businesses from Bridge Inn Road travelling east for both private vehicles and commercial vehicles and southbound vehicles on Yan Yean Road
- dislocate pedestrian access to the Doreen NAC from the recreation reserves in the north
- diminish the Doreen NAC's commercial identity from lack of direct access from the major road and possible reduced passing trade
- create 'isolated' land parcels by the roadway design.

Mr Barlow considered the Doreen NAC to be more like a local neighbourhood centre with services that were more destinational than convenience. Services include car and tyre repairs, the new medical centre and non-major food outlets. He added:

> Given this role it is considered that it is not necessary for the Yan Yean arterial road to directly pass the centre. Nonetheless, it is desirable that good visibility of the centre from new Yan Yean Road is maintained to ensure that passing traffic can choose to access the centre.

Mr Barlow considered good road signage advising of the Doreen NAC and access points would assist non-local passing traffic.

Jamluk and the Doreen Committee called expert evidence on economics from Mr Henshall of Ethos Urban and MRPV called expert evidence on business impacts from Ms Stoettrup.

Mr Henshall and Ms Stoettrup each applied different approaches in their evidence. Ms Stoettrup found the Project would result in an acceptable impact on business in the Doreen NAC while Mr Henshall found there would be a significant unacceptable outcome.

Both economic experts acknowledged that visibility and access contribute to a well-performing NAC, and was particularly important for passing trade. Ms Stoettrup added trade area, convenience walkability, safety and amenity as other contributing factors to a well-functioning centre. She described the Doreen NAC as a centre:

- in a fast growing trade area (Doreen suburb) where the population has grown from 3,000 in 2006 to 27,000 in 2019

- designed for convenience, with the most convenient access being north and west bound traffic
- which targets car travel, though it has relatively inefficient footpaths
- which appears safe but is not a place where people linger
- with little outdoor seating and public toilets away from the centre in the Doreen Recreation Reserve.

Economic experts defined the Doreen NAC trade area as:

- a 1.5 kilometre radius around the centre because it draws a significant share (51 per cent) of total annual sales (Mr Henshall)
- Doreen suburb (Ms Stoettrup).

Economic experts defined passing trade as customers from:

- outside the trade area (1.5 kilometre radius) who travel along Yan Yean Road or Bridge Inn Road to or from destinations further afield and who may choose to stop (Mr Henshall)
- outside the trade area (Doreen suburb) who "*stop to shop on a whim as an unplanned action*" (Ms Stoettrup).

Mr Henshall stated the Business Impact Assessment was deficient and was not a conventional economic impact assessment that measures potential impacts on Doreen NAC. His assessment found that Option B:

- is likely to reduce visitor numbers and sales during and after road construction
- would result in significant negative impacts on businesses ranging from:
  - 40 per cent trade loss, resulting in a loss of $7 million and possibly up to 55 full time equivalent jobs (high impact scenario)
  - 20 per cent trade loss, resulting in a loss of $3.5 million and possibly up to 30 full time equivalent jobs (low impact scenario)
- would threaten new investment in existing and potential businesses.

Mr Henshall supported Option C because it would maintain the Doreen NAC's convenience role. He considered this option would benefit from a U-turn point for traffic travelling east on Bridge Inn Road.

Ms Stoettrup stated the EES Scoping Requirements included potential business impacts but did not require retail impacts to be quantified. She considered that Technical Report E appropriately addressed business impact. Irrespective, her evidence[5] included definitions, assumptions and a methodology to better understand passing trade. This would include tourists and temporary workers. She found:

- tourists account for 1.07 per cent of traffic on Yan Yean Road
- temporary construction industry workforce accounts for an estimated 4.7 per cent of the workforce.

Ms Stoettrup added:

> These two components of passing trade support the 'rule of thumb' for passing trade to comprise a maximum 10% of total trade. Individual businesses at the Doreen Neighbourhood Activity Centre e.g. the United Petroleum Service Station and

[5] Stoettrup evidence, paras 5.23 to 5.26

> McDonalds have greater exposure to passing trade, whereas Ziba Barbers and En-Pointe Health Centre (podiatrist) have less exposure. With the addition of a medical centre and child care centre the role of passing trade to overall trade at the Doreen Neighbourhood Activity Centre will be further reduced.

Ms Stoettrup did not recommend any additional EPRs for 25 Doctors Gully Road and noted:

- Option B would result in more farming land loss than Option C
- vegetation loss would reduce the land's suitability for training young horses and foaling mares
- EPRs LU1, LU2, LV1, LV2, NV1 and B1 relating to protecting land use, landscape values, noise and visual impacts, have to be implemented in consultation with the business and land owner.

(v) Discussion

The Project needs to provide appropriate access to businesses around the Bridge Inn Road intersection during construction and operation to minimise negative impacts. It is not responsible for consumer behaviour beyond this and does not have to ensure that each individual business can achieve an acceptable economic outcome.

However, the Bridge Inn Road intersection design and construction need to achieve an acceptable economic outcome for the Doreen NAC. An unacceptable outcome to this centre may result in a disbenefit to the Doreen community and an unacceptable business impact across the entire Project area.

Doreen NAC's role, ultimate form and trade area need to be understood to assess whether the proposed Bridge Inn Road intersection will result in an unacceptable economic impact. Assessing the potential impact has been complicated by:

- limitations in Technical Report E, including the absence of quantifiable information
- the absence of a Doreen NAC structure plan to understand its ultimate form
- expert evidence with incomparable methodologies.

Technical Report E assesses the Project's impact on businesses in the Project area, including the Doreen NAC. Like the Stakeholder and Community Engagement Report, it does not specify how many and which businesses expressed their views. The Technical Report E conclusions appear to be made in response to stakeholder discussions without quantified data, including economic figures, to cross-check claims. To this extent, the IAC agrees with Mr Henshall the report is somewhat deficient.

The scoping requirements did not require retail impacts to be quantified but they did not preclude it either. Understanding Doreen NAC's primary and secondary retail trade catchment would have helped to:

- inform whether the Project's economic impact on the Doreen NAC will be acceptable
- support conclusions in Technical Report E.

Any economic impact on the Doreen NAC should include the collective impact on existing businesses and the ability to invest in and develop vacant sites. The Doreen NAC is a partly developed and will rely on appropriate access arrangements to attract future investment. From that perspective, the intersection design needs to consider the centre in is ultimate form as a baseline for access arrangements.

The IAC prefers Ms Stoettrup's trade area (Doreen suburb) because it provides a more realistic catchment where most expenditure would be drawn. It is consistent with the definition for a NAC in Plan Melbourne. The IAC considers Mr Henshall's more arbitrary 1.5 kilometre radius to be too conservative. This radius represents 51 per cent of annual sales. This can be regarded as a roughly equal share, but not a significant share, of annual sales. Mr Henshall's definition of passing trade (anyone from outside the 1.5 kilometre radius) thereby exacerbates the proportion of passing trade. His approach appears more in line with defining a primary and secondary catchment.

The IAC prefers Ms Stoettrup's definition because passing trade relies on an impulse decision. There would be a proportion of people outside of Doreen who would visit the centre as part of a planned multi-purpose trip. Irrespective, the IAC agrees with Mr Barlow that the Doreen NAC is more a destination centre than one of convenience. The centre will continue to evolve more into a destination centre through its future uses, including the medical and aquatic centres.

Mr Henshall provided definitive impact figures which the IAC cannot use whereas Ms Stoettrup provided indicative figures which are not as definitive. However, they are indicative enough to demonstrate that there is unlikely to be an unacceptable economic impact on the Doreen NAC.

The IAC is not persuaded that realigning Yan Yean Road about 200 metres east of the existing alignment, with appropriate access points, will result in an unacceptable economic impact. However, there should be measures in place during the construction phase to identify the centre and to guide motorists towards the relevant access points. During road operation, there should be identification and guidance signage and landmarks at locations where people have sufficient time to make a decision and to safely turn into the centre.

(vi) Findings

The Inquiry and Advisory Committee finds:

- The exhibited or modified Option B design for the Bridge Inn Road intersection can be further modified to result in acceptable economic impact on the Doreen NAC.
- There should be a new EPR which requires business related measures for the Doreen NAC to be prepared and implemented in consultation with Department of Transport, Nillumbik Council and Whittlesea Council.

5.13 Integrated Bridge Inn Road intersection assessment

(i) The issues

The issues are:

- whether acceptable environmental outcomes can be achieved with the Project design
- what recommendations and specific measures are necessary and appropriate to prevent, mitigate or offset adverse environmental effects to acceptable environmental outcomes.

(ii) Discussion

The IAC has considered the various issues raised in submissions and evidence put forward in relation to the design of the Bridge Inn Road intersection as discussed above. Both the Option B and Option C have significant merit and could achieve the objectives of the Project with acceptable environmental impact if appropriately managed. The impacts vary between options and the IAC has had to weigh these impacts with careful consideration.

There is rarely an ideal scenario without a negative impact and that is the case here with both options. To improve both safety and capacity some constraints on movement will occur and some vegetation will be removed, and some property will need to be acquired.

In determining that both could be acceptable, the IAC has accepted that Option B is the preferred option by the MRPV and the Department of Transport and has considered what recommendations and measures are necessary to prevent, mitigate or offset adverse environmental effects to acceptable environmental outcomes.

The key matters to be addressed are:

- managing the surplus land parcels created by the Project
- minimising impacts on the river red gums at 990 Yan Yean Road
- minimising impacts on Doreen Recreation Reserve
- improving bus accessibility and vehicular access to the Doreen NAC
- providing adequate U-turn and right turn facilities
- minimising impacts at 25 Doctors Gully Road.

The IAC has recommended that the Yan Yean Road duplication north of the Project area, including the Cookes Road/Yan Yean Road intersection be pursued separately. However, it is important the Cookes Road intersection be investigated for upgrade as soon as possible so that the full benefits of the Project can be achieved and to minimise pressure for further expanding the Bridge Inn Road intersection.

(iii) Finding

The Inquiry and Advisory Committee finds the Option B Bridge Inn Road intersection design acceptable, subject to changes.

5.14 Surplus land and master plan

(i) The issues

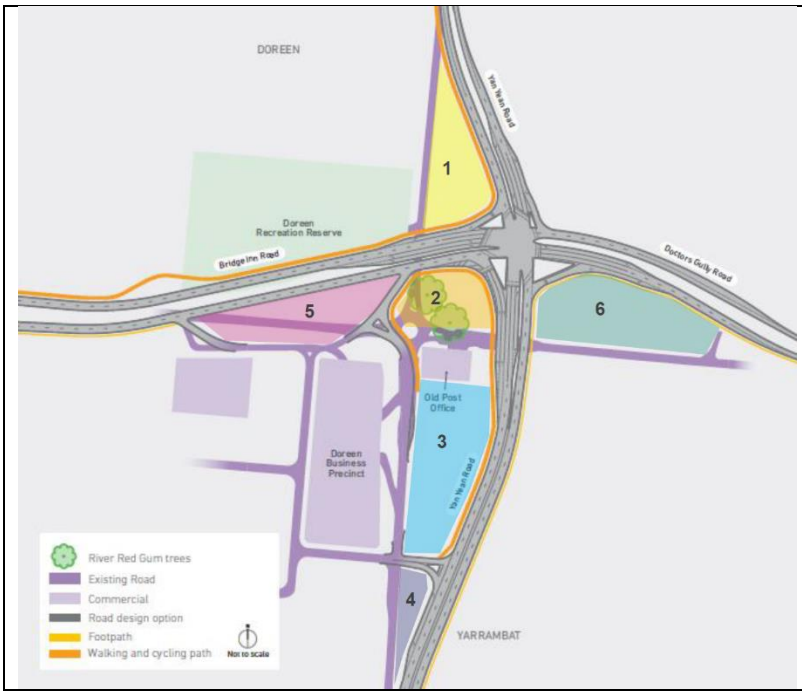
The issues are:

- how the surplus land acquired at the Bridge Inn Road intersection should be zoned and used
- whether a master plan should be required for the Bridge Inn Road intersection, surplus properties and the Doreen Recreation Reserve.

(ii) Background

Intersection design Option B would result in six areas of surplus land, as shown in Figure 3.

Figure 3 Bridge Inn Road intersection surplus land



Surplus land areas:

1. Nillumbik: Green Wedge Zone (outside Melbourne's Urban Growth Boundary (UGB))
2. Nillumbik: Green Wedge Zone (outside the UGB)
3. Nillumbik: Rural Conservation Zone (outside the UGB)
4. Nillumbik: Rural Conservation Zone (outside the UGB)
5. Whittlesea: Road Zone Public Parks and Recreation Zone (inside the UGB)
6. Nillumbik: Green Wedge Zone (outside the UGB)

The IAC refers to these area numbers in this chapter.

Source: Evidence of Mr Barlow

EPR LV1 requires the Landscape Strategy in Technical Report G to be implemented during detailed design and construction. The Landscape Strategy requires all landscape treatment to comply with the Doreen Recreation Reserve Master Plan.

Technical Report D advises that acquiring part of the Doreen Recreation Reserve would require the City of Whittlesea's Doreen Recreation Reserve Master Plan to be redesigned and the community space to be changed. The Department of Environment, Land, Water and Planning (DELWP) owns the Doreen Recreation Reserve.

(iii) Evidence and submissions

Nillumbik and Whittlesea Councils submitted that surplus land acquired through either Options B or C should be master planned to address amenity and urban design issues.

Nillumbik Council submitted that surplus land should be used to reinstate vegetation lost along the Project area, provide open space or provide alternative community space. It requested a new EPR:

> Prior to works commencing, MRPV to prepare and fund the implementation of a Masterplan for the use of surplus acquired land at the Bridge Inn Road intersection (incorporating the Doreen Recreation Reserve Masterplan) for public open space/recreation/ community use to be approved by Nillumbik and Whittlesea councils, including providing sewer to the Old Doreen Store and provision of adequate access and car parking.

Whittlesea Council submitted that Area 1 could be incorporated into the Doreen Recreation Reserve. This would help offset land proposed to be acquired. Whittlesea Council requested that the Incorporated Document be revised to not require a planning permit for augmenting the Doreen Recreation Reserve with the surplus land.

Regarding Area 3, Whittlesea Council referred to the Amendment's explanatory report:

> Land in the Green Wedge Zone acquired for the project will be acquired for the purposes of a road pursuant to the PAO and will be retained in the road reserve or provided to Council for use as public open space, Residual land following acquisition will also remain above 40 hectares.

Whittlesea Council submitted that the Incorporated Document did not enable such a land transfer to Council.

Whittlesea Council requested two new EPRs:

> **S4: Doreen Recreation Reserve**
>
> Prepare and implement a Doreen Recreation Reserve Master Plan, in consultation with the City of Whittlesea, achieving all key elements proposed in the 2014 Doreen Recreation Reserve Master Plan, including:
>
> - Provision of an adequate and versatile sporting oval, with a radius no less than 50 metres at any point; and
> - Provision of facilities and amenities within the Doreen Recreation Reserve, including car parking, tennis courts and community/play areas, to the satisfaction of the City of Whittlesea.
>
> **S5: If MFD is preferred design:**
>
> **Historical, Social and Landscape Master Plan**
>
> Prepare and implement an Historical, Social and Landscape Master Plan to manage impacts on the Yan Yean Road/Bridge Inn Intersection, including the existing Doreen Recreation Reserve and Doreen NAC. The Historical, Social and Landscape Master Plan must be prepared and implemented in consultation with the City of Whittlesea and Shire of Nillumbik and include measures to:
>
> - Integrate surplus parcels of land, vested in either the City of Whittlesea and the Shire of Nillumbik;
> - Enhance and maximise the social, historical and landscape values of the intersection and surrounding uses; and
> - Manage the use of surplus parcels of land recreated to ensure future use.

MRPV presented alternative designs[6] for the Doreen Recreation Reserve which were challenged by high voltage power lines running diagonally through the site. Whittlesea Council considered aspects of the redesign, including the oval dimensions, to be deficient.

Mr Barlow recommended the surplus land areas should be zoned and used as follows:

- Area 1 – add to the Doreen Recreation Reserve (Green Wedge Zone enables this purposes) and transfer to Whittlesea Council
- Areas 2 and 4 – use for landscaping and open areas due to smaller size and surrounding road and access ways
- Area 3 – open space and associated community uses (subject to assessing the need for such uses at this location) and landscaping, while retaining clear views to the Doreen NAC from the new road alignment
- Area 5 – landscaping with potential for community use, subject to assessing servicing and land capability
- Area 6 – retain as part of the modified road reserve and landscape, or amalgamate with 900 Yan Yean Road and rezone to Rural Conservation Zone to match that site.

Mr Barlow supported an EPR for a master plan which:

[6] Document 63

- investigates opportunities for surplus land
- responds to the final road alignment and views of the community and other stakeholders.

MRPV agreed with Mr Barlow and proposed:

- EPR LV1 be revised to add:

  Prior to operation, implement the Landscape Strategy to provide landscaping and reinstatement works to surplus land parcels consistent with the future use(s) of those surplus parcels proposed in the Bridge Inn Road/Yan Yean Road Surplus Land Use Plan (refer to EPR LU3).

- A new EPR LU3:

  Bridge Inn Road/Yan Yean Road Surplus Land Use Plan

  Prior to operation of the Project, MRPV in consultation with Whittlesea City Council and Nillumbik Shire Council, must develop and implement a Bridge Inn Road/Yan Yean Road Surplus Land Use Plan.

  The Bridge Inn Road/Yan Yean Road Surplus Land Use Plan must set out the process for establishing the future use of surplus land at the Bridge Inn Road/Yan Yean Road intersection, including:

  - Proposed future use(s) of each parcel of surplus land created by the development of the Bridge Inn Road/Yan Yean Road intersection;
  - Preferred future landowner/land manager for each surplus parcel; and
  - A process for transferring landownership where required.

  Note:

  *Surplus land is land acquired for the Project but not to be required for permanent Project infrastructure or related purposes.

(iv) Discussion

The IAC considers Mr Barlow's suggested uses and zones for the six surplus land areas to be based on reasonable logic. However, the ultimate uses and zones should be determined after the road design details have been finalised and in consultation with Whittlesea and Nillumbik Councils. The six surplus areas should be considered with the Doreen Recreation Reserve, Doreen River Red Gums, Doreen NAC interface and Old Doreen Store through a single master plan response.

The master plan should:

- consider consolidating part of Area 1 into the Doreen Recreation Reserve as part of its modified design
- ensure that Area 3 retains clear views across between the Doreen NAC and the new road
- consider land uses in Area 3 which would help integrate the Old Doreen Store with the rest of the Doreen NAC and complement existing businesses
- inform the Landscape Strategy so that it can include landscaping and reinstatement works on surplus land parcels.

(v) Finding

The Inquiry and Advisory Committee finds that a Surplus Land Master Plan should be prepared for the Bridge Inn Road intersection, six surplus land areas and the Doreen Recreation Reserve in consultation with Nillumbik and Whittlesea Councils.

5.15 Bridge Inn Road intersection overall findings and recommendations

(i) Summary of findings

The Inquiry and Advisory Committee finds:

- The Old Doreen Store at 920 Yan Yean Road, Doreen has sufficient local heritage significance which:
  - should be retained in the Bridge Inn Road intersection design
  - would be retained in Options B and C, although Option B would result in a better outcome.
- The Doreen River Red Gums:
  - should be retained and appropriately managed through the Bridge Inn Road intersection design
  - would be better managed by Option B and its modified version.
- Regarding existing trees in the Project area:
  - there is no ecologically significant difference between Options B and C, although Option C is slightly favourable
  - effort should be made to avoid and minimise impacts on the river red gums at 990 Yan Yean Road when finalising the road design.
- Option B will result in a significant but reasonable and justified land acquisition at 900 Yan Yean Road.
- The Landscape Strategy and the Environmental Performance Requirements will ensure that Options B and C will result in an acceptable visual impact on the Yan Yean Road surrounds.
- A design for the Bridge Inn Road intersection based on modified Option B is acceptable, subject to:
  - providing a direct right turn into the Bridge Inn Road service road
  - signalising the Activity Way/Yan Yean Road intersection
  - providing a direct right turn out of the Doreen Recreation Reserve, or a U-turn facility to the north of the exit, to enable traffic to exit to the south
  - minimising the design of Doctors Gully Road and extent of acquisition required at 25 Doctors Gully Road
  - considering a direct right turn out of 25 Doctors Gully Road should a median not be found necessary at this location
  - including a new Environmental Performance Requirement which requires business related measures for the Doreen Neighbourhood Activity Centre to be prepared and implemented in consultation with Department of Transport, Nillumbik Council and Whittlesea Council
  - addressing inadequacies with pedestrian and cyclist connectivity
  - a link from the shared path into the southern end of the Doreen Neighbourhood Activity Centre
  - a footpath along Doctors Gully Road linking to the Doreen Primary School
  - improved connectivity between bus stops on Yan Yean Road and the Doreen Neighbourhood Activity Centre.
- A Surplus Land Master Plan should be prepared for the Bridge Inn Road intersection, six surplus land areas and the Doreen Recreation Reserve in consultation with Nillumbik and Whittlesea Councils.

- There is sufficient traffic justification to extend the duplication of Yan Yean Road further north beyond Bridge Inn Road to around Cookes Road through a separate concurrent project and a separate environmental assessment.

(ii) Recommendations

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) **add new permanent and temporary work requirements in HH1**

b) **reference the former Post Office and General Store at 920 Yan Yean Road, Doreen in requirement HH3**

c) **add a new LU3 which requires a Bridge Inn Road/Yan Yean Road Surplus Land Master Plan to be developed and implemented in consultation with Whittlesea City Council and Nillumbik Shire Council before the Project operates**

d) **revise LV1 to require the Landscape Strategy to be implemented consistent with the Bridge Inn Road/Yan Yean Road Surplus Land Master Plan before the Project operates**

e) **add a new B4 which requires business related measures for the Doreen Neighbourhood Activity Centre**

f) **amend TP1 to include a reference to bus stops in the third dot point**

g) **add a new TP3 which requires the Bridge Inn Road intersection to be based on the modified Option B design but optimised in accordance with TP1 and include:**

- **a direct right turn into the Bridge Inn Road service road**
- **traffic signals at the Yan Yean Road/Activity Way intersection**
- **improved connectivity between the Doreen NAC and the shared path and bus stops on Yan Yean Road**
- **advanced directional signage for the Doreen NAC**
- **provision for vehicles to exit the Doreen Recreation Reserve and head south on Yan Yean Road.**

6 Yarrambat Park environs

Chapter 6 reviews issues in the Yarrambat Park environs, comprising the area between the southern entry to Yarrambat Park (golf club entry) to Jorgensen Avenue.

6.1 Yarrambat Park public golf course fence

(i) The issue

The issue is whether the proposed 36-metre tall fence will result in acceptable impacts on the surrounding ecology and landscape.

(ii) Background

The Project proposes to bring the road closer to the Yarrambat Park public golf course, creating the potential for golf balls straying onto the road. Two options to mitigate this issue were to realign the golf course or to install a fence approximately 30 to 36 metres tall and 360 metres wide.

(iii) Evidence and submissions

MRPV and Nillumbik and Whittlesea Councils preferred to realign the golf course than to install a 36-metre fence. Key concerns related to:

- impacts to fauna potentially colliding with the fence
- the fence creating a barrier to fauna movement including kangaroos
- negative visual impact
- ongoing maintenance.

MRPV provided Technical Note 4 with some draft golf course realignment options, which indicated realignment would require further removal of native vegetation by encroaching on previously identified 'no-go zones' in the golf course. There was also the potential that an alternate realignment design may require works outside the current Project area (still within the golf course) and impact on previously unsurveyed vegetation to an unknown extent.

Ms Forbes, Mr Weller and Mr Smales preferred no fence. Their evidence indicated they had not been provided with or reviewed Technical Note 4. Their evidence on the potential impacts of the Project of the swift parrot is discussed in sub-chapter 9.3.4. They considered the swift parrot rarely visited the area, based on minimal preferred foraging habitat existing in the Project area especially as compared to higher quality habitat in the vicinity. They added the swift parrot may not even fly through the Project area to reach that more significant habitat on its way from Tasmania.

Regarding the potential for collision with the swift parrot, Mr Smales based his evidence on a literature review combined with his experience in wildlife management. He referred to a study by Pfennigwerth (2008) which undertook detailed consideration of collisions by the swift parrot with built structures. This work offered in-principle guidance yet also recommended further study. He noted that little empirical data had been published on the issue. From the available literature it was established the birds collide with structures which are either invisible to them or not perceived as dangerous. Mr Smales gave evidence:

> Deaths of Swift Parrots due to collisions with such obstacles have been reported from fences, such as those around tennis courts and golf courses, and from windows and glass bus shelters in urban environments of cities and towns across the species range, particularly where such structures are in close proximity to trees frequented by the species (Pfennigwerth 2008; Saunders and Tzaros 2011).

While collisions were less frequently reported on the mainland 24 and 8 mortalities due to collisions with man-made structures were reported for New South Wales and Victoria, respectively between 1999 and 2008. With 43 percent of those deaths being form wire fences at golf courses.

Mr Smales then discussed the potential materials and tension for a fence which may be more likely to absorb the impact of a collision compared with ordinary chain-mesh. Although he identified the appropriate tension of the fence as being *'critical to the likelihood of a collision resulting in injury or death',* Mr Smales was unable to quantify an appropriate tension. He gave evidence that:

> Ideally it should be such that the impact of a Swift Parrot in flight will be absorbed without injury, however, it is also important that on impact, the mesh does not form loose folds or pockets in which an animal can become entangled and trapped.

Mr Smales stated the swift parrot is fast, one individual has been documented flying at 88 kilometres per hour, although he considered it *"unlikely that birds routinely fly at that speed".*

Although Mr Smales provided recommendations for the fence design, material and maintenance, should it be required, he conceded that it is:

> not possible to ensure that following this advice will entirely prevent Swift Parrot injuries or mortalities. Having said that, he considers it unlikely a fence would contribute to a significant impact on the species, as defined for the purposes of the Environment Protection and Biodiversity Conservation Act (Commonwealth Australia 2013. Matters of National Environmental Significance Significant Impact Guidelines 1.1).

Mr Knight provided evidence on the potential visual impact being that it was expected to have a moderate impact during the operation stage *"with the fence appearing as a prominent new built form element in an otherwise mostly naturalistic outlook".* He considered mitigating factors including the muted colours, non-reflective materials, mesh nature (being visually permeable) and proposed plantings would help reduce its perceived bulk and the level of visual impact.

Nillumbik Council which owns the golf course was concerned about the proposed realignment. It submitted:

- the existing course design by Anthony Cashmore "a designer amongst the best in the business" was a drawcard for the business and key to its success
- they had not been provided an opportunity to be involved in the preparation of redesign options
- it was unclear who would pay
- the additional native vegetation costs were unknown.

Nillumbik Council recommended new EPRs to create more certainty in the process to address the above issues.

Nillumbik Council submitted the fence would be a *"visually dominant aspect of the landscape"* and cause an unacceptable visual impact. It could pose significant risk to swift

parrot, other birds, grey-headed flying fox, and would create problems for fauna and require significant, ongoing maintenance in perpetuity.

Ms McKinnon submitted there were regularly kangaroos at the golf course which would cross of Yan Yean Road at that point. Figure 5.5 of Technical Appendix B1 indicates kangaroos cross in this vicinity. Ms Forbes had suggested there could be opportunity for the mesh to start at a height such as to permit kangaroos to jump under the fence while still providing safety from the higher-flying golf balls.

In response to questions from the IAC, MRPV submitted that existing EPRs would ensure impacts of the redesign of the golf course were appropriately managed within the Project area. In the event realignment outside the Project area was necessary, MRPV provided one option would be to alter the Project area subject to the Specific Controls Overlay, alternatively a separate approval would be necessary. MRPV reiterated the Project included the fence.

(iv) Discussion

The IAC remains concerned the fence poses a risk to individual swift parrot which may fly through the area.

Technical Appendix B2 provides that the fence poses a risk to individual grey-headed flying fox that may use suitable habitat in proximity to the fence, as well as individuals in transit from roost sites to foraging areas.

Anecdotal evidence provided from other golf courses, which were not required to undertake any monitoring, provided no reported collisions or entanglements of grey-headed flying fox. The IAC cannot attribute much weight to this. Technical Appendix B2 recommends the proposed fence incorporate ultra-violet reflective elements in order to increase its visibility for this nocturnal species.

Other listed species likely to fly through the Project area include white-throated needletail, common bent-wing bat, and rufous fantail. The respective heights at which remaining species may fly or ability to discern and avoid a fence, was not the subject of evidence.

The IAC accepts Mr Smales evidence that the high population-level threshold under the EPBC Act Significant impact criteria Guidelines may not be met.

The IAC accepts MRPV's submission that potential environmental impacts in the Project area related to redesign of the course can be managed by the existing proposed ERPs (subject to any changes recommended in this report). It is agreed the simplest process would be to expand the Special Controls Overlay should there be need to undertake works outside the current Project area. So long as any expansion only affects golf course land, the IAC considers consultation requirements can easily be met.

However, there is uncertainty as to what the triggers would be to stop pursuing the golf course realignment and to install the fence and to what extent this conclusion would be met by agreement with Nillumbik Council. It is unclear whether there is to be a concurrent process being undertaken to pursue the question of the most appropriate tension, materials and design for the fence to reduce potential environmental impacts.

Given the uncertainty of the critical level of tension required and even a means by which to determine an appropriate one, the need for ongoing monitoring and maintenance and the

moderate visual impact, the IAC finds it difficult to recommend a fence. It would be challenging to prescribe clear enough guidance by way of condition or EPR which would ensure all issues would be satisfactorily resolved and the design of the fence (including its tension) would minimise potential collision impacts on the swift parrot or other fauna.

The IAC agrees with submissions that the fence would be result in an unacceptable visual impact. Its roughly 12 storey height would be inconsistent with the surrounding low scale built form and would be seen from many vantage points at considerable distances. Even if the fence design had mesh which is visually prominent enough for the birds but not too prominent for the people, its structural posts would remain overly dominant.

The IAC is not persuaded the benefit of installing a fence at this location would outweigh the impacts resulting from the associated additional native vegetation clearance and its visual impact.

(v) Findings and recommendation

The Inquiry and Advisory Committee finds:

- The proposed 36-metre tall fence will not result in acceptable impacts on the surrounding ecology and landscape.
- The extent of native vegetation removal outside the Project area and the Specific Controls Overlay should be resolved during the detailed design.

The Inquiry and Advisory Committee recommends:

Extend the Specific Controls Overlay to include Yarrambat Park public golf course land required for the proposed golf course realignment works.

6.2 Median vegetation

(i) The issues

The issues are whether the wide median between Bannons Lane and Laurie Street:

- is necessary to avoid any significant environmental or landscape impact in this location
- can minimise potential native vegetation impacts of the Project.

(ii) Background

The EES shows vegetation on the western side of the existing Yan Yean Road at this location to include two matted flax-lily plants, one studley park gum and patches of grassy dry forest Ecological Vegetation Class (EVC). The wide median was pursued to see if impacts to these features could be avoided or minimised. Processes to date indicated it would not be possible to save all these features hence why it was proposed the matted flax lilies would be translocated and the studley park gum removed. In fact, the impact assessment assumed all this vegetation would be lost.

Despite this, the location still represented an opportunity to 'minimise' native vegetation loss through further detailed design.

(iii) Evidence and submissions

Mr Ryder conducted further work before the Hearing involving a preliminary desktop and a non-destructive root investigation of trees which may be able to be retained in the wide median treatment. The desktop assessment on 31 March 2020 identified 155 trees, 43 of which would require removal. The investigation and further assessment on 4 May 2020 indicated that of the 115 trees originally assessed:

- 10 had been removed for works separate from the Project
- 35 would need to be removed
- 70 could potentially be retained in the proposed wide median.

Investigations at this stage indicate the studley park gum would be impacted by works. Mr Ryder found there was the potential to retain this tree through refined required works and infrastructure.

Ms Forbes' assessment assumed all trees and vegetation would be impacted. She considered proposed offsets and mitigation measures were adequate to minimise and offset these losses.

MRPV provided Technical Note 10 which included horizontal and vertical plans for the road in this area and indicated up to a 1.1 metre difference from the existing to design surface in this area.

Ms McKinnon did not support saving trees in the median. She preferred to save trees on either side of the road.

Mr Knight stated that median vegetation was addressed in in the Landscape Strategy design guidelines under 'Median and verge planting'. The guidelines seek to protect existing vegetation and provide new median and verge planting where feasible. Mr Knight added:

> It should be noted that space is highly constrained along the corridor and planting will only be appropriate in locations where safety and maintenance outcomes can be guaranteed. Median and verge planting should be prioritised in areas of high pedestrian movement and visual sensitivity, such as important gateway locations.

(iv) Discussion

The IAC understands that the design of this section of Yan Yean Road has been developed around the assumption that providing a wide median was a key constraint to enable retention of existing significant trees and native vegetation and reduce visual impacts. However, it appears that a lot of the significant vegetation may be lost in any event due to the proximity and level of the new carriageways, and the median replanted, which has been assumed by the landscape and arboriculture expert witnesses.

Opening up the constraint of the median, such as providing a service land, may allow a better net outcome. This should be further explored during the optimisation of the design.

The IAC considers the wide median treatment is not necessary to avoid a significant environmental impact in this location. Rather, a wide median treatment at this location represents an opportunity to minimise potential native vegetation impacts of the Project in its entirety.

MRPV's approach to identifying all vegetation as candidates for removal provides limited information to clarify the extent it will be feasible for the Project to minimise impacts at this

location. Given the late introduction of the horizontal and vertical alignments, it is unclear whether Mr Ryder's analysis of trees which could be saved, accounted for grade lines as well as the Project footprint.

The IAC agrees with Mr Knight that median planting should be prioritised in areas of high pedestrian movement and visual sensitivity.

(v) Findings

The Inquiry and Advisory Committee finds the wide median:

- is not necessary to avoid any significant environmental impact in this location
- is unlikely to result in the avoidance of the matted flax-lily and studley park gum
- represents an opportunity to minimise potential native vegetation impacts of the Project
- provides a positive landscape outcome.

6.3 Traffic and access

6.3.1 Yarrambat Park northern access

(i) The issue

The issue is whether suitable access and exits are provided for the pony club and the Country Fire Authority (CFA).

(ii) Background

The northern access to Yarrambat Park provides access to a number of user groups within the park, including shooting clubs, model aeroplane club, pony club and the CFA. The pony club and the CFA attract large vehicles to the site.

The Project design restricts access to the northern entry to left in and left out. A U-turn facility, in the shape of a 'jug-handle' has been provided between the entry and Jorgensen Avenue to the north, to allow departing vehicles to return south along Yan Yean Road. Cars arriving from the north will be able to U-turn at the Bannons Lane traffic signals, while long vehicles will need to travel around 1.6 kilometres past the park entry to U-turn at Youngs Road, a total additional journey of around 3 kilometres.

(iii) Evidence and submissions

The CFA submitted that it welcomes the Project noting that it is a critical link for the community and emergency services. However, Yarrambat Park is a critical staging point for the CFA during a bushfire and can house up to 300 CFA appliances and a helicopter air base. It also contains a tanker refilling point. The CFA sought the installation of traffic signals at the northern park entry to facilitate all movements.

Nillumbik Council submitted that the pony club generates significant movements of horse floats on weekends, with up to 70-80 horse floats per hour exiting the intersection in the afternoons, as advised by Mr Kelly. It was concerned about the proximity of the jug-handle U-turn facility to the north of the entry citing potential difficulty for heavy vehicles to cross two lanes of traffic on a 5.9 per cent uphill slope in a 70 km/hr speed zone to enter the U-

turn lane. It describes it as "*a highly unsatisfactory design response that will create highly inefficient and cumbersome vehicle movements"*.

Mr Kelly gave evidence that additional consideration is needed regarding access to Yarrambat Park, particularly in relation to access for the CFA. He advised that while the northern entry does not meet volume warrants for traffic signals, consideration of CFA movements, when smoky conditions may cause visibility restrictions and stress, in an emergency event may justify some form of signalisation.

Mr Kelly advised that there were options available for access including:

- the Project design
- signals at the northern entry
- access by way of the Bannons Lane signalised intersection, which has impacts on the park
- access by way of the Jorgensen Avenue signals.

Whittlesea Council submitted that they would be willing to consider options for access by way of Jorgensen Avenue. However, Mr Kelly in his evidence noted that Parks Victoria do not support changes to the park layout and had safety concerns regarding an access to Jorgensen Avenue.

In its closing submission, Nillumbik Council recommended the provision of signals at the northern entrance. Nillumbik Council recommended a new ERP in relation to access to Yarrambat Park and provided wording for an additional traffic EPR to address this.

MRPV advised that it will continue to refine options with the CFA and other interested parties, referring to the EPR TP1 obligation to optimise the design of the Project.

6.3.2 Yarrambat Park southern access

(i) The issue

The issue is whether the proposed road design will negatively affect access at the Yarrambat Park public golf course and the Neighbourhood Safer Place.

(ii) Background

The southern access to Yarrambat Park is located approximately 75 metres south of Bannons Lane and provides access to a golf club and an archery club, with the latter located directly adjacent the Bannons Lane intersection. The golf club is also designated as a CFA Neighbourhood Safer Place for use during emergencies.

Access at the intersection will be limited to left turns in and out. Cars can U-turn at the adjacent Bannons Lane intersection to return south and other larger vehicles can use the jug-handle U-turn to the north. All vehicles approaching from the south will need to travel past the entry to U-turn at the Youngs Road roundabout approximately 950 metres to the south.

(iii) Evidence and submissions

Several submitters were concerned about the restriction on access. Nillumbik Council was concerned with providing safe and efficient access to the Neighbourhood Safer Place as well

as the proximity of the exit to the Bannons Lane signals, making it difficult to access the turn lane to do a U-turn.

Mr Kelly was satisfied with the proximity to the Bannons Lane intersection and stated that any drivers having difficulty accessing the turn lane could continue to the jug-handle to do a U-turn.

Mr Kelly considered that further consideration should be given to providing either a direct controlled right turn into the southern access during an emergency event or providing a more proximate U-turn facility to the south.

In its closing submission, Nillumbik Council recommended the southern access be relocated to form a crossroad with Bannons Lane to provide signalised access and provided wording for an additional traffic EPR to address this. It noted that the impacts on the Archery Club had not been fully investigated and mitigation may be required as a part of the Project.

MRPV submitted that this issue would be managed by EPR TP1.

6.3.3 Jorgensen Avenue intersection

(i) The issue

The issues are whether the Jorgensen Avenue intersection:

- should be signalised
- can incorporate U-turns for larger vehicles such as trucks in both directions.

(ii) Evidence and submissions

Mr Trevascus submitted that a roundabout had been proposed at the Jorgensen Avenue intersection since 2006 and questioned why the Project design now proposes traffic signals.

MRVP explained that the roundabout option was replaced with signals to reduce the size of the intersection and associated impacts on vegetation and land acquisition.

Ms Forbes gave evidence that key sensitivities at the Jorgensen Avenue intersection are Werther Park and private property on the east side which contains the pale-flowered Crane's Bill specimens.

Mr Ryder advised that it appears there may be more significant trees impacted at the jug-handle than at Jorgensen Avenue but there may be issues with levels at Jorgensen Avenue.

Mr Kelly advised that the jug-handle U-turn should be signalised and form part of the signal group for the Jorgensen Avenue signals.

MRPV submitted that EPR E1 contains a requirement to minimise the footprint of the Jorgensen Avenue intersection to minimise impacts on native vegetation.

6.3.4 722-758 Yan Yean Road, Yarrambat

(i) The issue

The issue is whether the proposed road design will provide appropriate access by motor vehicles and cyclists to 722-758 Yan Yean Road, Yarrambat.

(ii) Background

A group of residential properties is located on the east side of Yan Yean Road opposite Yarrambat Park to the north of Bannons Lane.

The Project design replaces the existing Yan Yean Road carriageway with a new southbound carriageway in the same location. A sealed shoulder has been provided to enable drivers to slow clear of the through lanes before turning into their properties. The shoulder stops just south of the southernmost driveway (outside 724 Yan Yean Road).

A footpath is provided along the frontage of the residential property while a shared path is provided along the frontage to Yarrambat Park, with access through the Bannons Lane signals.

(iii) Evidence and submissions

Several submitters, including the owner of 724 Yan Yean Road, raised concern with safe access to the residential properties to the north of Bannons Lane and considered a service road should be provided. With the current design, they raised issue with the location at which the shoulder terminated and requested that it be extended further to allow for a car and trailer to prop on the shoulder before reversing into 724 Yan Yean Road.

The 724 Yan Yean Road owner submitted that he regularly made trips with his caravan and reverses it in from Yan Yean Road because he cannot turn the caravan within his property. He considered it important for the shoulder to be extended to allow him to pull clear of the through lanes while waiting for a break in traffic to reverse into the driveway. He had no objection to widening the driveway to minimise the potential to obstruct the through lanes.

Mr Kelly considered it was not appropriate to allow reversing on Yan Yean Road as this could not be done safely without encroaching on the through lane or widening the driveway and forward in and out movements were preferred. At the Hearing, he said a service road would be the safest option for access to these properties.

In response to a question from the IAC on how cyclists can ride between these residential properties and the shared path on the other side of Yan Yean Road, Mr Kelly noted that this was a "*good point*" and cyclists could ride along the shoulder.

In response to Mr Kelly's recommendations, MRPV submitted that EPR TP1 be modified to include a reference to property accesses in the fourth dot point and a new dot point requiring a road safety audit be undertaken, with a particular emphasis on property access.

The MRVP also submitted that a service road was disproportionate to the issue it would address and not practicable due to the impact on the wide median and need to further increase the road reservation. Nor did it consider the extension of the shoulder to be practicable or appropriate having regard to the relationship between 724 Yan Yean Road and the left turn lane into Bannons Lane.

6.3.5 Bannons Lane intersection

(i) The issue

The issue is whether the proposed Bannons Lane intersection layout is appropriate.

(ii) Submissions

The 724 Yan Yean Road owner submitted that the U-turn lane on the north approach to the Bannons Lane intersection should be omitted as it unnecessarily complicates the intersection, is hard to get across to by the adjacent residents, adds to project costs, does not cater for horse floats and U-turns are accommodated by other intersections, including the Youngs Road roundabout, to the south.

Mr Barratt requested:

- a slip lane on Bannons Lane to increase capacity for left turns into Yan Yean Road
- the Bannons Lane intersection be turned into a four-leg intersection to provide access to the northern and southern entries to Yarrambat Park and allow the deletion of the jug-handle U-turn. He submitted that this was "*one solution to fix four problems*".

6.3.6 Discussion

Safe and efficient access to and from Yarrambat Park during a bushfire emergency is a significant issue that requires more consideration. A final suitable design for access to Yarrambat Park is yet to be determined. The IAC is concerned about the proposed jug-handle U-turn to accommodate the volumes of horse floats at the end of events or a significant number of CFA vehicles during emergencies. The CFA will require direct access from the north into its staging area for efficiency and safety. Access to a signalised intersection will be required, as sought by the CFA.

Regarding the southern access, the IAC considers that the access for the golf club is not unreasonable. However, the IAC agrees with the Nillumbik Council and Mr Kelly that a more direct access from the north is required when the Neighbourhood Safer Place is in use.

Safe access by cars with long trailers and bicycles to residential properties is also a significant concern.

The IAC welcomes the undertaking of a road safety audit to help guide the final design and recommends that this be done before detailed design to allow changes to the cross-section and vertical alignment to be made if required.

The IAC does not consider it reasonable to expect existing residential properties to redesign their own properties to enable vehicles to be able to enter and exit their properties in a forward direction nor is that necessarily practicable. Should a service road not be able to be provided, it is important that the shoulder be extended to allow a vehicle to prop safely before reversing into each driveway. The IAC considers that this is a feasible modification given that the left turn lane runs beside the shoulder.

Regarding restricting left turns into Laurie Street following the completion of the Project, the IAC considers that it will remain an option for Nillumbik Council to limit left turns at any time. Such an option would need to be done in consultation with all of the residents and would be best considered by Nillumbik Council once impacts during the Project construction phase can be assessed. The IAC does not consider that MRPV should be responsible for this matter.

Regarding the provision of signals at Jorgensen Avenue, the IAC considers that either a roundabout or signals are appropriate traffic control measures along this road and that

MRPV must balance a range of competing constraints in selecting the preferred treatment. Considering the range of issues being raised, particularly the need for signalised access to Yarrambat Park and U-turns for trucks, the treatment at Jorgensen Avenue may need to be reviewed.

6.3.7 Findings

The Inquiry and Advisory Committee finds:

- The Project design from the Yarrambat Park southern entry to Jorgensen Avenue does not provide for safe and efficient access for abutting uses, particularly the CFA, Pony Club, 724 Yan Yean Road and the Neighbourhood Safer Place.
- Traffic signals is an acceptable traffic control measure at the Jorgensen Avenue intersection.
- Opportunities should be explored, and informed by a road safety audit, to get a better net outcome in this area that considers property access and visual amenity.
- The detailed design process should consider:
  - more direct access to the Yarrambat Public golf course from the north when the site is used as a Neighbourhood Safer Place
  - signalised access for the CFA
  - safe and efficient egress from the Pony Club including for southbound horse floats
  - U-turns for long vehicles on Yan Yean Road, ideally in north and south directions near the Yarrambat Park northern access
  - a service road along the frontage of the residential properties between Bannons Lane and Laurie Street
  - a car and caravan to stop outside 724 Yan Yean Road without obstructing through traffic
  - provision for cyclists from the residential properties between Laurie Street and Bannons Lane to ride to and from the shared path on the west side of Yan Yean Road.

6.3.8 Recommendations

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) amend TP1 by:
- **adding 'including property accesses' to the fourth dot point**
- **adding a new dot point: 'Road Safety Audits should be undertaken in accordance with Department of Transport guidelines, with particular emphasis on property access'.**

b) add a new Environmental Performance Requirement TP3 to redesign the section of Yan Yean Road from and including the southern access to Yarrambat Park to Jorgensen Avenue which:
- **is in accordance with TP1**
- **provides more direct access to the Yarrambat Park public golf course from the north for when the site is used as a Neighbourhood Safer House**

- **provides access to the northern end of Yarrambat Park through a signalised intersection**
- **considers an alternate cross-section north of Bannons Lane to improve safety for the abutting residents.**

7 Ironbark Road environs

Chapter 7 reviews issues in the Ironbark Road environs, comprising the area from 509 Yan Yean Road to the Ironbark Road intersection.

7.1 Ironbark Road

(i) The issues

The issues are:

- whether the proposed road design will enable the Ironbark Road bus bay and passing zone to operate without any negative impact
- whether MRPV should construct a shared trail between Yan Yean Road and the Yarrambat War Memorial Park along Ironbark Road after the nearby laydown area is restored.

(ii) Background

The Project proposes to upgrade Ironbark Road on the approach to Yan Yean Road by:

- removing the existing eastbound auxiliary lane opposite the primary school to accommodate an additional westbound lane, with the eastbound bus stop placed on the single traffic eastbound lane
- adding new footpaths along both sides of Ironbark Road linking into the new footpath along the east side of Yan Yean Road.

Ironbark Road currently carries about 9,000 vehicles per day. The Project is expected to increase this volume by 500 to 1,000 vehicles per day each way by 2031, noting that without the Project no change is predicted.

(iii) Submissions

Nillumbik Council submitted the Project design for this area was not consistent with its streetscape plan and would result in the removal of the auxiliary lane on the north side of the road. Nillumbik Council preferred the cross-section in its Yarrambat Streetscape Masterplan, which includes an auxiliary lane/bus parking zone and potential on-road bicycle lanes. Nillumbik Council submitted that a shared path should be provided along the north side of the road connecting to the Yarrambat War Memorial Park, noting its use as a possible laydown/storage area.

MRVP did not support any of Nillumbik Council's proposed changes and noted the streetscape plan has not been formally adopted by Nillumbik Council.

(iv) Discussion

The IAC was not provided with any evidence regarding the use of the auxiliary lane, or impact on traffic flows due to the loss of the auxiliary lane opposite the primary school entrance and proposed location of the bus stop on the single lane.

Given that the volume of traffic on Ironbark Road is expected to increase to over 10,000 vehicles per day, the design in this area should be reviewed to ensure that traffic movements are maintained and where practicable enhanced. EPR TP1 contains a similar

requirement but is limited to traffic movements at intersections in the Project area. Given the primary school entry is an access not an intersection, removal of the limitation to intersections would allow the EPR to respond to this issue.

The Project is providing a substantial investment in providing a shared path along Yan Yean Road. It would be appropriate for the shared path to link into the Yarrambat township to extent of the Project works. Continuing beyond that point to the War Memorial Park is considered an unreasonable addition to the Project scope.

(v) Findings and recommendations

The Inquiry and Advisory Committee finds:

- The design of Ironbark Road should ensure that the bus stop and right turns on Ironbark Road into the Yarrambat Primary School do not adversely impact the performance and safety of the road network.
- Provision should be made for cyclists on Ironbark Road in the Project area.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) remove the limitation 'at intersections' from the second dot point of TP1

b) add a reference to Yarrambat Township in the fifth dot point of TP1.

7.1 Vista Court service road and shared path

(i) The issue

The issue is whether the Project is providing appropriate paths for cyclists.

(ii) Evidence and submissions

Nillumbik Council submitted that there is a missing link to the shared trail network on Yan Yean Road where a service road is provided to the north of Vista Court.

MRPV explained that a footpath would be provided along both sides of the road reservation at this point and cyclists can use the service road carriageway.

(iii) Discussion

The IAC agrees with Nillumbik Council that there is a missing link in the shared trail network at this location. The one-way service road would cater for northbound cyclists but not for southbound cyclists.

The Project design shows that motorists will enter the service road by cutting across the throat of Vista Court from the left turn lane provided into Vista Court on Yan Yean Road. This movement will conflict with northbound cyclists coming off the shared path from the south as well as pedestrians crossing from the Ironbark Road intersection pedestrian crossing, noting that this may also include pedestrians and cyclists from Yarrambat Primary School on the eastern side of the road.

A road safety review of the service road design and provision for cyclists and pedestrians should address this matter and is recommended for inclusion in EPR TP1 as discussed in Chapter 6.

(iv) Findings

The Inquiry and Advisory Committee finds:

- The design for pedestrian and cyclist paths at the Vista Court intersection should be reviewed to minimise potential conflicts with motorists.
- EPR TP1, modified with the requirement of a road safety audit, is sufficient to manage this review.

7.2 Yarrambat Primary School

(i) The issue

The issue is whether the proposed road design will result in an acceptable outcome for traffic movements at the Yarrambat Primary School.

(ii) Background

The EES identifies that access to the Yarrambat Primary School will be altered with some property acquired. The school has car parks on both Ironbark Road and Yan Yean Road. With the duplication of Yan Yean Road, cars accessing the Yan Yean Road car parks from the south will be required to U-turn at the Ironbark Road intersection. Cars departing this car park and wishing to head north will need to U-turn at the North Oatlands Road intersection.

The EES indicates that the Ironbark Road intersection will operate with a DoS of 0.91 in the pm peak with the Project. This is only just above the performance target and was deemed 'okay'.

(iii) Evidence and submissions

Nillumbik Council submitted that the appropriateness of having left in and left out only from the Yarrambat Primary School car park should be reviewed.

MRPV provided Technical Note 16 which contained traffic volume data for the school's car park exit on Yan Yean Road. The data showed 122 cars exiting the car park in the AM peak hour with 90 per cent turning left out.

In his evidence, Mr Kelly identified an exceedingly high U-turn demand on Yan Yean Road at the Ironbark Road intersection associated with the school and recommended that further consultation be undertaken with the school regarding access.

Mr Kelly noted that it would be desirable to be able to include an additional northbound through lane at the intersection in the future but constraints including the service road to the north of Vista Court would most likely prevent this from occurring.

MRVP submitted in its closing statement that consultation had been undertaken with Yarrambat Primary School and it was satisfied with the arrangements proposed. It submitted that the further assessment suggested by Mr Kelly can be done under the guidance of EPR TP1.

(iv) Discussion

The IAC notes that the U-turn issue at Ironbark Road is also a matter that may need to be considered at North Oatlands Road, as discussed later in this chapter. While the traffic data

outlined in Technical Note 16 indicates only a small number of vehicles currently turn right out of the school's Yan Yean Road car park in the morning peak this is likely to be a constrained movement due to current traffic flows. In future, the provision of a U-turn at North Oatlands Road may increase this movement and add to the desirability of the car park. This will in turn alter flows at the Ironbark Road intersection.

(v) Finding

The Inquiry and Advisory Committee finds:

- The Project design should be reviewed to adequately accommodate the Yarrambat Primary School traffic.
- EPR TP1 is adequate to manage this impact.

7.3 540-550 Yan Yean Road, Yarrambat

(i) The issue

The issue is whether the Project design has appropriately considered traffic movements and minimised impacts for 540-550 Yan Yean Road, Yarrambat.

(ii) Evidence and submissions

540-550 Yan Yean Road is located to the south of the primary school. Mr Kenneth Whiteman submitted on behalf of the owner that consideration was required in relation to:

- the provision of U-turns or right turns for large vehicles to enter and exit the property
- provision for a new driveway at the northern end of their property noting that a development proposal is under preparation which would require the new access
- the use of retaining walls to minimise property acquisition.

MRPV responded that it was not appropriate for the Project to pre-empt a future planning permit application in relation to the provision of a new driveway.

In relation to U-turns, Mr Kelly gave evidence that U-turns for trucks are available within reasonable proximity at Heard Avenue to the south and Youngs Road to the north.

(iii) Discussion

The IAC is satisfied the Project design has appropriately replaced direct right turns at 540-550 Yan Yean Road with opportunity for U-turns. It is pre-emptive to require a second driveway. During construction, MRPV should respond to conditions as they present and the owner should be responsible for informing MRPV of any changes to their property access for design coordination purposes.

(iv) Finding

The Inquiry and Advisory Committee finds the environmental impact on 540-550 Yan Yean Road has been appropriately managed.

7.4 Childcare and early learning centre and veterinary hospital

(i) The issue

The issue is whether the proposed road design has appropriately considered traffic movements for the childcare and early learning centre and the veterinary hospital at 553 and 541 Yan Yean Road, Yarrambat.

(ii) Background

Smile Child Care Centre and the veterinary hospital share a common driveway. As a part of the planning permit for the childcare centre the developer was required to construct a right turn lane on Yan Yean Road.

The duplication of Yan Yean Road will result in the loss of the direct right turn into the site, with traffic diverted to a U-turn at the proposed signals at North Oatlands Road 200 metres to the south.

(iii) Evidence and submissions

The Smile Child Care Centre submitted that it had paid a substantial sum of money to construct the right turn lane and sought the same level of access be provided. Smile Child Care Centre submitted that the EES had not adequately assessed its access requirements.

Mr Kelly explained that the right turns would be replaced with U-turns at the North Oatlands Drive and Ironbark Road signalised intersections either side of the childcare and considered this to be the appropriate response for this road category as a part of a safe system of road design.

MRPV provided Technical Note 16 as evidence that the turning movement data for the childcare entry had been collected and taken into account as a part of the EES assessment, with a 20 per cent growth factor applied to the redistributed movements.

(iv) Discussion

The IAC does not question the appropriateness of the requirement in the planning permit for the Child Care Centre to provide a right turn lane. The road authority accepted the decision based on conditions at that time.

The question is whether the Project design provides reasonable access to the centre in the future. In this case, subject to adequate capacity at the intersections, the IAC is satisfied that a U-turn facility at the North Oatlands Road intersection approximately 200 metres to the south of the childcare will be a reasonable replacement of the right turn facility. This may have a slight impact on travel distances and time, however the IAC accepts Mr Kelly's evidence that it will improve safety for all road users.

The IAC is concerned with the absence of a left turn lane into the centre in the Project design. The data in Technical Note 16 indicates that when the diverted right turns are added to the left turning traffic into the centre, the warrants for a left turn lane may be met, noting the potential for the veterinary clinic to attract large vehicles. With the property acquisition along the frontage of the site, the driveway may be realigned to meet the road at a less acute angle to facilitate entry movements, noting the Project boundary is already set back to allow works to the driveway.

(v) Findings

The Inquiry and Advisory Committee finds:

- The impact on the Smile Child Care Centre by the loss of the direct right turn is mitigated by the U-turn facility at North Oatlands Road and improvements to road safety and capacity brought about by the road's duplication.
- The need for a left turn deceleration lane should be investigated as a part of the process of optimising the design of the road under EPR TP1.
- Including references to property access and a road safety audit, as recommended in Chapter 6, is sufficient to manage this issue.

7.5 North Oatlands Road intersection

(i) The issues

The issues are whether the proposed road design has appropriately considered:

- the impact of property acquisition along the frontage of 513 Yan Yean Road
- the proximity of the driveway to 10 North Oatlands Road to the signalised intersection.

(ii) Background

The Project proposes to:

- signalise the North Oatlands Road intersection
- widen the western side of Yan Yean Road in this vicinity to accommodate the new carriageway, which will include a left turn lane commencing along the 513 Yan Yean Road frontage
- widen North Oatlands Road along its southern side to accommodate a second approach lane to the intersection.

(iii) Evidence and submissions

The 513 and 538 Yan Yean Road owners were each concerned about the impacts from acquiring part of their land and bringing the road closer to their dwellings.

The 513 Yan Yean Road owners submitted that their dwelling is only setback 11.5 metres from the existing front fence and MRPV seek to acquire 6 to 12 metres from the frontage, leaving only a 5-metre setback to their house. They sought to reduce the amount of acquisition to reduce impacts and protection from noise, water running onto property and overlooking from the raised carriageway level. They identified opportunities to reduce the acquisition by minimising the length of the turn lanes at the North Oatlands Road intersection and minimising the various elements in the cross-section of Yan Yean Road.

The 513 Yan Yean Road owners requested safety barriers be installed in front of their property and a new 'acceptable' front fence along the front boundary to restrict public access. At the Hearing, one of the owners said they were would be concerned with vehicles travelling so close to their dwelling irrespective of having safety barriers in place. She expressed her preference for lush green trees rather than shrubs used in the Yan Yean Road Stage 1 upgrade to offset the road's visual impact.

The 538 Yan Yean Road owner objected to the existing screening vegetation and fence along their front boundary being removed for the Project. They highlighted the vegetation screened views, reduced vehicle noise and filtered pollution. Removing it would negatively affect the property's rural character and visual amenity.

The 10 North Oatlands Road owner was concerned about the proximity of their driveway on North Oatlands Road to the new signalised intersection.

Property owners questioned the need for two lanes exiting North Oatlands Road.

MRPV submitted:

> Where possible the Project footprint will be further minimised during detailed design and impacts on residential properties will be acceptably managed and mitigated in accordance with relevant EPRs, including LU1-2, LV1-2, S1-3, AQ1 and NV1-2.

Mr Kelly explained that the turn lanes have been designed according to the Austroads standards and the 95th percentile queue length, but the lane designation on North Oatlands Road could be further refined during detailed design. He advised that the offset of the driveway at 10 metres from the stop line is acceptable, but this should be reviewed during the detailed design and the driveway relocated if necessary.

Nillumbik Council submitted that there should be an EPR to relocate the driveway.

(iv) Discussion

The IAC considers it important to minimise impacts on residents where possible and to ensure safe and efficient access. EPR TP1, as proposed to be modified with the inclusion of a road safety audit and references to property access and EPR LU1, among others, are appropriate to manage these issues.

(v) Findings

The Inquiry and Advisory Committee finds:

- There will be impacts on properties around the North Oatlands Road intersection due to the road widening on Yan Yean Road and North Oatlands Road.
- The EPRs proposed to help minimise these impacts are appropriate.

7.6 St Michael's Anglican Church

(i) The issue

The issue is whether the Project appropriately responds to the heritage significance of St Michael's Anglican Church at 469-475 Ironbark Road, Yarrambat.

(ii) Background

The Nillumbik Planning Scheme Heritage Overlay (HO219) applies to St Michael's Anglican Church, including a weatherboard building about 8 metres from the Ironbark Road property boundary and its grounds. The Heritage Overlay:

- requires a planning permit for buildings and works
- activates external paint controls and internal controls through its Schedule.

While future road works are proposed within the existing road reservation, the Project area and proposed SCO13 include part of 469-475 Ironbark Road. The Specific Controls Overlay

would exclude affected land from the Nillumbik Planning Scheme planning provisions and apply clauses specified in the Incorporated Document.

Technical Report F identified and assessed St Michael's Church as a historical heritage place in the Project area. EES Chapter 9 states:

> The Project has been designed to avoid and minimise adverse effects on the heritage values of the St. Michael's Anglican Church that are identified in the Heritage Overlay – Schedule HO219 (refer to EPR HH2).

The EMF includes EPR HH2 for St Michael's Anglican Church:

> Design permanent and temporary works to avoid where possible, and otherwise minimise, potential impacts on the heritage values of the St. Michael's Anglican Church that are identified in the Heritage Overlay HO219. The CEMP must include processes and measures to manage historical heritage, such as implementation of no-go zones, within the Construction Environmental Management Plan.

(iii) Evidence and submissions

Nillumbik Council referred to Technical Report F which recommends measures for protecting St Michael's Anglican Church. It submitted that the Incorporated Document:

- does not refer to Heritage Overlay (HO219)
- should be revised to include conditions at 4.6.1 (Heritage) which seek to protect the heritage significance of HO219.

An example condition is to require a minimum setback of buildings and works from the church building. Nillumbik Council did not specify a minimum setback.

Ms Barlow supported condition 4.6.1 of the Incorporated Document being applied to St Michael's Anglican Church.

Ms Gray noted the church building is outside the Project area and will not be directly impacted. She considered any temporary occupation of the front site or permanent works are not expected to have a negative impact. She explained:

- the on-site trees, existing post and rail fence and hard landscaping are of heritage significance
- the only permanent works to affect the site were minor driveway tie-in works.

Rather than revise the Incorporated Document, Ms Gray recommended that:

- EPR HH2 include a requirement for a heritage impact statement for any works on land subject to the Heritage Overlay (HO219)
- EPR HH3 reference St Michael's Anglican Church in the requirement for Cultural Heritage Awareness Induction.

MRPV submitted that St Michael's Anglican Church is outside the Project area so potential impacts would be limited to the property frontage and likely to involve relatively minor works.

MRPV agreed to change the Incorporated Document, consistent with Mr Barlow's evidence and made the following subsequent changes to the EPRs:

- HH1 – add a requirement to design permanent and temporary works to avoid where possible, and otherwise minimise, potential impacts on heritage values of St Michael's Anglican Church identified in the Heritage Overlay (HO219)

- HH1 – require the Construction Environmental Management Plan (CEMP) to include processes and measures to manage historical heritage, such as implementation of no-go zones
- HH2 – delete this requirement because it is addressed through the revised HH1 and Incorporated Document condition 4.6.1
- HH3 – include St Michael's Anglican Church in the Cultural Heritage Awareness Induction.

(iv) Discussion

The Heritage Overlay (HO219) applies to St Michael's Anglican Church – the modest weatherboard building and its entire property at 469-475 Ironbark Road. The property forms part of the building's curtilage therefore the Project area applies to a portion of identified heritage place.

Consistent with submissions and evidence, the IAC considers that the Project should better respond to St Michael's Anglican Church. MRPV's proposed changes would appropriately respond to the Church's heritage significance. They broadly merge the recommendations of Mr Barlow and Ms Gray to achieve the outcomes sought by Nillumbik Council and the two expert witnesses. Nillumbik Council's potential condition for a minimum building setback can be considered through processes enabled by the revised condition 4.6.1 and the EPRs.

(v) Finding and recommendations

The Inquiry and Advisory Committee finds that the Project should better respond to the heritage significance of St Michael's Anglican Church at 469-475 Ironbark Road, Yarrambat.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) add new permanent and temporary work requirements in HH1
b) delete HH2 which is addressed through other requirements
c) reference St Michael's Anglican Church (HO219) in requirement HH3.

Amend the Incorporated Document, as shown in Appendix F, to reference St Michael's Anglican Church in condition 4.6.1.

8 Traffic, transport and access

8.1 Property access

(i) The issue

The issues are whether:

- the design will facilitate safe access into properties
- suitable provision is made for long vehicles to U-turn.

(ii) Evidence and submissions

A number of submitters raised concern with the design of the driveway entrances, with particular regard to safe entry, and grades.

Regarding driveway grades and splays, MRPV submitted that these will be resolved during detailed design. Mr Kelly advised that the angle of entry / exit from properties should be considered to reduce the impact of slow turning traffic on the through traffic along Yan Yean Road and reduce the incidence of rear end crashes. MPRV proposed two amendments to EPR TP1 in response to Mr Kelly's evidence to ensure consideration of property access was made during the design phase, including through a road safety audit.

A number of submitters also raised concern with the lack of U-turn opportunities for long vehicles including Ms Mazza who submitted:

> The environment surrounding the project is characterised by low density residential and rural living areas and it appears that the needs of property owners, who require vehicles other than cars to enter their properties, have not been adequately considered.

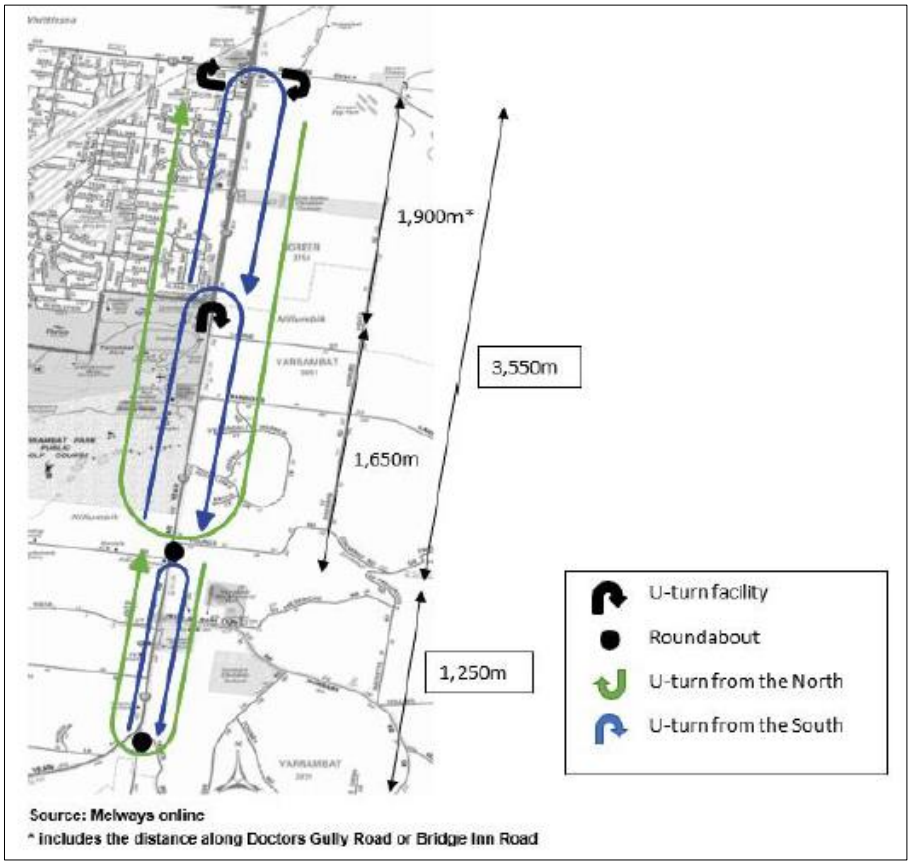
Chapter 8.2.1 of Technical Report A states:

> The provision of U-turn facilities is key for access to adjacent land and local roads. Signalised intersections provide opportunities for passenger cars, while roundabouts are suitable for rigid and articulated vehicles (semi-trailers).

The Project proposes to duplicate some 5.5 kilometres of Yan Yean Road from Kurrak Road to Bridge Inn Road preventing direct right turns into and out of driveways. U-turns for long vehicles are accommodated in the Project design at the Heard Avenue and Youngs Road roundabouts and the jug-handle south of Jorgensen Avenue, while modified Option B adds U-turn facilities at the northern end of the Project in Bridge Inn Road and Doctors Gully Road. Existing roundabouts at the Orchard Road and Bridge Inn Road intersections will be replaced with traffic signals. The distance between U-turn opportunities for long vehicles is set out in Figure 4.

Mr Kelly gave evidence that the properties that are not serviced by the provided U-turn facilities "*will need to use the greater declare grid network for access*". He considered this typical for divided roads in this category of road network, with vehicles able to turn left at Kurrak Road, and travel along Kurrak Road/Gorge Road to Plenty Road to Bridge Inn Road to Yan Yean Road southbound.

Figure 4 U-turn opportunities for long vehicles



Source: Evidence of Mr Kelly

(iii) Discussion

The IAC notes that detailed issues such as driveway splays and grades are typically resolved during the detailed design phase of a project and welcomes the additions to EPR TP1 that give overview of this, particularly the road safety audit.

In respect to U-turns, the IAC agrees with Mr Kelly that four-lane duplicated roads typically rely on the arterial grid network to support access to abutting properties. In this instance however, the primary arterial grid network is significantly larger than the 1.6 kilometre grid network intersection typically found in urban areas with no supporting secondary arterial grid network and accordingly the IAC considers it important that a reasonable opportunity be provided for U-turns.

Noting that there are no U-turn opportunities to the north of Bridge Inn Road, the IAC welcomes the addition of U-turns in modified Option B. To support this, signage will be needed on Yan Yean Road advising motorists of these U-turn facilities given their remoteness to Yan Yean Road.

While reference to the above Figure indicates a gap in the U-turn provision with the facility near Jorgensen Avenue only providing for U-turns to the south, the IAC notes that the number of long vehicle U-turners generated by properties to the north of this point would be low with no significant generators present. The extra travel distance for the impacted vehicles would be equivalent to travelling around an urban arterial grid and is not

considered unreasonable given the aims of the Project to improve safety and efficiency through restricted access.

(iv) Findings

The Inquiry and Advisory Committee finds:

- EPR TP1 as proposed to be modified by MRPV will provide adequate assurance that the design will address design issues relating to individual property access points.
- The spacing of U-turns for long vehicles is reasonable subject to providing U-turns at or near Bridge Inn Road.

8.2 Orchard Road intersection and Plenty Valley Christian College

(i) The issue

The issues are:

- whether Orchard Road intersection should be a signalised crossroad
- whether the impacts on the Orchard Road residents can be acceptably managed.

(ii) Background

The Project includes the replacement of the roundabout at the Orchard Road intersection with traffic signals.

The eastern leg of the intersection is the primary two-way access to the Plenty Valley Christian College. The Plenty Valley Christian College also has an exit from its car park to the south of its main entry. The Project proposes to make the exit left out only. A third driveway is located to the north of the main access and will be restricted to left turns in and out. A water body sits between the northern access and the primary access.

The Project proposes to widen Orchard Road to accommodate two additional exit lanes. The Map Book[7] shows a small slither of property acquisition along the south side of the road affecting a small number of dwellings.

(iii) Evidence and submissions

Mr Jackson submitted that the Orchard Road intersection should not be signalised as it was not the intent of the original plan of the estate for this to be a main access point. He submitted that Orchard Road should be restricted to left in and left out, to prevent 'rat running' among other benefits, and that the Plenty Valley Christian College should be accessed by way of a service road.

The Plenty Valley Christian College submitted that it is important to retain the environmental waterway on the Yan Yean Road boundary and for smooth and controlled access for its 800 students and 120 staff.

The owner of 5 Orchard Grove submitted that the road widening in Orchard Road will significantly impact her property due to:

[7] Attachment VI to the EES

- safety and amenity impacts with the loss of the nature strip and indented parking and the replacement of the footpath along the back of kerb, and
- noise, privacy and loss of value due to the proximity of the new traffic lanes to the house.

Mr Kelly gave evidence that Orchard Road is defined as a collector road in the Mernda Strategy Plan and the Orchard Road intersection currently allows all movements at Yan Yean Road. The provision of signals will improve pedestrian safety and minimise impacts on the school and its water body adjacent to Yan Yean Road.

MRPV submitted that EPR LU1 requires the detailed design process to seek to minimise land acquisition and where acquisition is unavoidable, LU2 seeks to enable compensation though the *Land Acquisition and Compensation Act 1986*.

(iv) Discussion

The IAC accepts the evidence of Mr Kelly that providing signals at the intersection is appropriate, safe and efficient for both the Plenty Valley Christian College and the Orchard Road area. The existing roundabout already accommodates all movements into and out of Orchard Road and traffic control devices (road bumps) are already provided along Orchard Road to control the typical impacts of 'rat running'. Including signalised pedestrian crossings linking to the proposed shared path along Yan Yean Road will help to encourage active transport as a mode of travel to Plenty Valley Christian College.

The Project will negatively impact numerous dwellings on Orchard Road as a result of the road widening and property acquisition. The impact on these properties will need to be fully assessed during the detailed design phase to minimise impacts. In this regard, EPR TP1 requires the road to be designed to meet the relevant road authority requirements and other EPRs such as LU1 and LU2 aim to minimise impacts on residential properties. Compensation is also available through the *Land Acquisition and Compensation Act 1986*.

(v) Findings

The Inquiry and Advisory Committee finds:

- It is reasonable to signalise the Orchard Road intersection.
- The Project will negatively impact numerous properties in Orchard Road, however:
  - the EPRs are sufficient to minimise impacts
  - the affected owners subject to the public land acquisition can pursue compensation through the *Land Acquisition and Compensation Act 1986*.

8.3 Youngs Road intersection

(i) The issue

The issue is whether pedestrian lights should be installed at the proposed Youngs Road roundabout.

(ii) Evidence and submissions

Nillumbik Council submitted that pedestrian lights should be provided at the Youngs Road roundabout to provide safe access to the bus stops.

The MPRV submitted that the provision of pedestrian signals would be addressed through EPR TP1 which seeks optimise the design in consultation with the relevant Council.

(iii) Discussion

The IAC was not provided with data on existing or estimated future pedestrian demand and is not able to make a definitive assessment on need. Nevertheless, there is strong Government policy to encourage the use of public transport and providing safe crossing facilities would assist that aim.

The IAC considers that this is a matter that should be addressed during the detailed design and this can be achieved through EPR TP1.

(iv) Finding

The Inquiry and Advisory Committee finds the need for pedestrian signals at the Youngs Road roundabout should be addressed through the guidance of EPR TP1.

8.4 Road safety

(i) The issue

The issue is whether:

- additional lighting is needed at intersections
- the speed limit should be reduced.

(ii) Evidence and submissions

Nillumbik Council submitted that additional lighting should be provided at all intersections.

Mr Briggs and Ms Mauthoor sought to reduce the speed limit along part or all of the Project.

RARE Northern Nillumbik submitted that speed limits should be reduced on roads impacted by the Project to minimise impacts on wildlife.

MRPV advised that:

- the Project is being designed to the standard for a 70 kilometres per hour speed limit, but the Department of Transport will be responsible for setting the operational speed limit.
- lighting will be designed to relevant standards.

(iii) Discussion and finding

The Inquiry and Advisory Committee accepts MRPV's submission that lighting will be addressed during the detailed design stage and EPR TP1, which requires the design to be optimised to relevant standards is sufficient to manage that issue. Regarding speed limits, the Department of Transport is responsibility for setting speed limits for the Project and other roads.

The Inquiry and Committee finds:

- EPR TP1 is sufficient to ensure that lighting is provided to an appropriate standard
- The reduction of speed limits is outside the ambit of this project.

8.5 Construction impact

(i) The issue

The issue is whether the construction impacts on traffic can be acceptably managed.

(ii) Evidence and submissions

Nillumbik Council and Whittlesea Council submitted that the construction traffic management plans should be prepared to their satisfaction. Nillumbik Council requested an EPR requiring the preparation of a local traffic management plan that monitors local streets for impact, provides mitigation measures, monitors for success and provides additional mitigation if needed. Nillumbik Council raised a particular desire to minimise traffic on Heard Avenue and advised that they had experienced issues with traffic impacts during the construction of Stage 1 that were not addressed by that project. For example, Nillumbik Council advised, one road experienced traffic volumes more than double its normal peak and daily volume. It noted that a number of local streets likely to be impacted are unsealed roads.

Nillumbik Council sought EPR TP2 to include the words:

> The TMP is to be approved by Nillumbik and Whittlesea Councils and specifically provide mitigation of rat running for the duration of construction.
>
> In consultation with Nillumbik and Whittlesea Councils, MRPV to undertake regular monitoring of the effectiveness of implemented traffic management mitigation measures.

and for the TMP to outline measures to:

- Specifically discourage southbound movements along Heard Ave.

EPR TP2, as exhibited, contains, among other words a requirement to:

> Minimise impacts on local streets such as from 'rat running' during construction closures.

TP2 includes a link to EPR S2 requiring community notifications of works.

MRPV submitted that construction of the Project will have impact upon the transport network and these will be appropriately addressed through the EPRs. EPR TP2 requires Project to be constructed in stages to minimise impacts on road uses and provides for a construction traffic management plan to be prepared in consultation with the local councils and to the satisfaction of MRVP. MRPV submitted that it was inappropriate to grant approval status to the Nillumbik and Whittlesea Councils. It objected to the proposed changes to the EPR.

Mr Kelly was satisfied that EPR TP2 provides suitable control to minimise traffic impacts during construction, but he recommended that the word 'consider' be added to the start of the sixth dot point which relates to haulage routes and that the word 'implement' be added to the start of the eighth dot point which relates to emergency services.

(iii) Discussion

The IAC acknowledges that it is not possible to construct a road project of this scale without traffic impacts during construction and some impact, such as increased traffic flow must be generally be accepted providing it does not pose a significant safety or operational risk.

The IAC notes that EPR TP2 contains a requirement to minimise impacts rather than mitigate impacts. It would be reasonable for the Project to mitigate impacts that have a significant safety risk or create additional significant maintenance.

Regarding a specific reference to Heard Avenue, the IAC does not consider that this level of detail is needed in the EPR.

The requirement to regularly monitor the effectiveness of mitigation measures would:

- be consistent with the requirement for the EMF to be monitored by the Independent Environmental Auditor
- provide certainty of success.

(iv) Findings and recommendations

The Inquiry and Advisory Committee finds:

- EPR TP2 should be modified to require mitigation of construction impacts that have a significant safety or operational risk
- The success of any medium to long term mitigation measures should be assessed after implementation.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to add in TP2:

a) a requirement to implement mitigation treatments where significant safety or operational risk may occur

b) a requirement to monitor the need for, and success of, mitigation treatments as appropriate

c) the word 'consider' to the start of the sixth dot point

d) the word 'implement' to the start of the eight dot point.

8.6 Operational traffic volume

(i) The issue

The issue is whether the Project should include measures to mitigate impacts on the surrounding streets caused by a redistribution of traffic flows after the Project is completed.

The issue relating to the Diamond Creek Road roundabout is discussed in Chapter 13.3.

(ii) Evidence and submissions

Several submitters were concerned about potential impacts resulting from increased traffic on local and arterial roads into the surrounding area following the completion of the Project. These streets include Laurie Street, Bannons Lane, Arthur's Creek Road, Ironbark Road and Orchard Road.

Mr Kelly gave evidence that:

- Yan Yean Road's capacity is currently constrained, resulting in some drivers taking alternate routes
- with the increased capacity along Yan Yean Road, there will be a redistribution of traffic to this route and this will flow on to roads leading to and from the route.

Mr Kelly stated that Doctors Gully Road, Hurstbridge-Arthurs Creek Road, Broad Gully Road, Heidelberg-Kinglake Road, Kurrak Road and Plenty Road are all expected to have a reduction in traffic, while Bridge Inn Road, Bannons Lane, Ironbark Road, Jorgensen Avenue and Diamond Creek Road are expected to see an increase in traffic. He considered the estimated traffic increases in Bannons Lane and Ironbark Road of about 500 to 1000 vehicles each day in both directions to be insignificant.

Mr Kelly added that queues approaching the Bannons Lane intersection should not extend back to Laurie Street and is therefore not expected to have a significant impact on Laurie Street.

(iii) Discussion

The IAC accepts Mr Kelly's evidence that the Project will result in a change in traffic flows in the area as it adds significant capacity to Yan Yean Road. This will result in some alternate routes having less traffic and some roads having more traffic as traffic patterns change to minimise delay.

While the change in volume to some roads will be noticeable to some residents, particularly those close to the Project, the IAC notes that the road authorities for the local roads, Nillumbik Council and Whittlesea Council have not raised issues with the change in traffic flows on local roads beyond construction stage. It will remain the responsibility of those road authorities to provide a safe road environment once construction has completed.

(iv) Finding

The Inquiry and Advisory Committee finds that traffic redistribution on local roads resulting from the Project does not require management by MRPV following completion of construction.

8.7 Ironbark and Pioneer Roads

(i) The issues

The issues are:

- whether Ironbark Road should be designated an urban arterial and Pioneer Road as a collector road
- whether Pioneer Road should be sealed.

(ii) Evidence and submissions

The 40-60 Pioneer Road, Yarrambat owners submitted:

- Ironbark Road and Pioneer Road should be reclassified as an urban arterial
- the Project should seal the Diamond Creek portion of Pioneer Road.

MRPV responded that these matters are related to roads outside the Project area.

(iii) Discussion

The classification of roads is a matter for Nillumbik Council to consider as the road authority and is not an environmental impact of the Project.

The submitters and the EES have not identified any long-term impacts on Pioneer Road to justify sealing the road because of the Project. The IAC notes that Pioneer Road is more than 400 metres away from the Project area.

(iv) Findings

The Inquiry and Advisory Committee finds:

- The Ironbark Road designation and Pioneer Road are outside the Terms of Reference of the Inquiry.
- There is no demonstrated need for the Project to seal Pioneer Road.

9 Ecology

A key reason for the requirement for an EES was the potential significant effects on ecology as a result of the proposed clearance of a large number of trees. Trees of particular concern were those with potential to be preferred foraging trees of the swift parrot but also high retention trees of ecological and cultural value. Because of the multi-facetted values of the trees in the Project area, they were subject to a number of EES studies:

- Swift Parrot Management Plan – Attachment V
- Biodiversity Existing Conditions – Technical Report B1
- Biodiversity Impact Assessment – Technical Report B2
- Arboriculture Assessment – Technical Report C
- Landscape Strategy – Technical Report G
- Biodiversity Peer Review – Peer Review O.

Expert evidence was provided by:

- Mr McCaffrey on ecology existing conditions
- Ms Forbes on ecology impact assessment
- Mr Weller on swift parrot
- Mr Smales on swift parrot
- Mr Ryder on arboriculture
- Mr Knight on the Landscape Strategy.

Mr Miller conducted the Peer Review accompanying the EES.

The Biodiversity reports focus on native vegetation and trees providing habitat for native species. The Arboriculture report includes an inventory of all trees in the Project area including remnant, native and planted (whether native or exotic species). Section 5.2 of the Landscape Strategy includes an assessment of the cultural value of vegetation which combined social, aesthetic, scientific, historic and spiritual values of trees into a heat map of all trees known as the 'Cultural Value of Vegetation Assessment'. Many EPRs for native vegetation rely on this heat map for implementation and it is discussed here.

The relevant EPRs are: E1 to E8, AR1 to AR4, LV1, LV2 and V1.

9.1 Native vegetation

(i) The issues

The issues are:

- whether the EES has appropriately addressed the evaluation objective to avoid and minimise effects on native vegetation
- whether the proposed exemption in relation to native vegetation removal for preparatory works is appropriate
- whether the Project should provide mitigation for potential consequential losses of native vegetation resulting from the reduction of lot sizes.

(ii) Background

Policy relevant to the loss of native vegetation

The *Ministerial Guidelines for Assessment of Environmental Effects under the EE Act 1978* (DELWP, 2007) (EE Ministerial Guidelines) describe a significant effect as an environmental effect of regional or State significance. Criteria for referring a project includes, as an example, *"potential clearing of 10 hectares or more of native vegetation from an area that is an EVC identified as endangered".*

The *Guidelines for the removal destruction or lopping of native vegetation* (NV Guidelines) support the planning scheme's aim to ensure there is no net loss to biodiversity (at Clause 52.17). The NV Guidelines seek to achieve this through a three-step process being avoid, minimise and offset.

In the NV Guidelines, native canopy trees are:

- of importance for impact assessment and offsetting purposes
- defined as mature trees greater than 3 metres in height and of a species typical of the relevant Ecological Vegetation Class (EVC) canopy
- classified according to size and location (in patches or scattered).

Background information relevant to the loss of native vegetation

EES Technical Appendix B1 and B2 provide an assessment of native vegetation and canopy trees for the purpose of the Guidelines, as summarised in Table 5.

Table 5 Native vegetation existing conditions and potential impacts

No.	EVC	Bioregion	Bioregional conservation status	Project area extent (ha)	Impact assessment (ha)
22	Grassy Dry Forest	Highlands Southern Fall	Least Concern	14.301	9.086
47	Valley Grassy Forest	Highlands Southern Fall	Vulnerable	1.595	1.545
55	Plains Grassy Woodland	Highlands Southern Fall	Endangered	0.295	0.347
937	Swampy woodland	Highlands Southern Fall	Endangered	0.501	0.418
136	Plains Sedgy Wetland	Victorian Volcanic Plain	Endangered	0.049	0.049
653	Aquatic Herbland	Highlands Southern Fall	Endangered	0.172	0.066
821	Tall Marsh	Highlands Southern Fall; Victorian Volcanic Plain	Not listed	0.395	0.395
			Total area of native vegetation	**17.31**	**11.888**

No.	EVC	Bioregion	Bioregional conservation status	Project area extent (ha)	Impact assessment (ha)
			Total canopy trees	**164 large trees in patches** **2101 small trees in patches** **47 large scattered trees** **187 small scattered trees**	**134 large trees in patches** **40 large scattered trees** **164 small scattered trees**

Source: Table 5.1 of Technical Appendix B1, Table 12 of Technical Appendix B2

Preparatory works

Clause 4.11 of the proposed Incorporated Document allows preparatory works to be undertaken before submitting environmental documentation required at Clauses 4.4 to 4.10 including the EMF and information for the listed Application Requirements in the Guidelines.

Clause 4.4 requires:

> Clause 4.4 Environmental Management Framework
>
> 4.4.1 Prior to the commencement of development (excluding preparatory buildings and works under Clause 4.11), an Environmental Management Framework (EMF) must be prepared, in consultation with Nillumbik Shire Council and Whittlesea City Council (the councils), to the satisfaction of the Minister for Planning. The EMF must include Environmental Performance Requirements (EPRs) …

Clause 4.5.1 requires information in accordance with Application Requirements 1, 5 and 9 of the Guidelines to be provided to the satisfaction of DELWP.

Clause 4.11.3 requires:

> Prior to the removal of native vegetation under Clause 4.11, information about the native vegetation to be removed must be provided to the Secretary to DELWP. The information provided to the Secretary to DELWP must include a description of, and maps showing, the native vegetation to be removed in accordance with Application Requirement 1 of the Guidelines.

Consequential losses

The permit requirements in Clause 52.17 of the Victoria Planning Provisions do not apply to native vegetation to be removed:

- on contiguous land in one ownership which has an area of less than 0.4 hectares
- to the minimum extent necessary to enable the construction of a boundary fence between properties in different ownership (absolute maximum clearance of 5 metres in width).

For consequential removal of native vegetation, the Guidelines state:

> Where the responsible authority considers that a proposed use and/or development is likely to involve, or lead to, the consequential removal of native vegetation into the future as a result of issuing a permit or approving a plan, the responsible authority should consider whether there is a need for a permit application to be lodged in accordance with Clause 52.17. This ensures consideration and integration of all issues as part of its decision making.
>
> This can include, but is not limited to, the consideration of an application for a permit to subdivide land that will enable native vegetation to be removed in the future without requiring a permit under Clause 52.16 or Clause 52.17.

(iii) Evidence and submissions

Loss of native vegetation

MRPV amended the Project design throughout the Hearing to accommodate modified Option B for the Bridge Inn Road intersection (Technical Note 3) and the potential realignment of the Yarrambat Park public golf course (Technical Note 4 and 18), should that be the preferred outcome. This resulted in reduced exhibited no-go zones and an update of native vegetation impacts, as set out in Technical Note 19. This updated the total area of vegetation clearance to 12.78 hectares and included an additional four scattered canopy trees.

MRPV proposed a change to EPR E1 to refer to no-go zones map of 15 December 2020 which removed previously identified no-go zones to account for these changes.

Regarding the proposed clearance of native vegetation for the Project, Ms Forbes stated:

> The majority of this vegetation is in poor to moderate condition compared to its pre-European settlement condition due to urbanisation, fragmentation and weed invasion present from decades of roadside maintenance, agricultural land use and residential development.

In response to an IAC direction, MRPV provided further detail[8] about the Project design development process. It acknowledged the design response "*necessarily involves competing objectives"* and that given the brownfield nature of the Project, "*there are inherent constraints imposed on the Project's design response from the outset".*

MRPV submitted that the following design responses addressed the key aspects of the Guidelines:

- Avoid:
  - reduced Project footprint overall
  - reduced median in most areas
  - shared use path on only one side of the road
  - retaining walls at several locations
  - micro siting through EPRs
- Minimise – opportunities to minimise through:
  - the wide median between Bannons Lane and Laurie Street
  - encouraging retention of native vegetation through the Landscape Strategy
  - preparation of a Tree Impact Assessment and Tree Management Plan
  - further micro siting and realigning the shared walking and cycling paths

[8] Technical Note 6, document 39

- considering different design options for discrete locations including Bridge Inn Road intersection, Youngs Road roundabout, Jorgenson Avenue intersection and the golf course safety fence.

MRPV acknowledged these opportunities did not equate to commitments to avoid vegetation (for example, the wide median treatment). In all cases, worst-case impacts were presented. It submitted that the no-go zones which represent a commitment to retain vegetation have been developed using a multi-disciplinary team and were developed iteratively through the design process to ensure "*final no-go zones are realistic and achievable*".

In response to questions at the Hearing, Ms Forbes explained that potential offsets required by the Guidelines had been investigated and are believed to be available, although an offset strategy has not been prepared. She stated that potential indirect impacts to native vegetation would be mainly from construction and includes sedimentation, erosion, spill contamination, dust generation and the introduction of weeds and pathogens. She considered the proposed EPRs and the CEMP to be appropriate management measures for these.

Ms Forbes identified EPRs E1, E3, E6 to 8, AR1 to 4, LV1 and LV2 as key EPRs to further encourage avoidance of impacts on native vegetation. EPRs E3, 7 and 8 are intended to manage indirect impacts. She considered EPRs E1 to E8 to be appropriate for suitably managing effects to achieve acceptable outcomes. She did not propose changes.

Nillumbik Council requested that purchased offsets be required as close to the Project as possible. MRPV responded they would use their best endeavours to ensure this but submitted it ought not be a performance requirement.

Ms McKinnon analysed the options considered by MRPV, submitting they were not assessed in the EES and not genuine. She submitted:

> A single lane road with centre and side safety barriers, turning lanes where required, reduced speed limit, and intersection modifications would address the problems of the road, allow flow of local traffic and would minimise tree loss and environmental impact. There may be other alternatives, but MRPV have certainly not provided these or assessed them.

Ms McKinnon submitted, in her experience, such projects tend to *"add and maximise"* as opposed to *"avoid and minimise"* native vegetation impacts.

Preparatory works

In response to questions from the IAC regarding preparatory works, Ms Forbes stated:

- it would be appropriate to expand Clause 4.11.3 to include all Application Requirements
- the Project had undergone detailed assessment and the information should be readily available.

MRPV responded[9] with the following changes to Clause 4.11.3 (shown in underline):

> … The information provided to the Secretary to DELWP must include a description of, and maps showing, the native vegetation to be removed in accordance with

[9] document 65

> Application Requirement 1 of Table 4 of the Guidelines together with a statement describing efforts to avoid and minimise impacts on biodiversity in accordance with the Application Requirement 5 of Table 4 of the Guidelines.

In response to questions from the IAC, Ms Forbes stated that works involving native vegetation clearance could proceed if additional documentation was provided explaining how ecological effects would be managed. She supported prior approval of the EMF.

Consequential losses

Nillumbik Council submitted that MRPV should account for potential consequential vegetation losses where the area of land remaining in private ownership following partial acquisition was below the 0.4 hectare threshold and to allow 4 metres clearance to account for potential new boundary fences where they had been relocated as a result of the Project. Council drew on its experience of lots of 4,000 square metres often being intensively developed and the common practice in a bushfire prone area for clearing of vegetation along fence lines. Nillumbik Council suggested:

- adding words to EPR E1 to ensure offsets for consequential losses from fences were provided
- including consequential losses in Clauses 4.5.1, 4.5.2 and 4.5.5 of the Incorporated Document.

MRPV opposed Nillumbik Council's request, stating consequential losses were speculative and unreasonable.

Mr Barlow found it unnecessary to further consider vegetation which may be deemed lost. He considered any vegetation removal to be speculative. He added that property owners would not immediately take up this 'right' because the community highly valued vegetation.

Mr Barlow explained that relocating a boundary simply transferred an existing exemption to a new boundary location. He accepted the potential for new lots below the lot size threshold could be created, but did not assess the extent.

MRPV submitted information[10] which specified the proposed residual lot sizes following from acquisition. It showed that 870 Yan Yean Road, Doreen would be reduced to below 0.4 hectares following partial land acquisition. MRPV submitted this property was already predominantly cleared of native vegetation and the part to be acquired had been assessed as part of the EES.

(iv) Discussion

Loss of native vegetation

The EES Environmental Risk Register (Attachment III) rated the residual risk for potential native vegetation loss as high.

After exploring this extensively throughout the Hearing process, there continues to be uncertainty about:

- what the final worst-case impacts on native vegetation will be

[10] Technical note 11, document 82

- whether the Project will appropriately avoid and, or minimise the loss of native vegetation and large trees.

At the Hearing, MRPV provided an evolving project design which resulted in continued changes to the potential effects on native vegetation. As a result, the worst-case scenario for native vegetation loss has continued to increase from the EES referral to the EES and throughout the Hearing.

The Project as modified throughout the Hearing process:

- will not be able to proceed without encroaching on the exhibited no-go zones at the golf course and Bridge Inn Road intersection
- would involve clearance of, as yet, unassessed native vegetation at the Yarrambat Park public golf course to enable the greens to be realigned and to avoid the need for a fence
- may require further native vegetation clearance at the construction laydown areas, as determined by contractors and identified in EES Chapter 5.

The IAC has concerns about MRPV's approach to identifying all native vegetation for potential removal at this stage of the process. This made it difficult for submitters to understand and respond to actual vegetation loss. The EES would have benefitted from a more refined vegetation assessment with more progressed calculations.

The IAC agrees with the evidence that regardless of the success of implementing the EPRs, the Project will have a high impact on native vegetation as defined by the risk assessment. Having said that, the vast majority of the vegetation to be cleared is of least concern and therefore the clearing of this vegetation alone is unlikely to cause a significant environmental effect at the State or regional level, in the context of significant effects as outlined in the Ministerial Guidelines.

The IAC agrees with Ms McKinnon that limited Project alternatives were considered. At Chapter 15, the IAC has found a demonstrated need to duplicate this section of Yan Yean Road. There is therefore a limit to the extent of avoidance that can be undertaken considering the existing road alignment. This creates further uncertainty as to the likely effectiveness of EPRs aimed at avoiding and minimising further impacts to native vegetation.

There are design refinements which need to be completed before the Project commences. EPR E1 should be updated to refer to the final no-go zones which reflect the final Project design and include more no-go zones than in Technical Note 19.

The IAC does not support the proposed approach for separate approval processes for native vegetation removal for the Yarrambat Park golf course realignment and proposed construction laydown areas. A complete assessment of the proposed impacts should have been exhibited with the EES documents.

The IAC accepts that:

- the offset determination in Technical Appendix B2 is consistent with the Guidelines and satisfied the DELWP approved processes, as indicated in the Peer Review by Mr Miller
- proposed losses will be offset and the Guidelines require those offsets to be in the same bioregion

- MRPV will employ effort to locate such offsets as close to the site as possible, and agrees this ought not be included as a performance requirement.

Preparatory works

The EPRs to avoid and minimise native vegetation are sufficient except to the extent they do not apply to preparatory works. The IAC agrees with Ms Forbes that information for all Application Requirements is readily available and there would be benefit in providing it upfront.

Most indirect effects are likely to occur during construction and the IAC agrees with Ms Forbes' that:

- the only way it would be acceptable for preparatory works to proceed without the EMF in place would be with additional environmental documentation
- the EMF would be preferable.

If MRPV finds this task too onerous for preparatory works, it would be appropriate to add a new Clause to the Incorporated Document which enables the EMF to be prepared and approved in stages or parts.

Consequential losses

The IAC acknowledges Mr Barlow's evidence regarding the transfer of an existing right to clear fence lines. Where the Project is acquiring part of a block however it seems very likely the owners will want to build a new fence to mark the new boundary of their property between it and the road. Where this requires clearance of native vegetation, it seems directly consequential from the Project.

Nillumbik Council has sought to assume all vegetation within four metres of new fencing to be lost. The IAC does not consider it necessary for the EPR to prescribe a precise method of calculating the loss because DELWP will approved the offset plan.

To implement the proposed change, native vegetation may need to be further assessed where the Project area goes only up to the extent of the new property boundary. An assessment of likely losses could also be provided. This information would already exist where the new boundary is already in the Project area.

Regarding 870 Yan Yean Road, the Project has assessed only the part of the property to be acquired and not that which would remain in private ownership with the potential for native vegetation clearance. This does not assist in determining whether the portion to remain in private ownership is likely to have remnant native vegetation.

Irrespective, 870 Yan Yean Road is part of a larger parcel of land including 880 and 890 Yan Yean Road so the exemption does not apply. The exemption does not apply to contiguous land in one ownership with an area greater than 0.4 hectares. Provision should be made for any losses associated with a relocated fence for this property.

(v) Findings and recommendations

The Inquiry and Advisory Committee finds:

- The final impacts on native vegetation are uncertain and will remain high.
- The EES has applied an appropriate approach to native vegetation, however it would have benefitted from exhibiting a complete assessment.

- Preparatory works involving the clearance of native vegetation should not be exempt from the requirement for the EMF.
- It is appropriate that information for all Application Requirements is provided up front.
- The Project should provide mitigation for consequential losses from fences needing to be relocated as a result of partial land acquisition.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) **include consequential losses for new fences in E1 in line with Nillumbik's submission**
b) **include requirements to finalise and implement the no-go zones identified through detailed design.**

Amend the Incorporated Document, as shown in Appendix F, to:

a) **require information for application requirements 1, 5 and 9 before preparatory works.**
b) **revise Clause 4.11 to no longer exempt preparatory buildings and works on the Project Land before the conditions set out in Clause 4.4 are satisfied**
c) **include reference to consequential losses for new fences in Clauses 4.5.1, 4.5.2 and 4.5.5.**

9.2 Trees

(i) The issue

The issue is whether the EES has appropriately characterised and minimised the potential for significant effects on social, cultural and habitat values through the removal of a large number of trees (including remnant, planted, regenerated and large old trees).

(ii) Background

The Arboriculture report (Technical Appendix C) includes an inventory of all trees (including remnant, planted and regenerated) in the Project area recording information such as dimensions, health, structure, useful life expectancy, tree significance, retention value and the presence of hollows. As the large number of very small saplings would have made the dataset exceptionally large, not all specimens that could exceed 3 metres were included – where there were many saplings a representative sample was collected. In general, small saplings between 1 and 2 metres in height present in bushland were not included as these would be dealt with as part of a patch of vegetation.

Approximately a third of the trees recorded belong to two indigenous eucalypt species, being red box and long-leaved box. Leyland Cypress trees were the next most prevalent representing 7 per cent of the tree species in the Project area and the most prevalent exotic species.

Table 6 summarises trees identified in the Project area and their retention value.

Table 6 Summary of trees and retention value

Retention value	Number	Description
Very high	12	Demonstrating fair to good health and structure, have life expectancy beyond 10 years. Should be retained for their indigenous origin, habitat significance or large size.
High	346	Retention of these trees is preferred and the design should accommodate these wherever possible. Mostly indigenous eucalypts.
Moderate	2,169	Mostly indigenous eucalypts and planted hedges. Should be retained unless the design does not allow it.
Low	3,533	Approximately 50 per cent of the population, majority either young or declining trees for which design changes are not considered worthwhile. Young eucalypts in this category account for 1,532 trees and should be accommodated wherever possible.
None	189	These trees are hazardous and should be removed.
Third party ownership	782	Trees outside the current Project boundary have been considered in this category irrespective of retention value. They will require protection unless approval is sought and provided by the owner or responsible authority.
Total	7,031	

Source: Section 5.3 of Technical Appendix C

Potential impacts to trees included direct removal, immediate damage to the roots, trunk or branches or indirect impacts from modified soil structure, drainage or hydrology.

Technical Appendix B2 indicates an additional 2,319 trees would be affected under a worse-case scenario (separate from those considered as native vegetation pursuant to the Guidelines). Of these, 1,222 were planted native trees with the remainder 1,097 being exotic.

EPRs to avoid, manage and mitigate impacts are AR1 to AR4.

The EES Environmental Risk Report identified the residual risks from the loss of trees from arboriculture and cultural and social perspectives to be significant.

Mr Miller's peer review was satisfied the characterisation of trees was appropriate and the potential impact pathways had been appropriately identified.

In order to better quantify the effectiveness of proposed mitigation measures, Mr Miller recommended further detail be provided before the detailed design as to the locations where under-boring technology (as opposed to trenching) was likely to be implemented.

(iii) Evidence and submissions

Mr Knight gave evidence Section 5.2 of the Landscape Strategy provided an assessment of the cultural value of vegetation. This was undertaken in response to the following scoping requirement:

> 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.

In the absence of a standardised methodology for the assessment of the cultural value of trees, Mr Knight gave evidence the report adopted guidance from:

- Cultural significant trees assessment and management guidelines (Symatree)
- Significant tree register criteria: National Trust of Australia.

Assessment criteria established based on the Australian ICOMOS, Burra Charter's included social, aesthetic, scientific, historic and spiritual significance. Regarding scientific value, the following key vegetation components were identified:

- trees identified by the arborist as very high and high retention value
- key habitat trees for the swift parrot (660 trees)
- ecologically significant flora species including matted flax-lily, studley park gum and pale-flowered crane's bill geranium.

Vegetation components were scored against the selected criteria and a cumulative value was created as a heat map across the Project area. Mr Knight noted that, as vegetation changes over time, the assessment provided a snapshot only of current value. The resulting heatmap was known as the 'Cultural Value of Vegetation'.

Mr Ryder conducted a range of further works to investigate potential effects at specific locations being the Doreen River Red Gums and those trees existing between Bannons Lane and Jorgenson Avenue being proposed to be included in the median. Regarding the number of trees to be felled, Mr Ryder gave evidence this represented a "*worst case-scenario assuming all trees within the Project area and outside the no-go zones would be lost".* Although he could not quantify it, he gave evidence it was likely the number of effected trees would be reduced.

With regard to potential effects from site compounds, Mr Ryder gave evidence he had not been provided with any details however in his evidence, *"tree removal is to be avoided, the development of site compounds should not be seen as a suitable excuse to remove anything but low value trees".*

In response to submissions, he recommended a number of changes to EPRs E3, AR1-4 and LV2 to refine some words regarding managing works around retained trees, and trees to be removed.

Several submissions related to native vegetation mainly focused on the number of trees to be felled. Values of trees mentioned included for habitat, visual amenity, greenhouse gas removal, shade and cooling effect. It was submitted that the Project impacted too many trees and did not appropriately consider alternatives such as a reducing carriageway footprint or upgrading Plenty Road.

(iv) Discussion

The IAC considers the Project will result in a significant number of trees to be felled in the area. These trees have social and cultural value, as well as potential value as habitat for fauna species.

Much of the discussion regarding the presentation of a worst-case scenario and the ability for the Project to avoid and minimise further loss of trees is common with that provided for native vegetation in sub-chapter 9.1. There is an overlap between these aspects. This discussion is not repeated here.

The IAC would have benefitted from a more detailed assessment of the proposed final number of trees to be impacted either directly or indirectly by construction works around a tree. The clearance of trees and native vegetation for site compounds and laydown areas should be avoided and if required, subject to the EPRs.

The IAC commends Mr Knight's assessment of the social and cultural values of vegetation, noting that this was a novel exercise. His assessment methodology was clearly documented. The IAC considers the use of the cultural value of vegetation as a consolidated management tool to be referred to in the EPRs as a good measure to simplify the implementation of many overlapping measures intended to mitigate impacts from potential impacts to trees which hold various values.

(v) Findings and recommendation

The Inquiry and Advisory Committee finds:

- The Arboriculture report and Landscape Strategy have appropriately characterised the existing trees in the Project area and their social and cultural values.
- The Project will result in a significant number of trees being removed or impacted, though the final number is uncertain.
- The EPRs are appropriate for tree avoidance, mitigation and management, though it is unclear how effective they will be.
- All project works including site compounds outside the Project area should be subject to the Environmental Management Framework and Environmental Performance Requirements.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to revise EPRs E3, AR1, AR2, AR3, AR4 and LV2 consistent with Mr Ryder's evidence.

9.3 Significant communities and species

9.3.1 FFG-listed community

(i) The issue

The issue is whether the proposed impact to FFG Act listed communities is likely to be significant.

(ii) Background

Technical Appendix B1 identifies one FFG Act listed community existing in the Project area being the *Western Plains (River Red Gum) Grassy Woodland,* with 0.233 hectares existing in the Project area. Technical Appendix B2 indicates 0.186 hectares of this community would be removed.

(iii) Evidence and submissions

Ms Forbes gave evidence the *Western Plains (River Red Gum) Grassy Woodland* community can be similar to Plains Grassy Woodland and that DELWP had advised there is no condition threshold for the community. Ms Forbes gave evidence this community of 0.233 hectares was expected to be entirely removed. She described the quality of the patches to be poor with a ground layer of weeds. The loss was not considered significant by Ms Forbes and would be offset accordingly.

(iv) Discussion

Expert evidence indicates a greater impact than that exhibited in the EES. This aside, the Inquiry and Advisory Committee accepts the poor quality of the patches identified as *Western Plains (River Red Gum) Grassy Woodland*, their isolated nature and agrees this impact is unlikely to be significant.

(v) Finding

The Inquiry and Advisory Committee finds the proposed impact to the FFG Act listed community is not likely to be significant.

9.3.2 Significant flora species

(i) The issue

The issue is whether the Project will have a significant effect on significant flora species?

(ii) Background

The following significant flora species were located in the Project area:

- Two matted flax-lily plants (listed in the EPBC Act and FFG Act) – located on the west side of Yan Yean Road south of Laurie Street
- One studley park gum (Advisory-listed endangered) – located near the matted flax-lily plants
- Three pale-flowered crane's bill *geranium sp. 3* (Advisory-listed rare) – located on private land in the vicinity of Werther Park
- Other species listed as protected under section 46 of the FFG Act being gold-dust wattle, spreading wattle, black wattle (118), golden wattle (192), hop wattle (1), blue pincushion and purple coral-pea. Individuals of all of these species are likely to be removed.
- An additional four listed species which were not indigenous to the area and obviously planted were also identified.

Technical Appendix B2 assumed individuals of all protected species would be directly impacted. To minimise this impact, Technical Appendix B2 recommended the Project footprint be minimised as much as possible and areas to be retained protected by no-go zones. Permits under the FFG Act would be required from DELWP for removal.

(iii) Evidence and submissions

Ms Forbes provided evidence the wide median treatment between Laurie Street and Bannons Lane was intended to provide as much opportunity as possible to avoid clearance

of the matted flax-lily and studley park gum. Despite efforts to date however, it was not clear if these plants could be avoided and so the impact assessment adopted the worst-case scenario of them being removed. In the case of the matted flax-lily there was opportunity to translocate the specimens as provided for in EPR E5. For the studley park gum there was the opportunity to collect seed although it was not considered appropriate to specify this in an EPR as the time to collect them would be prior to implementation of the Project. Ms Forbes gave evidence that EPR E5 was "*adequate to minimise potential impacts on the matted flax-lily"* and that native vegetation offsets and proposed measures were "*adequate to minimise and offset the impacts of the loss"* of the studley park gum.

Nillumbik Council supported the efforts to avoid the need for translocation of the matted flax-lily. In the event translocation was required, Nillumbik Council submitted that it should be required to be translocated within the same bioregion.

(iv) Discussion

The IAC considers that, should it not be possible to retain the two matted flax-lily and the studley park gum in the wide median, the effect of removing these plants will not be significant in the context of the survival of their species. The IAC accepts Ms Forbes' evidence translocation is an appropriate mitigation for matted flax-lily and EPR 5 provides for the development of a salvage and translocation plan. The IAC considers the wording of this EPR could be improved to ensure such a plan is developed before any impacts occurring.

The IAC would prefer the matted flax-lily to remain in the same bioregion, as submitted by Nillumbik Council. However, the IAC is comfortable with the proposed EPR, noting it requires any salvage and translocation plan to be to the satisfaction of both DELWP and the Commonwealth Department of Agriculture, Water and the Environment.

It would be desirable if MRPV had, or was already, collecting seeds from the studley park gum. It is acknowledged the timing would misplace an EPR commitment. EPR E2 requires the design to avoid and minimise impacts on listed species, ecological communities and the studley park gum. However, all of the following listed strategies relate to fauna not flora. Strategies in other requirements such as EPR E1 and AR1 are more relevant to avoiding impacts to these flora species.

The IAC recommends removing the reference to the significant flora species from E2 and including in either (or both) E1 and AR1. Specific mention of the studley park gum and listed species should be added to either of these EPRs to ensure avoidance is considered. AR1 and V1 references the Landscape Strategies "Cultural Value of Vegetation Assessment" which may not have included listed species as a criterion for scientific significance. The IAC considers it could be useful to include this criterion so this management tool can be more effective.

(v) Findings

The Inquiry and Advisory Committee finds:

- The Project is unlikely to have a significant effect on potential effects on the two matted flax-lily and one studley park gum are unlikely to be significant to the species even under the worst-case scenario.
- The existing EPRs could be tightened with respect to avoidance measures for the studley park gum and other listed flora species.

(vi) Recommendations

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) **revise EPR E5 to require the salvage and relocation plan to be developed where direct impacts are anticipated**
b) **remove references to flora in EPR E2**
c) **amend E1 to include references to listed flora**

Update the Cultural Value of Vegetation heatmap assessment to attribute scientific value to listed flora species to assist in avoiding and minimising impacts on these species through the implementation of Environmental Performance Requirements AR1 and V1.

9.3.3 Significant fauna species

(i) Issues

The issues are:

- whether the potential effects on listed fauna species have been appropriately assessed
- whether there is potential for significant effects on listed fauna species
- whether there are appropriate mitigation and management measures.

(ii) Background

Technical Appendix B2 identifies the following listed fauna species had a moderate to high likelihood of being present in the Project area:

- White-throated needletail (EPBC Act Vu, M, FFG listed) – almost exclusively aerial bird, may fly overhead.
- Swift parrot (EPBC Act CR, FFG listed) – potential foraging trees exist in Project area, targeted surveys failed to identify this species.
- Rufous fantail (EPBC Act M) – several recent records in locality however more likely to frequent nearby gullies and parks.
- Common bent-wing bat (EPBC Act CR, FFG listed) – may fly over or forage in area.
- Brush-tailed phascogale (FFG listed) – known to occur to the south of Project area, not identified in targeted surveys, low likelihood resident in area, moderate likelihood it uses area to disperse.
- Grey-headed flying fox (EPBC Act Vu, FFG listed) – recorded, likely to periodically forage in the area.
- Eastern snake-necked turtle (Vic Advisory List, data deficient) – likely to frequent farm dams and travel between them through the Project area.
- Tussock skink (Vic Advisory List, vulnerable) – one patch of higher quality potential habitat present, lower quality habitat also present.

The grey-headed flying fox was the only listed fauna species recorded during surveys. Except for the tussock skink, the above listed species were considered likely to use the Project area for foraging and dispersal only and habitat was not considered critical for any of these species.

The swift parrot was a key reason for the EES and is discussed in sub-chapter 9.3.4.

Technical Appendix B2 identifies potential impacts for fauna as:

- habitat removal
- disturbance from increased noise and light
- habitat degradation from weeds, dust, erosion and sedimentation
- increased predation
- increased potential for collision with vehicles or man-made structures (including the golf course fence)
- habitat fragmentation.

It identifies potential habitat removal impacts as:

- grey-headed flying fox potential loss of foraging habitat including up to 2,521 eucalypts (174 large trees, 2,347 small trees)
- brush-tailed phascogale approximately 2 hectares of potential dispersal habitat to be fragmented
- tussock skink approximately 1.5 hectares of potential habitat to be removed.

The potential for the Project to exacerbate key threatening processes under the EPBC Act and FFG Act was considered as part of the impact assessment[11] (Appendix B of Technical Appendix B2). Key threatening processes considered likely to result for the Project were:

- habitat fragmentation
- spread of specified environmental weeds
- loss of hollow bearing trees

Regarding the swift parrot, a key threatening process discussed at the Hearing was the potential for aggressive birds such as noisy minor to be displaced from the Project area into nearby higher quality habitat, causing potential exclusion of swift parrot from that higher quality habitat.

Technical Appendix B2 states that, as threatened species were likely to only use the Project area sporadically, they would be unlikely to be adversely impacted by habitat removal.

EPRs to mitigate potential impacts to fauna include: E2, E4, E6, E7 and E8.

(iii) Evidence and submissions

Ms McKinnon submitted the EES did not undertake appropriate surveys for the brown toadlet and tussock skink. Ms McKinnon submitted the tussock skink is expected to be listed under the FFG Act shortly with a provisional status of critically endangered.

Mr McCaffrey detailed the survey methods for brown toadlet and asserted they were suitable for the purposes of characterising the environment. He explained that a conservative approach was taken in appraising the potential for suitable tussock skink habitat and its likely occurrence. Based on this, it was determined there was a moderate likelihood of the tussock skink occurring in the Project area. Mr McCaffrey considered the level of assessment was adequate for the purpose of characterising the environment.

[11] Appendix B of Technical Appendix B2

Mr McCaffrey agreed with Ms McKinnon regarding the potential listing of the tussock skink but gave evidence its current status remains until the assessment and listing process is finalised.

Ms Hunter submitted that while replacement plantings might mitigate the impact of removal, *"established trees play a vastly different role in the landscape to new saplings, via the provision of nesting sites, tree hollows, support of insect populations and the provision of nectar".*

Nillumbik Council submitted that if trees with hollows are to be removed, the hollows should be reused nearby.

In response Mr Ryder provided that *"the retention of hollow-bearing trees is a preference and in accordance with EPR E1".* He proposed a number of additions to EPRs E2 and E3 to ensure pre-clearance surveys of tree hollows, advance blocking and retention or relocation of hollows where appropriate and practicable. In addition, the Project design was to provide for replacement of hollows.

In response to questioning from the IAC, Mr McCaffrey stated that habitat for significant fauna species had not been mapped. He was concerned that the time needed to make spatial polygons was not warranted.

(iv) Discussion

The IAC agrees with the Peer Review that significant fauna species were appropriately characterised for the purpose of an impact assessment. Accepting the low to moderate quality of habitat for these species, the IAC considers it unlikely the Project will result in significant effect to these fauna species.

Tree hollows are known to provide habitat to the brush-tailed phascogale and other more common wildlife species. While the Arboriculture report identified all trees with hollows the EPRs were silent as to measures to minimise and manage potential impacts to these significant habitat features.

Mr Ryder's additions to the EPRs referred to in sub-chapter 9.2, are appropriate to deal with tree hollows. The IAC has reviewed EPR E1 and, is concerned that it is limited to native vegetation as described by the Guidelines. The IAC observes that many planted native trees have hollows as indicated in Figure 5.3 of Technical Report B1, however these do not seem to have been included in the impact assessment in Technical Report B2 (at least they are not mapped). The IAC understands this is because these trees are not indigenous and were not thought to provide potential habitat for the swift parrot. In any case, the IAC considers retention of any hollow bearing trees to be of importance and that this should be ensured by the EPRs. The tree hollows also do not currently form a criterion of themselves as per the Cultural Value of Vegetation Assessment referred to in AR1 and as discussed above. The IAC considers it would be appropriate that effort equal to that for higher significance trees be had to avoid trees with hollows in the first instance.

The IAC considers spatially mapping key potential habitats for significant species to be an important step to inform management measures. Such mapping could be approximate or indicative.

(v) Findings and recommendation

The Inquiry and Advisory Committee finds:

- The EES has appropriately assessed the potential effects on listed fauna species.
- The Project is unlikely to have a significant impact on these fauna species if is implements recommendations in this report.
- Potential habitat for significant fauna species, such as for the grey-headed flying fox, brush-tailed phascogale and tussock skink, should be mapped to inform management measures.
- Trees with hollows should be identified for additional avoidance efforts before mitigating and minimising loss by relocating hollows:
  - through a new EPR, or
  - by adjusting the scientific criteria for the Landscape Strategies 'Cultural Value of Vegetation Assessment'.

The Inquiry and Advisory Committee recommends:

Update the Cultural Value of Vegetation heatmap assessment to attribute scientific value to hollow bearing trees.

9.3.4 Swift parrot

(i) The issues

The issues are:

- whether the potential for significant and cumulative effects have been appropriately assessed
- whether a Swift Parrot Rehabilitation Plan is necessary to mitigate existing potential impacts or as a precaution in future should potential indirect impacts become evident
- whether the existing mitigation measures allow for appropriate replanting of trees using preferred foraging species.

(ii) Background

Technical Appendix B1 did not rely solely on surveys to confirm the presence of the swift parrot in the Project area. Due to the presence of nearby records, it was assumed the species may periodically use any present habitat. All 'key' and 'secondary' habitat trees as defined in the Recovery Plan were identified and mapped in the Project area.

As the birds are only periodically present on the mainland, nearby reference sites were observed when surveys were undertaken to confirm the presence of the birds in the area at that time. Plenty Gorge Park was identified to have frequent use by the swift parrot in the Swift Parrot Management Plan.

A summary of potential foraging trees and effects is provided in Table 7.

Table 7 Assessment of potential foraging trees in the Project area

Source	Potential habitat trees	Further detail
Existing conditions (Technical Appendix B1)	2315 total in the Project area	
	272 in 20 metre buffer	
Impact assessment (Technical Appendix B2)	1693 likely to be impacted	Assessment undertaken of size and health: - 100 were dead (89) or in poor health (11) - 14 large preferred trees - 74 large secondary trees - 340 small preferred - 1165 small secondary

Technical Appendix B2:

- concludes the Project is not likely to have a significant impact on the swift parrot when considering the availability of foraging habitat in the wider area and its highly mobile nature
- provides a qualitative assessment of potential cumulative impacts from this and other recent projects (many being road projects) within a 10-kilometre radius of the Project area.

The cumulative assessment considered the availability of potential foraging habitat at a local and regional scale and demonstrated wide availability. Additional external factors which pose threat to the swift parrot were considered to provide broader contextual analysis of significant impacts. These included:

- predation of breeding females, eggs and chicks by sugar gliders in key breeding habitat located in Tasmania (up to 65 per cent of breeding females thought to fall victim to this each year)
- land clearing of blue gums across the breeding range in Tasmania
- wildfires in breeding habitat
- native vegetation clearing in foraging habitat on the mainland
- habitat fragmentation
- dieback caused by Phytophthora cinnamomic (an exotic pathogen likely introduced during European settlement)
- climate change
- collisions with structures
- competition and exclusion by aggressive nectarivores (birds and bees)
- Psittacine beak and feather disease.

Technical Appendix B2 provided:

> Vegetation and preferred foraging trees losses resulting from the Project are unlikely to contribute to a cumulative impact on the swift parrot.

Regarding cumulative effects, the EE Ministerial Guidelines state:

> While cumulative effects may be a relevant consideration for the assessment of a project, a proponent may not have a practical ability to provide such an assessment,

> for example because of their limited access to information on the effects of other existing activities or potential projects …
>
> A proponent will at least need to provide an assessment of relevant effects (e.g. on landscape values, risks to fauna or emissions to air) in a form that can be integrated with information relating to other projects or activities, and thus enable the Minister to assess the potential cumulative effects. A specific need for a proponent to document potential cumulative effects may arise where a project is to be undertaken in a series of stages.
>
> Because of the factors constraining quantitative assessment of cumulative effects, often only a qualitative assessment will be practicable.

(iii) Evidence and submissions

Mr Weller stated:

> the Project area is not used frequently during the period when the species is present on the mainland … However, the species is highly mobile and forages across greater Melbourne region in response to foraging resources, therefore it should be noted that the species may still utilise foraging habitat within the Project area if available on rare occasions, albeit only if more reliable, secure and higher quality habitat is unavailable in the local area.

In response to questioning from the IAC, experts Mr McCaffrey and Mr Weller confirmed the non-indigenous sugar gum trees in the Project area had not been considered from a habitat perspective even though it was a species commonly present in the reference sites. Mr Smales gave evidence this was because they are not listed in the Recovery Plan and it was assessed that their usefulness as a potential foraging species in this area was likely to be low. MRPV provided[12] that the proposed Project design changes would result in an additional 89 potential foraging trees being impacted including one preferred habitat tree, bringing the total to 1,682 habitat trees, including 15 preferred foraging trees.

MRPV submitted the Project will not have significant impact on the swift parrot and that appropriate mitigation measures were provided by EPR E4 (Swift Parrot Management Plan) and EPR E6 (Strategic revegetation) together with previously discussed EPRs seeking to avoid, minimise and manage impacts to native vegetation.

In response to submissions and direction from the IAC for a quantitative cumulative impact assessment, Mr Weller gave evidence that due to the different approval processes required for each project within a 10-kilometre radius, the quality and availability of tree data, required to undertake a quantitative assessment, varied significantly.

Mr Weller stated that although detailed tree data was available for the North East Link Project, it was considered too time-consuming to include this in a quantitative assessment for this Project given it was unlikely to alter the conclusion of the assessment.

Citing some limitations with the quality of data for Yan Yean Road Stage 1, Mr Weller provided a quantitative assessment of the impacts that the two stages would equate to being:

- 35 large preferred foraging trees
- 200 large secondary foraging trees
- 418 small preferred foraging trees

[12] Technical Note 19

- 2,040 small secondary foraging trees.

Remaining projects considered were identified as occurring in EVCs with predominant canopy species being river red gums which are not considered significant as per the Recovery Plan. Remaining residential projects were considered to have occurred outside the 10-year time frame.

Mr Weller added:

> Habitat value within the majority of these Project areas is insignificant relative to higher value habitat in the local area (i.e., Plenty River corridor).

He said even in the context of a cumulative impact assessment, applying the significant impact criteria for a critically endangered species under the EPBC Act Significant Impact Guidelines, the Project will not lead to a significant cumulative impact on the swift parrot.

In response to a question from Nillumbik Council, Ms Forbes stated that in the unlikely event that this higher quality habitat was completely decimated by fire, it was possible habitat in the Project area would be of increased importance.

Both Nillumbik and Whittlesea Councils were concerned with the potential for significant impacts from the Project as a result of resident aggressive species of birds being displaced by the Project and invading nearby higher quality swift parrot habitat.

Nillumbik Council submitted the Project should mitigate potential impacts by undertaking swift parrot habitat rehabilitation, maintenance and enhancement of non-affected areas. An EPR requiring a Swift Parrot Rehabilitation Plan was suggested. It was submitted such a plan should include recommendations for plant species for rehabilitation and consideration of potential secondary impacts from aggressive birds displaced from the Project invading high quality habitat in Plenty Gorge.

Whittlesea Council acknowledged the challenges facing MRPV in undertaking a cumulative impact assessment, but remained concerned the total impacts of road projects in the area (North East Link Project, Yan Yean Road Stage 1, Bridge Inn Road upgrade and Plenty Road upgrade) together pose a risk to the conservation of the swift parrot. Whittlesea Council considered the reasons Mr Weller did not undertake a quantitative assessment were valid, however submitted there remained a knowledge gap with respect to the potential for cumulative impacts on the swift parrot to which this Project would contribute. Whittlesea Council submitted a Swift Parrot Rehabilitation Plan be developed which could include monitoring of nearby higher value habitat to determine whether secondary impacts (such as influx by aggressive nectarivores) eventuate and, if they did to implement measures to be detailed in the Rehabilitation Plan.

Ms Forbes provided evidence that enhancement of nearby habitat could be voluntarily undertaken by MRPV however was not necessary to mitigate a potential significant impact resulting from the Project.

Mr Weller considered the high density of these aggressive birds already in higher quality habitat such as Plenty Gorge would mean any new aggressive birds would be met with stiff competition from other aggressive birds already there. He added:

> Potential impacts on swift parrot are considered to be adequately mitigated by proposed measures in EPRs E1, E3, E4, E6 and AR1. Native trees to be removed will be offset in accordance with requirements under the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017), and be located within the

> Port Phillip and Westernport Catchment Management boundary, or the Nillumbik Shire and City of Whittlesea Local Government Areas.

Ms McKinnon provided a detailed submission as to why the cumulative impact assessment that had been undertaken was inadequate providing details of publicly available data that could have been used.

In closing, MRPV submitted the combined evidence was that impacts on the parrot have been properly assessed, the habitat is of low to moderate value, there is an absence of evidence the birds exist in the Project area and no significant impacts are predicted when assessed against the significant impact criteria.

(iv) Discussion

The survey method and effort for the swift parrot is appropriate and consistent with relevant guidelines. The IAC accepts evidence that the Project, either considered alone or when together with recent projects in the vicinity, will not pose a significant impact to the swift parrot when assessed against the significant impact criteria under the EPBC Act. The Recovery Plan highlights the importance of a broad range of habitats due to the potential variability from year to year of suitable foraging habitat (variable flowering time or lerp presence). The IAC agrees with evidence that, even in this context, the habitat in the Project area would rarely be used.

Regarding the potential to displace aggressive nectarivores to higher quality habitat, the IAC accepts evidence that this is unlikely to create a significant impact to nearby higher quality habitat in Plenty Gorge. The IAC therefore does not support a requirement for a Swift Parrot Rehabilitation Plan.

The potential for significant and cumulative impacts on the swift parrot has been assessed consistent with the Ministerial Guidelines for assessing environmental effects under the EE Act. The IAC acknowledges the limitations provided for undertaking a quantitative cumulative impact assessment of the potential impacts of the Project together with other nearby road, infrastructure and residential projects.

MRPV facilitates many infrastructure works so it would be appropriate to provide in future a forward plan of projects to consider any necessary cumulative impact assessments. This would enable relevant requirements to be considered and assessed upfront.

EPR E6 provides for strategic revegetation including using trees likely to be used by swift parrot. The IAC considers this mitigation measure would not be particularly effective in the short term, given evidence provided regarding the preference for large trees for foraging and the time it can take trees to grow.

The IAC accepts evidence that the Project will have to offset native vegetation loss.

(v) Findings

The Inquiry and Advisory Committee finds:

- The potential for significant and cumulative impacts on the swift parrot has been assessed consistent with the Ministerial Guidelines for assessing environmental effects under the EE Act.

- The Project is unlikely to cause significant impacts to the swift parrot when considered alone or when considered cumulatively with other nearby projects therefore, a Swift Parrot Rehabilitation Plan is not warranted.
- The EPRs provide for replacement planting of preferred foraging tree species however, given the time taken for trees to grow to a large size which would be preferred by the swift parrot, the IAC does not consider this mitigation measure will be particularly effective in the short term.

9.4 Fauna management

(i) The issue

The issue is whether potential impacts to common wildlife present in the Project area will be appropriately avoided, managed and mitigated.

(ii) Background

Environmental Significance Overlay Schedule 1 in the Nillumbik Planning Scheme identifies 'Sites of Faunal and Habitat Significance'. The Schedule seeks to:

- protect and enhance sites of faunal and habitat significance identified in (Beardsell 1997) Sites of Faunal and Habitat Significance in the North East Melbourne.
- protect and enhance regional and strategic habitat links identified in (Beardsell 1997) Sites of Faunal and Habitat Significance in the North East Melbourne

Common wildlife such as kangaroos, wombats, echidna, possums were identified. Potential impacts to these species were the same as those identified for significant fauna species discussed in sub-chapter 9.3.3. There was concern about the risk of kangaroos crossing the road, risking collision with vehicles and causing a traffic safety risk.

To minimise impacts on habitat connectivity, Technical Appendix B2 and EPRs E2 and E3 require fauna sensitive design measures and techniques to be implemented consistent with the MRPV Fauna Sensitive Road Design Guideline (2019).

Technical Appendix B2 outlines such measures will aim to avoid collisions, mitigate loss of connectivity and limit street lighting disturbance. Measures are listed and captured in EPRs E2 and E3. These include rope bridges, increased signage, selective revegetation using indigenous species that may serve as foraging for swift parrot and grey-headed flying fox and fauna sensitive lighting.

Technical Appendix B2 states that fauna crossings would be placed in areas connected to wildlife corridors identified in Figure 5.5 Technical Report B1, consistent with EPR E8.

Mr Miller's peer review acknowledged and supported all listed measures to avoid and minimise potential impacts on habitat and fauna. His peer review provides:

> However, it is recommended that further detail is provided prior to detailed design that documents:
>
> - The quantum and location of rope bridges
> - Where is under-boring technique likely to be implemented
> - The quantum and location of revegetation
> - The quantum and location of 'contextual planting'.

> In order to fully assess the potential success of such mitigation activities and to balance this against the loss of habitat connectivity it would be beneficial to have all the information up front. It is understood that significant work has occurred to date, again I recommend further exploration of mitigation options such that eh Planning Panel can make a determination based on more complete knowledge of both the proposed impacts and mitigation.

(iii) Evidence and submissions

Ms Forbes indicated further work being undertaken included preparation of a Fauna Management Plan (FMP) that would respond to Mr Miller's peer review and assist in meeting the EPRs. She provided:

> The FMP aims to provide a summary of the design and on-ground management measures required to mitigate impacts to fauna from pre-, during and post-construction phases of the Project. The FMP should be presented to the contractor for the Project to inform the adequate implementation of the requirements of EPRs E2, E3, E6, E8, AR2 and LV2 (including informing the Construction Environmental Management Plan and Landscape Strategy elements related to fauna management).

Nillumbik Council submitted that EPR E2 needed to be strengthened with respect to potential mitigation measures for reducing collision risk with eastern grey kangaroos. EPR E2 requires targeted signage and *"investigation of other measures during detailed design which may be trialled to minimise collision risk, particularly for eastern grey kangaroos."* Nillumbik Council sought to include a requirement for resourcing of such other measures. It submitted that habitat links identified by the Environmental Significance Overlay should be included at the beginning of E2 to avoid impacts at key areas.

Nillumbik Council submitted that a Fauna Bridge and Crossings Plan should be prepared and approved by the relevant Councils before works commence.

In response to questions from the IAC, Ms McKinnon considered EPR E2 and submitted rope bridges would assist sugar gliders, but the location of these should already have been considered as part of the Project design. Regarding potential roadkill impacts on kangaroos and wombats, Ms McKinnon submitted there was *"nothing in rope bridges or signage which will assist"*. She cited research that signage to slow down for wildlife was rarely effective following the first time a driver observes it. Ms McKinnon submitted the only effective mitigation would be a bridge or vegetated underpass and that such mitigation measures would need to be considered early in the design process and not left for detailed design when it would be too late.

In its final version of EPRs, MRPV proposed a new dot point in EPR E2 to require the preparation of a *"Fauna Management Plan in consultation with the Department of Transport, Nillumbik Shire Council and Whittlesea City Council"*.

(iv) Discussion

The IAC agrees with the Peer Review that it would have assisted if further detail of fauna management measures was provided prior to the Hearing. The IAC also agrees with Ms McKinnon that mitigation measures such as bridges or underpasses should have been contemplated earlier in the design process. Without such detail it is difficult to determine how effective the EPRs are likely to be. The IAC agrees proposed rope bridges will not assist non-arboreal wildlife.

The IAC has considered the ESO1 in the Nillumbik Planning Scheme and even when combined with the Vegetation Protection Overlay in the Whittlesea Planning Scheme, there is only one location where these overlays are on both sides of the road. The IAC considers Yan Yean Road to already be a barrier to connecting these polygon areas. Areas identified in Figure 5.5 of Technical Appendix B1 provide adequate background information for considering habitat connectivity across the road. For habitat connectivity for habitats on the same side of the road, the general principles of (and requirements for) avoiding and minimising vegetation removal will assist and further specifying the ESO in E2 is not considered necessary.

Figure 5.5 of Technical Appendix B1 provides six locations predicted to be key arboreal connectivity areas and eight locations predicted to be kangaroo crossing hotspots. The kangaroo crossing hotspots ranged in length from approximately 150 to 400 metres. The longest of these is in proximity to Yarrambat Park. Using this area as an example, noting the proposal includes a cut of up to 2 metres on one side of the road, it is really important the feasibility of providing for kangaroos to cross at such location is considered early in the Project design. Aspects that need to be balanced include the desire to allow for connectivity and the need to ensure any such movement is either fully facilitated or prevented so as to avoid the possibility of animals becoming trapped on the road – such as may occur if they are to encounter a significant cut on the other side of the road.

The locations of rope bridges also need to be confirmed early to ensure further effort can be implemented to reduce tree loss in the area and allow for connectivity between trees. This is to ensure that remaining habitat is connected.

While the EES refers to EPR E8 for fauna crossings, the IAC considers the more relevant EPR to be E2. The IAC notes neither of these EPRs refer to the Figure in the EES and without this, it is difficult to determine how the appropriate location of crossings will be identified.

The IAC agrees that reference to the new FMP is required in the EPRs. Considering the lateness of this information, it is appropriate for the Minister for Planning to consider and approve the final FMP before works commence.

(v) Findings and recommendations

The Inquiry and Advisory Committee finds:

- The potential for impacts to wildlife has been considered, however there is insufficient detail of mitigation measures for the IAC to determine the effectiveness of proposed EPRs.
- The EPRs do not provide sufficient measures to minimise collision risks with kangaroos or provide habitat connectivity.
- Measures to provide habitat connectivity and minimise collision risks should be addressed in the Fauna Management Plan.

The IAC recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) update E2 to refer to Figure 5.5 of the Environment Effects Statement Technical Appendix B1.

b) **include reference to the preparation of a Fauna Management Plan as submitted by Major Road Projects Victoria and require for final approval by the Minister for Planning prior to works commencing.**

10 Environment

The EES Scoping Requirements:

- focussed on transport, biodiversity and social and cultural values
- identified the need for other potential adverse environmental effects to be considered including establishing mitigation and management measures.

Impact assessments were also undertaken to consider potential adverse effects with regard to noise, vibration, groundwater, contaminated land, surface water and air quality. These were supported by:

- Technical Appendix I – Noise and Vibration Impact Assessment
- Technical Appendix J – Groundwater Impact Assessment
- Technical Appendix K – Contaminated Land Impact Assessment
- Technical Appendix L – Surface Water Impact Assessment
- Technical Appendix M – Air Quality Impact Assessment.

The *Environment Protection Amendment Act 2018* will come into effect from 1 July 2021. This Act provides the framework for a more proactive approach to environmental issues, establishing a general environmental duty to focus actions of stakeholders on preventing harm to the environment. The relevant Environment Protection Authority (EPA) fact sheet explains that:

> This requires people to undertaken reasonably practicable steps to eliminate and other wise reduce risks of harm to human health and the environment from pollution and waste.

Subordinate legislation to support the amended Act include the Environment Protection Regulations and Environment Reference Standards (ERS). These will replace existing State Environment Protection Policies. The ERS identify environmental values to be achieved or maintained and provides a method to assess those values. ERS provide a reference to assist decision-makers, they do not set or impose compliance limits.

The impact assessments undertaken for the Yan Yean EES considered both the current State Environment Protection Policies and the draft ERS as these are considered to be the likely applicable regulation during construction.

The EPRs focus on State Environment Protection Policies and the Incorporated Document enables updates, to be consistent with *Environment Protection (Amendment) Act 2018* once operational.

10.1 Air quality

(i) The issues

The issues are:

- whether air quality, including dust emission, can be acceptably managed during the Project's construction phase
- whether the Project will result in acceptable operational air quality.

(ii) Evidence and submissions

Mr Jackson proposed a new design in the vicinity of Plenty Valley Christian College and the childcare facility opposite, with the intention of improving traffic efficiency and reducing emissions in this area.

Mr Conway gave evidence the proposed new design *"would not significantly change the outcomes of air dispersion modelling assessment with high background concentrations comprising a large component of the total contribution (Project plus background)".*

Nillumbik Council requested that Whittlesea Council and itself review the Dust Management Plan during its preparation and before construction commences.

Mr Conway gave evidence the existing EPR AQ1 provided for mitigation measures during construction under the CEMP and that this would be reviewed by the independent auditor.

Ms Mazza submitted:

- locating the road 4.5 metres to her house with nearby traffic lights would result in unacceptable air quality
- it is inappropriate for the modelling to be based on free-flowing traffic when peak particle concentrations at traffic signals could be up to 29 times higher than free-flowing conditions.

Ms Ewings' submission raised the issue of increased pollution at the childcare centre at the corner of Youngs and Yan Yean Road.

Mr Conway stated that the model showed emissions of PM_{10} and Nitrogen dioxide (NO_2) which would be below respective environmental quality objectives at all sensitive receptors. He acknowledged that predicted cumulative and annual $PM_{2.5}$ ground level concentrations would exceed their objectives at many of the sensitive receptors. This was due to the large contribution (72 to 90 per cent of total contribution) of background concentrations. Mr Conway:

> In 2031, the adopted annual background concentration (7.6 ug/m3) exceeds the environmental quality objectives before the Project contribution is added.

Mr Conway explained the Environmental Quality Objectives were used as recommended by the EPA as a comparison to predict the cumulative impacts (Project plus background). He noted that they hold no statutory weight and were not designed for assessing air emissions of individual projects.

Mr Conway referred to an EPA study found a sharp decline in PM_{10}[13] and NO_2 with increased distance from road (5 to 10 metres). He explained that pollution levels were anticipated to decrease by 2031 based on projections of higher efficiency vehicles and more stringent standards.

In response to submissions, Mr Conway recommended minor changes to the wording of EPR AQ1.

[13] Particulate matter with an aerodynamic diameter of 10 micrometres or less

(iii) Discussion

The IAC considers it is difficult to fathom a cumulative impact assessment which demonstrates air quality parameters may not be met but accepts evidence that this is due to high background levels that are already in exceedance. The IAC also accepts while the Project can implement appropriate measures through the existing EPR as adapted in line with Mr Conway's evidence, the bigger issue requires State-wide action in the form of improved emission technologies, more stringent standards and more efficient non-car-based transport options. The IAC notes the improvements the Project will deliver in terms of active and public transport options in the area.

The IAC accepts evidence the CEMP will include measures for dust management and notes Mr Conway's minor wording change in relation to managing stockpiles.

(iv) Findings and recommendation

The Inquiry and Advisory Committee finds:

- The existing EPR, as amended by Mr Conway, is appropriate to managing potential impacts.
- The Project will result in acceptable operational air quality.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to update AQ1 in line with recommendations from Mr Conway.

10.2 Greenhouse gases and sustainability

(i) The issue

The issue is whether the EES has appropriately considered potential increase in greenhouse gases.

(ii) Evidence and submissions

Ms McKinnon raised concerns the EES had failed to present the carbon footprint and comparative carbon saving through travel efficiency.

The EES provides total greenhouse gas emissions directly generated during construction is 31,314 tonnes. The EES undertook an analysis of potential greenhouse gas emissions with and without the Project which was based on the respective forecast traffic volumes under both these scenarios. The increase in greenhouse gas emissions from the Project at operations was due to the larger number of cars likely to use the road once duplicated.

Mr Conway gave evidence the Project will result in an annual increase of 385 tonnes of carbon dioxide emissions in 2031 arising from an increase in traffic using the upgraded road which equates to 0.0000000072 per cent of the total projected tonnes of carbon dioxide emissions in 2019.

The EES risk register included consideration of the potential for inefficient uses of resources during construction such as consumption of fossil fuels for electricity generation resulting in release of excess greenhouse gas emissions (risks 16 and 36) and mentioned the mitigation measure to inform the EPRs was to:

> Integrate sustainable design and construction practices to minimise, to the extent practicable, resource use particularly greenhouse gas emissions from construction of the Project.

Nillumbik Council submitted an additional EPR should be included to require a Repurposed Timber Plan to encourage the reuse of timber for trees. MRPV opposed this addition and submitted the *"EPR was not reasonably required to manage the environmental effects"* and that MRPV would *"implement Tree Reuse Strategies as part of the Project"* to ensure the reuse of timber for beneficial uses.

(iii) Discussion

The IAC accepts Ms McKinnon's submission the EES did not present a direct comparison as submitted. Following a risk-based approach however, this is not considered a fatal flaw. The Project achieves its transport aims of improved efficiency then some benefits in greenhouse gases will be achieved comparative to a no-project scenario. The IAC notes the mitigation measure identified in the risk register does not seem to have informed any of the EPRs. It would be appropriate to include an EPR which responds to sustainability to capture this mitigation measure.

Given the significant number of trees to be removed as part of the Project, it is reasonably consistent with the principles of sustainable development for the felled timber to be reused. The IAC could not find reference to the use of Timber Reuse Strategies mentioned by MRPV in any of the existing environmental documentation and considers the EPRs to be a satisfactory location for such a measure. This could either be grouped with the Arboriculture EPRs or Sustainability EPRs.

(iv) Findings and recommendation

The Inquiry and Advisory Committee finds:

- The EES appropriately considered potential impacts of greenhouse gases.
- An EPR informed by the sustainability mitigation measure for risks 16 and 36 should be included in the final EPRs.
- An EPR to ensure Timber Reuse Strategies are implemented should be included in the final EPRs.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to

a) add a new requirement SU1 which seeks to mitigate the potential inefficient use of resources.

b) add a new requirement SU2 to integrate sustainable development principles including through implementation of Timber Reuse Strategies.

10.3 Surface water

(i) The issues

The issues are whether the proposed EPRs can appropriately manage risks to stormwater environments and potential changes to stormwater flows.

(ii) Evidence and submissions

Nillumbik and Whittlesea Councils submitted the Project should provide stormwater detention systems to manage flooding impacts up to and including the 1 per cent Annual Exceedance Probability event. Both Councils requested best practice Water Sensitive Urban Design (WSUD) principles be incorporated into the road drainage system.

Nillumbik Council proposed two new EPRs for providing stormwater calculations for approval and implementing best practice WSUD principles.

Mr Leslie found that EPR SW2 already addressed these matters. It required drainage connections from the road drainage system to external systems to be agreed with receiving asset manager/owner and the need for stormwater detention devices and design calculations to be *"presented to the asset owners for acceptance"*.

MRPV agreed to amend EPRs SW1 and SW2 to include the words 'Best Practice'.

Ms Ewings raised concerns about potential impacts to Smugglers Gully waterway which runs diagonally from the Yarrambat Park (football oval) to the corner of Youngs and Yan Yean Roads. Particular impacts were the widening of the road at this point, disruption of the watercourse and potential to introduce contaminants. Mr Leslie found that EPRs SW1 and 2 addressed these matters.

Plenty Valley Christian College requested retention of the area and volume of the existing environmental waterway on the western side of the property boundary.

Mr Leslie considered that it may not be possible to entirely avoid encroachment on this waterway. He added that consultation with the College is required to determine the appropriate mitigation measures and:

> It is anticipated to be possible at the detailed design stage to design modifications to the environmental waterway to maintain its current function, storage and treatment characteristics and amenity value in consultation with College authorities.

Mr Leslie found the EPRs would appropriately protect the flow and water quality regimes of this watercourse.

(iii) Discussion

Regarding potential risks to flood levels, SW2 currently states:

> Minimise risk from changes to flood levels, flows and velocities. Permanent works must not increase overall flood risk at relevant locations or modify the flow regime of waterways with the acceptance of the relevant flood plain manager, drainage authority or asset owner. [IAC emphasis]

The IAC considers the use of the word 'acceptance' is inconsistent with terms used in the remaining EPRs and could cause confusion as to the level of input the relevant stakeholder may have. IAC considers tightening this EPR with the word 'approval' is preferred.

The IAC agrees with the proposed changes to SW1 and 2 in relation to best practice.

The IAC considers with the above changes, potential impacts to Smugglers Gully, the environmental waterway at Plenty Valley Christian College and other sensitive receivers will be appropriately managed.

(iv) Findings and recommendation

The Inquiry and Advisory Committee finds:

- The Project is unlikely to have a significant impact on surface water environments.
- Subject to minor changes, the EPRs are appropriate to manage potential changes to stormwater flows and risks to receiving water environments.

The Inquiry and Advisory Committee recommends:

> **Amend the Environmental Performance Requirements, as shown in Appendix E, to refer to best practice in EPRs SW1 and SW2 and to provide for approval from asset managers in SW2.**

10.4 Noise and vibration

(i) The issues

The issues are whether noise and vibration can be managed to an acceptable level during the Project's construction phase and road operation.

(ii) Background

The EES states:

- As far as effects on physical environment go, potential impacts from construction noise and vibration have the highest residual risk rating of medium.
- Regarding operations noise, the residual risk rating is low based on the modelled changes which indicate 95 per cent of receptors would experience an increase of less than 3 decibels (dB) being 'barely perceptible'.
- The remaining receptors would experience an increase of between 3 and 5 dB.

EPR N1 provides some general noise mitigation measures which should be included in the CEMP.

Regarding noise and vibration mitigation, in addition to the general noise control measures provided, the EES Technical Appendix I provides:

> Development of a Construction Noise and Vibration Management Plan is also recommended to manage construction noise and vibration impacts to the satisfaction of the relevant authorities. It is expected that the management plan will incorporate the need for predictive modelling, communication strategy and ad-hoc noise monitoring where appropriate to adequately manage adverse effects during construction activities, particularly those that may occur at night. More detailed construction noise and vibration modelling is recommended once a Contractor has been appointed and detailed method statements, timing of works and selection of equipment is known.

Regarding predicted operational noise levels, the EES provided that 15 noise sensitive buildings were expected to experience noise levels between 69 and 72 dB $A_{L10, 18HR}$ and 1 noise sensitive building was expected to experience noise levels between 72 and 75 dB $A_{L10, 18HR}$.

EPR N2 is:

> Design and construct the Project so that operational noise will be addressed in accordance with the VicRoads Traffic Noise Reduction Policy (2005).

Technical Appendix I states that mitigation measures under the VicRoads Traffic Noise Reduction Policy (2005) applies for:

- Arterial roads or freeways built on new alignments, OR
- Improved arterial roads and freeways, when
  - The road is widened by two or more lands AND
  - Buildings previously protected from traffic noise are exposed by removal of buildings required for widening.

(iii) Evidence and submissions

Individual submissions were concerned that more signalised intersections may increase noise to residences and users of Yarrambat Park. For example, 513 Yan Yean Road owners submitted the increase in predicted noise levels was coupled with proposed land acquisition bringing the road closer to the residence. The occupants of 25 Doctors Gully Road were concerned about potential noise impacts on horses including sick horses, foals, pregnant and racehorses which use the paddock which will be intersected by the new alignment.

MRPV provide evidence an evidence statement on noise and vibration prepared by Mr Deivasigamani. No party sought to cross-examine him.

Mr Deivasigamani considered the CEMP would provide opportunities for specific concerns to be raised in relation to construction noise. Regarding operational noise, he stated *"that the Project does not trigger the requirements for noise mitigation under the VicRoads Traffic Noise Reduction Policy".*

He acknowledged that modelling assumed free-flowing traffic and that signals may cause "*short-term events such as engine brake noise, which may have the potential for annoyance"*. However, it was noted that such events may already be occurring. Signage to discourage engine brakes was suggested as a possible mitigation measure.

Mr Deivasigamani considered Yarrambat Park would experience noise increases ranging between 3 and 6 dB. Mitigating factors considered relevant, were the temporary usage of the park as opposed to *"long-term occupants"*.

Regarding 25 Doctors Gully Road, Mr Deivasigamani stated that research regarding horses indicated they may exhibit adverse reactions to impulsive noises but not continuous noise exposure such as traffic noise. He acknowledged the business owners may need to modify the farm's operations and movement of horse in response to the road alignment.

(iv) Discussion

Regarding construction noise, the IAC supports the further modelling of construction noise impacts to inform mitigation measures once equipment and details are finalised by the chosen contractor. While EPR N1 provides some general mitigation measures it is not considered that these satisfy the recommendation of the Technical Appendix for a Construction Noise and Vibration Management Plan. Although the Incorporated Document provides the EMF must be developed to address a range of aspects, the IAC considers it beneficial for a new EPR to specifically require this plan and the need for detailed assessments of chosen equipment and construction methods to best inform implementation of mitigation measures.

Regarding 25 Doctors Gully Road, the IAC considers some of these horses may be considered especially sensitive to impacts from noise and these should be minimised. The EES predicts operational noise levels will increase over time for some noise sensitive receptors. Contributions to the increase are predicted increased traffic volumes (either with or without the Project) and in some places because the proposed duplication will bring the traffic closer to these receptors.

Regarding operational noise, EPR N2 refers to the VicRoads Traffic Noise Reduction Policy (2005). There was evidence that this not be triggered with respect to noise abatement measures. The IAC considers this to be problematic. This policy is not referred to in either of the planning schemes.

Clause 13.05-1S in both planning schemes aims to assist in controlling noise effects on sensitive land uses. As well as State Environment Protection Policies, this Clause refers to another VicRoads policy being 'A Guide to the Reduction of Traffic Noise' (2003). The policy states that for existing roads, consideration will be given to reducing noise levels to less than 68 dB(A) and eventually to less than 63 dB(A). It also states:

> VicRoads does not attenuate traffic noise generated by the arterial road network, unless works are undertaken to significantly increase the road's traffic carrying capacity.

This is a slightly different 'test' to that provided under the VicRoads Traffic Noise Reduction Policy. The IAC considers that the proposed duplication will significantly increase the carrying capacity of Yan Yean Road. Therefore, some form of mitigation should be considered for noise sensitive buildings likely to experience levels above 68 dB(A).

The IAC notes that signage which was a suggested mitigation measure to reduce engine braking was also not included in the EPRs and should be.

(v) Findings and recommendation

The Inquiry and Advisory Committee finds:

- An EPR requirement for a Construction Noise and Vibration Management Plan would further assist in informing the implementation and effectiveness of proposed mitigation measures.
- Reference to the VicRoads Traffic Noise Reduction Policy (2005) in EPR N2 should be removed as it will not provide effective mitigation.
- A requirement to mitigate potential significant noise effects on sensitive receptors in consultation with property owners should be included in the EPRs.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) **revise NV1 to require a Construction Noise and Vibration Plan consistent with the recommendation in Technical Appendix I.**

b) **replace reference to the *VicRoads Traffic Noise Reduction Policy (2005)* in NV2 with a requirement to mitigate potential significant noise effects as defined by *'A Guide to the Reduction of Traffic Noise'* (VicRoads, 2003) in consultation with property owners and to consider measures such as quieter**

pavement surfaces and measures including signage to reduce engine brake noise.

10.5 Construction laydown areas

(i) The issue

The issue is whether a construction laydown area should be located near the Yarrambat Horse and Pony Club.

(ii) Background

The Project area includes land for potential construction laydown areas at:

- 423-437 Yan Yean Road, Yarrambat (near the Yarrambat Horse and Pony Club)
- 26 Worns Lane, Yarrambat
- 573 Yan Yean Road, Yarrambat (near Yarrambat War Memorial Park)
- 651 Yan Yean Road, Yarrambat
- Part 780 and 790A Yan Yean Road, Doreen.

EPR CL1 states that for contaminated land, the process and measures must include a baseline site assessment of areas proposed for construction laydown before use.

The EES Chapter 5 Project description indicates the potential for additional environmental impact from construction laydown areas which *have not yet been identified other than those included in the project area*. The EES provides that the contractor would identify appropriate sites based on *"minimal environmental impact"* and that these would be subject to a separate planning approval process if required.

(iii) Evidence and submissions

Nillumbik Council submitted it was inappropriate to apply the SCO to the laydown areas. It did not support the construction laydown area proposed outside the Yarrambat Horse and Pony Club and requested that it be removed as a potential site. MRPV explained that Yarra Valley Water is currently using this area as a laydown area for a separate project.

Nillumbik Council was concerned with the potential impacts associated with using:

- Council owned land at 26 Worns Lane which had two dams
- 423 Yan Yean Road, when considering the extent of vegetation and the residential interface
- 573 Yan Yean Road, owned by Melbourne Water, which is subject to the Environmental Audit Overlay and has a residential interface.

Nillumbik Council explained that many properties in the Yarrambat area had the Environmental Audit Overlay applied due to historical gold mining activity. It submitted that allowing preparatory works before approving the EMF in the Incorporated Document would mean works could be undertaken at this site before land contamination was properly considered. It requested the following condition be added to the Incorporated document:

> Condition 4.11.1 and 4.11.2 do not apply to land to which the Environmental Audit Overlay is applied, unless an environmental audit has been undertaken which allows the proposed preparatory works.

MRPV did not agree with Nillumbik Council's request. It submitted that the Environmental Audit Overlay is concerned with sensitive uses, and that no sensitive uses are proposed on land affected by the overlay as part of the Project.

MRPV submitted that all laydown areas would be reinstated to their original condition after works are completed. It provided before and after photos[14] which showed similar restoration works at a laydown area at 50 Yan Yean Road which formed part of the Yan Yean Road Stage 1 upgrade works.

MRPV explained that the Department of Transport owns 423-437 Yan Yean Road. It referred to EES section 5.4.2 (Construction laydown areas) which states:

> 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.

(iv) Discussion

The IAC acknowledges that the five construction laydown areas are candidate sites and not all of them may be needed for the Project's construction phase. Should 423-437 Yan Yean Road near the Yarrambat Horse and Pony Club be used, the IAC is satisfied that it could be appropriately managed during the construction phase and restored upon completion. It finds no plausible reason to not use the site as a laydown area.

The IAC agrees with MRPV that the Environmental Audit Overlay is not concerned about a potential laydown area with an existing and proposed non-sensitive land use. This is confirmed by:

- Ministerial Direction 1 (Potentially contaminated land)
- Planning Practice Note 30 (Potentially contaminated land), particularly the assessment matrix in Table 2
- Environmental Audit Overlay which requires:

  > Before a sensitive use (residential use, child care centre, pre-school centre or primary school) commences or before the construction or carrying out of buildings and works in association with a sensitive use commences, either…

The IAC has reached this finding on the basis that MRPV will not be using land with the Environmental Audit Overlay for any interim sensitive land use such as offices and will not be transporting soil offsite. MRPV should seek further independent advice if this is not the case.

In sub-chapter 9.1, the IAC has recommended that Clause 4.11 in the Incorporated Document be revised to no longer exempt preparatory buildings and works in the Project area before the conditions set out in Clause 4.4 are satisfied. This would require the EMF, which considers contaminated land, to be prepared earlier. The EMF includes EPR CL1 which requires a baseline site assessment for laydown areas.

[14] document 83

The IAC notes that all planning scheme requirements, including the Environmental Audit Overlay provisions, will be restored to land in the Project area after the SCO is removed following the Project's completion.

The IAC is satisfied that MRPV will reinstate the laydown areas to their original condition without the need for additional requirements beyond those proposed through the EMF and Incorporation Document.

(v) Findings

The Inquiry and Advisory Committee finds:

- The five potential construction laydown areas have been appropriately nominated, subject to them being reinstated to their original condition after the Project is completed.
- The Incorporated Document should not require an environmental audit before preparatory works commence on a laydown area with non-sensitive land uses if the Project does not propose to introduce a sensitive land use or transport soil offsite.

10.6 Bushfire management

(i) The issue

The issue is whether the Project has appropriately considered bushfire related issues.

(ii) Background

EPR LV1 requires the Landscape Strategy in Technical Report G to be implemented during detailed design and construction. The Landscape Strategy requires all landscape treatment to comply with:

- Bushfire Management Overlay requirements detailed in CFA's Guidelines for meeting Victoria's Bushfire Planning Requirements, Planning for Bushfire Victoria: Version 2, November 2012 and Landscaping for Bushfire: Garden Design and Plant Selection
- Shire of Nillumbik Bushfire Mitigation Strategy, 2019 – 2023.

Technical Report G advises that plants should be selected in consultation with the CFA, Nillumbik Council and Whittlesea Council.

Technical Report H refers to relevant Planning Scheme bushfire policies and provisions.

(iii) Evidence and submissions

Ms Mauthoor submitted that Mernda and Doreen have developed in recent years with little regard to bushfire threat. She considered the road duplication would encourage more development. Mr Collinson considered the additional development would increase bushfire risk. Mr Schnapp was concerned the Project would be a fire danger to surrounding areas but did not explain why.

Nillumbik Council explained:

- the entire Project area is a designated bushfire prone area
- the Bushfire Management Overlay applies to the southern part of the Project area (from around Youngs Road to Kurrak Road).

CFA requested that bushfire related issues be managed through:

- intersections with unrestricted traffic flow based on a smooth transition cycle
- sequenced traffic lights which allow direct left and right turns into Yan Yean Road without deviation
- road reserves constructed and graded to enable fire risk vegetation to be reduced each year
- tree planting along the roadside which does not compromise annual fire prevention works
- suitable low bushfire risk species where revegetation.

Nillumbik Council submitted there was a need to specify canopy separation and understorey management for new planting. To achieve this, it requested a new EPR:

> Canopy separation and understorey management to be included in the Landscaping Strategy, to the satisfaction of the Country Fire Authority/Fire Services Victoria.

MRPV submitted that the Project will not increase bushfire risk and will improve the area's transport network capacity.

(iv) Discussion

The IAC was not presented with information to support submissions that:

- the Project would attract new development and subsequently increase bushfire risk
- Doreen and Mernda have developed with little regard to bushfire risk.

The Project proposes to duplicate a portion of Yan Yean Road in response to growing traffic volumes. The area east of the road and a large proportion of the west side is outside Melbourne's UGB where further urbanisation is not permitted. The Project would therefore not attract development beyond what is currently enabled through the Planning Scheme.

The IAC agrees with MRPV that the Project would improve the area's road network capacity. This would enhance the ability to evacuate people during major bushfire events.

The IAC agrees with Nillumbik Council and CFA that new vegetation needs to consider bushfire risk. The Landscape Strategy would broadly achieve this by:

- requiring landscape treatment to comply with CFA's Landscaping for Bushfire Garden Design and Plant Selection guidelines
- seeking to select the final vegetation in consultation with the CFA, Nillumbik Council and Whittlesea Council.

(v) Finding

The Inquiry and Advisory Committee finds the Project has appropriately considered bushfire related issues.

11 Planning and urban design

11.1 Land acquisition

(i) The issues

The issues are whether the proposed land acquisition:

- is appropriate and justified
- will result in an acceptable impact on existing public open space.

(ii) Background

Technical Report D states the Project design seeks to minimise the road footprint and extent of land acquisition where practical. The Project would result in:

- 21 linear road reserve parcels being fully acquired from Nillumbik Council
- 75 parcels being partially acquired, comprising:
  - two parcels owned by Whittlesea Council and five by Nillumbik Council
  - 60 privately owned parcels
  - eight parcels owned by the state government or public utilities.

EES Chapter 10 acknowledges that land acquisition may lead to significant land use, business and social impacts. It rates potential changes inconsistent with current or proposed future land use, including land acquisition, during the site establishment, earthworks and civil and structures Project phase to be high. It gave a significant rating for the reinstatement stage.

(iii) Evidence and submissions

Several submissions were concerned about the extent of land proposed to be acquired for the Project. Ms Hunter considered that some upgrade works were needed but not to the scale proposed by the Project.

Several submissions referred to the scale of the proposed Bridge Inn Road intersection. Jamluk and the Doreen Committee submitted the Project did not compare the amount of land to be acquired by the Options B and C designs. It added that Option B would require a significant amount of land acquisition.

Mr Prenzoski considered the road design should minimise the amount of land required to be acquired. To achieve this, he suggested retaining walls rather than batters, and locating services in existing property boundaries.

One submitter considered there was insufficient traffic to justify the need to acquire part of 9 North Oatlands Road for two turning lanes. Another submitter requested the left turning lane into North Oatlands Road be reduced to reduce the extent of land needed to be acquired from 513 Yan Yean Road.

Mr Tozer found the loss of recreation reserves to be alarming. Mr Collinson, Ms Ewings, Ms Glaisher, Ms Mauthoor, Ms McKinnon, Ms Rosenhain and Ms Williams were concerned about the Project's impact on the Doreen Recreation Reserve, Yarrambat Park and Werther Park. This includes the social impact on local residents. Ms Aldred, Ms Glaisher, Ms Grande and Ms Williams submitted the loss of public open space land:

- would impact the amenity of people seeking to relax and unwind

- was not considered by the Project.

Ms Rosenhain and RARE Northern Nillumbik submitted that no replacement has been found for land taken from these public open spaces. Mr Corrick considered that land lost at the Doreen Recreation Reserve should be compensated through an enlarged reserve to lessen the impact.

MRPV submitted the Project has been designed to:

- avoid and minimise potential impact on native vegetation, areas of cultural, heritage and biodiversity value and businesses
- minimise the Project footprint and avoid and minimise potential land acquisition impacts, while meeting the Project objectives.

MRPV explained the Project footprint will be:

- sought to be further minimised during the detailed design in accordance with EPR LU1
- managed and mitigated to acceptable levels in accordance with EPRs including B1, B2, B3, LU1, LU2, LV1, LV2, NV1, NV2, S2, and S3.

Mr Barlow considered the Project and land acquisition would not negatively impact the Yarrambat Park public golf course, Yarrambat Park, including the archery centre and horse and pony club, or the Plenty Gorge Park reserve in the long term.

(iv) Discussion

The EES had to demonstrate the amount of land being acquired to facilitate the Project is reasonable. It did not have to demonstrate that the Project is acquiring the least extent of land. Irrespective, the IAC considers the Project's footprint will acquire minimal land. This may be further reduced after being reviewed during the detailed design stage.

The IAC considers the most significant impacts on public open space are:

- the extent of land proposed to be acquired from the Doreen Recreation Reserve
- proposed works on the Yarrambat Park public golf course which seek to avoid the need for a large net along its Yan Yean Road interface.

In earlier chapters, the IAC has found that EPRs and association actions can satisfactorily mitigate these impacts.

The IAC accepts Mr Barlow's evidence and considers that the Project and land acquisition will not negatively impact Yarrambat Park or Werther Park. These public open spaces will continue to function as a place where people can relax and unwind. It agrees with MRPV that through careful management by implementing EPRs B1, B2, B3, LU2, S2 and S3, the Project will result in an acceptable impact on existing public spaces.

(v) Finding

The Inquiry and Advisory Committee finds the proposed land acquisition is appropriate and justified and will result in an acceptable impact on existing public open space if the relevant EPRs are implemented.

11.2 Amenity

(i) The issue

The issue is whether the Project appropriately responds to potential amenity impacts.

(ii) Background

EES Chapter 10 considers amenity and is informed by Technical Report H (Planning and land use impact assessment).

Technical Report D acknowledged that some residents were concerned that partial land acquisition would diminish their privacy after trees were removed and the road was brought closer to their dwelling.

(iii) Evidence and submissions

There were submissions concerned about potential amenity impacts the Project through loss of privacy, lack of public surveillance and light emission from motor vehicles and street lights.

Privacy

Ms Mazza submitted the Project design would remove existing vegetation screening, thereby affecting their privacy. She noted the proposed road reserve would be 4.5 metres from her dwelling. Ms Grundy was concerned the footpath and kerb would be too close to her dwelling. The owners of 9 North Oatlands Road and 513 Yan Yean Road each submitted that the road would tower over their property and affect their privacy.

MRPV submitted the Project's impact on surrounding residential areas and local residents will be acceptable and appropriately managed through the EPRs.

Public surveillance

Mr Graves submitted there would be insufficient public surveillance of the shared path where it deviates from the carriageway in the northern part of the Project area. He added that this would result in perceived and actual dangerous to path users. He requested adequate lighting and the clearance of undergrowth to provide the best possible sight lines.

No party sought to call Mr Knight to respond to questions on this matter.

Mr Knight explained that a small section of the path at the northern end of Yarrambat Park would deviate to avoid a patch of high value native vegetation. He considered appropriate planting treatments between the road and path recommended in the Landscape Strategy would maintain public surveillance. Specifically, the strategy recommends:

- Align pathways away from road corridor where space allows to avoid existing trees and improve user amenity
- Maintain clear sightlines along paths and remove obstructions from areas adjacent to walking and cycling paths
- Ensure appropriate offsets for landscape planting from path edges.

He opined that the amenity benefits of separating the path outweigh safety concerns.

Light emission

Ms Mazza submitted the Project design did not consider light emission from traffic signals and street lights at North Oatlands Road into her dwelling. RARE Northern Nillumbik, Ms Williams and Ms Grande submitted that increased lights would significant. Ms Grundy explained her dwelling was positioned in line with a turning lane which will result in headlights directed towards her front bedroom window.

Two submissions were concerned that aligning the Bridge Inn Road intersection and road alignment closer to paddocks at 25 Doctors Gully Road would startle the horses and detrimentally affect their health and wellbeing.

Mr Knight acknowledged the Landscape Strategy does not directly address light emissions, but he considered night-time visual amenity impacts to be relatively low. He explained that:

- street lighting is currently proposed at intersections and not along the rest of the road corridor
- existing traffic already generates headlight glare and increased vehicles is not expected to significantly change this.

He considered increased screen planting recommended by the Landscape Strategy is expected to reduce light emission impacts and should be carefully considering during the Project detailed design stage.

(iv) Discussion

Privacy

Technical D acknowledges resident concerns about privacy, without recommending a response or associated EPR. It is unclear how MRPV reached its conclusion that the Project's impact on surrounding residential areas and local residents will be acceptable and appropriately managed through the EPRs. The IAC considers that privacy should be considered during the detailed design stage if existing screening on private property is removed or privacy eroded as a result of the road reserve being brought closer to a dwelling.

Public surveillance

Three relatively short sections of the pedestrian path divert away from the carriageway to avoid removing high value vegetation. The path realigns back towards the kerb line and within view of the carriageway between each diverting section. The proposed path north of Jorgensen Avenue generally follows the existing path to minimise impact on the existing reserve.

The IAC agrees with Ms Graves that the path should be, and be perceived to be, safe. Ideally, the path should be aligned along the kerb line with uninterrupted views to the carriageway. However, the need to retain existing high value vegetation does not provide ideal circumstances for the alignment.

Having reviewed the length of each diversion, and the density and location of existing vegetation, the IAC considers these sections of path appropriately balance vegetation retention and safety. The vegetation enables filtered views between the path and carriageway and the path alignments are within reasonable distance to the kerb line.

These non-linear sections will provide a point of interest across the generally linear pedestrian path.

Light emission

The IAC considers that road safety should be a paramount factor when considering amenity during the detailed design stage. Street lights should be designed to minimise emission into surrounding properties, however they will be required to achieve a minimum level of illumination for safety reasons. This will be particularly the case closer to signalised intersections. In those instances, some dwellings may need to consider appropriate measures to block out lights from their bedroom.

There should be appropriate vegetation screening along the boundary between the new Bridge Inn Road alignment and 25 Doctors Gully Road to diffuse headlight glare.

(v) Findings

The Inquiry and Advisory Committee finds:

- The Project generally responds appropriately to potential amenity impacts.
- Privacy should be considered during the detailed design stage if existing screening on private property is removed or privacy eroded as a result of the road reserve being brought closer to a dwelling.

11.3 Visual impact

(i) The issue

The issue is whether the Project design appropriately responds to the area's landscape character.

(ii) Background

EES Chapter 9 which assesses social and cultural values, includes a landscape character assessment. Key findings include:

- CZ1 – Suburban Rural and LCZ 5 – Parkland: Moderate / low impacts are expected during construction due to their existing exposure to built form
- LCZ1 – Suburban Rural, LCZ 2 – Undulating Agricultural and LCZ 3 – Yan Yean Road Corridor: Moderate / low to low residual impacts are expected where there would be a permanent reduction in tree canopy extent and an increase in the road corridor footprint
- LCZ 2 – Undulating Agricultural and LCZ 3 – Yan Yean Road Corridor: Moderate / high to moderate operational impacts are expected where the removal of vegetation and increase in road footprint would reduce the naturalistic / rural qualities of the existing landscape and increase the dominance of road infrastructure.

A Landscape Strategy has been developed to limit the identified potential impacts and enhance existing landscape values where feasible. EPR LV1 seeks to implement the Landscape Strategy and LV2 requires replanting and reinstatement of vegetation in accordance the strategy and in consultation with the relevant land manager. EPRs E6, AR1, AR4 and V1 also relate to the Project's visual impact on its surrounding landscape.

(iii) Evidence and submissions

Numerous submissions were concerned about the Project's visual impact on the surrounding landscape. The extent of tree loss and the proposed road's urban appearance in a green wedge area were of particular concern. Ms Mazza considered it would affect the "*strong rural character*". Mr and Ms Mitanis felt it would affect part of Yarrambat's historic character. Ms Hunter submitted:

> If the trees are removed this will represent a huge change in the landscape character. In my opinion the incremental loss of defining features of the green wedge has the potential to ultimately damage its character so significantly that it loses its reason for being.

Nillumbik Council submitted that the type of safety barrier can have a significant visual impact. It least preferred concrete barriers. It requested that:

- any concrete barriers be textured or designed to be sympathetic to the landscape
- a new EPR be included – "*MRPV to minimise the landscape/visual/fauna impacts of wire rope, guardrail and concrete barriers.*"

MRPV responded that the Landscape Strategy and EPR E2 already address the visual impact of safety barriers.

Ms Fry suggested that the walking and cycling path be divided from the road, where possible, by remnant vegetation or a new planting buffer. This would help minimise the impact on the existing landscape character. MRPV responded:

> The detailed design of walking and cycling paths and associated landscaping will occur in accordance with the Landscape Strategy and relevant EPRs, including TP1, LV1 and S1-3.

MRPV considered the Project's visual impact will be acceptable and appropriately managed and mitigated with the relevant EPRs. It explained that:

- EPR V1 seeks to avoid or minimise impacts on high value vegetation
- the Landscape Strategy includes approaches which enhance existing landscape values or prevent or mitigate impacts resulting from the Project.

Mr Knight considered EPRs E1, E2, E3, E4, E5, E6, E7, E8, AR1, AR2, AR3, AR4, ACH1, HH1, HH2, HH3, LV1, LV2 and V1 are appropriate to manage the Project's visual impact. He added that the Project would need to rely on the Landscape Strategy to soften the visual impact resulting from removing mature trees, increasing the road footprint, and moving the Bridge Inn Road intersection further east. Mr Knight acknowledged there was an inherent trade-off between a reduced Project footprint and the negative impact of a retaining structure along part of the road.

(iv) Discussion

The IAC agrees with submitters to the extent that, without an appropriate Landscape Strategy and design response, the Project could negatively impact its surrounds. More than half of the southern proportion of the Project area is well in the green wedge while part of the northern portion abuts it. While a road of the scale and nature proposed by the Project is envisaged in green wedge areas, it needs to sensitively respond to this context.

MRPV has sought to minimise the Project's impact on the road's surrounds by minimising its footprint and extent of land acquisition. This design approach will retain more trees east

and west of the expanded road reserve but will result in more trees proposed to be lost in the median and other parts of the reserve. The IAC accepts this as an acceptable response to managing the potential impact, when combined with the proposed EPRs.

As outlined in previous chapters in this report, with changes to the proposed road design and associated EPRs, the Project can appropriately respond to the area's landscape character. Changes include:

- not constructing a 36-metre-tall and 360-metre-wide fence between the Yarrambat Park public golf course
- retaining as many of the over candidate 4,000 trees identified to be removed as practical
- appropriately landscaping the road medians.

(v) Finding

The Inquiry and Advisory Committee finds the Project design can appropriately respond to the area's landscape character if the relevant EPRs set out in Appendix E of this report are implemented.

12 Economic and social issues

12.1 Economic impact

(i) The issues

The issues are:

- whether the Project will result in acceptable economic impacts
- whether private financial impact and property value are relevant to the Inquiry.

This chapter considers the Project's overall economic impact. Issues specific to the Doreen NAC are considered in sub-chapter 5.12 and are not repeated here.

(ii) Background

EES Chapter 10 assesses the effects on businesses and was informed by Technical Report E (Business Impact Assessment). The EMF includes the following EPRs:

- B1 – Avoid and minimise business disruption
- B2 – Implement a Trader Engagement Plan
- B3 – Business access and car parking.

(iii) Evidence and submissions

Nillumbik and Whittlesea Councils were concerned about the impact on businesses in the Project area during construction. They requested that MRPV ensure every effort to protect ongoing business viability through measures such as monitoring, signage and communications.

Nillumbik Council specifically referred to private businesses, and those on Council land such as the Yarrambat Park public golf course, Diamond Valley Archery Club and Yarrambat Horse and Pony Club. Nillumbik Council requested two new EPRs:

> Appropriately compensate businesses for any economic loss experienced as a result of the works.
>
> Develop and implement a marketing and communications plan in consultation with impacted businesses to promote and maximise business exposure during construction.

Jamluk and the Doreen Committee, a few local residents, and RARE Northern Nillumbik were concerned that road's design and construction phase would negatively impact the commercial viability of businesses along the road alignment. The owners of 25 Doctors Gully Road and the business on that land each expressed similar concern.

MRPV submitted that Project impacts would be acceptable on businesses along the alignment and will be appropriately managed through EPRs B1, B2 and B3.

Regarding Nillumbik's recommended EPRs, Ms Stoettrup stated:

- compensation is legally limited to the *Land Acquisition and Compensation Act 1986*
- marketing activities are not explicitly included in EPR B2.

Ms Stoettrup acknowledged there would be some impact on some businesses in the Project area from changed access arrangements and land acquisition. She highlighted the Project would not displace any business.

Ms Stoettrup considered the additional travel distance to be insignificant. She referred to the Smile Childcare Centre which would lose right in access and require customers to travel an additional 1.2 kilometre round trip to the closest roundabout. She suggested appropriate signage to address this.

Ms Stoettrup recommended that EPR B2 be revised to add:

> Provide marketing support to small businesses along the alignment in consultation with the business, for example assisting small businesses to advertise using mediums such as social media, 'buy local' postcards, and discount vouchers and utilising project infrastructure as billboard space for promotion.

MRPV supported a modified version of the additional B2 requirement:

> Provide marketing support to small businesses along the alignment in consultation with and with the consent of the business, for example, by assisting small businesses to advertise using mediums such as social media, 'buy local' postcards, and discount vouchers and utilising project infrastructure as billboard space for promotion.

Several property owners were concerned the Project would devalue their property. One residential owner considered her property would be impossible to sell.

Smile Childcare Centre considered it unfair and economically damaging to remove a recently constructed accessway costing $150,000 after it was compelled to install it by relevant authorities. This is discussed in sub-chapter 7.4.

(iv) Discussion

For clarity, the IAC refers to the economic impact rather than the term 'business impact'. Other chapters in this report consider non-economic impacts on commercial properties.

The Project's overall economic impact is largely dependent on how the Bridge Inn Road intersection affects the Doreen NAC. As discussed in sub-chapter 5.12, the Project is likely to result in an acceptable economic impact on the Doreen NAC if the IAC's recommendations for redesigning the intersection and for the relevant EPRs are implemented.

The IAC supports MRPV's modified version of Ms Stoettrup's recommended addition to EPR B2 because the Project may affect businesses throughout the Stage 2 corridor. The revised B2 will promote businesses to existing and potential customers during the construction phase.

The IAC does not support an EPR which requires compensation for any economic loss resulting from road works. Compensation is a complicated matter administered through separate statutory and commercial processes.

The *Planning and Environment Act 1987* and planning scheme policies recognise economic effects at the broader community level. It does not extend to private individual economic impacts. This includes any impact on property value. The *Land Acquisition and Compensation Act 1986* responds to individual economic impacts in specified circumstances. This is a separate process outside the scope of the Inquiry.

(v) Findings and recommendation

The Inquiry and Advisory Committee finds:

- The Project will result in acceptable economic impacts if the IAC's recommendations for the Bridge Inn intersection are implemented.

- Private financial impact and property value are outside the scope of the Inquiry.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to add the following new requirement to B2:

Provide marketing support to small businesses along the alignment in consultation with and with the consent of the business, for example, by assisting small businesses to advertise using mediums such as social media, 'buy local' postcards, and discount vouchers and utilising project infrastructure as billboard space for promotion.

12.2 Social and cultural impact

(i) The issue

The issue is whether the Project will result in an acceptable impact on social and cultural values.

(ii) Background

EES Technical Report D assessed potential social and cultural impacts associated with the Project and was prepared by WSP Australia Pty Ltd. The report concluded that the Project would have a medium social impact based on the risk assessment and EPRs summarised in Table 8. For each impact pathway, the risk assessment identifies:

- potential impacts on social and cultural values such as community, educational, religious or recreational facilities due to changes to access or amenity (shown as Access or amenity): EPRs S1 and S2
- loss of or damage to remnant, planted or regenerated vegetation during construction impacting on social and cultural values (shown as Vegetation): EPR V1
- for Operations and Maintenance – 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 or maintenance (shown as Access or amenity): EPR S3
- for Operations and Maintenance – Loss of or damage to remnant, planted or regenerated vegetation during operations or maintenance impacting on social and cultural values (shown as Vegetation): EPR EMF5.

Table 8 Social impacts risk assessment

Aspect	Access or amenity risk rating	Vegetation risk rating
Site establishment	Significant	Significant
Earthworks	Medium	Significant
Civils and structures	Significant	Significant
Reinstatement	Medium	Significant
Operations	Low	Low
Maintenance	Low	Low

(iii) Evidence and submissions

About 40 per cent of submissions were concerned about potential social impacts related to land acquisition, impacts on public space, less convenient or direct access, and loss of amenity and landscape character. Their specific issues are identified earlier in this report and are not repeated here.

Whittlesea Council requested that EPR S2 be revised to require the Communications and Stakeholder Engagement Plan to be developed and implemented to the satisfaction of Whittlesea and Nillumbik Councils.

MRPV provided an evidence statement on social and cultural issues prepared by Ms Cavanagh of WSP Australia Pty Ltd. She was part of the team which finalised Technical Report D. No party sought to call Ms Cavanagh to respond to questions.

Ms Cavanagh was satisfied that the Project would result in an acceptable social outcome. She acknowledged that land acquisition would impact many residents but noted that acquisition was limited to part of a parcel and each owner would be compensated under the *Land Acquisition and Compensation Act 1986*.

Ms Cavanagh considered EPRs S1, S2, S3, V1 and EMF5 would appropriately manage potential impacts on social and cultural values such as community, educational or recreational facilities and existing vegetation and landscaping. She noted that EPRs S2 and S3 enabled further engagement and community involvement. She did not recommend changes to the EPRs.

Ms Cavanagh stated the modified Bridge Inn Road intersection design Option B did not cause her to materially change what is expressed in Technical Report D.

(iv) Discussion

The IAC accepts Ms Cavanagh's evidence. EPRs S1, S2, S3, V1 and EMF5 are appropriate, however, other changes to EPRs related to cultural values and vegetation, as shown in Appendix E, are needed to ensure the Project will result in an acceptable impact on social and cultural values. This includes an EPR requiring a master plan for land around the Bridge Inn Road intersection to avoid and minimise negative impacts on social and cultural values.

The IAC finds no functional reason to require the Communications and Stakeholder Engagement Plan to be development and implemented to the satisfaction of Whittlesea and Nillumbik Councils.

(v) Finding

The Inquiry and Advisory Committee finds that the Project will result in an acceptable impact on social and cultural values if it implements EPRs recommended in Appendix E.

13 Other issues

13.1 Sewerage connection

(i) The issue

The issue is whether the Project should facilitate the construction of a sewer network to 722-758 Yan Yean Road.

(ii) Evidence and submissions

Nillumbik Council explained that 722-758 Yan Yean Road:

- are not connected to sewerage
- have septic systems with approval to discharge drainage to Yarrambat Lake, which is an undesirable environmental outcome
- are scheduled to be connected by Yarra Valley Water as part of their capital works program in 2030.

Nillumbik Council requested that MRPV facilitate the early construction of a sewer network to these properties as part of the road upgrade process. It explained that installing the sewerage connection after the Project is completed would increase costs and be determinantal to the properties and local environment. It requested a new EPR:

> MRPV to construct the sewer network to properties at 722-758 Yan Yean Road as part of the scope of Stage 2.

MRPV submitted that sewerage connection to private properties is not within the scope of the Project.

(iii) Discussion

Nillumbik Council seeks earlier than schedule sewerage connection to 722-758 Yan Yean Road. These properties are outside of Melbourne's UGB, in the green wedge and have a rural zone (Rural Conservation Zone Schedule 3).

The IAC was not provided with information to demonstrate that increased connection costs associated with a larger road would make it unfeasible to connect sewerage to these properties. Nillumbik Council should consider leading discussions with Yarra Valley Water on the cost benefits of providing the sewerage connection during the construction phase.

If Yarra Valley Water does not agree to connect sewerage to the subject properties during the construction phase, MRPV should work closely with Yarra Valley Water to include a section of pipe under the roadway itself. This will help to minimise disruption and costs when Yarra Valley Water is prepared to connect these properties.

(iv) Findings

The Inquiry and Advisory Committee finds:

- Sewerage connection to private properties is outside the scope of the Project.
- Nillumbik Council should consider leading discussions with Yarra Valley Water to provide sewerage connections to 722-758 Yan Yean Road during the construction phase.

- If Yarra Valley Water does not agree, the Project design consider taking a precautionary approach by enabling space for a connecting pipe under the roadway to minimise works and costs when the relevant authority is ready to commence sewerage works.

13.2 Nillumbik recycling and recovery centre

(i) The issue

The issue is whether the capacity and potential contaminated land and groundwater at the Nillumbik recycling and recovery centre at 290 Yan Yean Road, Plenty is relevant to the Inquiry.

(ii) Evidence and submissions

Mr Hunter submitted that Nillumbik recycling and recovery centre is generally at capacity and Council is capping and monitoring the landfill. He was concerned about the cost associated with removing the underground service station fuel tanks and contaminated material.

MRPV explained that the Nillumbik recycling and recovery centre is outside the Project area.

MRPV provided an evidence statement on contaminated land and groundwater prepared by Mr Adams of Aracadis Australia Pacific Pty Ltd. He was part of the team which finalised Technical Report K. No party sought to call Mr Adams to respond to questions.

Mr Adams agreed the Nillumbik recycling and recovery centre is outside the Project area. He stated there was no reason to remove underground storage tanks at the service station west of the current alignment. He did not recommend any changes to the EPRs.

(iii) Discussion

The Nillumbik recycling and recovery centre is outside the Project area and is not considered any further. The IAC accepts Mr Adams' evidence that the underground service station tanks do not need to be removed as part of the Project.

(iv) Finding

The Inquiry and Advisory Committee finds that capacity and potential contaminated land and groundwater at the Nillumbik recycling and recovery centre are outside the scope of the Inquiry.

13.3 Diamond Creek Road and Civic Drive, Greensborough roundabout

(i) The issue

The issue is whether Diamond Creek Road and the Civic Drive roundabout in Greensborough are within the scope of the Project.

(ii) Evidence and submissions

Nillumbik Council submitted that modelling suggested the Project and North East link would increase traffic on Diamond Creek Road and the Diamond Creek Road / Civic Drive

roundabout. It requested an urgent investigation to widen Diamond Creek Road and upgrade the roundabout, to mitigate these concerns and recommended a new EPR:

> MRPV, together with the Department of Transport, undertake further analysis regarding the extent and timing of the Civic Drive/Greensborough Bypass/Diamond Creek Road roundabout complementary project.

Mr Kelly acknowledged the Project is expected to increase traffic on Diamond Creek Road. He considered the further analysis to be sensible but inappropriate to include it as an EPR because this matter is outside the scope of the Project.

(iii) Discussion

The IAC accepts Mr Kelly's evidence. It agrees that, while cumulative traffic volumes on Diamond Creek Road and the Civic Drive roundabout in Greensborough may warrant further investigation, they are outside the scope of the Project.

(iv) Finding

The Inquiry and Advisory Committee finds that Diamond Creek Road and the Civic Drive roundabout in Greensborough is outside the scope of the Project.

13.4 Diamond Creek and Yarrambat properties

(i) The issue

The issue is whether 40-60 Pioneer Road, Yarrambat and 175-199 and 219 Ironbark Road, Diamond Creek and are relevant to the Inquiry.

(ii) Submissions

There were four interrelated submissions prepared by three related individuals and a family trust company owned by one or more of the same individuals. They considered their properties at 40-60 Pioneer Road, Yarrambat and 175-199 and 219 Ironbark Road, Diamond Creek should be included in the Project area, have services connected and be rezoned to the General Residential Zone. They referred to processes since the 1970s to support their submission.

MRPV submitted that these properties are outside the Project area, will not be directly affected by the Project and are not relevant to the Inquiry.

(iii) Discussion

The subject properties are located about 1.3 and 1.6 kilometres east of Yan Yean Road.

At the Hearing, the IAC gave the submitters many opportunities to explain why their properties should have been included in the Project area and how rezoning their properties is relevant to the Inquiry. They continuously repeated their previous experiences and unrelated reasons for rezoning their properties without responding to the IAC's queries.

Without explaining how the Project will impact the subject properties, the IAC agrees with MRPV that they are not relevant to the Inquiry and Advisory Committee process. It appears the submitters have misconstrued the IAC process as an opportunity to achieve unrelated outcomes for their properties.

(iv) Finding

The Inquiry and Advisory Committee finds that 40-60 Pioneer Road, Yarrambat and 175-199 and 219 Ironbark Road, Diamond Creek are not relevant to the Inquiry.

14 Environmental Management Framework

Chapter 14 reviews changes to the Environmental Management Framework (EMF) proposed through conclusions earlier in this report and through specific requests in evidence and submissions.

14.1 Environmental Management Framework

(i) Issues

The issues are whether:

- the EMF ought to be generally in accordance with that in the exhibited EES
- appropriate oversite is provided by the EMF for the final design
- the ongoing role of councils in oversighting plans to be developed, including the CEMP
- six months is an appropriate audit period
- the EMF provides for an appropriate level of engagement
- the EMF otherwise meets the objectives of the Scoping Requirements.

(ii) Background

Section 3.7 of the EES Scoping Requirements set detailed requirements for the Project's EMF. The EMF, including the exhibited EPRs, are addressed in Chapter 12 of the EES. EPRs EMF1 to 4 deal with matters relating to the EMF.

(iii) Evidence and submissions

Nillumbik Council proposed the following changes to the overarching environmental management of the Project:

- Making the final EMF generally in accordance with that exhibited with the EES.
- For the Independent Environmental Auditor (IEA) to review the final design to ensure it is adequate for compliance with the EMF and EPRs.
- Both Councils approve the CEMP and various other plans.
- For the audit period for compliance audits by the IEA to be three-monthly rather than six-monthly.

MRPV opposed all changes. MRPV submitted the Incorporated Document already required for any differences between the final and exhibited EMF to be outlined to the Minister for Planning when seeking approval. The role of the IEA should be limited to that outlined in Table 12.1 of the EES. That they were the correct approvers of the CEMP and that it would be reviewed by the IEA. Finally, MRPV maintained the position that six monthly audits would be satisfactory.

In response to direction from the IAC, MRPV provided Technical Note 8 which provided a consolidated list of plans and documents required by key approvals and included roles and responsibilities, consultation and approval requirements.

(iv) Discussion

Clause 4.4.3 of the Incorporated Document provides:

> The EMF submitted to the Minister for Planning for approval under clause 4.4.1 must be accompanied by a statement explaining any difference between it, and the matters set out in the Minister's Assessment under the *Environment Effects Act 1978* dated [**insert date**].[IAC emphasis]

The IAC does not agree with MRPV that this is the same as ensuring any changes made from the exhibited EMF are documented in the submission for approval. The IAC accepts that such matters can be addressed in this clause and recommends an addition to this Clause to that effect. In doing so, the IAC does not consider the proposed changes to Clause 4.4.1 of the Incorporated Document are necessary.

The IEA's role as outlined in the EES is to review contractor systems and plans, conduct regular audits, provide a six monthly audit report and review complaints relevant to the EPRs. This is to be undertaken before relevant works commence. The CEMP is not explicitly mentioned and it is unclear if this is included in *"the contractor's systems and plans"*. There is currently no requirement for oversight of the final design by the IEA.

The IAC notes the EES presented aspects of design which were incomplete. Throughout the Hearing process the design evolved although there were still aspects such as the golf course fence which were still uncertain. Given the large number of submissions related to the Project design and the number of EPRs dependent on the design to mitigate impacts, the IAC considers it appropriate the final design is subject to further oversight.

In relation to oversight for the final CEMP the IAC notes a key requirement from the Scoping Requirements was for transparency and clear accountabilities. Although the IAC agrees Councils' involvement in finalising plans in future will be very valuable, there are significant challenges raised by requiring multiple approvers of various documents and this should be avoided wherever possible. As MRPV will have the contractual arrangement with the contractor and be ultimately responsible for impacts, the IAC agrees MRPV should be the approver of the CEMP. The IAC notes MRPV submitted the role of the IEA includes review of the CEMP. This is not clear to the IAC from the EMF in Chapter 12 of the EES. The IAC considers it appropriate to include this review role in EPR EMF2 and to include for this review to be published on the Project's website as well.

Given the short Project timeframe, the IAC considers six-monthly audits should be the minimum requirement and the EPR should be amended to reflect this.

The Scoping Requirements raise that a key aspect of the EMF is community consultation, stakeholder engagement and communications during construction and operation. To this end the EMF should set procedures for complaints, auditing of performance and review of EMF and continuous improvement. EPRs which are relevant to this include EMF4 and EMF3.

The EPRs do not explicitly provide for continuous improvement. Though this was not raised in submissions, this would assist in better achieving the objectives of the scoping requirements.

The IAC found Technical Note 8 useful in distilling the required environmental management plans and documents and their accountabilities and considers it would be beneficial to consolidate this information in the next version of the EMF prior to seeking approval from the Minister for Planning. As Technical Note 8 illustrates, there are numerous

environmental plans and documents to be developed to assist the management of the Project. It would be beneficial if it was clearer in the EMF what the relationships between the various plans and documents are and how they will be implemented. For example, what are the overarching plans guiding development of the Project compared to more detailed, issue-specific plans. Which plans should form sub-plans of the CEMP and which plans should sit outside the CEMP and for instance, guide design. The EMF should clarify if there is a hierarchy of plans and if there is any different weighting to be given in practice to plans in the Incorporated Document versus plans required in the EPRs.

(v) Findings and recommendations

The Inquiry and Advisory Committee finds:

- MRPV should inform the Minister for Planning of changes made to the EMF between exhibition and seeking approval from the Minister
- MRPV is the appropriate approver of the CEMP
- The IEA's role in reviewing the CEMP and other relevant plans should be included in the EPRs
- Further oversight of the detailed design process is required to ensure impacts are mitigated as much as possible
- Six monthly audits should be the minimum requirement
- The EPRs could more explicitly allow for continuous improvement resulting from audits and complaints reporting.

The Inquiry and Advisory Committee recommends:

Amend the Environmental Performance Requirements, as shown in Appendix E, to:

a) **include requirement in EMF2 for review of the Construction Environmental Management Plan and other relevant plans by the Independent Environmental Auditor.**

b) **require audits in EMF4 to be conducted at least every six months.**

Amend the Incorporated Document, as shown in Appendix F, to:

a) **refer to the exhibited Environmental Management Framework in Chapter 12 of the Environmental Effects Statement.**

15 Integrated assessment

This part of the report provides the IAC's integrated assessment of the Project.

15.1 Net community benefit and strategic justification

(i) The issues

The issues are whether the Amendment:

- is supported by, and implements, the relevant sections of the Planning Policy Framework
- is consistent with the relevant Ministerial Directions and Practice Notes
- is well founded and strategically justified
- will deliver net community benefit and sustainable development, as required by Clause 71.02-3
- should proceed subject to addressing the more specific issues raised in submissions.

(ii) Background

The Amendment proposes changes to the Nillumbik and Whittlesea Planning Schemes which seek to facilitate the Project. Further details are provided in sub-chapter 1.2 of this report.

Technical Report H assesses planning and land use impacts.

(iii) Evidence and submissions

MRPV submitted that the Project is:

- an appropriate response to the urban growth and development of Doreen and surrounding areas
- consistent with the Planning Policy Framework.

Mr Barlow stated the Project is needed to add capacity to the overall transport network in the Mernda corridor and to better connect the urban area of Doreen to metropolitan Melbourne. He acknowledged that Yan Yean Road was anticipated as a secondary arterial road when planning the Mernda and Doreen area. Significant population growth in the new urban area increase traffic volumes beyond what was anticipated and justified the need to upgrade Yan Yean Road to meet current and future demand.

Mr Barlow considered that, from a strategic perspective, the Project would:

- enhance access to services for the residents in Doreen and the broader locality through reduced travel times and congestion
- enhance access to key employment and education nodes to the south
- improve public transport services through the road's enhanced capacity.

Mr Barlow considered the Project was consistent with:

- Plan Melbourne's relevant strategic directions including:
  - Key outcome 3 that "*Melbourne has an integrated transport system that connects people to jobs and services and goods to market*"
  - Direction 3.2: Improve transport in Melbourne's outer suburbs
  - Direction 3.3: Improve local travel options to support 20-minute neighbourhoods

- Clause 21.05-05 of the Nillumbik Planning Scheme.

Department of Transport reviewed the Amendment documentation and supported the Head of Transport for Victoria being identified as the Project's acquiring authority.

Several submitters considered the Project's scale and design is unjustified and does not serve the needs of local communities and businesses. Mr Collinson, Ms Ewings, Ms Mauthoor, Ms Mel and Ms Williams submitted that a larger capacity road would encourage land to be rezoned for further development. Ms Mel questioned whether this was contrary to Clause 21.05-5 and Ms Aldred submitted the EES did not refer to it.

RARE Northern Nillumbik and Ms McKinnon submitted that Clause 21.05-5:

- seeks to encourage vehicular traffic generated by the Whittlesea growth corridor in the City of Whittlesea to access Melbourne by Plenty Road and not by Yan Yean Road
- only identifies the first stage of the Yan Yean Road duplication.

Friends of Nillumbik Inc and Ms Marshall believed that Melbourne's most intact and significant green wedge, the Nillumbik green wedge, was being sacrificed to convenience the urban population of Whittlesea. Friends of Nillumbik Inc considered this to be poor strategic planning and Ms Marshall described it as unfair and unaffordable.

Nillumbik Council and other submitters such as Ms Mauthoor were concerned the Project design was contrary to the green wedge. Nillumbik Council submitted that Bridge Inn Road intersection design Option B would negatively impact more green wedge land (land outside of Melbourne's UGB) than Option C, contrary to State and local planning policy.

MRPV disagreed the Project scale and design was contrary to the green wedge. It referred to Plan Melbourne which sets out the desired planning outcomes for green wedges and peri-urban areas which includes:

> **Transport and accessibility**
>
> Provide a high-quality road and rail transport network with a range of sustainable, efficient, accessible and affordable transport options that readily connect neighbourhoods, workplaces, community facilities, services and enable people to participate in community life.

MRPV added that the Planning Policy Framework did not support Nillumbik Council's approach to minimising the Project's footprint on green wedge land.

Jamluk and the Doreen Committee submitted that the EES:

- gives greater weight to the Doctors Gully Road leg of the Bridge Inn Road intersection than is warranted
- gives significant weight to the Old Doreen Store which is not statutorily recognised as having heritage significance.

(iv) Discussion

Traffic volumes along Yan Yean Road between Kurrak Road and Bridge Inn Road have increased to between 20,000 and 24,000 vehicles each day. There has been an increase in accidents associated with congestion. Upgrading this section of Yan Yean Road will improve road safety, road capacity and network efficiency, and connections.

Yan Yean Road experiences considerably more traffic because the surrounding primary arterial grid network is significantly larger than the 1.6 kilometre grid network intersection typically found in urban areas. There is no supporting secondary arterial grid network.

The next available arterials are 3.3 to 3.7 kilometres to the west and 4.8 kilometres to the south. The Plenty Gorge is located about midway between Plenty Road and Yan Yean Road.

The IAC considers that duplicating an existing road will result in negligible impact on the green wedge and notes:

- views from the closest road in the green wedge (about 820 metres east of Yan Yean Road) are mostly obscured by trees but where they are not, the road will be seen in a significantly diminished scale, if at all
- the 1.5 kilometre area of urban residential properties (Low Density Residential Zone) in the Nillumbik green wedge, east of Yan Yean Road obscures views from rural zoned land to its east (between Bannons Lane and Ironbark Road)
- Bridge Inn Road intersection design Option B will be about 400 metres east of the existing alignment, which is negligible when considering the green wedge is about 19.5 kilometres wide at this point.

The Project will result in:

- the type of arterial road anticipated in green wedges by Plan Melbourne
- a less intrusive road than other major arterials such as Eastlink or the Calder Highway which traverse through other green wedges around Melbourne.

The IAC accepts Mr Barlow's evidence that the Amendment, needed to support the Project, is strategically justified and should progress. It agrees with him that the Project is consistent with Nillumbik Planning Scheme Clause 21.05-5. The strategy is part of a suite of strategies under Objective 2 which seeks to "*provide safe and efficient roads and road links within the municipality and to the wider region*". The Project will achieve this outcome. Plenty Road in its ultimate form will be a larger and more convenient arterial to Yan Yean Road and will continue to attract traffic. While Clause 21.05-5 only refers to the first stage of duplication for Yan Yean Road, it does not preclude it from considering subsequent stages which seek to provide a safe and efficient road link.

(v) Findings

The Inquiry and Advisory Committee finds:

- The increased congestion and associated accidents resulting from up to 24,000 vehicles which use Yan Yean Road each day justifies the need to upgrade Yan Yean Road between Kurrak Road and Bridge Inn Road.
- The Amendment:
  - is supported by, and implements, the relevant sections of the Planning Policy Framework and is consistent with the relevant Ministerial Directions and Practice Notes
  - is well founded and strategically justified and will deliver net community benefit and sustainable development, as required by Clause 71.02-3
  - should proceed subject to addressing the more specific issues raised in submissions.

15.2 EES evaluation objectives

(i) IAC integrated assessment

Table 9 summarises the IAC's assessment against each of the Evaluation Objectives in the EES.

Table 9 IAC assessment against EES evaluation objectives

Transport capacity and connectivity
To provide for an effective corridor through the northern outer suburbs of Melbourne, to improve travel efficiency, road safety, and capacity.
IAC Assessment
The increased congestion and associated accidents resulting from up to 24,000 vehicles which use Yan Yean Road each day justifies the need to upgrade Yan Yean Road between Kurrak Road and Bridge Inn Road. There is sufficient traffic justification to extend the duplication of Yan Yean Road further north beyond Bridge Inn Road to Cookes Road. This should be progressed through a separate environmental assessment. Duplication north of the Project area should be pursued as a separate concurrent project so that its environmental impacts can be assessed without delaying the Stage 2 Project. Traffic redistribution on local roads resulting from the Project does not need to be managed by MRPV after the Project is completed.
Report reference: Chapters 5, 6.3, 7 and 8
Biodiversity
To avoid or, at least, minimise adverse effects on native vegetation (including remnant, planted, regenerated and large old trees), listed migratory and protected species/ecological communities and then to address offset requirements consistent with relevant state and commonwealth policies.
IAC Assessment
The Project will result in a significant number of trees being removed (including remnant and planted). The IAC accepted evidence that these trees did not provide significant or critical habitat to significant species. The Project will result in the removal of at least 12.78 hectares of native vegetation, the majority of which is of least concern. The final impacts on native vegetation are uncertain and need further analysis. The ability to avoid and minimise the loss of tree and vegetation removal is limited considering the existing alignment. That work to date has increased (not reduced) impacts. However, the IAC is satisfied the EPRs as recommended to be amended will provide for avoiding and minimising the loss to the extent that is practicable, and the Project will be offset in accordance with the Guidelines. The Project is likely to result in the removal of two matted flax-lily plants which will be translocated and one studley park gum. A number of potential foraging trees for swift parrot and grey-headed flying fox will also be removed however the IAC accepts evidence this will not result in a significant impact to the species. The Landscape Strategy and EPRs provide for strategic revegetation although, considering the preference for mature species, the IAC notes any benefits from such a measure will only be in the long term. Removal of tree hollows and the increased road footprint will have effects on common fauna species and further work is required by way of FMP to ensure these effects are appropriately managed to minimise effects and reduce road safety concerns.

Report reference: Chapters 5.4, 6.1, 6.2 and 9

Social and cultural values
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.
IAC Assessment
The Project will result in an acceptable impact on social and cultural values if it implements EPRs recommended in Appendix E.
Report reference: 12.2

(ii) Overall assessment findings

On balance, considering the negative and beneficial environmental effects overall, the Inquiry and Advisory Committee finds:

- the environmental effects of the Project can be managed to an acceptable level subject to implementing the recommendations in this report
- the Project approvals should be granted.

16 Structure and content of the Amendment

Draft Planning Scheme Amendment GC92 applies to the Project area and affects the Nillumbik and Whittlesea Planning Schemes.

16.1 Incorporated Document

(i) The issue

The issue is whether it is appropriate to amend the Incorporated Document to include changes which respond to issues raised in submissions and in previous chapters of this report.

(ii) Evidence and submissions

Department of Transport supported the Incorporated Document.

In response to addressing their issues, Nillumbik and Whittlesea Councils collectively requested that the Incorporated Document be amended to:

- require environmentally sensitive fencing in accordance with the Environmental Significance Overlay on land where the overlay applies
- include a more detailed description of the EMF
- ensure that native vegetation offsets are required for native vegetation removal
- require plans approved under clause 4 to be in consultation with Whittlesea and Nillumbik Councils
- exempt the Project from the requirements of section 173 agreements
- support and implement the Nillumbik Municipal Strategic Statement and local planning policy to minimise the impact of buildings and works on the amenity and character of rural and low density residential areas
- include Nillumbik Council's adopted position on the Yarrambat Township
- require a gateway feature at the north-east corner of the Yan Yean Road/Ironbark Road intersection
- provide a footpath on the northern side of Ironbark Road
- include conditions which seek to protect St Michael's Anglican Church at 469-475 Ironbark Road, Yarrambat which is subject to the Heritage Overlay (HO219)
- facilitate the use of surplus parcels
- facilitate works to the Doreen Recreation Reserve in accordance with the prepared Master Plan
- require a response to address amenity issues from the Yan Yean Road interface with the rear of the Shire of Nillumbik businesses
- require the transfer of isolated green wedge parcels to community open space
- require design modifications to ensure adequate car parking for Nillumbik businesses in the altered conditions for Option B
- respond to changes to the EPRs.

Nillumbik and Whittlesea Councils' issues as discussed in earlier chapters and are not repeated here. MRPV responded through two further versions of the Incorporated Document: version 1 (document 36) and version 2 (document 65).

Towards the end of the Hearing process, the IAC provided all parties with an opportunity to provide 'without prejudice' comments and tracked changes of their preferred drafting changes to the Incorporated Document. The following parties responded:

- Nillumbik Council (document 103)
- Whittlesea Council (106 and 119)
- Jamluk and the Doreen Committee (118)
- MRPV (120).

Jamluk and the Doreen Committee submitted the Incorporated Document should include the usual plan approval process for the final drawings. They considered this omission to be a gap in the approval process, particularly given the design modifications presented and accepted by MRPV during the Hearing.

MRPV did not support changes proposed by Nillumbik and Whittlesea Councils, except for Clause 4.2 where it agreed subject to an altered changed form.

(iii) Discussion

The IAC has responded to many of Nillumbik and Whittlesea Councils' suggested changes in earlier chapters of this report when reviewing associated issues. They are not repeated here.

The IAC has accepted drafting changes to the Incorporated Document which it considers clarify clauses and will improve the document's operation. Its assessment was assisted by MRPV's table in document 120 which responded to the changes sought by each council.

The IAC agrees with Jamluk and the Doreen Committee that the Incorporated Document should include an approval process for the final drawings. This will enable design issues addressed in this report to be included in the final design. For clarity and flexibility, the clause should specify:

- the use and development need to be generally in accordance with the final endorsed design plans
- the endorsed plans may be altered with permission from the Minister for Planning.

Appendix F shows the changes to the Incorporated Document accepted by the IAC.

(iv) Finding and recommendation

The Inquiry and Advisory Committee finds the version of the Incorporated Document in Appendix F can appropriately facilitate the Project.

The Inquiry and Advisory Committee recommends:

Amend the Incorporated Document, as shown in Appendix F.

16.2 Road zoning

(i) The issue

The issue is whether Yan Yean Road Stage 2 land should be rezoned from Road Zone Category 2 to Road Zone Category 1 through the Amendment.

(ii) Evidence and submissions

Nillumbik Council supported Yan Yean Road being rezoned from Road Zone Category 2 to Road Zone Category 1 and sought this to be brought forward to occur through the Amendment. It requested that MRPV "*provide a transitional arrangement for Yan Yean Road Stage 2 from Road Zone Category 2 (Council arterial) to Road Zone Category 1 (State arterial)*".

MRPV originally opposed this request.

Mr Barlow considered that Yan Yean Road can be appropriately rezoned to Road Zone Category 1 at the completion of the Project to ensure the zone aligns with the final adjusted property boundaries.

MRPV later submitted that it no longer opposed the road being rezoned to Road Zone Category 1 through the Amendment because it would be consistent with the road's arterial function.

(iii) Discussion

The Amendment provides an opportunity to rezone Yan Yean Road from Road Zone Category 1 to Road Zone Category 2. This is within the scope of the Amendment and the IAC agrees with Nillumbik Council that it would appropriately recognise the road by its actual category – State arterial.

(iv) Finding

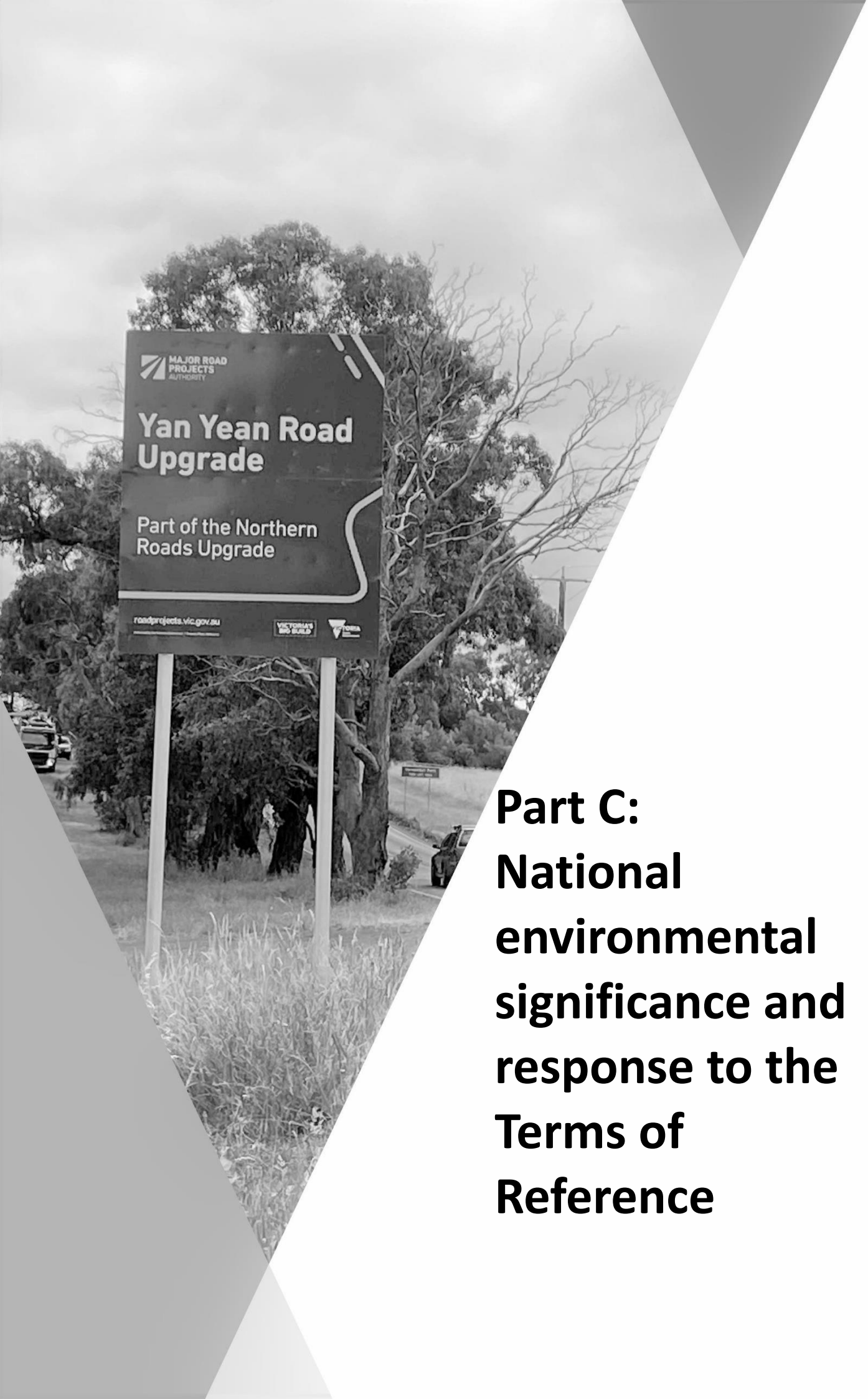
The Inquiry and Advisory Committee finds that Yan Yean Road Stage 2 land should be rezoned from Road Zone Category 2 to Road Zone Category 1 through the Amendment.

16.3 Recommendations

Based on recommendations in this report, the Inquiry and Advisory Committee recommends:

Prepare, adopt and approve Planning Scheme Amendment GC92 be subject to the following changes:

a) **Revise the Incorporated Document as shown in Appendix F.**
b) **Extend the Specific Controls Overlay to include Yarrambat Park public golf course land proposed to be redeveloped.**
c) **Rezone Yan Yean Road Stage 2 land from Road Zone Category 1 to Road Zone Category 2.**



Part C: National environmental significance and response to the Terms of Reference

17 Swift parrot, matted flax-lily and grey-headed flying fox

The EES process was accredited through the Bilateral Assessment Agreement to assess impacts on matters of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The term "effects" in the EE Act generally corresponds with "impacts" in the EPBC Act.

After having considered the Minister for Planning's assessment under the EE Act, the Commonwealth Minister or delegate will decide whether the Project is approved, with or without conditions, or refused.

The referral decision under the EPBC Act identified two listed species with the potential to be significantly impacted being the swift parrot and matted flax-lily. Other Commonwealth-listed species not identified in the referral decision were also considered by the EES.

Other species considered in the Technical Appendix B1 and B2 assessment are discussed in Chapter 9 of this report and were not subject to the referral decision or considered significant. This chapter focuses on the swift parrot, matted flax-lily and grey-headed flying fox. The latter is the only EPBC Act-listed species not identified in the referral decision that was actually recorded on site.

(i) The issue

The issue is whether there is likely to be significant impact on matters of national environmental significance.

(ii) Background

EES Technical Appendices B1 and B2 considered the potential for EPBC Act listed species and communities to be present in the Project area and for the potential for significant impacts, respectively. EES Attachment V (Swift Parrot Management Plan) is relevant to the swift parrot.

Key threatening processes under the EPBC Act were considered in Appendix B to Technical Appendix B2. Significant impact assessments using the EPBC Act Guidelines were provided in Appendix C to Technical Appendix B2.

Relevant species-specific plans were:

- National recovery plan for the matted flax-lily (Carter, 2010)
- National recovery plan for the swift parrot *Lathamus discolor* (Saunders, D & Tzaros 2011)
- Draft recovery plan for the grey-headed flying fox *Pteropus poliocephalus* (Commonwealth of Australia, 2017).

Survey guidelines only existed for the swift parrot.[15]

[15] Survey Guidelines for Australia's threatened birds: Guidelines for detecting birds listed as threatened under the EPBC Act (Department of the Environment, Water, Heritage and the Arts, 2010)

The Matters of National Environmental Significance Significant impact guidelines 1.1 under the EPBC Act (Department of Environment, 2013) are relevant when determining significance of a potential impact.

A summary of the assessment of impacts to these species is as follows:

Table 10 Assessment of Matters of National Environmental Significance

MNES*	Assessment
Matted flax-lily	Two plants (with up to 75 ramets pre plant) would be impacted by the Project. These were proposed to be translocated subject to a salvage and translocation plan which would be approved by both State and Commonwealth environment departments (EPR E5). When assessed against the Significant Impact Criteria and after implementing the translocation plan, it was considered there was a low likelihood of significant impact on the matted flax-lily as although the removal of these plants would interfere with the recovery of the species, the relocation would mitigate the loss as per the listed objectives of the recovery plan.
Swift parrot	Not recorded during surveys. May still use foraging habitat within the Project area on rare occasions, only if better habitat in the local area is unavailable. 1682 potential habitat trees (including 15 preferred habitat trees) likely to be impacted. When assessed against the Significant Impact Criteria – it was considered there was a low likelihood of significant impact due to the absence of records in the Project area and determination that habitat in the Project area was not considered to comprise important or priority habitat for the species. Although not mentioned in the Significant impact assessment, the EES also identified potential risk of collision with man-made structures including the proposed golf course fence.
Grey-headed flying fox	Recorded during surveys. Considered likely to periodically forage on flowering eucalypts and planted trees in the Project area. Considered likely to regularly fly over the area, the nearest camp is approximately 17 km away. Potential loss of foraging habitat including up to 2,521 eucalypts (174 large trees, 2,347 small trees). When assessed against the Significant Impact Criteria – it was considered there was a low likelihood of significant impact due to there being no roosting sites or recognised important habitat in the Project area. Although not mentioned in the Significant impact assessment, the EES also identified potential risk of collision with man-made structures including the proposed golf course fence.

Source: Technical Appendices B1 and B2 and evidence of Mr Weller. | * matters of national environmental significance

(iii) Evidence and submissions

Evidence and submissions relevant to these species are detailed in sub-chapters 6.1 (fence impacts), 9.3.2 (matted flax-lily), 9.3.3 (grey-headed flying fox), and 9.3.4 (swift parrot) and are not repeated here.

(iv) Discussion

The IAC accepts the assessment that the Project is unlikely to cause a significant impact on the matted flax-lily, grey-headed flying fox or swift parrot in the context of the respective Significant Impact Guidelines.

The IAC accepts Mr Smales evidence that the high population-level threshold under the EPBC Act Guidelines may not be met for potential impact from the golf course fence to the swift parrot. However, for reasons outlined in sub-chapter 6.1, the IAC considers the golf course fence should not be pursued as an element of the Project.

(v) Finding

The Inquiry and Advisory Committee finds there is unlikely to be significant impact on matters of national environmental significance.

18 Response to Terms of Reference

Table 11 Response to Terms of Reference for the EES Inquiry

Terms of Reference item	Report response
32. The IAC must produce a written report for the Minister for Planning containing the IAC's:	
a. findings with respect to the environmental effects of the project and their significance	Chapters 5 to 16
b. findings on whether acceptable environmental outcomes can be achieved, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development	Chapters 5 to 16
c. recommendations and/or specific measures that it considers necessary and appropriate to prevent, mitigate or offset adverse environmental effects to acceptable environmental outcomes, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development	Chapters 5 to 16
d. recommendations for any feasible modifications to the design or management of the project that would offer beneficial outcomes	Chapters 5 to 16
e. recommendations for any appropriate conditions that may be lawfully imposed on any approval for the project, or changes that should be made to the draft PSA in order to ensure that the environmental effects of the project are acceptable having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development	Chapter 16
f. recommendations about the structure and content of the proposed Environmental Management Framework, including with respect to monitoring of environmental effects, contingency plans and site rehabilitation	Chapters 5 to 16 and Appendix E
g. recommendations for any changes to the proposed Environmental Performance Requirements	Appendix E
h. recommendations with respect to the structure and content of the draft PSA	Chapter 16 and Appendix F
i. specific findings and recommendations about the predicted impacts on matters of national environmental significance and their acceptability, including appropriate controls and environmental management.	Chapter 18
33. The report should include:	
j. information and analysis in support the IAC's findings and recommendations	Chapters 3 to 16
k. a description of the public hearing conducted by the IAC,	Overview and Appendix C

Terms of Reference item	Report response
and a list of those persons consulted with and heard by the IAC	
l. a list of all recommendations, including cross-references to relevant discussions in the report	Executive summary and Chapters 5 to 16
m. a list of all submitters in response to the exhibited EES	Appendix B
n. a list of the documents tabled during the public hearing.	Appendix D

Appendix A Terms of Reference

Inquiry and Advisory Committee:

Yan Yean Road (Stage 2) Upgrade Project

Version: July 2020

The Yan Yean Road (Stage 2) Upgrade Project Inquiry and Advisory Committee (the IAC) is appointed to inquire into, and report on, the proposed Yan Yean Road (Stage 2) Upgrade Project and its environmental effects in accordance with these terms of reference.

The IAC is appointed pursuant to:

- section 9(1) of the *Environment Effects Act 1978* (EE Act) as an inquiry; and
- part 7, section 151 of the *Planning and Environment Act 1987* (P&E Act) as an advisory committee.

Name

1. The IAC is to be known as the 'Yan Yean Road (Stage 2) Upgrade Project Inquiry and Advisory Committee'.

Skills

2. The IAC members should have the following expertise:
    a. road transport modelling, road design and traffic management;
    b. biodiversity and ecology; and
    c. social and cultural values of trees.
3. Where it considers it necessary, the IAC may seek additional specialist expert advice to assist it in undertaking its role.
4. The IAC will comprise an appointed Chair (IAC Chair) and other members.

Purpose of the inquiry

5. The IAC is appointed by the Minister for Planning under section 9(1) of the EE Act to hold an inquiry into the environmental effects of the project. The IAC is to:
    a. review and consider the environment effects statement (EES) and public submissions received in relation to the environmental effects of the project;
    b. consider and report on the potential significant effects of the project, taking into account the draft evaluation objectives in the EES scoping requirements, the procedures and requirements of the Minister for the preparation of the EES under section 8B(5) of the EE Act (see Attachment 1) and the controlling provisions under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) (see Attachment 2) as outlined in paragraph 12;
    c. identify any measures it considers necessary and effective to avoid, mitigate or manage the environmental effects of the project to balance project objectives with environmental, economic and social outcomes, including any necessary project modifications; and
    d. report its findings and recommendations to the Minister for Planning to inform his assessment under the EE Act.

Purpose of the advisory committee

6. The IAC is appointed as an advisory committee under section 151 of the P&E Act to:
    a. review draft planning scheme amendment (PSA) GC92, which was prepared to facilitate the project, along with any public submissions received in relation to the draft PSA;

b. provide a report to the Minister for Planning whether the draft PSA contains provisions and controls that are appropriate for the project; and

c. recommend any changes to the draft PSA that it considers necessary.

Background

Project outline

7. The project proposes to duplicate a 5.5km portion of Yan Yean Road between Kurrak Road, Yarrambat and Bridge Inn Road, Doreen. The project includes:

   a. increasing the existing two lanes to four lanes (comprising two lanes in each direction);

   b. two new roundabouts at Heard Avenue and Youngs Road;

   c. five new signalised intersections at Bannons Lane, Jorgensen Avenue, North Oatlands Road, Orchard Road and Bridge Inn Road;

   d. upgrades to the existing signalised intersection at Ironbark Road, including an additional right hand turning lane, slip lane, and traffic island;

   e. new street lighting at all intersections, road signage and landscaping;

   f. new 3-metre-wide shared use path on the western side and 1.2 metre wide footpath on the eastern side of Yan Yean Road; and

   g. installation of continuous safety barriers running along both sides of the road and in the centre median for protection against tree and car collisions.

8. The project's proponent is Major Road Projects Victoria, a project team within the Major Transport Infrastructure Authority at the Department of Transport, who is responsible for preparing technical studies, consulting with the public and stakeholders and preparing the EES.

EES assessment process

9. On 14 October 2018, the Minister for Planning determined that an EES was required for the project under the EE Act and issued the decision with procedures and requirements for the preparation of the EES under section 8B(5) of the EE Act (Attachment 1). The reasons for decision were based on the potential for significant environmental effects.

   a. The project has the potential for significant effects on biodiversity values as a result of the proposed clearance of a very large number of tress and habitat, including its contribution to potential cumulative effects on the critically endangered Lathamus discolor (Swift Parrot) listed under the Flora and *Fauna Guarantee Act 1988* and the *Environment Protection and Biodiversity Conservation Act 1999*.

   b. Assessment of aspects of the design and potential refinements is required to understand their associated impacts, including where further avoidance and minimisation of tree loss is possible (in particular loss of preferred foraging trees for Swift Parrots and high retention trees of ecological and cultural value).

10. The proponent prepared an EES in response to the Minister for Planning's decision and the scoping requirements issued by him in June 2019.

11. The EES will be placed on public exhibition for thirty (30) business days, together with the draft PSA. The proponent will be responsible for giving notice. DELWP must liaise with the office of Planning Panels Victoria (PPV) to agree on the directions hearing and hearing dates, which should be included on all notices.

Commonwealth assessment process

12. The project was determined to be a controlled action for the purposes of the EPBC Act on 15 February 2019 because of its potential impacts on matters of national environmental significance. The controlling provisions under the EPBC Act are listed threatened species and communities (sections 18 and 18A).

13. The EES process is an accredited process under the *Commonwealth-Victorian Bilateral Agreement for Environmental Impact Assessment*, to provide for the assessment of matters of national environmental significance required under the EPBC Act. The Victorian Minister for Planning's assessment under the EE Act will be provided to the Commonwealth Minister for the Environment to inform the EPBC Act approval decision, in accordance with Schedule 1 Part B of the bilateral agreement. To assist the Minister for Planning in making his assessment, the IAC should specifically identify its advice relevant to matters of national environmental significance that may be affected by the project.

Planning approval process

14. The IAC is to consider and provide advice on draft PSA GC92. The draft PSA proposes planning controls and provisions that will allow for, and facilitate, the use and development of land for the project in accordance with an incorporated document that is proposed to be included in the Nillumbik and Whittlesea planning schemes.

15. The draft PSA proposes that the project be exempt from any requirement to obtain a planning permit, subject to any conditions set out in the incorporated document. The incorporated document proposes a requirement for the development of a framework to manage environmental effects associated with both the construction and operational phases of the project.

Other approvals

16. The project may require several other statutory approvals and/or consents, as outlined in the EES, including:

    a. an approved Cultural Heritage Management Plan under the *Aboriginal Heritage Act 2006* to manage works in areas of cultural heritage sensitivity;

    b. a permit to remove listed flora and fauna under the Flora and Fauna Guarantee Act 1988; and

    c. an authority to take or disturb wildlife under the *Wildlife Act 1975*.

Process

Stage 1 – Submissions

17. Submissions on the EES and draft PSA will be collected by PPV in accordance with the '*Guide to Privacy at PPV*' through the Engage Victoria Website. All written submissions or other supporting documentation are public documents and should be published on-line, unless submitters request that their submission not be publicly available, or where the IAC specifically directs that the submission or a part of it is to remain confidential.

18. Electronic copies of submissions on the EES and draft PSA will be provided to the proponent, DELWP and Nillumbik and Whittlesea councils.

19. Petitions will be treated as a single submission, and only the first name to appear on the first page of the submission should receive correspondence in relation to the IAC.

20. Any written material or evidence provided to the IAC during the public hearing will be published online, unless the IAC specifically directs that the material is to remain confidential.

21. PPV will retain any written submissions and other documentation provided to the IAC for a period of five years after the time of its appointment.

Stage 2 – Public hearing

22. Prior to the commencement of the public hearing, the IAC must hold a Directions Hearing to make directions it considers necessary or appropriate as to the conduct, scope or scheduling of the public hearing.

23. The IAC must hold a public hearing and may make other such enquiries as are relevant to undertaking its role.

24. When it conducts a public hearing, the IAC has all the powers of an advisory committee that are specified in section 152(2) of the P&E Act.

25. The IAC may inform itself in any way it sees fit, but must review and consider:
    a. the exhibited EES and draft PSA;
    b. all submissions and evidence provided to the IAC by the proponent, state agencies, local councils and the public;
    c. any information provided by the proponent that responds to submissions; and
    d. any other relevant information that is provided to, or obtained by, the IAC.
26. The IAC must conduct its public hearing in accordance with the following principles:
    a. the public hearing will be conducted in an open, orderly and equitable manner, in accordance with the principles of natural justice, with a minimum of formality and without legal representation being necessary for parties to be effective participants; and
    b. the IAC process is to be exploratory and constructive with adversarial behaviour minimised and with cross-examination controlled by the IAC Chair.
27. The IAC may limit the time of parties appearing before it.
28. The IAC Chair may direct that a submission or evidence is confidential in nature and the hearing be closed to the public for the purposes of receiving that submission or evidence.
29. The IAC may conduct a public hearing when there is a quorum of at least two of its members present or participating through electronic means in line with Attachment 3, one of whom must be the IAC Chair.
30. Recording of the hearing must be undertaken by the proponent, if directed by the IAC Chair. If the hearing is recorded, the audio recording will be provided to PPV as a weblink and would be made publicly available as soon as practicable after the conclusion of each day of the hearing, or otherwise as directed by the IAC Chair.
31. Any other audio or video recording of the hearing by any other person or organisation may only occur with the prior consent of, and strictly in accordance with, the directions of the IAC Chair.

Stage 3 – Report

32. The IAC must produce a written report for the Minister for Planning containing the IAC's:
    a. findings with respect to the environmental effects of the project and their significance;
    b. findings on whether acceptable environmental outcomes can be achieved, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development;
    c. recommendations and/or specific measures that it considers necessary and appropriate to prevent, mitigate or offset adverse environmental effects to acceptable environmental outcomes, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development;
    d. recommendations for any feasible modifications to the design or management of the project that would offer beneficial outcomes;
    e. recommendations for any appropriate conditions that may be lawfully imposed on any approval for the project, or changes that should be made to the draft PSA in order to ensure that the environmental effects of the project are acceptable having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development;
    f. recommendations about the structure and content of the proposed environmental management framework, including with respect to monitoring of environmental effects, contingency plans and site rehabilitation;
    g. recommendations for any changes to the proposed environmental performance requirements;
    h. recommendations with respect to the structure and content of the draft PSA; and

i. specific findings and recommendations about the predicted impacts on matters of national environmental significance and their acceptability, including appropriate controls and environmental management.

33. The report should include:

a. information and analysis in support of the IAC's findings and recommendations;

b. a description of the public hearing conducted by the IAC, and a list of those persons consulted with and heard by the IAC;

c. a list of all recommendations, including cross-references to relevant discussions in the report;

d. a list of all submitters in response to the exhibited EES; and

e. a list of the documents tabled during the public hearing.

Timing

34. The IAC should commence its public hearing no later than 40 business days from the final date of the exhibition period, or as otherwise agreed by the Minister for Planning.

35. The IAC must submit its report in writing to the Minister for Planning within 40 business days from its last hearing date.

Minister's assessment

36. The Minister for Planning will make his assessment of the environmental effects of the project after considering the IAC's report as well as the EES, submissions and any other relevant matters.

37. PPV will notify submitters of the release of the Minister for Planning's assessment and IAC report.

Fee

38. The fees for the members of the IAC will be set at the current rate for a panel appointed under part 8 of the P&E Act.

39. All costs of the IAC, including the costs of obtaining any expert advice, technical administration and legal support, venue hire, accommodation, recording proceedings and other costs must be met by the proponent.

Miscellaneous

40. The IAC may apply to the Minister for Planning to vary these terms of reference in writing, at any time prior to submission of its report.

41. The IAC may retain legal counsel to assist it in undertaking its role.

42. PPV is to provide any necessary administrative support to the IAC.

43. The IAC may engage additional technical or administrative support as required.

Hon Richard Wynne MP

Minister for Planning

Date: 16 / 08 / 2020

Appendix B Submitters to Inquiry

No	Submitter	No	Submitter
1	Brent Collett	31	Nicholas Collinson
2	David Briggs	32	Barbara Marshall
3	Peter Farrell	33	Andrew Corrick
4	Adam Watson	34	John and Christine Yeomans
5	Rachael Benns	35	David McKinnon
6	Anna Williams	36	City of Whittlesea
7	Dale Wesley	37	Janine Grundy
8	Michael McMaster	38	Jennifer Austin
9	Ross and Lorraine Steel	39	Natalie Williams
10	Paul and Debbie Sly	40	Silvana Grande
11	McKeir Pty Ltd	41	Peter Yates
12	Mark Jackson	42	Department of Transport
13	Amin Riazati	43	Stephen Mullins
14	Meera Govil	44	Kelly Holden
15	Nillumbik Shire Council	45	George Barratt
16	Mel Ellis	46	John and Thelma Huitt
17	Olive McIntosh	47	Frederick Norman
18	Monica Wallace	48	Jim and Nicole Mitanis
19	Margaret Healy	49	Fiona Ewings
20	Michelle Mazza	50	Susan Aldred
21	David Prenzoski	51	Friends of Nillumbik Inc
22	Adjungbilly Pty Ltd	52	Sarah Hunter
23	Christopher Short	53	Cameron Tozer
24	Patricia Weller	54	Karena Goldfinch
25	MZA Creative Pty Ltd	55	Sarah Brenan
26	Nicole Zaccagnini	56	Esther Caspi
27	Moya Mauthoor	57	Sammy and Elizabeth Ebrahim
28	Leigh Trevascus	58	Dale Schnapp
29	Grant Brooker	59	Sue McKinnon
30	Rosemary Glaisher	60	Plenty Valley Christian College

No	Submitter	No	Submitter
61	Sue Rosenhain	66	Jamluk Pty Ltd and the Doreen Traders and Landowners Committee
62	Roads and Roadside Ecology Northern Nillumbik	67	Lynn Fry
63	Elizabeth Claire Warren	68	Gila Schnapp
64	James Hunter	69	Country Fire Authority
65	John Graves		

Appendix C Parties to the Hearing

Submitter	Represented by
Minister for Planning	Bruce Abernethy, Director Impact Assessment, DELWP
Major Road Projects Victoria	Paul Connor QC and Rupert Watters of Counsel, instructed by Sallyanne Everett of Clayton Utz, called expert evidence on: - transport from Paul Kelly of WSP - ecology (existing conditions) from Nick McCaffrey of WSP - ecology (impact assessment) from Jenny Forbes of SMEC - Swift Parrot from Dan Weller of SMEC and Ian Smales of Biosis - arboriculture from Cameron Ryder of C&R Ryder Consulting - landscape and visual from Matt Knight of ARUP - social and cultural values (peer review) from Kate Gray of Lovell Chen - business impacts from Marianne Stoettrup of Matters More - land use and planning from Michael Barlow of Urbis
Adjungbilly Pty Ltd	Gila Schnapp
City of Whittlesea	Charlie Wurm of Maddocks
Country Fire Authority	David Allen
Dale Schnapp	
David Briggs	
David Prenzoski	Ken Whiteman of Whiteman Property & Associates Pty Ltd
Department of Transport	Kate Stapleton, Director Planning Practice, with Andrew Wall, Director Integrated Transport Practice and Craig Allan, Manager Project Coordination
Esther Caspi	
George Barratt	
Gila Schnapp	
Grant Brooker	
Jamluk Pty and the Doreen Traders and Landowners Committee	Mark Bartley of HWL Ebsworth Lawyers calling expert evidence on: - economics from John Henshall of Ethos Urban - traffic and transport from Jason Walsh of Traffix Group
John & Thelma Huitt	
Nillumbik Shire Council	Lawrence Seyers, Lead Transport Planner with presentations from: - Gavin Crawford, Principal Statutory Planner, and Paul Fyffe, Senior Strategic Planner on the planning scheme amendment - Kirsten Reedy, Coordinator Environment on environment and biodiversity matters - Andrea Jackson, Senior Leisure Facilities Officer, on Yarrambat

Submitter	Represented by
	Park impacts
Rachael Benns	
Roads and Roadside Ecology Northern Nillumbik	Sue McKinnon
Sammy and Elizabeth Ebrahim	
Sarah Hunter	
Sue McKinnon	

Appendix D Document list

No	Date	Description	Provided by
	2020 – Before the Hearing		
1	9 Oct	Letter – Major Road Projects Victoria (MRPV) to Inquiry and Advisory Committee (IAC) draft hearing timetable	Mr W Bartley, Clayton Utz
2	15 Oct	Letter – IAC Directions Hearing	Planning Panels Victoria (PPV)
3	26 Oct	Correspondence – Gila Schnapp to IAC	Ms Schnapp
4	28 Oct	Correspondence – Gila Schnapp to IAC	Ms Schnapp
5	30 Oct	Directions and Timetable (version 1)	PPV
6	2 Nov	Correspondence – Gila Schnapp to IAC	Ms Schnapp
7	6 Nov	Letter – MRPV to IAC regarding change in experts	Mr W Bartley
8	9 Nov	MRPV Technical Note 1 – Horizontal and vertical alignment plans	Mr W Bartley
9	11 Nov	MRPV Technical Note 2 – Community consultation that informed the Business Impact Assessment	Mr W Bartley
10	11 Nov	MRPV Technical Note 3 – Further consideration of improvements at Yan Yean Road and Bridge Inn Road intersection	Mr W Bartley
11	20 Nov	IAC Directions and Timetable (version 2)	PPV
11b	23 Nov	Site inspection locations request	Mr Briggs
12	23 Nov	MRPV Part A submission	Mr W Bartley
13	23 Nov	Evidence statement – Peter Kelly	Mr W Bartley
14	23 Nov	Evidence statement – Nic McCaffrey	Mr W Bartley
15	23 Nov	Evidence statement – Jenna Forbes	Mr W Bartley
16	23 Nov	Evidence statement – Dan Weller	Mr W Bartley
17	23 Nov	Evidence statement – Ian Smales	Mr W Bartley
18	23 Nov	Evidence statement – Cameron Ryder	Mr W Bartley
19	23 Nov	Evidence statement – Matt Knight	Mr W Bartley
20	23 Nov	Evidence statement – Kate Gray	Mr W Bartley
21	23 Nov	Evidence statement – Marianne Stoettrup	Mr W Bartley
22	23 Nov	Evidence statement – Oona Nicolson	Mr W Bartley
23	23 Nov	Evidence statement – John Conway	Mr W Bartley
24	23 Nov	Evidence statement – David Adams	Mr W Bartley
25	23 Nov	Evidence statement – Arvind Deivasigamani	Mr W Bartley
26	23 Nov	Evidence statement – Naomi Cavanagh	Mr W Bartley
27	23 Nov	Evidence statement – Rob Leslie	Mr W Bartley

No	Date	Description	Provided by
28	23 Nov	Evidence statement – Michael Barlow	Mr W Bartley
29	23 Nov	Evidence statement – John Henshall	Ms Markis, HWL Ebsworth Lawyers
30	23 Nov	Evidence statement – Jason Walsh	Ms Markis
31	23 Nov	Evidence statement – Geoffrey Brown	Ms Markis
32	26 Nov	Letter – MRPV to IAC regarding experts	Mr W Bartley
33	27 Nov	IAC Directions and Timetable (version 3)	PPV
34	27 Nov	MRPV Part B submission	Mr W Bartley
35	27 Nov	Environmental Performance Requirements Version 1	Mr W Bartley
36	27 Nov	Incorporated Document (version 1)	Mr W Bartley
37	27 Nov	MRPV Technical Note 4 – Yarrambat Park Golf Course realignment	Mr W Bartley
38	27 Nov	MRPV Technical Note 5 – Bridge Inn Road/Doctors Gully Road intersection options	Mr W Bartley
39	27 Nov	MRPV Technical Note 6 – Project design development	Mr W Bartley
40	27 Nov	Evidence statement presentation – Peter Kelly	Mr W Bartley
41	23 Nov	Site inspection locations request	Ms Markis
42a	23 Nov	Site inspection locations request	Ms Schnapp
42b	23 Nov	Site inspection locations request	Ms Caspi
43	30 Nov	Submission presentation – Frank De Santis, MRPV	Mr W Bartley
44	23 Nov	Map – MRPV site inspection locations	Mr W Bartley
	Hearing week 1		
45	30 Nov	Evidence statement presentation – Nic McCaffrey	Mr W Bartley
46	30 Nov	Evidence statement presentation – Jenna Forbes	Mr W Bartley
47	30 Nov	Evidence statement presentation – Dan Weller	Mr W Bartley
48	30 Nov	Evidence statement presentation – Ian Smales	Mr W Bartley
49	1 Dec	Evidence statement presentation – Cameron Ryder	Mr W Bartley
50	1 Dec	Evidence statement presentation – Matthew Knight	Mr W Bartley
51	1 Dec	Evidence statement presentation – Kate Gray	Mr W Bartley
52	2 Dec	Survey guidelines for Australia's threatened birds, April 2017	Mr W Bartley
53	2 Dec	Evidence statement presentation – Marianne Stoettrup	Mr W Bartley
54	2 Dec	Technical Note 7 – Amendment to Project area	Mr W Bartley
55	3 Dec	City of Whittlesea Heritage Study, 1990 (excerpt)	Mr W Bartley
56	3 Dec	North West Nillumbik Heritage Study, 21 June 2016 (excerpt)	Mr W Bartley

No	Date	Description	Provided by
57	3 Dec	Letter – Procedural matters	Ms Schnapp
58	3 Dec	Evidence statement presentation – Michael Barlow	Mr W Bartley
59	3 Dec	email – Heritage advice from Samantha Westbrooke to Nillumbik Shire Council, 7 August 2020	Mr Seyers
60	3 Dec	IAC Directions and Timetable (version 4)	PPV
	Hearing week 2		
61	7 Dec	Submission – MRPV response to legal queries	Mr W Bartley
62	7 Dec	MRPV Technical Note 8 – Consolidated list of plans and documents required by key approvals	Mr W Bartley
63	7 Dec	MRPV Technical Note 9 – Doreen Recreational Reserve	Mr W Bartley
64	7 Dec	Environmental Performance Requirements (version 2)	Mr W Bartley
65	7 Dec	Incorporated document (version 2)	Mr W Bartley
66	7 Dec	Photos – from Ms Stoettrupp of various activity centres (15)	Mr W Bartley
67	7 Dec	email – from Country Fire Authority (CFA) to PPV	Mr Allen, CFA
68	7 Dec	Archery advice – Dr James Park	Mr W Bartley
69	7 Dec	Submission presentation – Nillumbik Shire Council	Mr Seyers
70	7 Dec	Submission – Department of Transport	Ms Stapleton
71	8 Dec	email – Nillumbik Council's response to questions on notice	Mr Seyers
72	8 Dec	Yarrambat Streetscape Masterplan	Mr Seyers
73	8 Dec	Ironbark Road Yarrambat road reconstruction plans	Mr Seyers
74	8 Dec	Submission – City of Whittlesea	Mr Wurm
75	8 Dec	Submission attachment 1 – Mernda Strategy Plan	Mr Wurm
76	8 Dec	Submission attachment 2 – Open space strategy	Mr Wurm
77	9 Dec	email – Nillumbik Council's further response to questions on notice	Mr Seyers
78	9 Dec	Submission presentation – Roads and Roadside Ecology Northern Nillumbik	Ms McKinnon
79a	9 Dec	Submission – Sue McKinnon	Ms McKinnon
79b	10 Dec	Submission (revised) – Sue McKinnon	Ms McKinnon
80	9 Dec	Submission presentation – Sarah Hunter	Ms Hunter
81	10 Dec	MRPV Technical Note 10 – Gradeline plans	Mr W Bartley
82	10 Dec	MRPV Technical Note 11 – Proposed land acquisition and residual land areas	Mr W Bartley
83	10 Dec	MRPV Technical Note 12 – Extent of land in the Project area	Mr W Bartley
84	10 Dec	Department of Transport response to IAC queries	Ms Stapleton
85	10 Dec	Submission presentation – George Barratt	Mr Barratt

No	Date	Description	Provided by
86	11 Dec	MRPV Technical Note 13 – Biodiversity maps	Mr W Bartley
87	11 Dec	MRPV Technical Note 14 – Trees 1130 and 1135	Mr W Bartley
88	11 Dec	MRPV Technical Note 15 – Right turn-in Bridge Inn Road	Mr W Bartley
89	11 Dec	MRPV's Technical Note 16 – Traffic movement counts (16, 17 and 18 May 2017) for the Child Care Centre Veterinary Clinic at 553 Yan Yean Road, Yarrambat	Mr W Bartley
90	11 Dec	Submission presentation – David Briggs	Mr Briggs
91	11 Dec	Submission – Amin Riazati with the Annexures: A. Riazati v Nillumbik SC [2014] VCAT 1457 B. Aerial photos and 553 Yan Yean Road traffic counts C. Aerial photos	Mr M Bartley
92	11 Dec	IAC Directions and Timetable (version 5)	PPV
	Hearing week 3		
93	11 Dec	MRPV Technical Note 17 – Large scale plans	Mr W Bartley
94	13 Dec	Submission presentation – David Prenzoski	Mr Whiteman
95	14 Dec	Submission – Ms Schnapp, Mr Schnapp, Ms Caspi and Adjungbilly Pty Ltd: A. EES Traffic impact B. Urban evidence C. EES procedural impact D. DC structural plan objectives E. New planning brief F. Urban support G. EES Study area H. Nillumbik planning scheme I. Whittlesea planning scheme J. Infrastructure relevance to Whittlesea K. Nillumbik letter 26 Nov 2020 L. Utility photos	Ms Schnapp
96	14 Dec	Submission – Jamluk Pty Ltd and the Doreen Traders and Landowners including attachments	Ms Markis
97	14 Dec	Signed remote conferencing declarations – Mr Walsh, Mr Hensall and Mr Brown	Ms Markis
98	14 Dec	Planning permit and endorsed plans – the Bridge Inn Road development	Ms Markis
99	14 Dec	Evidence statement presentation – John Henshall	Ms Markis
100	14 Dec	Evidence statement attachments: A. Sight triangles (existing)	Ms Markis

No	Date	Description	Provided by
		B. Sight triangles C. Average delays for major movements	
101	14 Dec	Location plan prepared by Mr Brown	Ms Markis
102	16 Dec	Closing submission - Nillumbik Shire Council	Mr Seyers
103	16 Dec	Incorporated document – Nillumbik Shire Council version	Mr Seyers
104	16 Dec	EPRs – Nillumbik Shire Council version	Mr Seyers
105	16 Dec	Closing submission – City of Whittlesea	Mr Wurm
106	16 Dec	Incorporated document – City of Whittlesea version	Mr Wurm
107	16 Dec	EPRs – City of Whittlesea version	Mr Wurm
108	16 Dec	MRPV Part C submission	Mr W Bartley
109	16 Dec	MRPV Part C submission - Attachment A: Project design and no-go zones	Mr W Bartley
110	16 Dec	MRPV Part C submission - Attachment B: Project design and no-go zone changes	Mr W Bartley
111	16 Dec	Environmental Performance Requirements (version 3)	Mr W Bartley
112	16 Dec	Correspondence – Gila Schnapp to IAC	Ms Schnapp
113	16 Dec	IAC Directions 32 to 35	PPV
	Hearing close		
114	17 Dec	Correspondence – Mr W Bartley to IAC	Mr W Bartley
115	23 Dec	Department of Transport 'without prejudice' comments on Incorporated Document and EPRs	Ms Stapleton
116	23 Dec	MRPV Technical Note 18 – Environmental management of golf course realignment works	Mr W Bartley
117	23 Dec	MRPV Technical Note 19 – Native vegetation impacts associated with amended no-go zones	Mr W Bartley
118	23 Dec	Jamluk and the Doreen Committee 'without prejudice' comments on Incorporated Document and EPRs	Mr M Bartley
119	23 Dec	Whittlesea City Council 'without prejudice' comments on Incorporated Document and EPRs	Mr Wurm
120	23 Dec	MRPV response to changes proposed to the Incorporated document by Nillumbik Shire Council and Whittlesea City Council	Mr W Bartley
121	23 Dec	MRPV response to 'without prejudice' drafting changes to the EPRs proposed by Nillumbik Shire Council and Whittlesea City Council	Mr W Bartley

Appendix E IAC recommended Environmental Performance Requirements

Tracked Added

~~Tracked Deleted~~

EPR	Environmental Performance Requirement	Project phase
EMF1	**Environmental Management System** Implement an Environmental Management System that complies with AS/NZS ISO 14001:2015 Environmental management systems - Requirements with guidance for use.	Design and construction
EMF2	**Environmental Management Plans** Prepare and implement a Construction Environmental Management Plan (CEMP) and other relevant plans as required by the EPRs and in accordance with this Environmental Management Framework (EMF). The development of the CEMP and sub-plans must include consultation with relevant stakeholders as listed in this EMF and as required under any statutory approvals. The CEMP and all sub-plans shall be approved by MRPV before construction commences (excluding preparatory buildings and works permitted under the Incorporated Document). Before approval, the CEMP and other relevant plans are to be reviewed by the Independent Environmental Auditor and that review must be made public at the time of approval.	Design and construction
EMF3	**Complaints management** Prepare and implement a process for recording, managing, and resolving complaints received from affected stakeholders during construction. The complaints management system must be consistent with the Project's Communications and Stakeholder Engagement Plan (see also EPR S2) and Australian Standard AS/NZS 100002:2014 Guidelines for Complaint Management in Organisations.	Design and construction
EMF4	**Environmental compliance** Appoint a certified Independent Environmental Auditor to: - Prior to commencement of relevant works, review the Contractor's systems and plans to ensure they are adequate for compliance with this EMF, relevant EPRs, CEMP, and any other plans required by the EPRs, and conditions of Project approvals - Conduct regular audits (at least every six months) of Contractors' compliance with this EMF, relevant EPRs, CEMP, and any other plans required by the EPRs, conditions of Project approvals, and as required by MRPV - Prepare a six monthly audit report summarising the Contractor's compliance and results of audits and provide to MRPV to be published on the MRPV website - Ensure the six monthly audit report is also provided to the Contractor(s), the Minister for Planning and to other statutory approval authorities as required - Review complaints referred by MRPV relevant to the EPRs.	Design and construction
EMF5	**Operation and maintenance** Any potential impacts during operation and maintenance will be managed	Operation and maintenance

EPR	Environmental Performance Requirement	Project phase
	in accordance with the Department of Transport's environmental management system and standards for managing declared roads in Victoria.	
TP1	**Optimise design for active and road users** Optimise the design in consultation with appropriate road management authorities, Shire of Nillumbik and City of Whittlesea to: - Minimise adverse impact on travel times for all transport modes, including walking and cycling - Maintain, and where practicable, enhance the traffic movements ~~at intersections~~ within the project area - Design the road, walking and cycling elements and other recreation activities to meet relevant road and transport authority requirements - Where existing traffic movements are altered by the Project, ensure that alternative movements are incorporated into the design, including property accesses - Maintain, and where practicable, enhance pedestrian movements, horse rider access, bicycle connectivity, and walking and cycling paths, including access to public open space and reserves - Road Safety Audits should be undertaken in accordance with Department of Transport guidelines, with particular emphasis on property access.	Design
TP2	**Traffic Management Plan** The Project should be constructed in stages to minimise impact on road users and prior to commencement of relevant works, a Traffic Management Plan (TMP) must be developed and implemented to minimise disruption during construction in accordance with AS1742.3-2009 and in consultation with relevant authorities including Department of Transport, Shire of Nillumbik and City of Whittlesea. The TMP will clearly outline measures to: - Minimise road closures, access restrictions and disruption to all road users, public transport users and active users, including pedestrians, cyclists and horse riders - Minimise impacts on local streets such as from 'rat running' during construction closures - Provide for safe construction practices in accordance with road authority requirements - Provide alternative routes for affected road users, public transport users and active users where practicable - Maintain property accesses during construction where practicable or provide alternative access - Consider ~~P~~potential routes for construction haulage and construction vehicles travelling to and from the project, recognising sensitive receptors and avoiding the use of local streets where practicable - Maintain community safety through appropriate measures such as	Construction

EPR	Environmental Performance Requirement	Project phase
	providing convenient and safe access across Yan Yean Road at all bus stops, activity nodes and places of community significance - Implement ~~S~~suitable measures, developed in consultation with emergency services, to ensure emergency service access is not inhibited as a result of project construction activities - Ensure affected community is notified in advance (in accordance with EPR S2) of changed traffic conditions - Implement suitable measures, developed in consultation with the road authority, to mitigate significant safety or operational risks on local streets that occur as a result of project construction activities - Monitor the road network to identify the need for and success of mitigation measures.	
TP3	Redesign the Bridge Inn Road intersection to be based on the modified Option B design but optimised in accordance with TP1 and include: - a direct right turn into the Bridge Inn Road service road - traffic signals at the Yan Yean Road/Activity Way intersection - improved connectivity between the Doreen NAC and the shared path and bus stops on Yan Yean Road - advanced directional signage for the Doreen NAC - provision for vehicles to exit the Doreen Recreation Reserve and head south on Yan Yean Road.	Design
TP4	Redesign the Project at the section of Yan Yean Road from and including the Yarrambat Park southern access to Jorgensen Avenue to: - be in accordance with Environmental Performance Requirement TP1 - provide more direct access to the Yarrambat Park Public Golf Course from the north for when the site is used as a Neighbourhood Safer House - provide access to the northern end of Yarrambat Park through a signalised intersection - consider an alternate cross-section north of Bannons Lane to improve safety for the abutting residents.	Design

EPR	Environmental Performance Requirement	Project phase

E1	**Native vegetation**
	Develop and implement measures to avoid where possible, and otherwise minimise impacts on native vegetation, listed species and ecological communities and the Studley Park Gum through detailed design and construction, including:
	- Minimising footprint and disturbance of temporary and permanent works, such as through detailed design of:
	  - The wide median between Bannons Lane and Laurie Street
	  - The Bridge Inn Road intersection
	  - The Jorgensen Avenue intersection
	  - The Youngs Road roundabout
	  - The Yarra Valley Water pump station relocation
	  - The walking and cycling path in Werther Park
	  - The walking and cycling path built within Tree Protection Zones
	- At the Bridge Inn Road intersection, the Doreen river red gums will be retained. A Tree Protection Management Plan is required to protect trees during construction (see also EPR AR3)
	- Further minimisation of native tree loss during detailed design, prioritising retention of large and hollow bearing trees
	- Trees for which the Project will impact <10% of the Tree Protection Zone (TPZ) are likely to be able to be retained. For these specific trees, once construction methods are better known, a detailed arborist assessment must be conducted
	- Finalise the Yan Yean Road Stage 2 – Project Design and No Go Zones, 15 December 2020 to include further no-go zones as identified through detailed design
	- Implement the no-go zones identified in the finalised Yan Yean Road Stage 2 – Project Design and No Go Zones~~EES Attachment VI Map Book~~.
	Native vegetation removal must be offset in accordance with DELWP's Guidelines for the removal, destruction or lopping of native vegetation 2017 (DELWP 2017c), including consequential losses along proposed boundary fence lines.
		Design and construction

E2	**Flora and fauna - design** Design the Project to avoid and otherwise minimise impacts, to the extent practicable, on listed species ~~and ecological communities, the Studley Park Gum~~, wildlife and their habitat, including: - Utilising the MRPV Fauna Sensitive Road Design Guideline (2020) to incorporate fauna sensitive design, including: - Use of fauna-friendly fencing where fencing is required where possible (avoidance of chain-mesh fencing and barbed wire). If non-metal mesh fencing is required, it must be designed to minimise collision risk - Use of fauna sensitive lighting where lighting is required - Avoidance of transparent materials in the construction of bus shelters,	Design and construction

EPR	Environmental Performance Requirement	Project phase
	barriers, fencing, and signage to minimise the potential for birds or other fauna to collide with them - Targeted signage to minimise roadkill and investigation of other measures during detailed design which may be trialled to minimise collision risk, particularly for Eastern Grey Kangaroos - Providing rope bridges in key connectivity areas (as shown in Figure 5.5 of Technical Appendix B1) for arboreal mammals, to be installed as early as practicable during construction - Provision of replacement hollows - Preparing a Fauna Management Plan in consultation with the Department of Transport, Nillumbik Shire Council and Whittlesea City Council. The final Fauna Management Plan should be approved by the Minister for Planning prior to works commencing.	
E3	**Flora and fauna – construction** The CEMP must include requirements and methods in accordance with the MRPV Fauna Sensitive Road Design Guideline (2020) for avoiding, or where avoidance is not feasible, minimising impacts on flora and fauna, including: - Contingency and reporting procedures for the event that a listed threatened species is identified in order to mitigate any potential for significant impacts on the listed threatened species - Protection of all vegetation inside and adjacent to the project area (where the Tree Protection Zone intersects the project area) that is not required to be removed, provided that such measures should be limited to activities undertaken inside the project area - Fencing no-go zones (refer to Attachment VI *Map Book*) to prevent access during construction - Vegetation clearing controls and protection measures, including protocols such as pre-clearing surveys, advanced blocking of known tree hollows, two-stage clearing, minimised clearing during spring where practicable, and phased removal wherever practicable (see also EPR V1) - Pruning of trees to be retained must not exceed one third of total canopy area. Pruning and removal of trees must only be conducted following pre-clearance surveys, in the presence of an ecologist. Prior to being removed, all identified hollows in any tree or branch are to be inspected for signs of fauna - Measures during clearing and construction including weed and disease hygiene, pathogen mitigation, management, monitoring and reporting measures to reduce weed introduction and spread - Fire risk management measures - Development and implementation of a Tree Protection Management Plan for protection of retained trees (see also EPRs AR2 and AR3) - Development and implementation of protocols around the handling of fauna during construction - Retention of dead, declining, or impacted trees and retention/relocation	Design and construction

EPR	Environmental Performance Requirement	Project phase
	of tree hollows for habitat where appropriate and practicable following completion of a risk assessment - Minimise impacts of construction lighting through consideration of siting, direction and fixtures - Egress points for fauna (particularly kangaroos) in construction fencing. Construction personnel to report fauna entrapment and traffic control to slow or stop vehicles when wildlife is sighted to minimise collision risk - Trench management, including avoiding open trenches overnight where practicable. Where trenches cannot be closed, check trenches for fauna early in the morning.	
E4	**Swift Parrot Management Plan** Implementing the mitigation measures specified in the Swift Parrot Management Plan, including: - Using existing stacksites and existing road formation for material lay down areas for storage, plant and vehicle storage and site compounds - Establish and maintain no-go zones (refer to Attachment VI *Map Book*) to reduce impacts on Swift Parrot - Design, where possible, to avoid incorporating chain-mesh or barbed wire fences as well as clear glass for any structures (bus shelters, barriers). If chain-mesh fencing is required at Yarrambat Golf Course, it must be designed to minimise collision risk for Swift Parrot - Inducting construction workers to communicate permit conditions, environmental requirements regarding fauna management and no-go zones - Controlling noise and dust during works in accordance with relevant standards (see also EPRs NV1 and AQ1).	Design and construction
E5	**Matted Flax-lily** Where direct impacts on Matted Flax-lily ~~occur~~are anticipated, a salvage and translocation plan must be developed and implemented to the satisfaction of the Department of Environment, Land, Water and Planning and the Commonwealth Department of Agriculture, Water and the Environment, prior to the commencement of relevant works.	Design and construction
E6	**Strategic revegetation** Strategic revegetation in accordance with the Project's Landscape Strategy (see also EPRs AR4 and LV2) to minimise long term fragmentation impacts by: - Using indigenous species as appropriate from relevant ecological vegetation classes to maximise fauna habitat value and connectivity, including trees likely to be used by Swift Parrot and Grey-headed flying fox - Incorporating indigenous mid-storey and ground layer plants as appropriate to complement retained habitat.	Design and construction

EPR	Environmental Performance Requirement	Project phase
E7	**Avoid introduction or spread of weeds and pathogens** The CEMP must include measures to avoid the spread or introduction of weeds and pathogens during construction, including vehicle and equipment hygiene.	Design and construction
E8	**Operational maintenance** During operation, maintain all fences, signage and fauna crossings, and soil hygiene controls for areas of retained native vegetation in accordance with Department of Transport processes and standards for declared roads in Victoria.	Operation and maintenance
AR1	**Avoid and minimise tree removal** During detailed design and construction, review potential tree impacts (particularly large/higher value trees and high value vegetation as identified within the Landscape Strategy's 'Cultural Value of Vegetation Assessment'), and provide for maximum tree retention where possible. This may be achieved through: - Design permanent and temporary works to avoid where possible, and otherwise minimise, adverse effects on trees (see also EPRs E1, AR2 and AR3) - The location and width of walking and cycling paths and footpaths is to be varied further to minimise Tree Protection Zone encroachment where possible - Apply suitable construction techniques to minimise impact on Tree Protection Zones, including limiting excavation depth or building above grade. Include additional retaining walls in the design for high priority trees where appropriate - Optimise design of Safety Barriers to retain trees, such as avoiding trenching - Prepare a Tree Impact Assessment which includes consideration of necessary cut and fill and grading requirements (3D design) which can be undertaken in stages - Establishment of no-go zones identified in the finalised Yan Yean Road Stage 2 – Project Design and No Go Zones~~Attachment VI Map Book~~ to exclude and protect the trees within the project area, with fencing to be as per the Australian Standard 4970-2009 Protection of Trees on Development Sites.	Design and construction
AR2	**Tree Protection Management Plan** Prior to construction commencing, develop and implement a Tree Protection Management Plan (see also EPRs E3 and AR3) based on the recommendations of Australian Standard 4970-2009 Protection of Trees on Development Sites. This will be in consultation with the City of Whittlesea and Shire of Nillumbik and informed by a project arborist (with a minimum qualification of Diploma in Arboriculture (AQF level 5 or equivalent), which covers:	Design and construction

EPR	Environmental Performance Requirement	Project phase
	- Trees to be removed or retained which will be informed by Tree Impact Assessment - Condition or significance of trees to be removed - Options for relocation and reinstatement of trees if feasible - All tree protection zones and structural root zones - All tree protection fenced off areas and areas where ground protection systems will be used - Installation of services should avoid tree protection zones of retained trees. If any services are required within the tree protection zone of a retained tree, they are to be installed via boring under the tree protection zone or hydro excavation where appropriate in accordance with the Tree Protection Management Plan - ~~All services to be located within the tree protection zone. All services will either be located outside of the tree protection zone or bored under the tree protection zone~~ - Location of tree protection measures and ground protection - To reduce tree removal and retain trees for as long as possible, tree removal will be undertaken as late as possible during construction works.	
AR3	**Doreen river red gums** At the Bridge Inn Road intersection, the two Doreen river red gums will be retained. Prior to any works, a detailed Tree Protection Plan will be prepared by a suitably qualified arborist and must be signed off by MRPV. This will include tree protection measures relevant to proposed works such as a calculated no-go zone and Tree Protection Zones and specific controls for works (including excavation, utility installation, lighting) within the calculated Tree Protection Zones of the Doreen river red gums as follows: - Works must not occur within the no-go zone determined in the Tree Protection Plan - The maximum depth of excavation must not exceed 800 millimetres below the existing ground surface within the Tree Protection Zones identified in the Tree Protection Plan - There must be no damage to the tree canopy of the Doreen river red gums - Fence/crash barrier, signage footings and road furniture can be installed within the identified Tree Protection Zones identified in the Tree Protection Plan. All footings should be of pier or pad type and strip footings should be avoided. ~~but are not to be more than one metre below the existing ground surface level and must not be strip footings or similar if they exceed 800 millimetres below the existing ground surface level~~ - Any utilities or services such as conduits or pipes to be installed within the Tree Protection Zones identified in the Tree Protection Plan, but outside of the no-go zone identified in the Tree Protection Plan, are to be bored with a minimum of one metre cover to the existing ground surface	Design and construction

EPR	Environmental Performance Requirement	Project phase
	and are to be no greater than 500 millimetres in diameter - Arrangements for appropriate long-term access to water are to be provided to the Doreen river red gums - The finished level of any surface adjacent to the no-go zone must be +/- 200 millimetres of the existing road and no additional fill can be placed within the undisturbed areas of the Tree Protection Zones identified in the Tree Protection Plan - Reinstatement – the area that is available, must be converted to mulched garden bed with complementary indigenous plantings such as acacias. Reinstatement of existing pavement areas within the Tree Protection Zones identified in the Tree Protection Plan shall be to a minimum depth of 500 millimetres - The Tree Protection Plan must provide an assessment of the tree canopies and any recommended pruning, cabling or other works. All canopy management works are to be in accordance with AS4373-2007 Pruning Amenity Trees. All tree pruning is to be completed by qualified arborists with a minimum Certificate III in arboriculture or equivalent.	
AR4	**Reinstatement** Reinstatement of soft and hard landscaping is to be in accordance with the Project's Landscape Strategy (see also EPRs E6 and LV2) and include: - Protecting retained trees - Ensuring new tree planting does not adversely impact existing vegetation - There is to be no broad-scale tillage of soil within Tree Protection Zones of retained trees. Topsoil is not to be added within the Tree Protection Zone of a retained tree.	Design and construction
ACH1	**Cultural Heritage Management Plan** Implement and comply with the Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act 2006*.	Design and construction
HH1	**Historic heritage~~Doreen river red gums~~** At the Bridge Inn Road intersection, retain the two Doreen river red gums that are identified in the Heritage Overlay HO191 (see also EPR AR3) and retain the Post Office and General Store building at 920 Doctors Gully Road.~~For works within the Heritage Overlay that impact historic heritage, prepare a Heritage Impact Statement in consultation with Shire of Nillumbik and implement no-go zones in accordance with the CEMP (see also EPR AR3).~~ Design permanent and temporary works to avoid where possible, and otherwise minimise, potential impacts on heritage values of St. Michael's Anglican Church identified in Heritage Overlay HO219, the Post Office and General Store building at 920 Doctors Gully Road, Doreen and the two Doreen River Red Gums identified in Heritage Overlay HO191. The CEMP must include processes and measures to manage historical heritage, such as implementation of no-go zones.	Design and construction

EPR	Environmental Performance Requirement	Project phase
~~HH2~~	~~**St. Michael's Anglican Church**~~ ~~Design permanent and temporary works to avoid where possible, and otherwise minimise, potential impacts on the heritage values of the St. Michael's Anglican Church that are identified in the Heritage Overlay HO219. The CEMP must include processes and measures to manage historical heritage, such as implementation of no-go zones, within the Construction Environmental Management Plan.~~	~~Design and construction~~
HH3	**Archaeological discovery protocol** The CEMP must include an archaeological discovery protocol that specifies measures to avoid and minimise impacts on any previously unidentified historical archaeological sites and values discovered during construction. The management protocol must be consistent with the requirements of the *Heritage Act 2017* and include procedures for ceasing work if human remains or archaeological artefacts are discovered, notifying Heritage Victoria of the find, obtaining consent to deal with the find, and dealing with the find in accordance with the consent. All personnel on site must undertake a Cultural Heritage Awareness Induction prior to commencing work, which will include information on the Doreen River Red Gums, St Michael's Anglican Church and the former Post Office and General Store building at 920 Doctors Gully Road, Doreen.	Design and construction
LV1	**Implement the Landscape Strategy** Implement the Landscape Strategy (refer to Technical Report G) during detailed design and construction to minimise adverse effects on landscape values and visual impacts, particularly in relation to: - Retaining and reinforcing key existing views as identified within the Landscape Strategy - Heritage values - Existing and proposed landmark elements across the Project - High value vegetation as identified within the Landscape Strategy's 'Cultural Value of Vegetation Assessment' - Community and recreational centres and open space, including existing Council masterplans for Doreen Recreational Reserve, Yarrambat Park & Golf Course and Yarrambat Township - Residential and business interfaces. Before operation, implement the Landscape Strategy to provide landscaping and reinstatement works to surplus land parcels consistent with the future use(s) of those surplus parcels proposed in the Bridge Inn Road/Yan Yean Road Surplus Land Use Plan (refer to EPR LU3). See also EPRs E6, AR1, AR4, LV2, LU3 and V1.	Design and construction
LV2	**Replanting and reinstatement of vegetation** Replanting and reinstatement of vegetation must occur in accordance with the Project's Landscape Strategy (see also EPRs E6, AR1, AR4, LV1 and V1)	Design and construction

EPR	Environmental Performance Requirement	Project phase
	in consultation with the relevant land manager, Nillumbik Shire Council and Whittlesea City Council (as appropriate), including: - Ensure tree planting is fully coordinated with services, easements and utilities including required height limits and offsets - Ensure new tree planting is climate resilient and suitable for the local context - Maximises the enhancement of landscape, Aboriginal and historical cultural heritage, and vegetation and habitat connectivity values, where opportunities exist - Provide replacement screening vegetation where feasible to reduce impacts to visual amenity - Enhance existing vegetation along the road corridor and around infrastructure elements - Provide contextual planting along roads and walking and cycling paths where feasible to achieve tree canopy cover for shade, shelter and habitat creation and connectivity - Seek to improve user amenity through identifying opportunities within public open space in accordance with relevant Council masterplans - Enhance intersections and identified gateways with distinctive native plantings to act as visual marker along the road corridor - Where existing vegetation on private residential property is removed due to the acquisition of land, for dwellings that will be located within 7 metres of the road or cycling and walking paths provide replacement screening vegetation to provide privacy to those dwellings. Where there is insufficient space to achieve replacement screening vegetation within the road reserve, the replacement screening vegetation should be provided on the private land, subject to landowner agreement - All advanced tree stock must be assessed by the project arborist before installation and must be in accordance with AS2303-2018 Tree Stock for Landscape Use. Certification reports for trees to be planted are to be supplied to MRPV.	
V1	**Avoid and minimise impacts on vegetation** 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
LU1	**Minimise land use impacts** The Project must be designed and constructed to minimise the design footprint and avoid, to the extent practicable, any temporary and permanent impacts on the following land uses: - Parks and reserves - Recreational and community facilities	Design and construction

EPR	Environmental Performance Requirement	Project phase
	- Residential properties and other sensitive land uses such as educational facilities - Commercial and industrial sites. - Consolidate or minimise the fragmentation of, and provide access to, residual land parcels to support future viable land use to the extent practicable and consistent with land zoning and the planning policy framework - Consultation must occur with land managers and/or authorities responsible for the implementation of the relevant strategic land use plans and policies, including City of Whittlesea, Shire of Nillumbik, Melbourne Water and Yarra Valley Water.	
LU2	**Land acquisition** Where permanent land acquisition is unavoidable: - Early and consistent consultation with affected land owners and occupiers must occur - Continue one-on-one consultation with affected landowners and occupiers to outline the acquisition and compensation process, discuss changed access arrangements and provide clear timelines of proposed action - Compensation for interests in acquired land must be assessed in accordance with *Land Acquisition and Compensation Act 1986.*	Design and construction
LU3	**Bridge Inn Road/Yan Yean Road Surplus Land Use Plan** Prior to operation of the Project, MRPV in consultation with Whittlesea City Council and Nillumbik Shire Council, must develop and implement a Bridge Inn Road/Yan Yean Road Surplus Land Use Plan. The Bridge Inn Road/Yan Yean Road Surplus Land Use Plan must set out the process for establishing the future use of surplus land at the Bridge Inn Road/Yan Yean Road intersection, including: - Proposed future use(s) of each parcel of surplus land created by the development of the Bridge Inn Road/Yan Yean Road intersection; - Preferred future landowner/land manager for each surplus parcel; and - A process for transferring landownership where required. Note: Surplus land is land acquired for the Project but not to be required for permanent Project infrastructure or related purposes.	Design and construction

EPR	Environmental Performance Requirement	Project phase
B1	**Avoid and minimise business disruption** Avoid and minimise to the extent practicable any reduction in the level of access, amenity or function of any business or commercial facility, including any reduction in car parking available for businesses or commercial facilities. Ensure that the construction program minimises impacts on businesses and facilities to the extent practicable, with consideration of operating hours and peak visitation times (see also EPR B2).	Design and construction
B2	**Implement a Trader Engagement Plan** Prepare and implement a Trader Engagement Plan in accordance with *Victorian Small Business Engagement Guidelines* to manage impacts to non-acquired businesses and to engage with business and property owners throughout the construction phase. The plan shall include: - Timely information on key project milestones - Changes to traffic conditions and duration of impact - A project construction schedule developed in coordination with transport authorities and City of Whittlesea and Shire of Nillumbik and in consultation with businesses to minimise cumulative impacts of this and other projects - Plans for signage to notify customers of proposed changes to business operations, including the setting of suitable timeframes for notification prior to commencement of changes - Measures to ensure access to businesses is maintained for customers, delivery and waste removal unless there has been prior engagement with affected businesses (including mutually agreed mitigation measures as required). This could include the installation of directional and business signage to assist customers and minimising reduction in carparking available to shoppers and traders - Process for registering and management of complaints from affected businesses and potential support services offered - Ensure emergency services are notified ahead of major works - Provide the opportunity for issues / concerns to be raised through a 24-hour phone number (see also EPR S2). - Provide marketing support to small businesses along the alignment in consultation with and with the consent of the business, for example, by assisting small businesses to advertise using mediums such as social media, 'buy local' postcards, and discount vouchers and utilising project infrastructure as billboard space for promotion.	Design and construction

EPR	Environmental Performance Requirement	Project phase
B3	**Business access and car parking** All permanent access to and parking for business and commercial facilities affected by the works is to be restored, in consultation with the relevant stakeholders, including associated landscaping and restoration works. Any temporary access arrangements put in place for the duration of construction must be removed when construction has ceased, unless they become the permanent arrangement. Any reduction in current parking numbers at existing businesses will be avoided; however, where a loss in existing car parking is unavoidable, losses must be minimised and occur in consultation with relevant stakeholders.	Design and construction
B4	**Doreen Neighbourhood Activity Centre** Develop and implement measures as part of the Project in consultation with the Department of Transport, Whittlesea City Council and Nillumbik Shire Council to avoid and minimise loss of exposure of the Doreen Neighbourhood Activity Centre to the arterial road network, including: - Design permanent and temporary works to the extent practicable to ensure that a reasonable level of visibility of the Doreen Neighbourhood Activity Centre is maintained when approaching the Doreen Neighbourhood Activity Centre on Yan Yean Road or Bridge Inn Road; - Installation of wayfinding, directional and/or business identification signage to provide advanced notice to motorists on Yan Yean Road or Bridge Inn Road of the Doreen Neighbourhood Activity Centre in accordance with relevant Department of Transport guidelines.	Design and construction
S1	**Social access and amenity** To develop and implement measures to avoid and minimise impacts on social and cultural values, including: - Design permanent and temporary works to avoid where possible, and otherwise minimise adverse effects on trees (see also EPR AR1) - 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.	Design and construction
S2	**Implement a Communications and Stakeholder Engagement Plan** 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: - 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,	Design and construction

EPR	Environmental Performance Requirement	Project phase

	consistent with Australian Standard AS/NZS 10002:2014 Guidelines for Complaint Management in Organisations
	- Communicate and engage with the community and potentially affected stakeholders in relation to:
	  - 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
	  - Changes to transport conditions and relevant mitigation (e.g. road closures, detours)
	- Ensure that communities are notified of construction and changes well in advance of works commencing as approved by MRPV
	- Ensure that the consultation program includes provision for onsite signage of affected properties that provide a service to the local or regional community
	- Continue consultation with people affected by the relocation of memorials
	- Outline the timing of works that will affect particular local areas, to be updated to reflect current and anticipated conditions
	- Communicate incidents and emergencies, including notification methods and timeframes in the event of a major incident or overrun
	- Ensure the workforce has appropriate community awareness and sensitivity
	- 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
	- Make provision for a 24-hour phone number to be available to the community to report concerns.	

S3	**Reinstatement of access** 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
AQ1	**Air quality management** The CEMP must include processes and measures to manage air quality during construction, including in accordance with the relevant air quality objectives set out in the State Environment Protection Policy (Ambient Air Quality) and other relevant statutory requirements. Best practice ~~These~~ measures will include, but not be limited to: - Ensure that all vehicles and machinery are fitted with appropriate emission control equipment, maintained frequently and serviced to the manufacturers' specifications - Smoke from internal combustion engines must not be visible for more	Design and construction

EPR	Environmental Performance Requirement	Project phase
	than ten seconds - ~~Protect~~ Manage stockpiles to prevent and minimise dust emissions - Review construction methodology in response to potential dust generation during dry and windy weather conditions, and in response to site inspection, monitoring results or complaints related to air and / or dust disruption - Provide the opportunity for the community to raise issues / concerns through a 24-hour phone number (see also EPR S2).	
CL1	**Spoil management** The CEMP must include processes and measures to manage contaminated soil in accordance with the relevant objectives set out in State Environment Protection Policy (SEPP) – Prevention and Management of Contamination of Land and other relevant statutory requirements and guidelines. These include, but are not limited to: - Environment Protection (Industrial Waste Resource) Regulations 2009 - Industrial Waste Management Policy (Waste Acid Sulfate Soils) 1999 - National Environment Protection (Assessment of Site Contamination) Measures 1999, amended 2013 (ASC NEPM) - WorkSafe Occupational Health and Safety Regulations 2007 (Asbestos) - PFAS National Environmental Management Plan 1.0 2018 - AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil. The processes and measures must include: - Characterising soil prior to disposal or reuse - Identifying soil containing asbestos and if present, developing management strategies in accordance with the WorkSafe Regulations - Assessing geological formations with naturally enriched metals and applicable spoil management options and or off-site disposal to the satisfaction of EPA Victoria - Identifying suitably licensed facilities for the disposal or treatment of contaminated soil - Management measures for storage, handling and transport of spoil for the protection of health, amenity and the environment - Management of wastewater - Management of dust, potential stormwater run-off and seepage from stockpiled materials - Undertaking a baseline site assessment of areas proposed for construction laydown prior to use - Protection of the beneficial uses of land associated with current and planned future use.	Design and construction

EPR	Environmental Performance Requirement	Project phase
GW1	**Groundwater management** The CEMP must include measures to manage groundwater impacts in accordance with the relevant water objectives set out in the State Environment Protection Policy (Waters), Water Industry Regulations 2006 (Vic) and other relevant statutory requirements.	Design and construction
NV1	**Construction noise management** The CEMP must include measures to manage construction noise and vibration in accordance with EPA Publication 1254 (Noise Control Guidelines), EPA Publication 480 (EPA Environmental Guidelines for Major Construction Sites) and other relevant statutory requirements. The CEMP should include measures, such as (but not limited to): - Fit and maintain appropriate mufflers on earth-moving and other vehicles on the site - Enclose noisy equipment - Provide noise attenuation screens, where appropriate - Where an activity is likely to cause noise impacts to nearby residents, restrict operating hours to between 7 am and 6 pm weekdays and 7 am to 1 pm Saturday, except where, for practical reasons, the activity is unavoidable. All reasonable measures must be implemented to mitigate the impacts of such unavoidable works - Undertake targeted noise monitoring of construction activities that are expected to cause higher impacts (as appropriate) and modify management actions as necessary - Advise local residents when unavoidable out-of-hours work will occur - Schedule deliveries to the site so that disruption to local amenity and traffic is minimised - Prepare and Implement a Construction Noise and Vibration Plan consistent with the recommendation in Technical Appendix I - A noise and vibration communications sub-plan, consistent with the Communications and Stakeholder Engagement Plan (see also EPR S2), for informing the community of work scheduling and working hours - Provide the opportunity for the community to raise issues / concerns through an attended 24-hour phone number (see also EPR S2).	Design and construction
NV2	**Achieve traffic noise objectives** Design and construct the Project to mitigate potential significant noise effects as defined by 'A Guide to the Reduction of Traffic Noise' (VicRoads, 2003) in consultation with property owners and to consider measures such as quieter pavement surfaces and measures including signage to reduce engine brake noise ~~so that operational noise will be addressed in accordance with the VicRoads Traffic Noise Reduction Policy (2005)~~.	Design and construction ~~Operation and maintenance~~
SW1	**Surface water management** The CEMP must include processes and measures to manage surface water	Design and construction

EPR	Environmental Performance Requirement	Project phase
	in accordance with the relevant 'Best practice' water objectives set out in the State Environment Protection Policy (Waters), Melbourne Water Performance Criteria and other relevant statutory requirements. Mitigation and management measures would be informed by Melbourne Water and Council requirements, EPA Publications 275, 480 and 960 and include: - Best practice sediment and erosion control, including measures to prevent contamination of surface waters from contaminated soils if / when encountered and the management of dewatering of earthworks areas following storm events - Maintenance of existing flow paths, drainage lines and floodplain storage or, where modification of existing flow paths cannot be avoided, mitigating the effects of changes to flow to the extent practicable - Water quality monitoring during construction and management of drainage infrastructure to be carried out in accordance with MRPV's Integrated Water Management Guideline (2020) - Stormwater or flood modelling and implementation of mitigation solutions and management measures for temporary works as required - Flood emergency management including consideration of scheduling works - Maximising the visual and aesthetic amenity of waterways having regard to any relevant development plans in consultation with Melbourne Water - Refuelling in designated areas where hardstand is present and removal of impacted soils following minor spills.	
SW2	**Design to minimise surface water impacts** Design the Project to minimise impacts on the hydrologic and / or hydraulic regime of waterways and stormwater risks, including: - Develop a detailed drainage model based on the 3D road detailed design to comply with Austroads, Council and Melbourne Water guidelines. A spill risk assessment will be conducted for each outfall based on the likelihood of a spill, which is estimated based on the road characteristics (geometry) of the outfall catchment, and its proximity to the downstream water sensitive receptors (i.e. consequence of the spill). Outfalls with a high spill risk are to provide spill containment - Discharge and runoff to meet the relevant water objectives set out in the State Environment Protection Policy (Waters), Melbourne Water Performance Criteria and other relevant statutory requirements - For outfalls to major main drains or waterways, determine specific requirements in consultation with Melbourne Water - Minimise risk from changes to flood levels, flows and velocities. Permanent works must not increase overall flood risk at relevant locations or modify the flow regime of waterways without the ~~acceptance~~approval of the relevant flood plain manager, drainage authority or asset owner	Design and construction

EPR	Environmental Performance Requirement	Project phase
	- Minimise impacts on private, Council and Melbourne Water drainage assets - Comply with Melbourne Water Performance Criteria and MRPV's Integrated Water Management Guideline (2020).	
SU1	Integrate sustainable design and construction practices to minimise, to the extent practicable, resource use particularly greenhouse gas emissions from construction of the Project.	Design and construction
SU2	Integrate sustainable development principles including through the implementation of Timber Reuse Strategies to ensure beneficial reuse of felled timber.	Design and construction

Appendix F IAC recommended Incorporated Document

Yan Yean Road (Kurrak Road to Bridge Inn Road) (Stage 2) Upgrade Project

Incorporated Document

August 2020

INTRODUCTION

1.1 This document is an incorporated document in the Nillumbik and Whittlesea Planning Schemes (planning schemes) pursuant to section 6(2)(j) of the *Planning and Environment Act 1987*.

1.2 This incorporated document facilitates the delivery of the Yan Yean Road (Kurrak Road to Bridge Inn Road) (Stage 2) upgrade project (project).

1.3 The control in this incorporated document prevails over any contrary or inconsistent provision in the planning schemes.

PURPOSE

2.1 The purpose of the control in this incorporated document is to permit and facilitate the use and development of land described in Clause 3 for the purposes of the project.

LAND TO WHICH THIS INCORPORATED DOCUMENT APPLIES

3.1 The control in this document applies to land shown as SCO13 on the planning scheme maps forming part of the planning schemes (project land).

CONTROL

Exemption from Planning Scheme Requirements

4.1 Despite any provision to the contrary or any inconsistent provision in the planning schemes, no planning permit is required for, and no provision in the planning schemes operates to prohibit, restrict or regulate the use and development of the Project Land for the purposes of, or relating to, constructing, maintaining or operating the project.

4.2 The use and development of the Project Land for the purposes of, or related to, the Project includes, but is not limited to:

a. The upgrade, duplication and widening of Yan Yean Road to provide for two lanes in each direction, associated service and turning lanes.

b. Intersection upgrades and improvements including to provide controlled intersections at North Oatlands Road, Ironbark Road, Bannons Lane, Jorgensen Avenue. Orchard Road and Bridge Inn Road.

c. Walking and cycling infrastructure and facilities including shared user and walking paths.;

d. Utility installation and relocation and associated services.

e. Earthworks and related structures, kerbs, channels, water and soil transfer facilities and works, water quality facilities, retaining walls, cuttings, batters and fill associated with the ~~p~~Project.

f. Creating or altering access to roads, including roads in a Road Zone Category 1, Road Zone Category 2 or land in a Public Acquisition Overlay.

g. Any use, buildings and works or associated infrastructure and activities for the Project, including use of surplus land parcels and development for the purpose of informal outdoor recreation, an open sport ground or golf course.

h. Ancillary activities to the use and development of the Project Land for the purposes of, or related to, the Project including, but not limited to:

   i) Developing and using lay down areas for construction purposes.

   ii) Stockpiling of excavation material.

   iii) Constructing and using temporary site workshops and storage administration and amenities buildings.

   iv) Removing, destroying and lopping trees and vegetation, including native and dead vegetation.

   v) Constructing scaffolding, working platforms and provision of pedestrian access to construction or maintenance sites.

   vi) Demolishing and removing buildings, fixtures, structures, infrastructure and works.

   vii) Constructing and carrying out works to install, upgrade, alter or relocate services and utilities.

   viii) Constructing and using temporary access roads, diversion roads and vehicle parking areas.

   ix) Constructing fences, site barriers and site security.

   x) Constructing or carrying out works to create or alter roads, car parking areas, access points, bunds, mounds, shared use and walking paths, landscaping, excavate land, salvage artefacts and alter drainage.

   xi) Earthworks including cutting and spoil removal, and formation of drainage works.

   xii) Displaying construction, directional and business identification signs.

   xiii) Subdividing and consolidating land.

   xiv) Storage and assembly of materials and equipment.

   xv) Restoration and reinstatement works.

Conditions

4.3 The use and development permitted by this document must be undertaken in accordance with the following conditions:

4.4 Environmental Management Framework

4.4.1 Prior to the commencement of development (excluding preparatory buildings and works under Clause 4.11), an Environmental Management Framework (EMF) must be prepared, in consultation with Nillumbik Shire Council and Whittlesea City Council (the councils), to the satisfaction of the Minister for Planning. The EMF must include Environmental Performance Requirements (EPRs) addressing the following areas and any other relevant matters:

a. Aboriginal cultural heritage
b. Air quality.
c. Arboriculture.
d. Business
e. Contaminated land
f. Ecology
g. Environmental Management Framework
h. Groundwater
i. Historical heritage
j. Land use planning
k. Landscape and visual
l. Noise and vibration
m. Social
n. Surface water
o. Transport
p. Vegetation.

4.4.2 The EMF must set out the process and timing for development of the Construction ~~Site~~ Environmental Management Plan~~, Site Environmental Management Plans~~ and other plans and procedures required by the EPRs, including the process and timing for consultation as required by the EPRs.

4.4.3 The EMF and EPR submitted to the Minister for Planning for approval under clause 4.4.1 must be accompanied by a statement explaining any difference between it, and the EMF in Chapter 12 of the EES. ~~the matters set out in the Minister's Assessment under the Environment Effects Act 1978 dated [insert date].~~

4.4.4 The EMF may be amended from time to time with the approval of the Minister for Planning.

4.4.5 The EMF must be amended to update references and requirements to be consistent with the Environment Protection (Amendment) Act 2018, to the satisfaction of the Minister for Planning. The amended EMF must be prepared in consultation with the Environment Protection Authority and must be submitted to the Minister for Planning for approval within 12 months of the commencement of the Environment Protection (Amendment) Act 2018.

4.4.6 The use and development of the Project must be carried out in accordance with he approved EMF.

4.5 Native Vegetation

4.5.1 Prior to removal of native vegetation (excluding native vegetation removed under Clause 4.11), information about that native vegetation in accordance with Application Requirements 1, 5 and 9 of Table 4 of the Guidelines for removal, destruction or lopping of native vegetation (DELWP, December 2017) (Guidelines) must be provided to the satisfaction of the Secretary to the Department of Environment, Land, Water and Planning (DELWP). For the avoidance of doubt, the information provided to the Secretary to DELWP must include information about any native vegetation that has been, or is to be, removed under Clause 4.11.

Refer to consequential losses for new fences

4.5.2 Prior to removal of native vegetation (excluding native vegetation removed under Clause 4.11), the biodiversity impacts from the removal of that native vegetation must be offset in accordance with the Guidelines, and evidence that the required offset(s) has been secured must be provided to the Secretary to DELWP.

Refer to consequential losses for new fences

4.5.3 In exceptional circumstances, the Secretary to DELWP may vary the timing requirement in Clause 4.5.2.

4.5.4 The secured offset(s) for the ~~p~~Project may be reconciled at the completion of the project in accordance with the Assessor's handbook – Applications to remove, destroy or lop native vegetation (DELWP, 2018).

4.5.5 For the purposes of this incorporated document, the term 'remove native vegetation' includes to destroy and/or lop native vegetation.

Refer to consequential losses for new fences

4.6 Heritage

4.6.1 Where, but for this Incorporated Document, a planning permit would be required for buildings and works within Heritage Overlay HO191 River Red Gums (2) or HO219 St Michael's Anglican Church under the Nillumbik Planning Scheme, a Heritage Impact Statement must be prepared, in consultation with Nillumbik Shire Council, to the satisfaction of the Minister for Planning prior to the commencement of such buildings and works.

4.6.2 The recommendations of any Heritage Impact Statement prepared under clause 4.6.1 must be implemented to the satisfaction of the Minister for Planning.

4.7 Dry Stone Walls

4.7.1 Where, but for this incorporated document, a planning permit would be required to demolish, remove or alter a dry stone wall within the City of Whittlesea, a Dry Stone Wall Management Plan must be prepared, in consultation with Whittlesea City Council, to the satisfaction of the Minister for Planning prior to the commencement of such demolition, removal or alteration works.

4.7.2 The Dry Stone Wall Management Plan prepared under clause 4.7.1 must be consistent with the relevant provisions of Clause 22.04 (Heritage Conservation Policy) of the Whittlesea Planning Scheme to the satisfaction of the Minister for Planning.

4.8 Utility Installation

4.8.1 Where, but for this incorporated document, a planning permit would be required under the planning schemes for buildings and works associated with an above-ground utility installation, site plans and elevations must be prepared to the

satisfaction of the Minister for Planning prior to the commencement of such buildings and works.

4.9 Green Wedge Land

4.9.1 Land outside the urban growth boundary must not be subdivided into more lots or into smaller lots, unless the subdivision would not be prohibited under the planning scheme controls that would apply but for this Incorporated Document.

4.10 Other Conditions

4.10.1 Unless otherwise stated, the conditions in Clause 4 may be satisfied for separate components or stages of the Project but each condition must be satisfied prior to the commencement of development for that component or stage.

4.10.2 The plans and documents required under Clause 4 may be amended from time to time to the satisfaction of the Minister for Planning or the relevant approving authority. In deciding whether a plan or document is satisfactory or whether to consent to an amendment to a plan or document, the Minister for Planning or the relevant approving authority, may seek the views of Nillumbik Shire Council and Whittlesea City Council, or any other relevant approving authority.

4.10.3 The use and development of the ~~p~~Project must be undertaken generally in accordance with the plans and documents approved under Clauses 4.6~~,~~ 4.7 and 4.8.

4.11 Preparatory Buildings and Works

4.11.1 Preparatory buildings and works may be undertaken on the Project Land before the conditions set out in Clauses 4.4~~5~~ to 4.10 are satisfied.

4.11.2 Preparatory works for the Project include, but are not limited to:

a. Works, including vegetation removal, where, but for this incorporated document, a planning permit would not be required under the provisions of the planning schemes.

b. Investigation, testing and preparatory works to determine the suitability of land, and property condition surveys.

c. Construction and use of access points and working platforms.

d. Site establishment works including temporary site fencing and hoarding, site offices, and hardstand and laydown areas.

e. Construction, protection, modification, removal or relocation of utility services and associated infrastructure.

f. Establishment of environmental and traffic controls, including designation of “no-go” zones.

g. Establishment of temporary car parking.

h. Demolition to the minimum extent necessary to enable preparatory works.

i. Removal of native vegetation to the minimum extent necessary to enable preparatory buildings and works.

j. Salvage of aboriginal cultural heritage material and other management actions required to be undertaken in compliance with a Cultural Heritage Management Plan approved under the Aboriginal Heritage Act 2006 or otherwise in compliance with that Act.

4.11.3 Prior to the removal of native vegetation under Clause 4.11, information about the native vegetation to be removed must be provided to the Secretary to DELWP. The information provided to the Secretary to DELWP must include a description of, and maps showing, the native vegetation to be removed in accordance with Application Requirements 1, 5 and 9 of Table 4 of the Guidelines.

4.11.4 The biodiversity impacts from the removal of native vegetation under Clause 4.11 must be included in the total biodiversity impacts when determining the offset(s) in accordance with Clause 4.5.2.

FINAL PLANS

5.1 Before commencing works associated with the Project, a final design plan or plans must be submitted to and endorsed by the Minister for Planning.

5.2 The use and development must be carried out generally in accordance with the endorsed plans.

5.3 The endorsed plans may be altered with prior written approval from the Minister for Planning.

EXPIRY

5~~6~~.1 The controls in this document expire if any of the following circumstances apply:

- The development allowed by the control is not started by 1 July 2024.
- The development allowed by the control is not completed by 31 December 2029.

5~~6~~.2 The Minister for Planning may extend these periods if a request is made in writing before the expiry date or within three months afterwards.