

# Planning Panels Victoria

## Beaufort Bypass

### Inquiry and Advisory Committee Report No. 1

*Environment Effects Act 1978*

*Planning and Environment Act 1987*

**12 October 2022**

*Environment Effects Act 1978*

Inquiry and Advisory Committee Report No. 1 pursuant to section 9(1)

*Planning and Environment Act 1987*


Advisory Committee report pursuant to section 151

**Beaufort Bypass - Report No. 1**

**12 October 2022**



Tim Hellsten, Chair



Elissa Bell, Member



Peter Edwards, Member

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## Glossary and abbreviations

|                     |  |
|---------------------|--|
| AEP                 | Annual Exceedance Probability Event  |
| Assessor’s Handbook | <i>Assessor’s handbook – Applications to remove, destroy or lop native vegetation</i> , DELWP 2018 |
| CEMP                | Construction Environmental Management Plan   |
| CHMP                | Cultural Heritage Management Plan  |
| CHW                 | Central Highlands Water  |
| Council             | Pyrenees Shire Council   |
| CVA                 | <i>Beaufort Bypass Cultural Values Assessment</i> , August 2021                                    |
| DCCEEW              | Commonwealth Department of Climate Change, Energy, the Environment and Water                       |
| DELWP               | Department of Environment, Land, Water and Planning, Grampians Region, Planning and Approvals      |
| DoT                 | Department of Transport  |
| draft PSA           | draft Planning Scheme Amendment C50pyrn to the Pyrenees Planning Scheme                            |
| EES                 | Environment Effects Statement  |

|                              |  |
|------------------------------|--|
| EE Act                       | <i>Environment Effects Act 1978</i>  |
| EMF                          | Environmental Management Framework   |
| EP Act                       | <i>Environment Protection Act 2017</i>   |
| EPBC Act                     | <i>Environment Protection and Biodiversity Conservation Act 1999</i>                         |
| ERA                          | Environmental Risk Assessment  |
| EVC                          | Ecological Vegetation Class  |
| FFG Act                      | <i>Flora and Fauna Guarantee Act 1988</i>  |
| GED                          | General Environmental Duty   |
| GHCMA                        | Glenelg Hopkins Catchment Management Authority   |
| IAC                          | Beaufort Bypass Inquiry and Advisory Committee   |
| IAU                          | The Department of Environment, Land, Water and Planning's Impact Assessment Unit             |
| Incorporated Document        | draft Beaufort Bypass Project Incorporated Document, June 2021                               |
| LAC Act                      | <i>Land Acquisition and Compensation Act 1986</i>  |
| MD#                          | Management Document (number)   |
| MNES                         | Matters of National Environmental Significance   |
| MRPV                         | Major Road Projects Victoria   |
| Native Vegetation Guidelines | <i>Guidelines for the removal, destruction or lopping of native vegetation</i><br>DELWP 2017 |
| ORTs                         | Off Reservation Treatments (with respect to noise)   |
| PAO                          | Public Acquisition Overlay   |
| PE Act                       | <i>Planning and Environment Act 1987</i>   |
| PONLs                        | Project Objective Noise Levels   |
| Proponent                    | Regional Roads Victoria  |
| Project                      | the Beaufort Bypass Project  |
| RO                           | Restructure Overlay  |
| RRV                          | Regional Roads Victoria (the Proponent)  |
| SCO                          | Specific Controls Overlay  |
| Scoping Requirements         | scoping requirements for the EES   |
| WHCG                         | Western Highway Conservation Group   |
| WTOAC                        | Wadawurrung Traditional Owners Aboriginal Corporation  |



## Overview

### Project summary

|                   |   |
|-------------------|---|
| The Project       | Beaufort Bypass   |
| Brief description | An 11 kilometre freeway standard bypass of the Beaufort township, consisting of: <ul style="list-style-type: none"> <li>- four lane divided carriageways</li> <li>- three road interchanges, a road over rail bridge and road overpass structures</li> <li>- waterway related infrastructure including culverts and bridges and ten watercourse realignments</li> <li>- associated infrastructure and works including noise barriers, utility relocation and landscaping works</li> </ul> |
| Project location  | Land corridor generally to the north of Beaufort linking to the Western Highway to the east and west of Beaufort township (refer Figure 1)  |
| The Proponent     | Regional Roads Victoria   |
| EES               | Beaufort Bypass Environment Effects Statement 2022  |
| Draft PSA         | draft Planning Scheme Amendment C50pyrn to the Pyrenees Planning Scheme   |
| Exhibition        | 21 March to 13 May 2022   |
| Submissions       | Number of Submissions: 25 - see Appendix B in Report No. 2  |

### Inquiry and Advisory Committee process

|                        |   |
|------------------------|---|
| The IAC                | Tim Hellsten (Chair), Elissa Bell and Peter Edwards   |
| Directions Hearing     | 17 June 2022 by videoconference   |
| Hearing                | 26 to 29 July, 1, 2, 4 and 8 August 2022, mainly by videoconference with an in person/videoconference hybrid day held at the Mecure Hotel Ballarat on 4 August 2022 |
| Site inspections       | Unaccompanied, 4 July 2022<br>Accompanied, 5 August 2022  |
| Parties to the Hearing | Appendix C in Report No. 2  |
| Citation               | Beaufort Bypass (EES) [2022] PPV  |
| Date of this report    | 12 October 2022   |

# Executive summary and recommendations

## Overview

The Beaufort Bypass Project (the Project) is an 11 kilometre long, freeway standard dual carriageway that will bypass Beaufort and connect two recently duplicated sections of the Western Highway to the east and west of the Beaufort township. Regional Roads Victoria (RRV) is the Proponent.

The preferred corridor alignment (C2) is located mainly on freehold land used for rural purposes with undulating or flat topography. In addition, the alignment traverses a section of the Camp Hill State Forest to the north of Beaufort and part of the Yam Holes Creek floodplain.

Key Project components include:

- two interchanges (entry and exit ramps) to connect the township of Beaufort to Western Highway at the east and west tie-ins
- a diamond interchange at Beaufort-Lexton Road
- road over rail bridge at the Melbourne – Ararat rail line
- four bridge structures over the local road network
- waterway crossings
- treatment swales and bioretention systems at discharge points to protect downstream water quality
- noise attenuation barriers (as required)
- earthworks
- ancillary components including utility service relocation, local intersection treatments and landscaping works.

The Environment Effects Statement (EES) includes a preferred C2 alignment and an analysis of three alternative alignment options (C0, A0 and A1).

Because the Project is not yet funded, the EES assessment is based on a reference design rather than a detailed design.

Major Road Projects Victoria (MRPV) will be responsible for detailed design and construction once the Project is funded.

The EES was exhibited for seven weeks between 25 March and 13 May 2022, together with draft Planning Scheme Amendment C50pyrn (the PSA) which would provide planning approval for the Project through:

- the application of the Special Control Overlay (SCO) and an associated Incorporated Document
- identification of land for acquisition to facilitate the Project through the Public Acquisition Overlay (PAO1).

The IAC received 25 submissions - 21 submissions during the public exhibition period, an invited late submission from the Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC) and a further three late landowner submissions. Submissions both supported and opposed the Project. Opposing submissions raised issues relating to access, impact of severance, land acquisition, amenity impacts and the cumulative impacts of vegetation loss and habitat impacts. Supporting

submissions cited amenity and safety benefits from reduced traffic through the main street of Beaufort.

The Hearing was held over eight days from 26 July to 8 August 2022. The IAC heard evidence from 12 experts, all called by RRV and submissions from 13 submitters.

Due to COVID restrictions, the bulk of the Hearing was held by video conference. An in-person session was held in Ballarat on 4 August 2022 for those submitters who wanted to present in person. Both the online Hearing and the in-person sessions were open to the public, and a number of observers listened in at various stages of the proceedings.

## Context for assessment

This report provides an analysis of the EES, the draft PSA and the Project's environmental effects, having regard to the draft evaluation objectives in the EES Scoping Requirements and relevant policy and legislation. The IAC has considered the exhibited material, all written submissions received in response to the exhibited material, and evidence, submissions and other material provided to the IAC during the Hearing.

The IAC has prepared two reports:

- Report No. 1 key considerations, findings and recommendations
- Report No. 2 Appendices.

Report No. 1 has three Parts:

- Part A provides background information about the IAC process, a Project summary and rationale and the bypass corridor options
- Part B provides the review and analysis of each of the environmental effects of the Project, using the EES subject themes (chapter headings)
- Part C provides the summary and conclusions of the IAC in relation to Project implementation, its integrated assessment and response to its Terms of Reference.

Report No. 2 includes the IAC's recommended mitigation measures, and its recommended draft PSA should the Project proceed.

## Summary of findings and conclusions

Beaufort town centre is a busy, traditional strip style local centre with heritage character and many food related shops providing for travellers and local residents. The enjoyment of this environment (and its potential to further expand) is hampered by the large volumes of vehicles and trucks moving through it.

The IAC considers the Project will bring positive benefits to Beaufort and surrounds and to regional Victoria. The Project will result in a net benefit for the community of Beaufort and Victoria more generally.

The impact of the Project's construction on biodiversity and habitat, landscape and amenity will be significant for the wider community but particularly significant for adjacent landowners and those whose properties will be fully or partly acquired. While some of these impacts will remain for some time after the Project becomes operational, on balance, these impacts can be managed to an acceptable level through the implementation of the mitigation measures.

## **Project rationale**

The rationale for the Project is essentially sound. The Project will deliver a ‘missing piece’ in the Western Highway Duplication Project between Ballarat and Stawell. It will improve travel times on the Western Highway reducing transport costs and improving competitiveness of primary producers in western Victoria. It will result in the substantial reduction of through traffic movements including large truck vehicle volumes through the Beaufort township, improving road safety, amenity and liveability for residents.

## **Bypass alignment options**

The EES alignment options methodology and analysis of Options A0, A1, C0 and C2 was robust, transparent and thorough. The four alignment options were largely similar in terms of their road efficiency, capacity and safety, social, economic, landscape and visual amenity impacts. However, the C2 alignment is superior in terms of having less impacts on native vegetation and habitat values and cultural heritage. The IAC agrees with the conclusion of the EES analysis that the C2 alignment is the preferred alignment.

## **Traffic and transport**

The Project will realise significant traffic and transport benefits by way of improved capacity, safety and amenity with reduced traffic including heavy/commercial vehicles travelling through the Beaufort town centre.

Further improvements to the reference design, particularly the western and eastern tie ins should be explored to further minimise vegetation loss – this can occur without compromising opportunities to optimise the Project.

Access to a small numbers of properties will be adversely affected however the proposed Access Management Strategy is a satisfactory mitigation measure to ensure access arrangements will be resolved during the Project’s detailed design phase.

There are no traffic and transport impacts that preclude the Project being approved.

## **Biodiversity and habitats**

The Project will have significant impacts associated with native vegetation clearance and habitat loss, including for golden sun moth (listed under the *Environment Protection and Biodiversity Conservation Act 1998* (Cth)) and Victorian Temperate Woodland Bird Community (listed under the *Flora and Fauna Guarantee Act 1988*). and FFG-listed Victorian Temperate Woodland Bird Community. However, the IAC is generally satisfied these impacts will be acceptable because:

- offsets will be provided in accordance with relevant State and Commonwealth policies
- the Project proposes a land bridge to re-connect habitat in the Camp Hill State Forest

The IAC is concerned the significant loss of habitat for the Victorian Temperate Woodland Bird Community may not trigger specific offset requirements due to the current policy framework. This is undesirable and the IAC recommends native vegetation offsets include habitat for this fauna community.

## **Cultural and historic heritage**

The residual impacts on Aboriginal cultural heritage and historic heritage, after implementation of the mitigation measures (subject to minor changes), will meet the evaluation objective of avoiding or (where avoidance is not possible) minimising impacts on heritage through the Cultural Heritage

Management Plan (CHMP) process. The Project alignment generally avoids impacts on areas of known Aboriginal cultural heritage value. There remains an opportunity however to better embed the recommendations of the Cultural Values Assessment into the mitigation measures to ensure they influence the detailed design phase. The Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC) have been appropriately engaged in the EES process to date and opportunities should be explored to ensure meaningful engagement continues through the detailed design and construction phase.

The mitigation measures will ensure that impacts to the heritage site on the Victorian Heritage Inventory is managed appropriately and to an acceptable level.

### **Catchment values and hydrology**

The groundwater and surface water issues and impacts on catchment values can be managed to ensure appropriate environmental outcomes are realised by appropriate design, construction practice and the bypass' ongoing operation. The Incorporated Document and mitigation measures are reasonable and, are consistent with standard practice used on major road projects. Some minor amendments are required to respond to flooding issues and incorporate expert ecological inputs. practical subject to minor amendments including responding to flooding issues and incorporating expert ecological inputs. The residual impacts after implementation of the proposed mitigation measures will meet the evaluation objectives.

### **Social**

Social impacts can be managed to acceptable levels. While the social benefits are difficult to precisely quantify, the reduced traffic volumes and associated truck activity and noise should result in improved amenity and provide the potential to deliver some very significant social benefits.

The social impacts on individual property owners will be significant particularly where the use of the property is significantly constrained or homes are lost. These impacts can be ameliorated through the Land Acquisition and Compensation Act (LAC Act) process although not in the timely way sought by some landowners. However overall, the IAC is satisfied that the social benefits of the Project outweigh its disbenefits and that there are no social impacts that preclude the Project being approved. The IAC encourages RRV to explore options for early acquisition or land purchase negotiation discussions particularly with the most affected landowners and to maintain dialogue with those owners on the Project's progress.

The IAC's recommended mitigation measures will ensure other social impacts can be managed consistent with the evaluation objective.

### **Land use and economic**

The Project is broadly consistent with the Planning Policy Framework and will not inhibit the strategic growth of Beaufort.

The Project will have an economic impact on existing Beaufort businesses once operational. These impacts are likely to be primarily on highway trade dependent businesses. Short term impacts can be effectively managed through proposed mitigation measures and associated management documents. Beaufort's transition from a highway service town once the bypass opens will require a range of strategic and economic planning actions to be undertaken and implemented. RRV has acknowledged that this preparatory work will require its support in partnership with Council and has identified appropriate amendments to the EMF and Incorporated Document.

The impacts on agriculture are limited to a small number of rural properties that are to be partially acquired. These impacts will include loss of productive land and potential impacts on farm viability and in some cases cannot be ameliorated by mitigation measures. In the context of the Project as a whole, and the anticipated wider benefits to agriculture generally, the IAC considers these impacts are acceptable.

The impact on the Beaufort Trunk Main, Beaufort wastewater treatment plant and associated irrigation areas are potentially significant but can be managed to an acceptable level with the IAC's recommended mitigation measures and the inclusion of additional conditions in the Incorporated Document.

### **Amenity**

The key amenity impacts examined by the EES relate to dust and noise during and post construction.

Dust during construction will be short-lived and appropriately managed by the proposed controls to acceptable levels, consistent with the evaluation objectives. Air emissions resulting from the Project once operational are likely to be negligible.

The Project will result in some increase in traffic noise to a number of properties. These impacts can be mitigated with a combination of on and off-reservation treatments.

The Project will result in an improvement of noise and amenity issues for residents and businesses in town which will benefit from a reduction in through traffic.

There are no amenity impacts that preclude the Project being approved.

### **Landscape and visual amenity**

The Project will have significant impact on the landscape and visual amenity for a number of nearby residents. Because of the extent of cut and fill to accommodate the Project, these impacts cannot be readily screened from view. The evaluation objective for landscape and visual amenity is to minimise adverse effects as far as practicable. The IAC considers that a high standard of landscaping treatments for the Camp Hill cutting and land bridge are critical to achieving this objective. For adjacent residents whose outlook and visual amenity is highly impacted, maximising the areas available for landscaping and early delivery of landscape works will be important in reducing long term impact.

On balance, the proposed mitigation measures (including proposed changes) will manage these impacts to an acceptable level consistent with the evaluation objective. There are no landscape and visual amenity impacts that preclude the Project being approved.

### **Soil geology and contaminated land**

Geotechnical issues can readily be managed to an acceptable level through the mitigation measures. The IAC has recommended some minor changes to the exhibited mitigation measures to provide more detail of the key areas of concern for further investigations as the Project progresses. There are no impacts on soils, geology and contamination that preclude the Project being approved.

### **Reference design approach**

The reference design approach used for this Project, while appropriate and sufficiently detailed to establish whether key impacts were acceptable, has its disbenefits. These included establishing

how many of the critical Management Documents and mitigation measures, particularly those relating to biodiversity and habitat, landscaping and cultural heritage, would be integrated into the detailed design phase rather than be developed later in response to the final designs. It was also unclear as to whether critical design components such as the Camp Hill land bridge would be embedded into the design or remain optional depending on project funding.

The IAC has recommended an approach to provide overarching guidance for the detailed design process.

### **Matters of national environmental significance**

The EES included an assessment of significant impacts against the nominated species and communities (two listed flora communities, four listed flora species and five listed fauna species) consistent with the *Significant impact guidelines 1.1: Matters of National Environmental Significance*. The expected overall likelihood of significant impact on matters of national environmental significance (MNES) was low, other than for golden sun moth. With the exception of golden sun moth, the expected overall likelihood of significant impact on remaining matters was low. The IAC is satisfied that the residual impacts on MNES, after implementation of the mitigation measures, will meet the evaluation objective of avoiding, minimising and addressing relevant offset requirements.

## **Project implementation**

### **Draft Pyrenees Planning Scheme Amendment**

The planning controls in the draft PSA constitute an appropriate mechanism to facilitate the Project subject to minor changes to the Incorporated Document and refinement of the application of the PAO.

### **Environmental Management Framework**

The EMF meets the Scoping Requirements and is broadly appropriate. The monitoring, auditing and reporting requirements in the EMF are appropriate and will ensure there is appropriate accountability, transparency and enforceability in relation to the construction and operation of the Project.

## **Integrated assessment**

The IAC's integrated assessment has had regard to relevant legislation and policy, the evaluation objectives in the Scoping Requirements, the principles of ecologically sustainable development, and net community benefit.

The Project is generally consistent with legislative and policy. There appears to be no significant impediments to securing the required approvals under relevant legislation to deliver the Project.

The C2 alignment is considered the most appropriate of the four alignments and satisfies all evaluation criteria and overall performs better than alignments A0, A1 and C0. No changes are required to the C2 alignment and through the implementation of mitigation measures the reference design will be refined to manage impacts to an acceptable level.

The Project will provide benefits to the local community from re-directing heavy vehicle traffic away from the most built-up areas of the township, including the main street. Other key benefits,

including on a broader scale for Victoria, include travel and transport efficiencies and increased safety.

Having regard to the Project's broader local, regional and State benefits, the IAC is satisfied the Project will result in a net community benefit, subject to applying its recommended mitigation measures.

## Recommendations

The IAC makes the following recommendations:

- 1. The C2 alignment is the optimum of the four alignment options and should progress to planning approval stage subject to modifications to the Environmental Management Framework and draft Pyrenees Planning Scheme Amendment C50pryn as set out in the following recommendations.**

### Environmental Management Framework

- 2. Amend the Environmental Management Framework as indicated in Appendix F in Report No. 2.**

### Draft Planning Scheme Amendment

- 3. Amend draft Pyrenees Planning Scheme Amendment C50pryn subject to the following:**
  - a) Amend the Beaufort Bypass Project Incorporated Document as shown in Appendix G in Report No. 2.**
  - b) Review the PAO mapping extent to include portions of freehold land in the Farming Zone that cannot be readily or practically consolidated into adjoining freehold land parcels or accessed and used consistent with the purpose of the zone.**



# PART A: INTRODUCTION AND BACKGROUND

# 1 The IAC process

## 1.1 The Environment Effects Statement

Regional Roads Victoria (RRV) prepared an Environment Effects Statement (EES) for the proposed Beaufort Bypass (the Project) in October 2021. The EES consists of:

- a main report (Chapters 1 to 18)
- 13 Technical Appendices
- five Attachments, one of which is draft Pyrenees Planning Scheme Amendment C50pyrn (the draft PSA) which would provide planning approval for the Project.

## 1.2 The Inquiry and Advisory Committee

The Minister for Planning appointed a three member Inquiry and Advisory Committee (IAC) on 3 April 2022 pursuant to section 9 of the *Environment Effects Act 1978* (EE Act) and section 151 of the *Planning and Environment Act 1987* (PE Act) to inquire into and report on the proposed Beaufort Bypass Project (the Project) and its environmental effects.

The IAC comprises:

- Tim Hellsten, Chair
- Elissa Bell
- Peter Edwards.

The IAC was assisted by Kimberly Martin, Senior Project Officer at Planning Panels Victoria.

This is Report No. 1 of the IAC. Report No. 2 contains the Appendices.

## 1.3 The IAC's role

The Minister for Planning signed Terms of Reference for the IAC on 30 June 2021. The Terms of Reference set out the scope of the IAC's role and how it is to conduct the IAC process. A copy is provided in Appendix A in Report No. 2.

Clause 5 of the Terms of Reference requires the IAC as the Inquiry to:

- a. review and consider the environment effect statement (EES), submissions received in relation to the project, the predicted environmental effects, and the other exhibited documents;
- b. consider and report on the potential environmental effects of the project (i.e. the proposed alignment and alternatives), their significance and acceptability, having regard to the draft evaluation objectives in the EES scoping requirements and relevant policy and legislation;
- c. identify any measures it considers necessary and effective to avoid, mitigate or manage the environmental effects of the project within acceptable limits, including any necessary project modifications; and
- d. advise on how this relates to relevant conditions, controls and requirements that could form part of the necessary approvals and consents for the project.

Clause 6 requires the IAC as the Advisory Committee to:

- a. review draft planning scheme amendment (PSA) C50pyrn and incorporated document, which has been prepared to apply a public acquisition overlay and establish planning

approval for the project, along with any public submissions received in relation to the draft PSA;

- b. provide a report to the Minister for Planning as to 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.

It is not within the IAC's remit to recommend whether or not to approve the Project or adopt the draft PSA. Rather, the IAC is required to:

- assess the Project's impacts and identify measures to avoid, mitigate or manage any impacts including any necessary Project modifications
- advise on whether the provisions of the draft PSA are appropriate or require changes.

The IAC's recommendations reflect these key aspects of its remit.

Clause 7 describes the IAC's reporting obligation:

7. The IAC is to produce a report of its findings and recommendations to the Minister for Planning to inform his assessment under the EE Act and to assist the Minister to make a decision about the draft PSA.

Clause 26 sets out what the IAC must consider:

26. 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 submitters;
  - c. any information provided by the proponent and parties that responds to submissions or directions of the IAC; and
  - d. any other relevant information that is provided to, or obtained by, the IAC.

Clauses 33 and 34 set out what must be included in the IAC's report. These requirements are discussed and responded to in Chapter 17 of this Report.

## 1.4 Scoping Requirements

The Minister for Planning issued Scoping Requirements for the EES on 4 January 2017. The Scoping Requirements set out the matters that must be addressed in the EES, covering:

- general approach
- general content and style
- project description
- project alternatives
- applicable legislation, policies and strategies
- consultation
- an Environmental Management Framework (EMF).

The Scoping Requirements set out the specific environmental effects that must be assessed, and evaluation objectives against which each effect is to be assessed (see Table 1). These objectives reflect the decision of the Minister for Planning regarding the need for an EES, and the technical studies have responded to these objectives in their assessments.

**Table 1** Evaluation objectives

| Environmental effect                 | Evaluation objective   |
|--------------------------------------|--|
| Road efficiency, capacity and safety | To provide for an effective Western Highway bypass of Beaufort, to improve travel efficiency, road safety, and capacity, as well as improve amenity and local transport network in Beaufort  |
| Biodiversity                         | To avoid and minimise adverse effects on native vegetation, as well as habitat for threatened flora and fauna species and ecological communities, including those listed under the FFG Act, and address offset requirements for predicted losses consistent with relevant policy |
| Catchment values and hydrology       | To protect catchment values, surface water and ground water quality, stream flows and floodway capacity, and avoid impacts on protected beneficial uses  |
| Cultural heritage                    | To avoid and minimise adverse effects on Aboriginal and historic cultural heritage values, and to identify best practice mitigation measures   |
| Social and community                 | To minimise and manage adverse effects on the well-being of the local community, including potential impacts on cohesion and severance of community access to services, facilities and infrastructure  |
| Land use and economic                | To minimise and manage adverse effects on local business (including agriculture) and existing or planned land uses   |
| Amenity                              | To minimise adverse air quality, noise or vibration effects on the amenity of residents and local communities, as far as practicable during construction and operation   |
| Landscape and visual                 | To minimise adverse effects on visual and landscape values as far as practicable, during construction and operation  |
| Environmental management framework   | To provide a transparent framework with clear accountabilities for managing environmental effects and hazards associated with construction and operation phases of the proposed project, in order to achieve acceptable environmental outcomes                                   |
| Sustainable development              | Overall, to identify an alignment and conceptual design for the Western Highway bypass of Beaufort that would achieve a sustainable balance of environmental, economic and social outcomes and provide a net community benefit   |

## 1.5 Exhibition and submissions

Clause 18 of the Terms of Reference provided for submissions to be lodged through the Engage Victoria website and collected by Planning Panels Victoria.

The EES was exhibited for 41 business days from 25 March 2022 to 13 May 2022. 21 submissions were received during exhibition, including:

- four submissions from government agencies - Pyrenees Shire Council (Council), Department of Environment, Land, Water and Planning (DELWP), Central Highlands Water (CHW) and Glenelg Hopkins Catchment Management Authority (GHCMA)
- one submission from a regional advocacy group (Western Highway Action Committee)
- one submission from an environment group (Western Highway Conservation Group)

- two submissions from community groups (Old Beaufort Primary School 60 Committee and Cyril Callister Foundation Inc)
- 13 submissions from individuals.

The IAC accepted four late submissions including from three individuals and from the Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC) discussed below.

A full list of submitters is provided in Appendix B of Report No. 2.

### **(i) Wadawurrung Traditional Owners Aboriginal Corporation**

The WTOAC is the Registered Aboriginal Party representing the Traditional Owners of the land on which the Project is proposed. The WTOAC was consulted in the early stages of the Project development, and is working with RRV to finalise a Cultural Heritage Management Plan (CHMP) for the Project. A draft CHMP was not exhibited with the EES package of documents and was not provided to the IAC or parties because of cultural sensitivities.

The IAC invited the WTOAC to make a submission, and/or to participate in the Hearing. The WTOAC provided a late submission<sup>1</sup> and made a presentation to the IAC's at the Hearing. The Committee was provided with a copy of the *Beaufort Bypass Cultural Values Assessment*, 11 August 2021 (CVA) prepared for the Project in partnership between the Department of Transport and the WTOAC following the WTOAC's presentation. The submission issues are discussed at Chapter 6.2.

### **(ii) Key issues raised in submissions**

Submissions both supported and opposed the Project.

Supportive submissions highlighted a number of potential Project benefits including:

- supporting tourism
- reducing traffic volumes in town and night time heavy traffic noise
- improving safety, amenity and reducing accidents
- positive social impacts.

The main issues raised in opposing submissions were:

- environmental impacts
  - loss of biodiversity
  - native vegetation removal including loss of large old trees
  - impacts on fauna
  - weeds and disease
  - climate change
- land use impacts:
  - usability of land including for agriculture including grazing, animal husbandry and cropping
  - fragmentation of land holdings and reduction in connectivity and access
  - investment uncertainty associated with project timelines
- landscape character:
  - visual impact on view lines and landscape character

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<sup>1</sup> Documents 3 and 4

- amenity impacts:
  - pollution associated with increased traffic including noise, dust, odour and lighting
  - loss of privacy
- economic impacts:
  - town centre, employment and activity
  - land value
  - compensation
- access impacts:
  - loss of or restricted access to Western Highway
  - loss of access to Camp Hill or remnant land parcels
- infrastructure impacts:
  - trunk water main and waste water treatment plant irrigation areas
  - drainage
- social impacts:
  - personal well being
  - anxiety and stress associated with project timeframes.

Council offered in-principle support to the Project subject to clarification of arrangements for further strategic work, town transition strategies post bypass opening and planning.

GHCMA sought modifications to the Incorporated Document relating to flood management and EES documentation relating to floodplain afflux and water monitoring sites.

The WTOAC supported the proposal but made suggestions about the EMF taking a broader view of flora and fauna species and consideration of the CVA.

The Old Beaufort Primary School 60 Committee identified the potential role of the former school site as a community hub once the bypass was constructed.

## 1.6 Hearings

A Directions Hearing was held via video conference on 17 June 2022.

The main Hearing was held, mainly by video conference, over 8 sitting days between 25 July and 8 August 2022. Five submitters expressed a preference to appear in-person before the IAC. The IAC held a single in-person Hearing day for those submitters. The Hearing participants are identified in Appendix C of Report No.2.

All documents and materials tabled during the IAC process are shown in Appendix D of Report No. 2 and published on the Engage Victoria website

The IAC invited DELWP's Impact Assessment Unit (IAU) to provide an overview presentation of the EES process to assist parties. This was presented on Day 1 of the Hearing.

## 1.7 Site inspections

The IAC undertook a comprehensive unaccompanied site inspection prior to the Hearing. This was informed by suggestions from the various parties and undertaken from the public realm. The locations and features included on the site inspection itinerary<sup>2</sup> included:

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<sup>2</sup> Document 9c

- the area of proposed project works where accessible
- the Beaufort township
- Camp Hill
- various landscape features and view points
- key road routes affected by the Project
- landowner submitter properties within the study area.

All parties were provided an opportunity to nominate sites for accompanied site inspections or attend the inspections. At the request of four parties the IAC undertook accompanied on-site inspections with the respective landowners of:

- 8 Drivers Lane, Beaufort (Submitter 13)
- 11 Box Cutting Rise (Submitter 2)
- 24 Topps Lane (Submitter 18).

The IAC also viewed a section of Camp Hill state forest along a section of Raglan Track that aligned with the proposed corridor which was attended by three representatives of the Western Highway Conservation Group (Submitter 7) and Submitter 19. Two representatives of RRV (Greg Tobin of Harwood Andrews and RRV Project Officer Somma Sourivong) attended the accompanied site inspections along with ecologist Nic McCaffrey.

## 1.8 Evidence

Table 2 lists the evidence presented at the Hearing on behalf of RRV.

**Table 2** Evidence presented at the Hearing

| Expert             | Firm                               | Area of expertise                   |
|--------------------|------------------------------------|-------------------------------------|
| Colleen Peterson   | Ratio                              | Planning                            |
| John Noronha       | Ethos                              | Regional economics                  |
| Nic McCaffrey      | WSP                                | Flora and fauna                     |
| Brett Lane         | Nature Advisory                    | Flora and fauna (Peer review)       |
| Rodney van der Ree | WSP                                | Fauna crossings (not called)        |
| Peter Kelly        | WSP                                | Traffic and transport               |
| Hilary Marshall    | Ratio                              | Traffic and transport (Peer review) |
| Tim Ryan           | WSP                                | Acoustics                           |
| Darren Tardio      | Enfield Acoustics                  | Acoustics (Peer review)             |
| Ian Wallis         | Centre for Environmental Education | Air quality                         |
| Kirsten Bauer      | ASPECT Studios                     | Landscape                           |
| Rob Leslie         | WSP                                | Surface water                       |

## 1.9 Project documentation

The draft PSA included a draft Incorporated Document as the main control for the use and development of the Project. Prior to the commencement of development (excluding preparatory works) an EMF is to be prepared to the satisfaction of the Minister for Planning. A draft EMF was

included in Chapter 17 of the EES and formed the basis of discussions as to what the final EMF should include.

### **(i) Day 1 documents**

The IAC directed RRV to circulate ‘Day 1’ versions of the EMF and Incorporated Document before the commencement of the Hearing. RRV circulated Day 1 versions on 21 July 2022:

- Summary of RRV’s ‘Day 1’ proposed changes to the PSA and EES documents comprising:<sup>3</sup>
  - Table 1: RRV’s proposed ‘Day 1’ changes in response to submitter-requested changes (which included changes to the EMF, other EES documentation and the Incorporated Document)
  - Table 2: RRV’s proposed ‘Day 1’ changes in response to expert evidence (focused on changes to the EMF and Incorporated Document)
  - Table 3: RRV’s proposed changes to EES documents (which included administrative changes to EES Chapters 4 and 8, technical Appendices C, G and M and Attachments III and V)
- Draft Beaufort Bypass Project Incorporated Document with tracked changes.<sup>4</sup>

The proposed changes included changes to the EMF and Incorporated Document to resolve drafting issues raised by CHW.<sup>5</sup> RRV provided a copy of an email from GHCMA which confirmed that it was satisfied that the Day 1 changes addressed issues raised in its submission.<sup>6</sup>

### **(ii) Final RRV changes**

RRV’s closing submission included a set of ‘End of Hearing’ documents with additional changes arising from the Hearing. These documents were circulated for the parties to respond to, before RRV provided its final version of proposed changes in response.

Only Council and DELWP provided additional changes and comments. CHW advised that it agreed to the Day 1 changes and sought no further changes. RRV’s final response was submitted on 19 August 2022 (RRV’s Final changes) and comprised:

- summary of RRV’s ‘End of Hearing’ proposed changes to the PSA and EES comprising:<sup>7</sup>
  - Table 1: RRV’s proposed ‘Day 1’ changes in response to submitter-requested changes
  - Table 2: RRV’s proposed ‘Day 1’ changes in response to expert evidence
  - Table 3: RRV’s proposed changes to EES documents other than the EMF
  - Table 4: Other EMF and Incorporated Document changes arising from the Hearing.
- a draft Beaufort Bypass Project Incorporated Document with tracked changes.<sup>8</sup>

The RRV’s Final changes, where supported by the IAC (including with further changes) are included in Appendix F in Report No. 2.

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<sup>3</sup> Document 33a

<sup>4</sup> Document 33c

<sup>5</sup> Document 28

<sup>6</sup> Document 50j

<sup>7</sup> Documents 69 (Summary of changes)

<sup>8</sup> Document 68 (draft Incorporated Document)



## 1.10 Terminology

The EES refers to environmental impacts, and environmental effects. The terminology used in the EE Act is ‘significant effects’. The Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) refers to ‘significant impacts’. This Report uses both interchangeably.

## 1.11 Procedural issues

### (i) Requests for Information

The IAC requested RRV provide further information on two occasions to assist it with its understanding of EES materials.<sup>9</sup> RRV responded to these requests providing additional documents, in their Part A and B submissions and in evidence.<sup>10</sup> The IAC’s requests and RRV’s responses and submissions were uploaded to Engage Victoria, the Hearing document share platform and circulated to parties.

### (ii) Submitter discussions

The IAC directed RRV to engage with all submitters prior to the Hearing given:

- a number of submissions appeared to raise issues that the RRV could address or potentially resolve
- some issues raised were outside the scope of the IAC’s Terms of Reference particularly relating to land acquisition and compensation.

### (iii) Proposal notification issues

RRV informed the IAC on 13 July 2022 of an omission made in notification of the proposal. It advised that the formal exhibition notification letter sent to all landowners in the Study Area on the 7 March 2022 had inadvertently not been sent to the landowners directly impacted by the C2 alignment. RRV had subsequently written to and emailed those landowners on 2 July 2022 and contacted 13 of the landowners who had not already made submissions by phone to advise them of the proposal and IAC Hearing process. One landowner was unable to be contacted by phone. One additional submission was received and accepted by the IAC as a result of this process.

On Day 1 of the Hearing the IAC asked RRV to provide an update of any further discussions with those landowners and invited Council and the IAU to provide comment on the notification issue.

Council advised that it had not been contacted by any community members about the lack of project information or the extent of notice undertaken. The IAU advised that the requirements for EES notification under the EE Act (through the Ministerial Guidelines) and EPBC Act included publication of notices in newspapers and this had been satisfied. Any wider notification was the responsibility of the Proponent consistent with its Engagement Strategy which the IAU had reviewed.

The IAC was satisfied that RRV had undertaken the required notification although this was not a consideration within its scope. The IAC proposed to accept any late submissions that might be received from the remaining C2 alignment landowners until 1 August 2022 which provided a four

<sup>9</sup> Documents 7 (Direction’s letter) and 12

<sup>10</sup> Documents 9, 14 (Part A submission), 31, 32 and 50 (Part B submission)

week window from the late notice sent to those landowners and to adjust the Hearing days if required. No further submissions were received.

**(iv) Late evidence**

RRV requested an extension for the circulation of Ms Bauer's evidence. This was granted based on the reasons and because there was no competing evidence. Ms Bauer's evidence in chief was presented at the conclusion of all other evidence to enable parties sufficient time to review it before cross examination and to ensure procedural fairness.

The Western Highway Conservation Group had intended to call the ecological evidence of Tim D'Ombrain of Biodiversity Services. The Group requested an extension of over a week to provide this evidence. This was not accepted by the Committee as RRV was calling like evidence and their ecological experts could not be called later to allow time for his evidence to be circulated before cross examination. Mr D'Ombrain was however able to attend the accompanied Camp Hill site inspection and the IAC benefitted from his attendance along with Mr McCaffrey's.

**(v) Confidential submission addendum**

Submitter 18 requested the IAC accept a submission addendum of a personal nature on a confidential basis. The request was discussed during preliminary matters on 4 August 2022. RRV proposed an undertaking which was provided in writing to the IAC, submitter and parties. This undertaking was agreed by the submitter's advocate as an acceptable and transparent approach and was adopted by the IAC in its subsequent Direction which in essence proposed that the document:

- be received as a confidential document in the proceeding
- be allocated a document number and watermarked as confidential by IAC Order and not made public by RRV or uploaded to the document share platform and Engage Victoria website
- be referred to in any document list as a confidential document
- could be reviewed by RRV and its representatives but any content could not be disclosed by RRV in its closing submission other than by way of a separate confidential submission managed in a similar way to the confidential document.

RRV did not provide any response in its closing submission to the confidential document (including by way of a confidential response).

## 1.12 Report structure

The material before the IAC is significant. It includes the EES including the various Technical Appendices and attachments, the 25 submissions, 12 statements of evidence, 74 tabled documents and the submissions of 12 parties who spoke to the IAC at the Hearing, as well as its observations on its site inspections. The IAC has had to be selective in referring to the more relevant or determinative material in its Reports. All submissions and materials have been considered by the IAC in reaching its conclusions, regardless of whether they are specifically mentioned in the Reports.

The IAC has prepared two Reports:

- Report No. 1 – Key considerations, discussion, findings and recommendations
- Report No. 2 – Appendices.

The IAC's findings and recommendations are based on the exhibited version of the EES and draft PSA and RRV's Final changes to the EMF and Final version of the Incorporated Document.

The IAC has recommended further changes to RRV's Final changes to the EMF and the Incorporated Document.

RRV did not provide its proposed Final EMF changes in an updated EMF document. Rather its proposed changes<sup>11</sup> were in table form which interchanged between specific wording changes, adopting the wording of another party or expert, or to simply note that a change was agreed but without identifying the proposed wording or location of the change.

RRV's Final changes are captured in Appendix F of Report No. 2 in a format that is consistent with the EMF content. Appendix F identifies where those changes are supported and recommended by the IAC or recommended with further changes. Appendix F also includes IAC recommendations to provide additional mitigation measures. The IAC's additional recommendations are also included in Chapters 4 to 13 and Table 11 of this Report.

## 1.13 Limitations

### (i) Reference design

The EES has been prepared around a reference design within a defined corridor to establish the potential impacts of the Project. The Reference design represents one possible design solution with the identified mitigation measures providing guidance around final Project design considerations. The reference design approach is legitimate given the Project is not funded, and in this instance was resolved sufficiently to understand some of the more significant impacts on the environment, landscape, and cultural and historic heritage. This enabled the IAC to consider the impacts consistent with the evaluation objectives and Terms of Reference. However, the approach had the disadvantage of not being sufficiently detailed to understand the full impact of different elements of the Project such as the visual resolution of extensive cuts on the landscape, amenity impacts of elevated carriageways and noise walls for adjacent residents or capacity for meaningful screening landscaping, or further native vegetation retention.

The EES, and particularly the EMF contains an extensive array of mitigation measures and associated management documents which propose to deal with these issues at the design and construction stage. It was not entirely clear to the IAC how these disparate but interrelated elements come together to inform the final Project design. This concern is further complicated because the Project is not yet funded; the different responsibilities of RRV, Major Roads projects Victoria (MRPV) and the contractor; and the potential to lose some of the goodwill expressed by RRV to embrace design enhancements that were discussed during the Hearing and identified in this Report. So too might some of the more significant design ideas associated with wildlife crossings including the land bridge, which the IAC considers fundamental to a successful project design.

Accordingly, the IAC considers that a design management document is required as part of the EMF to provide an overarching reference point for detailed design considerations. What this document looks like and its role is discussed in more detail in Chapter 13.

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<sup>11</sup> Document 69

**(ii) RRV's proposed changes to EES documents**

RRV's proposed Day 1 and Final changes to EES documentation (other than those relating to the EMF Chapter) included changes to EES Technical Appendices and Attachments to respond to identified minor errors, expert evidence and administrative changes for consistency. While the changes were articulated during the Hearing and at face value appear to be reasonable, they have not been examined in any detail by the IAC. This is because the EES document is a point in time assessment. The document as exhibited is the document which assesses the impacts, and changes to it (other than the EMF which carries forward through the Incorporated Document) serve little purpose moving forward. The IAC has however included RRV's summary of these changes in Appendix H of Report No. 2 because of the reliance on a reference design and the potential long lead time between final EES assessment, project funding and commencement of detailed design.

**1.14 Acknowledgements**

The IAC thanks all who participated in the IAC process. It appreciates the way in which all parties participated in the Hearing both online and in person. The IAC heard considered and often heart-felt submissions from affected landowners and community members. It appreciated those contributions and found them valuable in understanding particular landowner concerns about the Project's impact on them and the future enjoyment of their land.

The IAC acknowledges RRV's assistance in setting up and hosting the online Hearing sessions and document sharing platform, providing technical support to the IAC and parties, and arranging a local venue for parties wishing to present in person. RRV and its advocate team were prompt in providing additional information or in taking on board submitter concerns and IAC questions.

The IAC appreciated the IAU's EES process overview and time taken by Talia Schlen to participate.

The IAC also appreciated the contributions of the Council officers who attended all Hearing days and provided important context and local knowledge and helpful information to the IAC when requested in addition to their submission.

The IAC thanks the WTOAC for their participation in the Hearing and their considered submission.

The IAC particularly thanks the office of Planning Panels Victoria for its ongoing support and assistance throughout the process, with special acknowledgment to Kimberly Martin, Senior Project Officer.

## 2 The Project

### 2.1 Introduction

For context, this chapter provides a high level overview of the key elements of the Project drawn from the EES. For more specific or detailed information please refer to EES Chapter 4.

### 2.2 Project study area

Figure 1 outlines the Project study area (shaded mauve) in which four alignment options were investigated and the 250 metre wide corridor (coloured dark purple) to accommodate the preferred Bypass corridor (Option C2).

**Figure 1** Project study area and alignment corridor



Source: EES Figure 1.2

The EES describes the preferred alignment as follows:

From the western tie-in point, approximately 3 km from the Beaufort township, the alignment leaves the existing Western Highway and deviates east then north-east, following the northern side of a gully formed by a tributary of Yam Holes Creek. The alignment then passes over Back Raglan Road and heads in a south-east direction across the Yam Holes Creek floodplain, to the north of the Beaufort Trotting Track. Crossing Main Lead Road, the alignment ascends into the southern extent of Camp Hill State Forest, then descends to form a full diamond interchange at Beaufort-Lexton Road. The alignment crosses Yam Holes Creek and Racecourse Road, before bearing south, south-east and crossing the Melbourne-Ararat rail line. The bypass then re-joins the existing Western Highway at an interchange approximately 4.5 km to the east of Beaufort.

### 2.3 Key elements of the Project

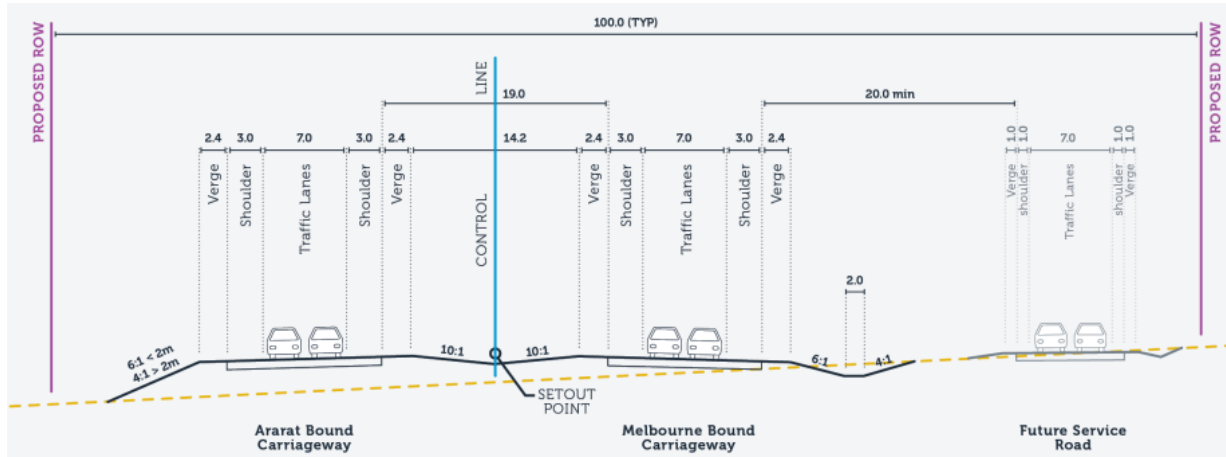
The Project adopts a reference design for the EES to determine the potential impacts. The key elements of the project are summarised below:

**(i) Bypass carriageway and interchanges**

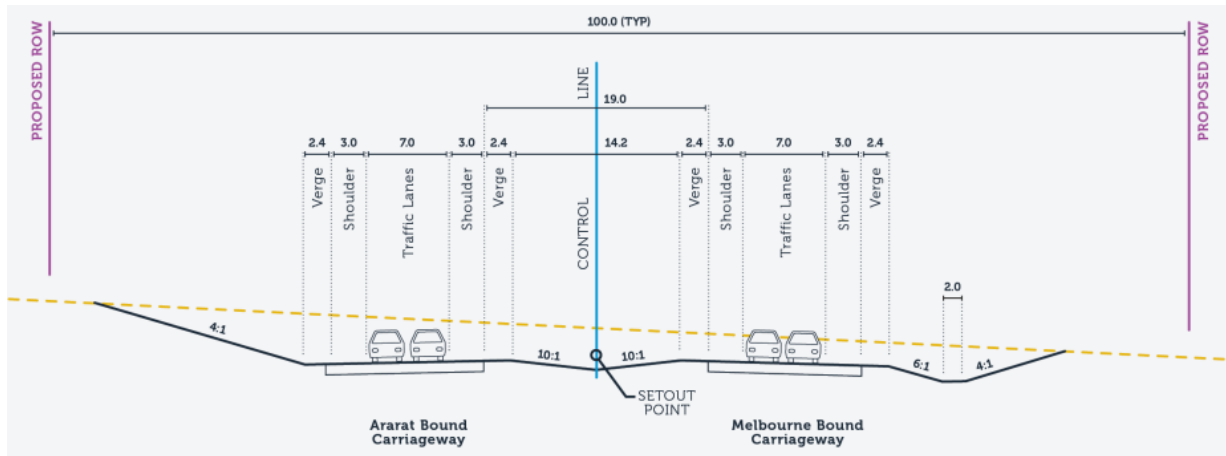
The bypass (C2 corridor alignment) comprises an approximately 11 kilometre long, freeway standard road designed to accommodate 120 kilometres per hour speeds and proposed to be signposted for 110 kilometres per hour.

Each carriageway would have two 3.5 metre wide lanes, with a 3 metre wide shoulders and 2.4 metre wide verges. The typical bypass cross sections are shown in Figure 2.

**Figure 2 Bypass dimensions**



Source: EES Figure 4.4 Typical cross section in fill



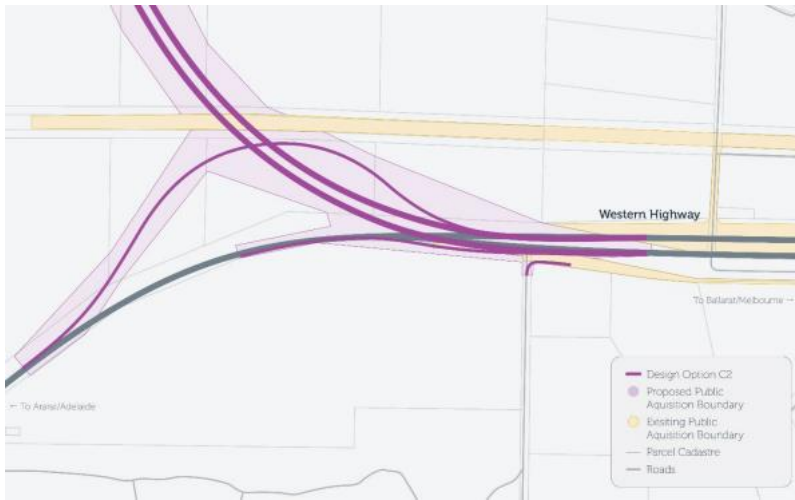
Source: EES Figure 4.5 Typical cross section in cut

The Project proposes three interchanges:

- two tie in points to the Western Highway at the western (Figure 3) and eastern (Figure 4) ends of the Bypass
- a diamond interchange at the connection of the Bypass with the Beaufort-Lexton Road (Figure 5).

The main areas of fill would occur at bridge and interchange locations, with the largest cut and fill area north and north east of Camp Hill. A total of 2,786,500 cubic metres of fill is required to build up the road in certain areas, while 1,438,400 cubic metres of material is to be removed from cut areas.

**Figure 3 Western Highway - eastern bypass tie in**



Source: EES Figure 4.9

**Figure 4 Western Highway - western bypass tie in**



Source: EES Figure 4.7

**Figure 5 Beaufort-Lexton Road bypass interchange**



Source: EES Figure 4.8

**(ii) Bridges, culverts and waterway crossings**

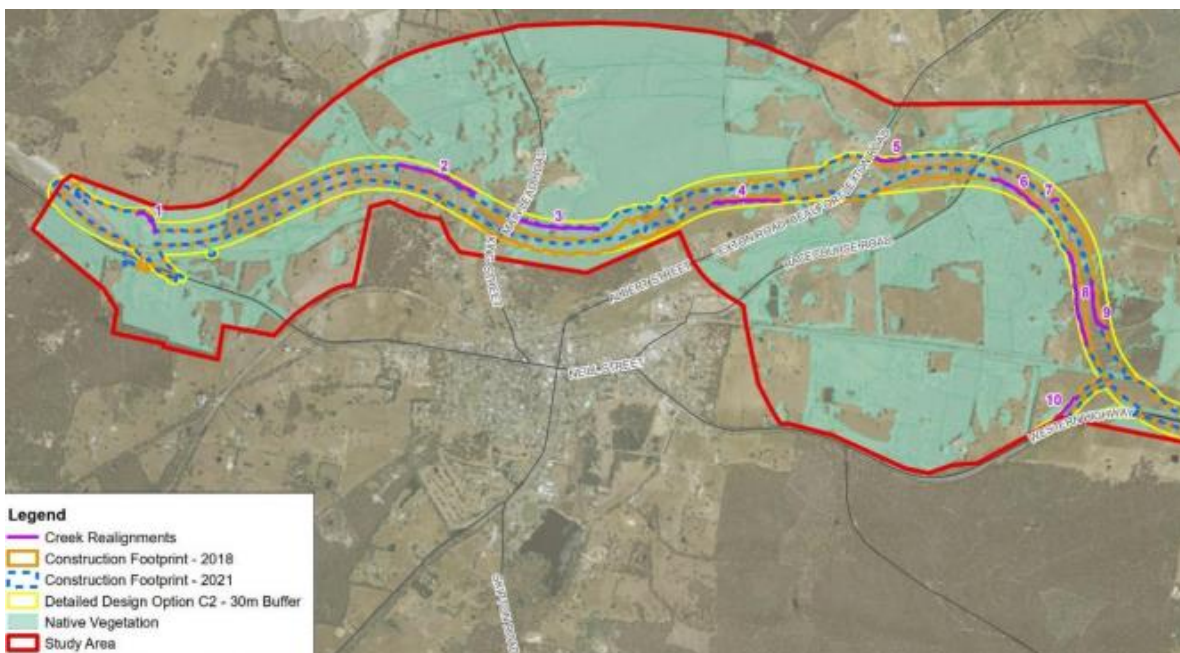
The preferred alignment provides for bridge structures over:

- the Melbourne-Ararat rail line
- the local road network:
  - Main Lead Road
  - Racecourse Road
  - Back Raglan Road
  - Beaufort-Lexton Road as part of the diamond interchange
  - Western interchange bridge
- Yam Holes Creek and its tributaries (14 waterway bridge and box culvert structures).

**(iii) Watercourse realignment**

The preferred C2 alignment involves 10 minor watercourse realignments to maintain waterflows of Yam Holes Creek tributaries as shown in Figure 6.

**Figure 6** Creek realignments



Source: EES Figure 4.13

**(iv) Noise barriers**

The preferred alignment proposes the installation of 2 metre high noise barriers in selected locations as shown in Figure 22 in Chapter 10.3.

**(v) Other project elements**

The Project will include a range of construction related activities:

- preconstruction site delineation and compound setup
- establishment of environmental and traffic controls
- route clearance and relocation or protection of utilities
- construction drainage, sediment and erosion control measures
- general earthworks including cut and fill, treating contaminated soils if required



- development of structures, interchanges, batters, drainage and pavement
- ancillary infrastructure including lighting, safety barriers, signage and line marking
- landscaping and site reinstatement.

**(vi) Construction techniques**

The construction methodology is summarised in Section 4.16 of the EES. It includes methods proposed to manage impacts such as concentrating works during standard construction work hours (5.5 days/week with reduced operational hour on Saturday) where possible and compliance with the Environmental Management System and Construction Environmental Management Plan (CEMP).

## 2.4 Project study area features and conditions

Most of the Project study area is freehold land used for farming purposes. The topography is characterised by lower elevations in the Yam Holes Creek floodplains to the west of Main Lead Road and east of Beaufort-Lexton Road, and the higher elevations of Camp Hill State Forest to the north of the Beaufort township. Key landscape elements are described in EES chapter 15.

A number of Study and Project area features were viewed by the IAC during its unaccompanied site inspection.

EES Chapters 9, 10 and 15 identify the following study area biodiversity, cultural heritage and landscape conditions:

- Biodiversity:
  - 16 Ecological Vegetation Classes (EVC) including two EPBC Act listed threatened ecological communities (Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plain, and White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Grasslands) and one Flora and Fauna Guarantee Act 1988 (FFG Act) threatened community (Victorian Temperate Woodland Bird Community)
  - nine high value wetlands
  - 14 significant fauna species considered to have a moderate to high likelihood of occurrence
  - 160 native fauna species recorded
  - 471 flora species of which 350 were native and 121 introduced species.
- Aboriginal and cultural heritage:
  - areas of Aboriginal cultural heritage sensitivity within the Yam Holes Creek catchment
  - 16 registered historic places with eight associated with gold mining, including one located in the C2 corridor and another site previously identified but not included on the Victorian Heritage Inventory.
- main landscape character types:
  - semi-enclosed rural valley at the eastern and western ends containing undulating topography and dispersed trees
  - township fringe areas characterised by flat to gently undulating topography, vegetation along boundary lines and road reserves containing low scale residential areas
  - Ecological Conservation Reserve comprising Camp Hill State Forest and reserve areas, elevated and undulating topography of dense bushland character.

## Beaufort township

The 2016 Census identified that the Beaufort-Snake Valley District Statistical Area had a population of 4,395, with *Victoria in the Future*, DELWP 2019 projecting a 2036 population of 4,526 (0.4 per cent growth rate).

RRV identified that Beaufort township's population was approximately 1,100.<sup>12</sup>

Beaufort is generally located on the south side of Yam Holes Creek and laid out in a grid. The town centre is situated on Neill Street (Western Highway) which bisects the town, separating the north of the town from the south. The main residential areas are located south of the Melbourne-Ararat rail line and west of the town centre (within the General Residential Zone), with some smaller areas to the east adjacent to the town centre and in the area between Camp Hill State Forest and Yam Holes Creek to the north. Rural living areas extend south of the established residential areas and of the proposed eastern and western tie-ins. There are three pockets of Low Density Residential Zone land located on the eastern township boundary, to the north-east of Camp Hill summit and to the north-west near Deep Lead Road and Back Raglan Road. An industrial area is located to the east, adjacent to the railway line and north-east within the flatter areas of the Yam Holes Creek valley.

The C2 alignment runs predominantly through land within the Farming Zone used for agricultural and rural residential purposes to the north of the township. At its closest point, the C2 alignment is located to the immediate north of two Low Density Residential Zone areas and the Camp Hill lookout and Recreation Reserve.

## Camp Hill State Forest

The C2 corridor (and all corridor options) dissect the Camp Hill State Forest which is managed by DELWP. It is a significant habitat and landscape feature offering views over the town (particularly from Camp Hill lookout) and surrounds and is an important community asset providing opportunity for informal recreational activities such as bush walking, gold prospecting and mountain bike riding. It is a dominant landscape feature viewed from the Beaufort township. The nearby Camp Hill picnic area performs as a local and regional park. Vegetated areas to the west and north of the state forest area are within the Rural Conservation Zone.

## Yam Holes Creek and wetlands

Yam Holes Creek is the main waterway flowing east through Beaufort, with three smaller creeks feeding into the Yam Holes Creek within the township itself. It has a catchment of approximately 70 square kilometres and is subject to large seasonal flow variations. It is valued for its water management and ecological functions and its cultural history. There are seven wetlands in the project area located predominantly along the Yam Holes Creek valley.

## 2.5 Land ownership

Appendix G of the EES identifies that alignment C2 involves:

- 66 land parcels within 25 separate ownerships
- four dwellings, with one dwelling directly impacted

<sup>12</sup> RRV introductory Hearing presentation (Document 38)

- the acquisition of 243.42 hectares of land including the partial acquisition of 47 parcels of land and four Crown land parcels
- 22 private landowners permanently impacted through land severance or altered access.

The Project's potential impacts on property owners including amenity impacts from noise and dust, stormwater, visual outlook and loss of access are discussed in Part B of this Report.

## 2.6 Project approvals

### (i) Legislative and policy context

The key elements of the legislative and policy contexts are described in Appendix E of Report No. 2. The evaluation objectives set out in the Scoping Requirements are described in Table 1 of this Report.

### (ii) Project approvals

Clauses 21 and 22 of the Terms of Reference set out the main approvals and consents that will be required for the Project:

- planning approval, in the form of draft PSA which proposes the application of:
  - a Public Acquisition Overlay (PAO1)
  - a Special Control Overlay (SCO) supported by controls set out in the *Beaufort Bypass Project Incorporated Document, May 2021* (Incorporated Document) to regulate the use and development of the land for the project
- an approved CHMP under the *Aboriginal Heritage Act 2006*
- approval under the *Heritage Act 2017* for the removal or damage of places registered on the Victorian Heritage Register and Victorian Heritage Inventory
- a permit to remove listed flora under the FFG Act
- an authority to take or disturb wildlife under the *Wildlife Act 1975*
- approvals for works on waterways under the *Water Act 1989*.

In addition, the Project was determined to be a controlled action under the EPBC Act and will require approval under this Act before it can proceed.

## 2.7 Environmental Management Framework

### (i) Structure and purpose

Chapter 17 of the EES includes a draft EMF. The EMF provides integrated measures for mitigating and managing the Project's potential environmental effects.

### (ii) Management plans and strategies

The primary implementation of the EMF is through the preparation of a series of Management Documents (MD):

- to be prepared by RRV:
  - Native Vegetation Offset Strategy (MD07)
  - EPBC Act Offset Management Strategy: Golden Sun Moth (MD08)
  - CHMP (MD10)
- to be prepared by the design and construction contractor:

- Environmental Management System (EMS)(MD03)
- CEMP (MD04)
- Traffic Management Plan (MD05)
- Access Management Strategy (MD06)
- Threatened Species Management Plan (MD09)
- Groundwater Management and Monitoring Plan (MD11)
- Community and Stakeholder Engagement Plan (MD12)
- Business Disruption Plan (MD13)
- Construction Dust Management Plan (MD14)
- Construction Noise and Vibration Management Plan (MD15)
- Landscape Design Plans (MD16)
- Spoil Management Plan (MD17)
- Acid Sulfate Soil Management Plan (MD18)
- Occupational Health and Safety Plan (MD19)
- Sustainability Management Plan (MD20)
- Operations and Maintenance Plan (MD21).

### (iii) Mitigation measures

The EES proposes mitigation measures to address specific issues identified in the assessment of the Project's environmental impacts. The mitigation measures build on the recommendations in the specialist impact assessments in the EES Technical Appendices and Attachments.

Each relevant chapter of the EES includes a summary of the assessment of impacts and a set of mitigation measures (at design, construction or operation phases) designed to avoid or minimise those impacts. The EMF includes a consolidated set of mitigation measures (including those that apply to a number of the different impacts to be evaluated).

Table 3 provides references to where the mitigation measures are listed in the EES main chapters and consolidated in the EMF and the associated management documents. The IAC notes that the exact wording for mitigation measures in the EES main chapters does not always correlate with the wording used in the EMF.

**Table 3 Reference for mitigation measures contained in the EES (main chapters) and EMF**

| Theme/issue                                      | Mitigation measure Tables | Mitigation measure No. Management Document (MD#)       |
|--|---------------------------|--|
| Traffic  | Table 8.12                | TO1, T02   |
|  | Table 17.7 (EMF)          | TO1, T02, SO2, RE04<br>MD05                            |
| Biodiversity and habitat<br>- Threatened species | Table 9.20                | BH01 - BH11  |
|  | Table 9.21                | BH12 – BH32  |
|  | Table 17.8 (EMF)          | BH01 – BH32, NV01, S06<br>MD04, MD09, MD15, MD16, MD21 |

| Theme/issue                      | Mitigation measure Tables | Mitigation measure No. Management Document (MD#)                              |
|----------------------------------|---------------------------|---|
| Cultural heritage                |                           |   |
| - Aboriginal cultural heritage   | Table 10.6                | AH01 – AH05   |
| - Historic heritage              | Table 10.7                | HH01 – HH03   |
|                                  | Table 17.9 (EMF)          | AH01 – AH05, HH01 – HH03<br>MD04, MD10  |
| Catchment values and hydrology   |                           |   |
| - Surface water                  | Table 11.17               | SW01 – SW04   |
| - Groundwater                    | Table 11.18               | GW01  |
|                                  | Table 17.10 (EMF)         | SW01 – SW08, GW01<br>MD04, MD11, MD16   |
| Social                           | Table 12.04               | S01 – S08   |
|                                  | Table 17.11 (EMF)         | S01 – S08, RE01 - RE05, T02, LV03, NV01, BH07<br>MD06, MD12, MD13, MD15, MD16 |
| Land use and economics           | Table 13.7                | RE01 – RE05, LU01   |
|                                  | Table 17.12 (EMF)         | RE01 – RE05, LU01, S01, S02, S03, S07, S08, T02<br>MD06, MD13                 |
| Amenity                          |                           |   |
| - Air quality                    | Table 14.18               | AQ01, AQ02  |
| - Noise and vibration            | Table 14.19               | NV01 – NV03   |
|                                  | Table 17.13 (EMF)         | AQ1, AQ02, NV01 – NV03, S06, BH07<br>MD14, MD15                               |
| Landscape and visual amenity     | Table 15.13               | LV01 – LV04   |
|                                  | Table 17.14 (EMF)         | LV01 – LV04, S05<br>MD04, MD16, MD21  |
| Soils, geology and contamination | Table 16.6                | SG01 – SG0  |
|                                  | Table 17.15 (EMF)         | SG01 – SG05<br>MD04, MD17, MD18, MD19   |

#### (iv) Project delivery and operations

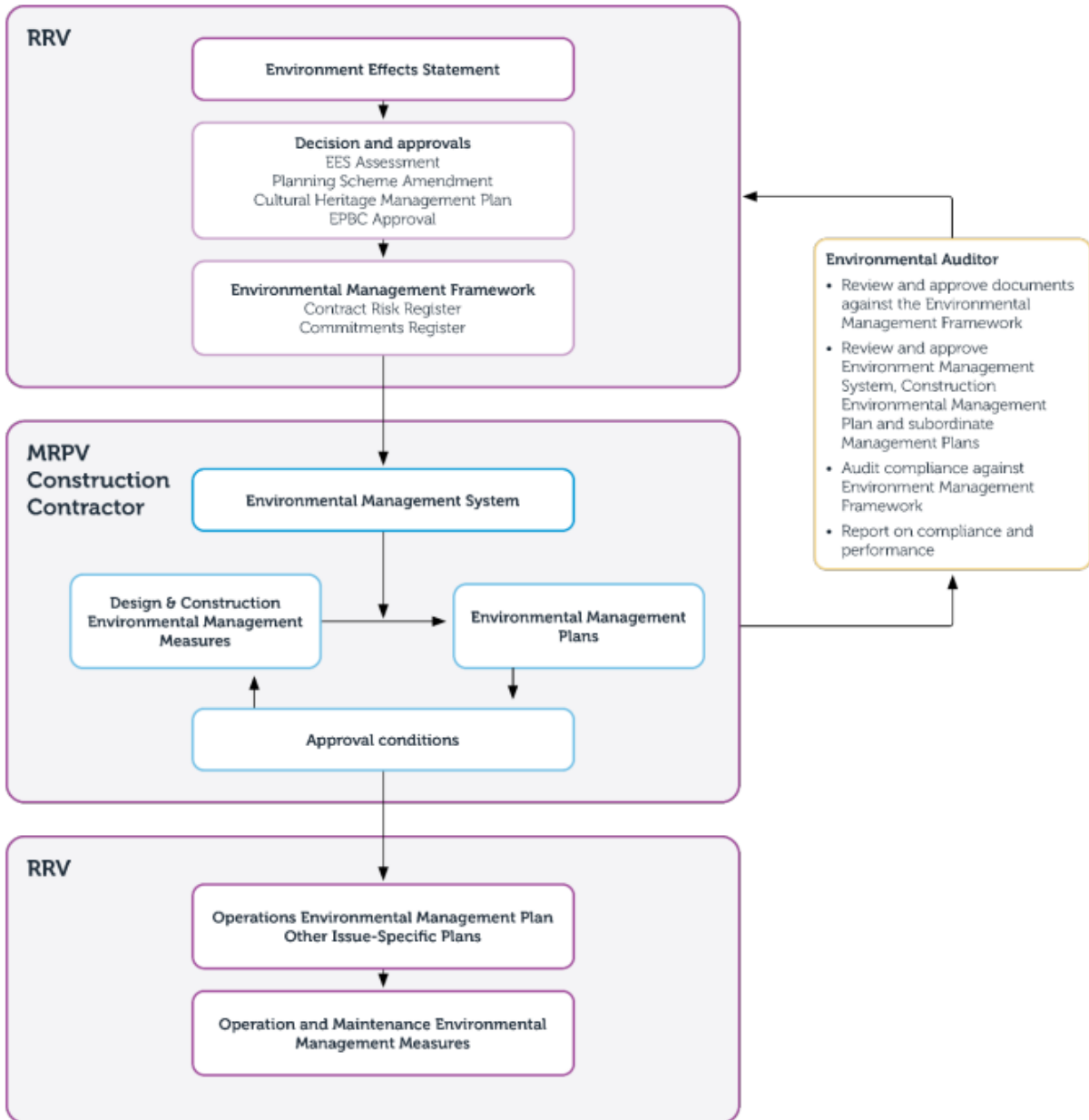
The Project impacts have been based on a reference design with detailed design to commence when the Project is funded.

MRPV will manage and oversee the delivery of the Project including the appointment of a contractor to design and construct the Project and prepare a number of the management documents. MRPV will also be responsible for stakeholder engagement, overseeing and managing the progress and compliance of the construction contractor process. This includes regular auditing of contractor compliance with the EMF, Environmental Management System, CEMP and other Environmental Management Plans by an appointed independent environmental auditor.

It is expected to take two years to complete the Project. Two years after completion, responsibility for the ongoing operation and maintenance of the bypass will revert to RRV.

The key roles and responsibilities for the preparing the EES, design and construction of the project and operational phases of the project are set out in Figure 7. Arrangements for performance management including compliance and reporting are set out in EMF Table 17.3 and Chapter 17.7.

**Figure 7 Beaufort Bypass Environmental management structure**



Source: EES Chapter 17.4

### 3 Project rationale and corridor options

#### 3.1 Project rationale

The project rationale is included in EES Chapter 2. In summary, the key drivers for the Project are:

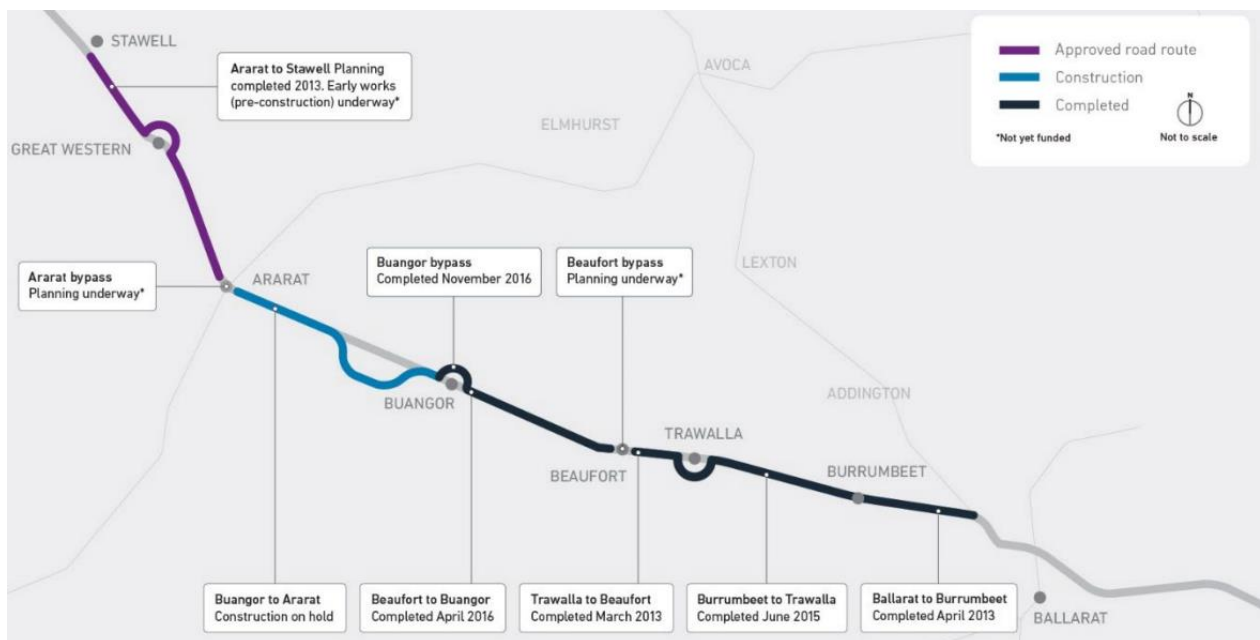
- Delays on the Western Highway increasing transport costs and reducing competitiveness of primary producers in western Victoria.
- High freight traffic through Beaufort substantially diminishes the liveability and tourist potential of the town
- Road safety in Beaufort is compromised by the high freight and commuter traffic volumes.

EES Chapters 1 and 2 explain the Western Highway is being progressively duplicated between Ballarat and Stawell over three stages (Figure 8). Beaufort is the last township through which the Western Highway passes before metropolitan Melbourne.

More than 6,000 vehicles travel along the Western Highway west of Ballarat each day with heavy vehicles making up 25 per cent of these vehicles. Through Beaufort township, the Western Highway comprises a 50 kilometres per hour two-lane single carriageway with one set of traffic lights between Neill Street and Ararat Road. There were 10 vehicle crashes and one fatality on the Western Highway in the vicinity of Beaufort between January 2014 and May 2019.

Agriculture is the highest contributor to the region’s economy with additional focus on timber plantations and processing. Improved freight movement and efficiency is expected to provide a commercial advantage to these industries.

**Figure 8 Western Highway upgrade program**



Source: EES Chapter 2.3

## 3.2 Project corridor options

### (i) Introduction

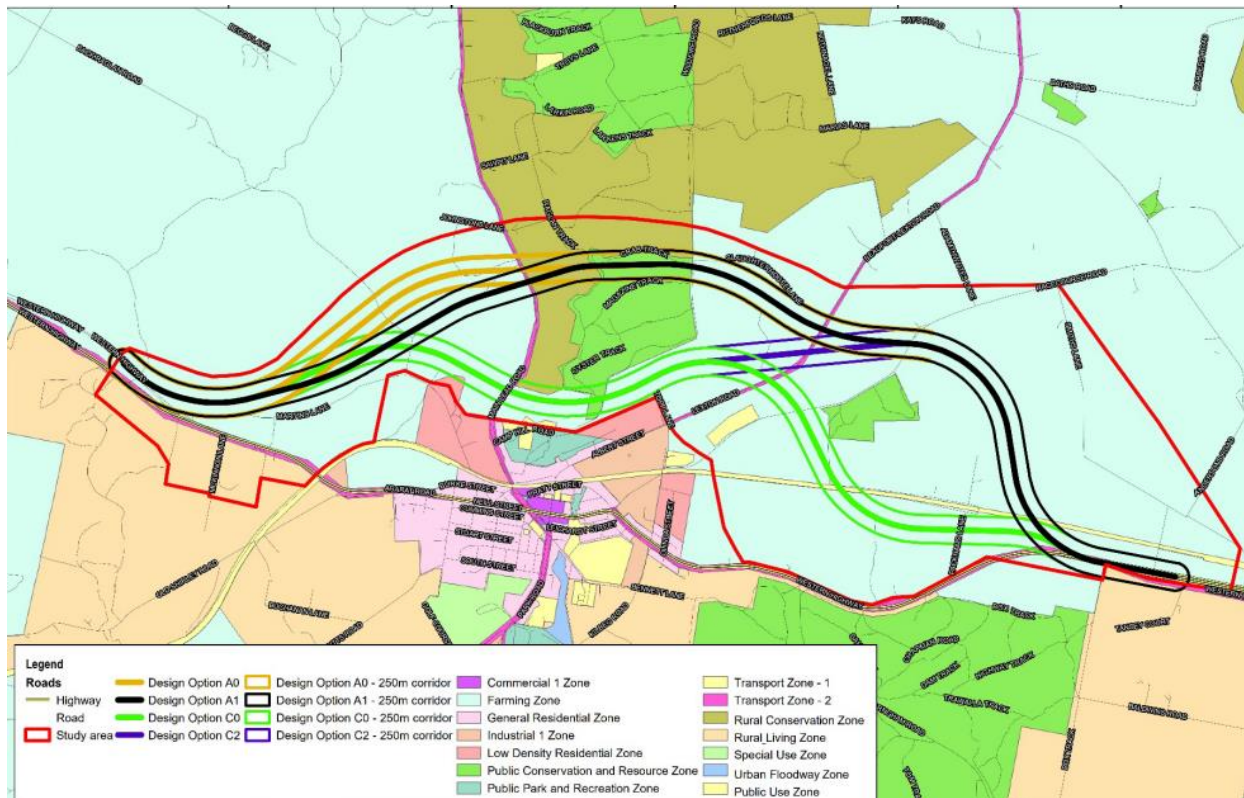
The Scoping Requirements required the EES to consider and evaluate the likely social, strategic, economic and environmental effects of alternative route alignment options.

This chapter briefly outlines the four bypass alignment options (A0, A1, C0 and C2) which were selected for impact assessment following previous investigations in 2012, 2015 and 2017. These investigations included a review of options to the south of Beaufort which were subsequently discounted. Alignment C2 was the preferred option and the focus of the reference design and EES.

### (ii) Options analysis

The detailed analysis of the four bypass alignment options is set out in EES Attachment IV – Options Assessment Report and summarised in EES Chapter 3. Figure 9 shows the four alignments in the context of Camp Hill (lime green), Beaufort township and Farming Zone (light green)

**Figure 9** Beaufort Bypass corridor options



Source: EES Technical Appendix G Figure 5.1

The Options Assessment Report sets out the background of options analysis and the options assessment process. It describes the four scenarios as follows:

- The A0 alignment option is 11.2km in length and is the northern most bypass option. From the western tie-in point, approximately 3km from the Beaufort Township, this alignment curves north-northeast. The alignment passes over Main Lead Road then climbs through the State Forrest north of Camp Hill. From here it descends to Beaufort-Lexton Road, before re-joining the Western Highway at its eastern extent, approximately 4.5km from Beaufort. Bridges will pass over Main Lead and Racecourse Roads, as well as over the Melbourne-Ararat train line.



- The A1 alignment option is 11.1km in length. Approximately 3km from the Beaufort Township, this alignment deviates northeast from the Western Highway, staying slightly south of alignment A0 until a point east of Main Lead Road, where it re-joins the A0 alignment. The A1 alignment will re-join the Western Highway approximately 4.5km to the east of the township. Bridges will pass over main Lead and Racecourse Roads, as well as over the Melbourne-Ararat train line.
- The southernmost alignment option, C0 is approximately 10.6km in length. The C0 option follows the A0 option from the western tie-in point, approximately 3km from the Beaufort township, before deviating at Back raglan Road in a more easterly direction almost parallel to the existing Western Highway. This option passes close to the north of Camp Hill, before curving south-east to Beaufort-Lexton Road. The C0 alignment will re-join the existing Western Highway approximately 4.5km to the east of the township. Bridges will pass over Main Lead and Racecourse Roads, as well as over the Melbourne-Ararat train line.
- Alignment option C2 is 11km in length and follows the C0 option from the western tie-in point (approximately 3km from the Beaufort township) until Beaufort-Lexton Road, where it continues in an easterly direction and joins the A0 alignment near Racecourse Road. The C2 alignment will re-join the existing Western Highway at the eastern tie-in point, approximately 4.5km from the township. Bridges will pass over Main Lead and Racecourse Roads, as well as over the Melbourne-Ararat train line.

In recognition of the complexity and multi-facet nature of the Project, RRV developed a comprehensive Revised Options Assessment Matrix to ensure that appropriate level of rigour and robustness was fully incorporated into the assessment and selection of the preferred alignment.

The assessment adapted an Objective Based Evaluation Matrix methodology to provide an assessment tool which took into account impacts rather than benefits, included qualitative elements, and included a range of scoring/rating and sensitivity analysis by factoring in:

- six of the EES scoping requirements – Biodiversity, Catchment Values and Hydrology, Cultural Heritage (Aboriginal and Historic), Social and community, Amenity and Landscape and Visual
- objectives where quantifiable impacts are clearly stated within the preliminary environmental impact assessment technical reports
- a triple bottom line approach.

The approach utilised:

- the following key assessment criteria:
  - Environmental:
    - extent of native vegetation to be cleared (all classes) per alignment
    - threatened vegetation communities within alignment corridor
    - wild life corridor/connectivity impact
    - Strategic Biodiversity Value Score per alignment by EVC conservation Status
    - condition score of native vegetation to be removed per alignment by EVC Conservation Status
    - construction within floodplains
  - Social:
    - impact on number of known or registered sites by proposed alignment
    - acquisition and property impacts
    - number of residential properties (without mitigation) that would be directly impacted by noise post construction of bypass
    - air quality impacts - number of sensitive receptors within 100 metres, 200 metres and 500 metres of the alignments

- visual impact – number of dwellings within 500 metres of the alignments
- Economic:
  - construction cost per alignment.
- six scoring scenarios that considered different weightings and potential mitigation impacts
- three scoring sensitivity scenarios.

**(iii) Outcomes**

The evaluation of the four alignment alternatives is summarised in Figure 10.

**Figure 10 Bypass alignment option scenario scoring**

| Scenario               | Alignment A0 | Alignment A1 | Alignment C0 | Alignment C2 |
|------------------------|--------------|--------------|--------------|--------------|
| Scenario 1             | 128          | 123          | 126          | 111          |
| Scenario 2             | 18           | 22           | 20           | 27           |
| Scenario 3             | 45.85        | 44.89        | 50.01        | 43.95        |
| Scenario 4             | 81.03        | 77.59        | 93.98        | 74.12        |
| Scenario 5             | 24.16        | 22.70        | 27.03        | 19.44        |
| Scenario 6             | 47.74        | 42.69        | 56.16        | 35.49        |
| Sensitivity Scenario 1 | -6           | -3           | -5           | 9            |
| Sensitivity Scenario 2 | -3           | 2            | -4           | 11           |
| Sensitivity Scenario 3 | -11          | -6           | -9           | 5            |

Key:

| 1st overall | 2nd overall | 3rd overall | 4th overall |
|-------------|-------------|-------------|-------------|
|             |             |             |             |

Source: EES Chapter 3.6.2 Table 3.8

The best performing option was the C2 Alignment, while the worst performing alternatives were the A0 and C0 Alignments. The primary drivers for this outcome were due to the C2 alignment having:

- the lowest amount of total native vegetation clearance
- the least impact on threatened vegetation communities identified under the EPBC Act and FFG Act
- the least impact on wildlife corridors, particularly the core habitat areas
- the lowest amount of native vegetation with high conditions to be removed by Ecological Vegetation Class Conservation Status
- the lowest potential impacts on known or registered sites of Aboriginal and historic heritage significance
- the smallest number of dwellings within 100, 200 and 300 m of the alignment corridor from an air quality impact perspective.

The methodology was independently peer reviewed and found reasonable and defensible.

Following the selection of the preferred alignment, additional investigations were undertaken to further inform environmental, social and economic impact assessments. Key refinements were made to all assessments in this phase to refine the reference design impacts.

### 3.3 Discussion and findings

#### Project rationale

Two submissions (Submissions 3 and 7) were critical that the Project was focused on travel times ahead of other considerations including the environment and Aboriginal cultural heritage.

The IAC considers that the EES Options Assessment Report sets out a very clear and sound rationale for the Project. The project is effectively the missing element of the Western Highway upgrade between Stawell and Ballarat and is consistent with the *VicRoads Western Highway M8/A8 Corridor Strategy – Deer Park to South Australian Border*.<sup>13</sup> The IAC is confident the Project will deliver its anticipated benefits both in terms of improvements to the freight network, road safety and reduced travel times and the reduction of traffic volumes and truck movements through the centre of Beaufort. The IAC considers that the benefits of the Project are quantifiable and real.

The Project will create a range of construction and permanent impacts on some landowners, the environment and the wider landscape. These issues are significant and are discussed in the remainder of this Report. They do not however undermine the Project rationale or anticipated benefits.

The IAC considers it evident that the Project will provide for an effective Western Highway bypass of Beaufort and realise significant traffic and transport benefits with:

- enhanced capacity
- reduced traffic including heavy/commercial vehicles travelling through the Beaufort town centre
- reduced through traffic travel times
- enhanced safety, amenity and connectivity of the local road network for all road users.

#### Project corridor options

No submissions were critical of the process adopted by RRV to determine the preferred option, although one submission (Submission 23) favoured alternate alignments through crown land that did not affect homes.

The IAC considers that the EES documentation sets out a very detailed analysis of the option analysis methodology and the basis for supporting alignment option C2. The methodology provided a transparent, tailor designed and holistic approach for identifying and analysing potential impacts that weighted environmental, landscape and amenity impacts ahead of road design criteria or traffic efficiencies. For the reasons set out in the remainder of this Report the IAC agrees with the conclusions of the options analysis that alignment C2 is the preferred alignment subject to changes to the mitigation measures in the EMF to ensure impacts are managed to an acceptable level. The C2 option is superior to options A0, A1 and C1 in terms of its lower impacts on habitat values, flora and fauna and to cultural and historic heritage values.

The IAC finds:

- The Project is capable of delivering freight transport, travel and safety benefits to users of the Western Highway and improving the amenity and functionality of Beaufort's town centre to enable it to become a destination town rather than a highway service town

<sup>13</sup> Refer to description in Chapter 1.15 IAC Report No. 2 Appendices

- The EES's assessment of the social, strategic, economic and environmental effects of alternative route alignment options met the Scoping Requirements.
- For the reasons identified in the following chapters alignment option C2 is the most appropriate corridor alignment.

## PART B: ENVIRONMENTAL EFFECTS OF THE PROJECT

Part B includes issue-specific chapters addressing the impacts of the Project, based on the themes addressed in the main EES chapters. The final chapter in this Part draws together the IAC's advice on matters of national environmental significance.

## 4 Traffic and transport

### 4.1 Introduction

Traffic and transport are considered in the EES:

- Chapter 8
- Technical Appendix M (Traffic and Transport Impact Assessment)
- Attachment III Functional Design.

The evaluation objective is:

To provide for an effective Western Highway bypass of Beaufort, to improve travel efficiency, road safety, and capacity, as well as improve amenity and local transport network in Beaufort

Considering Project design, construction and operation, the EES proposed the following measures to manage and ameliorate adverse traffic and transport impacts:

- mitigation and contingency measures during the construction phase (T01, T02 – see EES Table 8.12)
- mitigation measures during the operations phase (T02 – see EES Table 8.13).

Technical Appendix M concluded that the bypass was appropriate on traffic engineering grounds.

Principally, road efficiency, capacity and safety were the fundamental (traffic and transport) drivers and the Options Assessment Report concluded that all four alignments realised similar traffic and transport benefits compared with the ‘no project’ scenario.<sup>14</sup>

### 4.2 Network performance assessment

#### (i) What did the EES say?

The EES Technical Appendix M identified the Project would:

- reduce traffic including heavy/commercial vehicles travelling through the Beaufort town centre
- reduce through traffic travel times
- enhance safety and connectivity of the local road network for all road users.

#### Traffic reduction and impact on road network

The bypass would remove approximately 60 to 70 per cent of through traffic from the Beaufort town centre. Notably the Western Highway (Neill Street), was forecast to carry around:

- on a ‘no bypass’ scenario - 14,000 vehicles per day including 2,500 trucks and other heavy vehicles
- with a bypass - 7,500 vehicles per day including 500 heavy vehicles.

With the proposed interchange, Beaufort-Lexton Road traffic conditions were anticipated to remain stable at around 600 to 700 vehicles per day.

Other local roads within the study area were not anticipated to experience significant changes in traffic flow with traffic volumes less than 2,000 vehicles (usual amenity threshold for local streets).

<sup>14</sup> Attachment IV – Options Assessment Report Section 5.3.1 Table 6.

Connectivity to the broader road network would be maintained with the proposed interchanges providing access into and out of the Beaufort township at:

- Western tie in – accommodates vehicles arriving from or departing towards Ararat
- Beaufort-Lexton Road – all movements
- Eastern tie in – accommodates vehicles arriving from or departing towards Ballarat.

### **Travel time savings**

Alignment option C2 travel time savings are in the order of 1 minute and 19 seconds to 2 minutes 33 seconds compared to driving through Beaufort.

### **Road safety and amenity**

The bypass will improve road safety compared to existing conditions, particularly within the town centre, by reducing traffic volumes and likelihood of crashes occurring. Cyclists and pedestrians will particularly benefit with reduced traffic exposure.

Other benefits include increased township amenity and greater opportunities for streetscape works to enhance the pedestrian realm.

### **Construction phase**

Some of the biggest traffic impacts would occur during the construction phase which is anticipated to take around two years. Potential impacts on the road network relate to:

- increased traffic associated with construction activity including heavy vehicle haulage routes
- construction worker trips to and from the site
- access impacts on the road network.

A detailed Construction Traffic Management Strategy would be required to manage impacts.<sup>15</sup>

#### **(ii) Key issue**

The key issue is whether the Project will realise improvements in road efficiency, capacity and safety.

#### **(iii) Evidence and submissions**

RRV cited the key drivers of the Project and highlighted the importance of the Western Highway as the primary trade route between Melbourne and Adelaide and that there is a growing problem of queuing within the town due to increased traffic, reduced speed limits and lights. The flow on effects for motorists include:

- increased travel times
- less travel time reliability
- greater operating costs
- reduced competitiveness of primary producers in western Victoria.

RRV submitted that the Project will deliver a range of benefits to the local community including:

- removing substantial levels of heavy vehicles from Beaufort which will improve safety and amenity and overall improvements to the local road network

<sup>15</sup> Appendix M Section 7.2

- improving road safety and travel efficiency, by proving a safer and faster way to move along what is a principal trade route, which is expected to provide a commercial advantage to local industries.

RRV submitted that the 'no project' scenario would perpetuate the ongoing unacceptable traffic impacts within the Beaufort township. The C2 alignment will secure an effective bypass of Beaufort and secure all of the benefits associated with the removal of heavy vehicle traffic from the township.

Mr Kelly referred to the evaluation objective and gave evidence:

The concept and functional design for the Project addresses the elements of road efficiency, capacity and safety as noted above [in the evaluation objective] to the appropriate level for this stage of development, from traffic engineering and transport planning perspective. [IAC note]

Many of the submissions focused on access arrangements and 'micro-siting' of particular design elements such as the Western interchange (discussed in the following sections of this Chapter).

The Western Highway Conservation Group (WHCG) submitted that the bypass should be rejected so there would be no environmental impact or biodiversity loss, and that other ways should be explored to bring about safer and faster ways of transporting goods and services. They questioned whether there was a road safety imperative for the bypass and submitted that the Project in its current form should not proceed.

RRV responded that the Options Assessment Report identified the majority of freight traffic between Melbourne and Adelaide was the movement of non-bulk goods. This essentially required goods to be picked up and distributed to different locations requiring flexibility which could only be realised with road-based solutions.<sup>16</sup>

Other community-based submitters (including Submission 1, 5 and 17) supported the bypass and envisaged removing traffic including trucks and heavy vehicles would make a positive contribution to enhancing safety and amenity within the Beaufort township.

#### **(iv) Discussion**

There is little difference between the alignment options in terms of time savings. All had similar construction requirements and impacts on the road network, they all provide travel time savings, reduction in through heavy vehicles movements and improved road safety.

The IAC agrees that the bypass would deliver an overall improvement to network performance. The Project would result in a significant reduction in vehicle movements through the township, with a significant number of these being heavy vehicles. This will provide significant benefits in terms of road efficiency, capacity and safety.

There was no dispute from submitters and the traffic experts that the project would deliver these outcomes, and the traffic experts were not challenged on the key findings of the EES around these beneficial impacts.

With a bypass in place, motorists will realise improved travel times on a safer freeway standard road. Beaufort township will experience a significant reduction in traffic including trucks and heavy vehicles enhancing safety and amenity for all road users.

<sup>16</sup> Attachment IV Options Assessment Report 3.5.2



In response to the WHCG position the bypass should be rejected, the IAC notes long term planning and support for the Western Highway upgrade between Burrumbeet and Stawell has been in place since 2003 with 55 kilometres of duplicated highway already delivered. The Beaufort Bypass is essentially the ‘missing link’ in this program of upgrades.

In-town amenity impacts (discussed in Chapter 10) will only increase with expected increases in heavy-vehicle traffic through town. Further, the Options Assessment Report identified that the majority of freight movement requires a more flexible road-based solution which the bypass provides.

Construction impacts of access are discussed in Chapter 4.4.

#### **(v) Findings**

The IAC finds that:

- The Project would deliver a safe and more efficient road network.
- This benefit is largely the same for each of the four bypass options.

### **4.3 Bypass tie ins and interchange design**

#### **(i) Key issues**

The key issues are:

- western tie in, including the loss of vegetation and connectivity for nearby residents
- Beaufort-Lexton Road, including whether a full diamond interchange is appropriate
- eastern tie in with Western Highway, including potential headlight glare on residents and vegetation loss.

#### **(ii) What does the EES say**

The EES provided information around applicable design standards and ensuring the effective integration of the Project with the local transport network. Key design and mitigation measures included:<sup>17</sup>

- potential design solutions to optimise linkages with the existing road network and maintain or enhance access
- addressing potential risks to road safety.

#### **4.3.1 Western interchange**

##### **(i) What does the EES say**

The proposed western tie-in or interchange consists of a half diamond interchange providing only westbound access (for vehicles travelling towards or from Ararat). The on and off ramps connect back to the existing road network (Western Highway and Martins Lane) with roundabouts. A new T-intersection is proposed onto Western Highway near Drivers Lane to provide local access to Box Cutting Rise and Drivers Lane properties (refer to Figure 4 in Chapter 2.3).

<sup>17</sup> EES Chapter 8 – Traffic and Transport Table 8.2

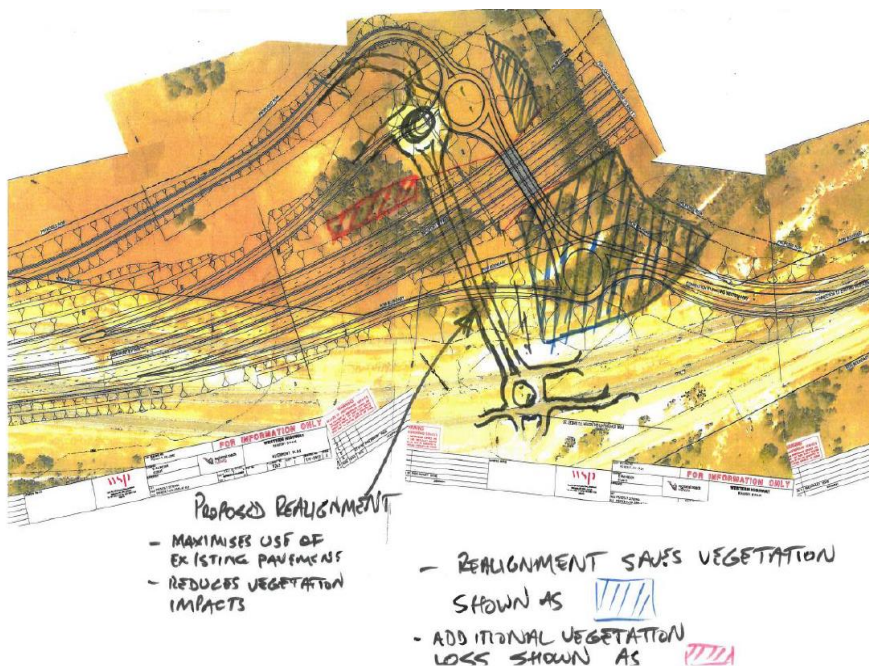
## (ii) Evidence and submissions

A number of submissions (2, 7 and 13) were received regarding the western interchange treatment and its potential modification to:

- minimise the loss of vegetation
- potentially relocate the interchange further west
- provide a full diamond interchange (access in both directions from the bypass)
- create a smaller less intrusive footprint, potentially replacing the roundabouts with T-intersections
- improve and simplify resident access from Box Cutting Rise and Drivers Lane
- reduce the height of the interchange and potential for increased noise and visual intrusion
- address existing issues of localised flooding.

The WHCG proposed an alternative interchange design to reduce the impact on existing vegetation patches (Figure 11). Residents to the south of Box Cutting Lane and Drivers Lane with outlooks toward the proposed works expressed concerns regarding the height and design of the proposed works expressed concerns regarding the height and design of the proposed interchange.

**Figure 11** Western Highway Conservation Group proposed realignment concept sketch



Source: Western Highway Conservation Group submission

RRV submitted it was not necessary to identify the western tie in design elements specifically as this may limit the consideration of other design options to minimise impacts. It noted that the EMF propose further refinement of the construction footprint and minimise impacts on native vegetation. However, RRV's Final changes to the EMF proposed to amend mitigation measure BH01 to include the tie ins (underlined):

Detailed refinement of design/construction footprint (for example the tie ins and intersections) to avoid and minimise vegetation to be removed and further development of no-go zones, defined in EES Chapter 9: Biodiversity and habitat.

Incentives to contractors to further minimise vegetation and habitat loss.

RRV anticipated that the western tie in would be examined by a multidisciplinary team rather than being purely engineering focused.

RRV explained that a full diamond interchange was not warranted due to the additional land take requirement. Further westbound motorists would have two opportunities to turn off to Beaufort at the eastern tie in and Beaufort-Lexton Road and would be unlikely to use this interchange to double back towards the Beaufort.

In relation to the height above existing ground level and noise associated with the western interchange RRV made the following observations:

- existing dwellings are set back over 400 metres from the nearest edge of the interchange
- while the road height (for the overpass) including barriers was proposed at 12.5 metres above ground level at this location, the ground level is lower than the existing Western Highway elevation, and the relative height would therefore appear lower
- impacts would not be material on the properties given distance, existing vegetation and opportunities for further landscaping in the redundant road reserve.

Mr Kelly's evidence in relation to the Western interchange was:

- the tie-in locations were determined as part of the previous Western Highway freeway works (stages 1 and 2)
- shifting the interchange significantly further west would require an additional two kilometres of bypass to be constructed which would be unnecessary and wasteful
- it would be too close to the Eurambeen-Streatham Road interchange creating potential safety and operational issues with two closely spaced interchanges
- shifting the location of the roundabout(s) to minimise vegetation impacts would be immaterial to the functioning of the interchange, however a multi-disciplinary assessment would be required, particularly in relation to drainage, environmental, cultural and heritage considerations.

Mr Kelly could see merit in simplifying and improving access for local residents by providing a new leg from Box Cutting Rise into the southern roundabout as it would also accommodate larger vehicles, but Drivers Lane residents would need to double back to this revised access point (essentially mirroring existing access arrangements where residents currently access Western Highway at Box Cutting Lane).

Ms Marshall agreed that providing additional access to the southern roundabout from Box Cutting Rise may be an option, however she was concerned it may lead to confusion and potential safety issues with the operation of the roundabout. Ms Marshall supported the use of roundabouts at interchanges as it creates a safer environment for all road users compared with T-intersections.

Council supported initiatives to reduce the environmental impact of the western interchange including well-designed off ramps incorporating signage and lighting to encourage township visitation by highway users.

### **(iii) Discussion**

Interpreting the reference design plans and long sections can be difficult. The IAC found the YouTube video project fly through (screenshot included at Figure 12) useful to understand the project design elements and landscape setting in conjunction with the reference design plans. These documents in addition to the Project website provided a useful approximation of how the

western interchange interacts with the surrounding area and how the mitigation measures will lessen the impacts on nearby properties.

**Figure 12** Western interchange looking east.



The reference design for the western interchange was contentious for nearby landowners, particularly given more recent changes to property access resulting from recent highway duplication beyond Beaufort. The accompanied site inspection enabled the IAC to gain a perspective of the potential visual and noise impacts of the Project for adjacent residents and an understanding of issues relating to access and stormwater management along Drivers Lane and Box Cutting Lane.

The IAC supports further refinement of the western interchange, including the potential to:

- accommodate an adjustment of the location of the roundabouts, ramps and overpass to reduce impacts on vegetation
- explore opportunities to improve/enhance access for Box Cutting Rise and Drivers Lane residents by providing a new leg into the southern roundabout.

A multi-disciplinary approach will be required to balance other potential impacts such as noise and to ensure appropriate and deliverable outcomes can be realised. It is appropriate that this be undertaken at the Project detailed design stage, rather than altering the reference design at this stage of the Project development.

The IAC agrees with:

- RRV that providing a full diamond interchange at this location is not appropriate
- Mr Kelly that substantially shifting the interchange further west is not appropriate
- Ms Marshall that using roundabouts to reduce speed and the number of conflict points is appropriate for road safety.

The IAC appreciates that nearby residents are concerned with the potential height and noise associated with this interchange but agrees with RRV that nearby properties should not be materially affected. This is because:

- the bypass is curving to the north, moving traffic further away from residents
- the existing Western Highway is at a higher elevation than the new bypass and will provide some screening to residents

- the redundant freeway can be landscaped to further soften its impact.

The roundabouts and associated road crossing, which carry significantly less traffic, travelling at lower speeds, may potentially be visible and may create some additional noise for residents with vehicles slowing down or accelerating as they negotiate the roundabouts and associated on and off ramps. While the WHCG concept plan, which was supported in principle, moves the southern roundabout closer to residential properties, it may utilise some of the existing 'old' Western Highway, and consequently be at a similar elevation. As such, there may potentially be little or no appreciable impact on nearby properties, but this should be considered and resolved during detail design.

#### **(iv) Findings**

The IAC finds:

- The western interchange design elements and approach are generally appropriate.
- RRV's changes to mitigation measure BH01 are appropriate. However, modifying the western interchange to minimise vegetation loss and potentially provide local access from the southern roundabout (generally in accordance with Western Highway Conservation Group proposed realignment concept sketch) should be further explored at the detailed design stage utilising a multidisciplinary design team approach which considers potential disbenefits of shifting the roundabout closer to residents.

### **4.3.2 Beaufort-Lexton Road interchange**

#### **(i) What did the EES say?**

A full diamond interchange is proposed with the Beaufort-Lexton Road as shown in Figure 5 in Chapter 2.3.

#### **(ii) Evidence and submissions**

The IAC queried why a full diamond interchange was proposed at Beaufort-Lexton Road when it was expected to carry relatively little traffic (predicted to be around 200 vehicles per day).

Council supported a full diamond interchange at Beaufort-Lexton Road as it would:

- further reduce the number of heavy vehicles entering the town centre and Main Lead Road heavy vehicles could access the freeway (via Albert Street and Beaufort-Lexton Road)
- provide a second opportunity to enter Beaufort township
- provide further strategic land use planning and growth opportunities.

However, Council sought to minimise the interchange's footprint, environmental and visual impacts and queried whether the design should include T-intersections instead of roundabouts. It also called for well designed off ramps incorporating signage, lighting to encourage township visitation by highway users be provided in addition to Beaufort-Lexton Road amenity improvements.

RRV advised that the full diamond interchange on Beaufort-Lexton Road was an important Project connectivity element. During the planning phase, in response to Council concerns, interchanges were considered for both Beaufort-Lexton Road and Main Lead Road. However, Beaufort-Lexton Road was adopted because:

- it is a higher order road ('C' class Arterial Road which RRV is responsible for)
- vehicles using Main Lead Road would be able to enter and exit this bypass (via Albert Street) without passing through town
- desirable spacing of interchanges in Austroads guidelines is 5 to 8 kilometres (considering the bypass is approximately 11 kilometre long, a midblock interchange would be consistent with the guidelines).

RRV also referred to the Options Assessment Report which highlighted the importance of Beaufort-Lexton Road as an important transportation link for the grain industry with crops to the north.

Two interchanges (Main Lead Road and Beaufort-Lexton Road) were discounted as:

- a Main Lead Road interchange would adversely impact vegetation, flood plains, seasonal wetlands and local amenity
- safety issues associated with vehicles potentially 'weaving' due to two closely spaced interchanges.

RRV submitted while estimated traffic volumes using the interchange appear low, other important elements such as optimising road safety, traffic service and community interests are also key considerations and given the distance between the tie in points, the Beaufort-Lexton Road interchange is considered appropriate.

Ms Marshall supported a diamond interchange at Beaufort-Lexton Road as it provided greater 'resilience' for the performance and operation of the road network, in particular it provided an entry and exit point for emergency service vehicles and other vehicles if necessitated by a potential freeway closure. She noted the Options Assessment Report, identified that due to additional vehicle usage, the section of Beaufort-Lexton Road between the township and the proposed interchange would need improvement works during the construction of the bypass.<sup>18</sup>

Submitter 12 was concerned the Beaufort-Lexton interchange would increase traffic on Beaufort-Lexton Road and that an appropriate response would be to:

- reduce speed limits to 80 km/h and
- provide improved walking and cycling facilities, in particular shoulder sealing to facilitate safe bicycle, mobility-aid and pedestrian use.

Mr Kelly noted that predicted traffic volumes along Beaufort-Lexton Road would remain low (600 – 700 vehicles per day) but importantly heavy vehicles arriving from the north (Beaufort-Lexton Road and Main Lead Road via Albert Street) would be able to access the freeway without having to travel through Beaufort.

His evidence was that the existing pedestrian and cycling infrastructure was appropriate for the road type and usage, and any improvements were not required as part of the Project.

Mr Kelly advised that Department of Transport (DoT) was responsible for setting speed limits. A range of factors were assessed but considering the density of abutting development he would anticipate that the Beaufort-Lexton Road speed limit would be 60 km/h closer to the township increasing to 80 km/h south of the interchange. Mr Kelly recommended:

... that DoT review all speed zones between Beaufort township and all interchanges with the Western Highway.

<sup>18</sup> Attachment IV – Options Assessment Report page 50

In response, RRV proposed amending mitigation measure T02 to provide for the consideration of speed limits on RRV controlled roads.

### **(iii) Discussion**

The IAC agrees with evidence and submissions that a full diamond interchange at Beaufort-Lexton Road is appropriate.

The use of roundabouts instead of T-intersections is supported as it provides a safer environment for all road users.

A significant length of Beaufort-Lexton Road currently has a 100 km/h speed limit (south of the proposed interchange). The IAC supports RRV's changes to the mitigation measure T02 for the review all speed zones between the Beaufort township and all interchanges on RRV controlled roads. Based on Mr Kelly's assessment the Beaufort-Lexton Road speed limit may drop to 80 kilometres per hour, subject to a speed zone assessment.

The IAC appreciates resident concerns regarding pedestrian, cycling and mobility aided persons' safety along Beaufort-Lexton Road and understands that Submitter 12 has been liaising with RRV regarding this matter. This is an issue for RRV to manage and resolve and does not form part of the Project. Traffic volumes are low and not anticipated to significantly change as a result of the Project. That said, the Options Assessment Report identified that future upgrade works along Beaufort-Lexton Road would be required due to increased traffic flow.

Council is able to explore through separate processes strategic land use changes to exploit the bypass access from Beaufort-Lexton Road interchange which may result in increased traffic flow and result in potential cross-section and further speed limit changes to Beaufort-Lexton Road, in addition to other visual enhancement works. This is accommodated through mitigation measure S07. The IAC notes that signage, and lighting would be part of the Project's detailed design and should be considered at that time in response to Council's concerns in part, to encourage township visitation by highway users (as discussed in detail in Chapter 9.2).

### **(iv) Findings**

The IAC finds:

- A full diamond interchange utilising roundabouts at Beaufort-Lexton Road is appropriate.
- RRV should review all speed zones between Beaufort township and all interchanges with the Western Highway. The IAC supports RRV's Final changes to mitigation measure T02 in this regard.
- The Project does not trigger a need to improve existing amenity and safety issues along Beaufort-Lexton Road. Any such improvements should be separately managed by RRV in consultation with Council as required.

## **4.3.3 Eastern interchange**

### **(i) What did the EES say?**

A two-lane eastbound on ramp is proposed at the eastern tie-in (refer to Figure 3 in Chapter 2.3).

**(ii) Evidence and submissions**

Submitter 24 was concerned with potential headlight glare from eastbound vehicles as they travelled over the bypass bridge above the railway line.

While RRV noted the issue it did not respond in detail. However, Ms Marshall advised that there was insufficient information to undertake a detailed analysis but did not consider it a significant issue as (refer to Figure 13):

- the dwelling is located approximately 350 metres south of the existing Highway
- southbound vehicles in line with the dwelling are likely to be ramping up and over the railway line such that their headlights are likely to be directed away from the dwelling
- the proposed curvature of the bypass as it re-joins the Western Highway suggested that headlights will be deflected away from the dwelling.

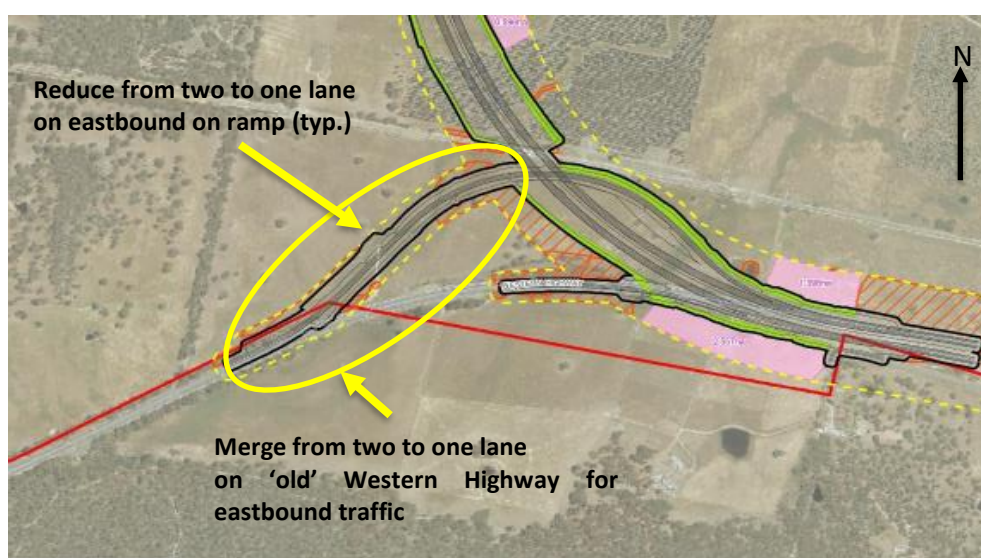
**Figure 13 Proposed Bypass at eastern tie-in**



Source: Marshall evidence Figure 6.8 page 30 Document 18

The eastbound on-ramp (for vehicles leaving Beaufort heading towards Ballarat) consisting of two lanes before merging to a single lane as it enters the freeway. The IAC questioned whether it could be reduced to a single lane with the lane merging from two to one lane occurring on the existing 'old' Western Highway. This would reduce the overall land take with potentially less impact on roadside vegetation, and construction cost (refer to Figure 14).

**Figure 14 Eastern Interchange eastbound on ramp – IAC identified design refinement opportunity**



Source: IAC

Mr Kelly and Ms Marshall verbally indicated that they could see merit in shifting the eastbound merge manoeuvre back onto the existing highway, however an emergency stopping lane (wide



shoulder) would still be needed to ensure vehicles could safely move off the road to allow through traffic to continue.

### **(iii) Discussion**

The IAC accepts Ms Marshall's preliminary assessment that vehicle headlight glare from southbound vehicles is unlikely to have significant impact on Submitter 24's dwelling. The issue of headlight glare can be reviewed during detailed design as necessary including through mitigation measure LV02.

The IAC sees benefit in modifying the eastern on ramp to one lane with the merging of two to one lane occurring on the 'old' Western Highway to minimise potential impact on roadside vegetation and construction costs. Both traffic experts saw merit in exploring the proposal. This should be explored through the detailed design stage.

Similar to the western tie in, the EMF already includes requirements to further refine the construction footprint and minimise impacts on native vegetation (though RRV's proposed changes to mitigation measure BH01 to include tie ins). RRV anticipated that the western tie in would be examined by a multidisciplinary team and it is expected that the same would apply for the eastern tie in.

### **(iv) Findings**

The IAC finds:

- The eastern interchange design approach and treatment is generally appropriate.
- However, modifying the eastern interchange eastern on ramp to one lane with the merging of two to one lane occurring on the 'old' Western Highway should be explored through the detailed design as this could minimise potential impact on roadside vegetation and construction cost.
- Vehicle headlight glare from Bypass southbound vehicles is unlikely to have significant impact on the dwelling at 47A Paxton Court.

## **4.4 Access and road management**

### **(i) What did the EES say?**

The Project will create temporary and permanent access changes to the local road network and individual properties. A small number of properties losing their access to abutting the road network will require alternative access arrangements to be provided.

To address this issue, access arrangements are the subject of an Access Management Strategy (MD06) and mitigation measure T02.

Key elements include:

- Developing a Construction and Operational Access Strategy to the satisfaction of DoT, Council and DELWP
- ensuring thorough community and landholder consultation and public notice of the works
- ensuring alternative access and redirections are provided where existing access is removed
- maintaining access to private land, the local road network and Crown land.

**(ii) Key issues**

The key issues are:

- whether the Access Management Strategy adequately address temporary and permanent access issues
- other road management issues.

**(iii) Evidence and submissions**

A small number of private property owners flagged issues around the practical nature of maintaining property access, once their properties (or landholdings) had been bisected. In particular:

- Submitter 25 (Smiths Lane properties) explained that the heavily wooded block on the south west corner of his farm was used for fire wood collecting and for stock shelter during inclement weather and held concerns that it would be inaccessible for both activities
- Submitter 18 (24 Topp Lane) identified that approximately 5 hectares of their property would be 'rendered useless' with the loss of access to this portion of land as well as the loss of direct access between the two orphan lots.

Submitters 2, 8 and 13 (landowners in Box Cutters Rise and Drivers Lane) were disappointed they were losing direct access to the Western Highway and/or access being limited to left-in left out only.

RRV considered access mitigation measures in hand with the acquisition process would ensure that the impacts on property access were acceptable and manageable and that no changes to the access management were required.

Mr Kelly and Ms Marshall provided a traffic engineering assessment to identify future potential vehicle access arrangements for the various affected properties and clearly identified those parcels of land that would be land locked. Both experts suggested underpasses for stock movement, if alternative safe and practical stock movement could not occur.

The IAC queried if the proposed drafting appropriately covered the issue of internal access within private landholdings in addition to providing access to private landholdings. Mr Kelly responded that maintaining access within a property (particularly 32 Back Raglan Road) was definitely relevant and suggested adding "*and within*" to the Access Management Strategy. Ms Marshall advised that consideration should be given to including livestock crossings for significant landholdings that were bisected. She explained there was a need to be pragmatic and that it was not the intention to provide internal access at all costs.

While the traffic experts identified that it would be physically possible to provide private vehicle access into the Camp Hill State Forest (through public land); RRV clarified that this would require vegetation removal and DELWP's agreement. While this would be possible, it was also appropriate for land acquisition to be considered.

Both experts considered a range of options for 4126 Western Highway (which would lose direct access to the Western Highway due to the eastern tie in). The optimal access solution would most likely be providing a new driveway link along and within the road reserve to Smiths Lane (Figure 15).

**Figure 15** Access options for 4126 Western Highway

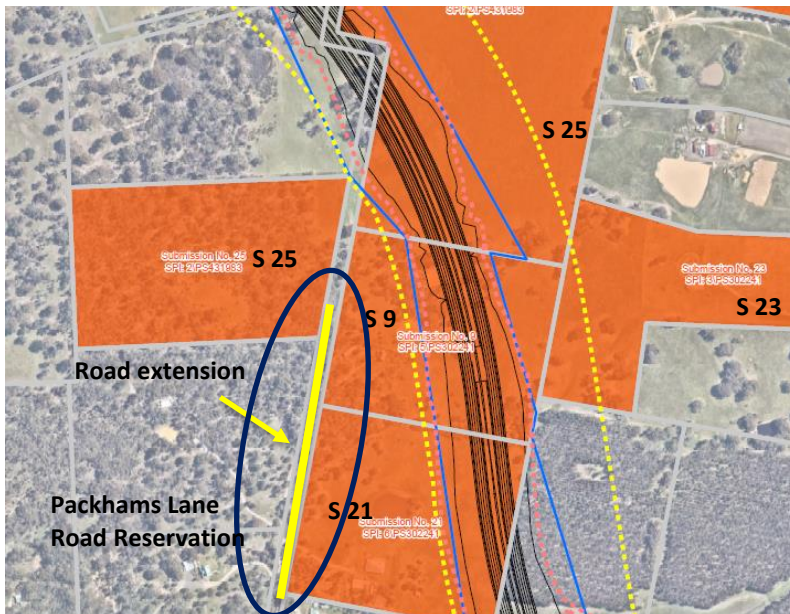


Source: Kelly evidence page 15 Document 17

In relation to maintaining access into Camp Hill Forest, Mr Kelly and Ms Marshall could see merit in the haulage roads (used only during construction and generally located parallel to the proposed bypass) could be repurposed to provide access track(s) into the State Forest - maintaining a similar level of access to what currently exists. This issue would be appropriately resolved during detailed design.

For those properties where future vehicle access was proposed from an extension along Packham Lane, RRV confirmed that the Packham Lane ‘paper road’/road reservation was still intact (had not be acquired by adjoining property) which would allow the road to be extended (refer to Figure 16).

**Figure 16** Packhams Lane Road Reservation – available to extend roadway for future access



Source: IAC

DEWLP submitted that the Camp Hill Recreational Reserve would be severed from the Camp Hill State Forest resulting in the truncating of informal tracks (including Camp Hill Road) and pedestrian connections. Of particular concern was managing fire risk in the reserve as the bypass will affect vehicle access to and within the reserve and alternative access options will need to be determined

and supported by DELWP. DELWP noted that some of the access tracks were not within a defined road reserve and potentially these tracks would need to be upgraded if they were to be utilised for private access. Such a scenario was unlikely to be supported. The IAC understands that preliminary discussions with the CFA have addressed issues around fire breaks and access.

Council sought to ensure that the Project during construction and operation has minimal impact on its ability to manage and maintain council assets, in particular council's road network. It proposed that the EMF be enhanced with:

- a Construction Traffic Management Plan to the satisfaction of Council
- an Access Disruption Plan that identifies short and long-term disruption and severance of formed and unformed legal access to private property
- a Post-construction Asset Handover Plan to the satisfaction of Council.

RRV's Final EMF changes proposed to amend the Operations and Maintenance Plan to include a description of assets to be handed over to Council. It submitted that mitigation measure T01 and the Access Management Strategy accommodated the additional documents sought by Council.

Council also submitted that pedestrian and cycling infrastructure should be provided along Main Lead Road to encourage continued recreation use of Camp Hill Forest. This was accommodated within RRV's Final EMF changes to LV03 to allow for the consideration of Council comments on issues of connectivity including recreation, pedestrian and cyclist networks.

RRV considered that access issues for sites that had limited or no alternate access points or where internal access was restricted, was best considered through the access mitigation measures and in the context of land acquisition and in consultation with landowners.

The IAC sought comment about whether there would be opportunities to enhance access to local streets and driveways by providing additional breaks in the central median wire rope barrier along the Western Highway from the proposed eastern tie in back towards the Beaufort township. Ms Marshall noted the predicted traffic on the Western Highway leaving Beaufort significantly reduces and effectively, traffic flows would be consistent with a local collector road (estimated to be 4,100 vehicles per day in 2031 with project compared to 11,000 vehicles per day without). As such, improving access to local side roads (accommodating all movements) and private driveways could be explored.

#### **(iv) Discussion**

The IAC agrees that the proposed Access Management Strategy is satisfactory, with access arrangements to be resolved during the Project's detailed design phase.

The IAC acknowledges that a small number of properties will have their access permanently affected. This is unavoidable with a project of this size and length. However the IAC concurs with RRV that this can be a manageable impact.

The IAC is particularly concerned to ensure that landowners do not end up with 'false hope' that property access could be maintained. In particular, properties abutting the Camp Hill State Forest are unlikely to have vehicle access granted onto public land. However, properties at the south east end of the bypass may potentially obtain access from an extension of Packhams Lane. Again, more detailed work in consultation with landowners will be required to ascertain the practicality and suitability of this arrangement.

Similarly, future access into Camp Hill Reserve utilising the haulage tracks may be a feasible solution addressing fire risk and public access.

Providing stock underpasses was suggested as an option to maintain safe stock movement on one of the properties bisected by the proposed bypass. In practice, this could only occur where the bypass is constructed on fill. This matter can be explored during detailed design with affected landowners or through the acquisition process. Specifically amending the mitigations measures, in particular T02, to reflect this is not considered necessary, as it would essentially be captured as part of the land acquisition process. This option is not precluded by the wording of T02.

The Project will impact on RRV and Council's road network and while Council has used different terminology regarding various ongoing management plans, T02 ensures that the 'construction' and 'operation' traffic management plans are required to be to Council's satisfaction. RRV has also amended the EMF wording around these issues. The IAC believes that this is sufficient to ensure Council's concerns and needs will be addressed.

Council's desire to improve pedestrian and cycling facilities along Main Lead Road to encourage Camp Hill State Forest use is understandable, however the IAC believes that these works would be outside of the Project scope (essentially there is no changes to Main Lead Road as part of the Project) and would need to be pursued separately by Council.

Should the Project proceed, traffic flows would significantly reduce along the 'old' Western Highway between the eastern tie in and Beaufort (around 4,100 vehicles per day which is consistent with a local collector road). This may provide opportunities to provide additional breaks in the central median wire rope barrier. This would improve and provide full access to side roads and other local access points which are currently restricted to left in-left out arrangements to minimise conflict with the higher volume and speed of existing Highway traffic.

#### **(v) Findings**

The IAC finds that:

- The EMF Access Management Strategy is an appropriate measure to mitigate access impacts to an acceptable level.
- A small number of properties will have their access permanently impacted but this is considered manageable and acceptable.
- RRV's Final EMF changes are appropriate and supported.
- RRV/DoT should review opportunities to improve and provide full local access to side roads and other local access points which are currently restricted to left in-left out arrangements along the 'old' Western Highway between the eastern and western tie ins as part of the detailed design.

## **4.5 Recommendations**

The IAC recommends:

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- **Amend mitigation measure T02 to include references to speed zones (item 13).**
- **Amend mitigation measure BH01 to refer to tie ins and intersections (item 27).**

## 4.6 Overall conclusions on traffic and transport

The IAC considers that further improvements to the reference design, particularly the western and eastern tie ins should be articulated in the EMF without compromising future opportunities to optimise the Project.

The IAC concludes:

- There are no impacts on traffic and transport that preclude the Project being approved.

## 5 Biodiversity and habitats

### 5.1 Introduction

Biodiversity and habitats is discussed in EES:

- Chapter 9
- Technical Appendix C (the Flora and Fauna Impact Assessment).

The evaluation objective is:

To avoid and minimise adverse effects on native vegetation, as well as habitat for threatened flora and fauna species and ecological communities, including those listed under the FFG Act, and address offset requirements for predicted losses consistent with relevant policy

As exhibited, the EES proposed the following general measures to manage impacts to biodiversity and habitats:

- general mitigation measures to be applied during the design phase (BH01 - BH04), pre-construction/construction phase (BH05 - BH09) and operations phase (BH10, BH11) - see EES Table 9.20
- species and community specific mitigation measures to be applied generally (BH12) and during the design phase (BH13 and BH14), pre-construction/construction phase (BH15 – BH28) and operations phase (BH29 – BH32) – see EES Table 9-21.

The EMF proposes the following plans be prepared:

- Native vegetation offset strategy – for offsets under the *Guidelines for the removal, destruction or lopping of native vegetation*, DELWP 2017 (Native Vegetation Guidelines)<sup>19</sup>
- EPBC Act Offset Management Strategy for golden sun moth offsets required under the EPBC Act.
- Threatened Species Management Plan for the matted flax-lily, Ben Major grevillea, river swamp wallaby grass, broilga, brown toadlet, brush-tailed phascogale, growling grass frog, golden sun moth, little galaxias and Seasonal Herbaceous Wetlands (freshwater) of the Temperate Lowland Plains, Victorian Temperate Woodland Bird Community and White-Box-Yellow Box-Blakey's Red Gum Grassy Woodland.

The above plans would be prepared by the construction contractor, reviewed by MRPV and approved by DELWP or DCCEE, respectively.<sup>20</sup>

The Threatened Species Management Plans are also required by the Incorporated Document.

The Incorporated Document requires a Native Vegetation Management Plan, and Offset Statement to be prepared to the satisfaction of DELWP (Clause 5.1.3 and 5.1.4).

Further detailed recommendations, mitigation measures and protocols were provided in Chapter 10 of Technical Appendix C. Some of these measures are represented in the EMF mitigation measures and Incorporated Document.

The Incorporated Document required an EMF to be prepared prior to the commencement of works, to the satisfaction of the Minister for Planning. The EMF is required to include:

<sup>19</sup> Refer to description in Chapter 1.14 IAC Report No. 2 Appendices

<sup>20</sup> EMF Table 17.6

b) the relevant requirements as set out in the Minister for Planning's Assessment under the *Environment Effects Act 1978* and the relevant aspects of the Environmental Effects Statement (EES) prepared for the Project.

## 5.2 Native vegetation

### (i) What did the EES say?

Existing conditions in terms of Ecological Vegetation Class (EVC) and trees (large trees in patches and all scattered trees) were mapped for the Study area in which the four route alignments were assessed. Tree surveys focused on assessing the areas likely to be impacted including the 250 metre wide alignment corridor and interchange locations. Results are shown in EES Figures 9.3a to 9.3e. Impact assessments for the four alignments were undertaken and compared resulting in alignment C2 being the preferred alignment from a biodiversity and habitats perspective (see Chapter 7 and 8 of Technical Appendix C) as summarised in Chapter 3.2(iii) of this Report.

The impacts of the chosen C2 alignment on EVCs in the construction footprint were provided in Table 9.13 of the EES (reproduced in Figure 17).

**Figure 17 EVC impacts within the construction footprint**

| Ecological Vegetation Class number                                    | Ecological Vegetation Class name     | Ecological Vegetation Class conservation status | Hectares (ha) |
|---|--------------------------------------|---|---------------|
| 20  | Heathy Dry Forest                    | Least Concern                                   | 14.432        |
| 22  | Grassy Dry Forest                    | Depleted  | 20.532        |
| 47  | Valley Grassy Forest                 | Vulnerable                                      | 7.185         |
| 67  | Alluvial Terraces Herb-rich Woodland | Endangered                                      | 1.325         |
| 125   | Plains Grassy Wetland                | Endangered                                      | 0.510         |
| 136   | Sedge Wetland <sup>^</sup>           | Vulnerable                                      | 0.350         |
| 175   | Grassy Woodland                      | Endangered                                      | 0.764         |
| 647   | Plains Sedgy Wetland                 | Endangered                                      | 0.030         |
| 653   | Aquatic Herbland                     | Endangered                                      | 0.944         |
| <b>Total (ha) mapped in patches</b>                                   |                                      |   | <b>46.072</b> |
| n/a   | Current Wetland (WET_0000)           | Unclassified                                    | 1.878         |
| <b>Total (ha) mapped in patches, including DELWP modelled wetland</b> |                                      |   | <b>47.950</b> |
| <b>EnSym output total*</b>  |                                      |   | <b>50.714</b> |

<sup>^</sup> Sedge Wetland used as closest Ecological Vegetation Class to Aquatic Sedgeland

\* total areas from the EnSym outputs are slightly different to totals to include canopies of trees on the edges of patches as required as per the 'Guidelines for the removal, destruction or lopping of native vegetation' (DELWP 2017)

Source: EES Table 9.13

Mitigation measures proposed to further minimise clearance were BH01 and BH09 which sought further avoidance and minimisation of vegetation clearance through detailed design (BH01) and providing financial incentives to do so (BH09). Offsets were also proposed in accordance with the Native Vegetation Guidelines.



The residual impact of native vegetation clearance was given a high rating due to the unavoidable loss of native vegetation within the final construction footprint.

**(ii) What does the Draft Planning Scheme Amendment require?**

The Incorporated Document requires a Native Vegetation Management Plan to be prepared prior to the removal of any native vegetation, excluding preparatory works. Clause 5.1.3 of the Incorporated Document provides:

The plan must include an assessment of native vegetation to be removed, lopped or destroyed for the Project in accordance with the requirements of the Guidelines for the removal, destruction or lopping of native vegetation or its successor.

**(iii) Key issues**

The key issues are whether:

- surveys undertaken will remain current in future
- native vegetation impacts have been fully assessed
- the Project will appropriately avoid and minimise impacts.

**(iv) Evidence and submissions**

**Currency of surveys**

Mr Lane gave evidence the Native Vegetation Management Plan required by the Incorporated Document (Clause 5.1.3) would ordinarily involve a re-calculation of the final design impacts using existing data, as opposed to requiring new field surveys. In his opinion, if detailed design were to occur more than 5 years from now, then as a minimum he would recommend an audit be undertaken of existing field survey data to ensure it remained relevant.

DELWP submitted the Assessor's Handbook<sup>21</sup> sets timeframes for the currency of native vegetation surveys of between 3 and 5 years depending on the vegetation type.

RRV's Final Hearing Version of the Incorporated Document Clause 5.1.3 included a reference to the Assessor's handbook and some other minor changes proposed in response DEWLP's submissions.

**Completeness of native vegetation impacts**

In Mr Lane's opinion, the EES Technical Appendix C had underscored the leaf litter and log components of some habitat zones. It was considered likely that recent storms contributed to the higher number of logs observed by Nature Advisory. Mr McCaffrey accepted Mr Lane's review. Mr Lane advised a re-calculation of habitat scores would remedy this error without the need for further surveys.

Mr Lane's field review also identified three additional habitat zones (NA1, NA2 and NA3) in the roadside of Martins Lane adjacent to parcel 4A/PS727373. It was considered likely that habitat zone NA1 was a new planting that had only recently come of age and it was noted that habitat zone NA2 and NA3 the 250 metre corridor for the C2 alignment, were inside the C2 alignment construction footprint. Mr McCaffrey's evidence agreed it would be appropriate to add these habitat zones to the final native vegetation assessment.

<sup>21</sup> Assessor's handbook – Application to remove, destroy or lop native vegetation, DELWP, 2018 (Assessor's Handbook). Refer to description in Chapter 1.14 IAC Report No. 2 Appendices

DEWLP submitted the native vegetation assessment had used a 10 metre buffer around trees as opposed to the required 15 metres as per the Native Vegetation Guidelines. DELWP also submitted a new fire access track to be constructed in the southern part of Camp Hill State Forest north of the bypass ought to be included in the calculations. Mr McCaffrey's evidence was the assessment had included the new fire access track and that tree impacts were assessed for a total buffer of 35 metres and so further assessment was not required.

The IAC requested clarification as to the extent of any future service roads to be built and whether associated vegetation removal had been allowed for. RRV responded that the EES had assessed the impact of native vegetation removal from service roads within the SCO (if required) either directly (where the access rearrangement to service roads were known) or indirectly (through applying a 10 metre buffer to the construction footprint).<sup>22</sup>

DELWP noted alignment C2 would sever access to a property on the south-side of Beaufort-Lexton Road and submitted that any loss of native vegetation associated with reinstating that access should be included in the native vegetation assessment. Mr McCaffrey responded that determining access for a project at the functional design phase was complex and the proposed approach was to address this through the Access Management Strategy provided for in the EMF.

RRV submitted access management was an issue appropriately to resolve during detailed design. In the meantime, it submitted there existed appropriate measures (in particular the Access and Management Strategy) to ensure a consultative approach with landowners.

### **Avoid and minimise**

Both Mr Lane and Mr McCaffrey gave evidence that choosing the C2 alignment avoided the most native vegetation clearance. Mr Lane considered this "*avoidance by design*" whilst McCaffrey considered it a "*no brainer*" in terms of ecological impacts.

In response to submissions that further avoidance was possible, for example by relocating the western interchange (WHCG, Submitters 3 and 11), Mr McCaffrey considered that further avoidance and minimisation was desirable and this was supported by the existing mitigation measure BH01.

## **(v) Discussion**

### **Currency of surveys**

The IAC agrees with DEWLP's submission that the Native Vegetation Guidelines and Assessor's Handbook set out clear parameters for ensuring the currency of completed native vegetation surveys. The reference to the requirements of the Native Vegetation Guidelines in the Incorporated Document is probably sufficient for this to be ensured, however, the IAC considers this link could be strengthened by specific reference to the application requirements under the Native Vegetation Guidelines and has made a recommendation to this effect.

The IAC does not consider it necessary to refer separately to the Assessor's Handbook as this is clearly referred to in the Guidelines.

The IAC notes RRV has chosen to use the term Native Vegetation Management Plan in Clause 5.1.3 whereas DELWP's submission used the term Native Vegetation Assessment. So long as the

<sup>22</sup> Document 14 Part A submission paragraph 110

document addresses the application requirements under the Native Vegetation Guidelines the IAC does not have strong views and considers that such a document would more commonly be referred to as an ‘assessment’ as opposed to a ‘management plan’.

### **Completeness of native vegetation impacts**

The IAC accepts the additional patches of native vegetation identified by Mr Lane should be included in an updated assessment.

There are two types of access discussed for the purpose of native vegetation removal

- access that will be provided within the SCO that has been accounted for in the EES calculations
- to reinstate internal access for a residual part of a lot which is severed by the Project (discussed further in Chapter 4.4 of this Report).

Internal access may extend outside the SCO but is to be determined in time, with landowner consultation, in accordance with the access management strategy. The approach is reasonable. However, it fails to consider potential impacts to native vegetation from providing new access routes. Vegetation to be cleared outside the SCO and not covered by the Incorporated Document would also require separate approvals to be obtained.

It is appropriate the amount to be cleared is considered as part of the impacts of the Project so that offsets can be provided for all impacts.

To remedy this, the IAC recommends the Access Management Strategy include an assessment of any native vegetation required to be cleared, for providing new access and which has not previously been assessed, and to detail how the removal of such vegetation has been avoided and minimised. Any such native vegetation should then be included in the Native Vegetation Management Plan so that the impacts of the entire Project are included in this management plan and offsets. A similar change to the access strategy referred to in the Incorporated Document should also be made.

### **Avoid and minimise**

The EES provided a thorough assessment of native vegetation in the Project study area to inform the chosen alignment (as opposed to simply focusing on separate alignments without providing the surrounding context). The IAC agrees that comparatively, the greatest avoidance will be achieved by C2 alignment. Despite this, the residual impact of clearing over 49 hectares of native vegetation is “*high*” and remains significant.

As discussed in Chapter 13 the EMF includes high-level mitigation measures to further avoid native vegetation loss and this was supported by evidence, wherever possible. The IAC considers key locations worthy of further consideration to determine if further avoidance is possible for the western interchange and eastern tie-in as identified in Chapter 4.3 of this Report.

### **(vi) Findings**

The IAC finds:

- The EES has appropriately characterised the likely native vegetation removal associated with the Project.
- Due to the amount of vegetation to be removed, residual impacts on native vegetation will remain high.

- Impacts on native vegetation of providing new access where properties are severed should be considered as part of the Access Management Strategy (MD06) and included in the Native Vegetation Management Plan.
- Alignment C2 results in the least impact on native vegetation and demonstrates appropriate efforts to avoid clearance through the chosen alignment.
- Further reduction in the amount of native vegetation to be removed may be possible through detailed design.
- While the mitigation measures allow for further avoidance and minimisation of impacts, the IAC considers it appropriate for these measures to more specifically mention areas where potential reductions can be made.
- Despite the potential to further reduce impacts during detailed design, the IAC considers it unlikely the high residual impact rating would change as a result.
- To ensure the currency of surveys, a minor change to Clause 5.1.1 of the Incorporated Document is necessary.

### 5.3 Trees

#### (i) What did the EES say?

The EES surveyed and recorded all large trees in patches and all scattered trees (large and small) in the 250 metre wide alignment corridor for all alignments. The rationale for not counting small trees in patches at the EES phase was that the impact of their removal would be accounted for in the EVC patch impact.

Alignment C2 resulted in the least number of trees to be removed, although it was recognised that all options would remove a high number of trees (from 317 to 396). The EES explained that the survey approach had been informed by lessons learnt from the Western Highway Duplication Project – Section 2 and referred to the report *Underestimation of large old trees within the environment effects statement – Western Highway Duplication Section 2: Beaufort to Ararat (VicRoads 2016)* (the Section 2 report).

In short, for Section 2, the EES had relied upon a sampling approach to estimate the number of large trees in the construction footprint. This estimate (which turned out to be a significant underestimate) had unfortunately been misinterpreted as an absolute maximum, rather than a comparison between options. The Section 2 report made recommendations to avoid such situations in the future including counting all individual large old trees at the planning stage. This recommendation was taken on board for the surveys for the Beaufort Bypass.

The EES recommended:<sup>23</sup>

Once the project moves into a detailed design phase, a feature survey and an arborist assessment is highly recommended to assess all trees above 10 centimetre DBH<sup>24</sup> (not just large trees in patches and scattered trees) in close proximity (15 metre buffer) to the construction footprint. This is not a requirement of the Guidelines 2017, however this will allow detailed impact minimisation to be undertaken and allow for the accurate assessment of the Tree Protection Zone impacts as part of the detailed design phase.

<sup>23</sup> Technical Appendix C, page 30

<sup>24</sup> Diameter at breast height

The EES acknowledged the large number of trees to be removed will result in loss of numerous hollows which provide habitat for fauna. A timber re-use program was recommended to be developed to specify how trees will be re-used and the number and type of replacement logs and hollows to be installed. The EES stated:

Due to past clearing of large trees in the area, hollows are extremely valuable, particularly medium to large-sized hollows, and a hollow replacement strategy is recommended to re-use hollows felled on site. A ratio of hollow replacement should be considered (e.g., 1:1 replacement of installed hollows being removed, or two hollows replaced per hollow-bearing tree removed) targeted in areas that are lower in natural hollows).

Similarly, the EES noted large logs are rare in the landscape and should be distributed to provide habitat in locations to be determined during detailed design.

Mitigation measure BH06 outlined the process for identifying hollows, undertaking fauna salvage and release and providing replacement hollows.

## **(ii) Key issues**

The key issues are:

- impacts to trees
- timber repurposing
- loss of tree habitat (such as logs and hollows).

## **(iii) Evidence and submissions**

WHCG were opposed to the removal of any more large old trees following the removal of a significant number of trees for Western Highway Project Section 2. The WHCG submission highlighted the importance of native vegetation and trees to tackle climate change, provide carbon sequestration and for community wellbeing. WHCG noted it had had some useful engagement with VicRoads/MRPV from late 2015 to 2018 regarding Section 2 and opportunities to mitigate further damage.

In the event the Project were to proceed, WHCG submitted the recommendations from the Section 2 report should be implemented as part of normal operations including:

- being more proactive in informing the community about significant impacts
- appointing a dedicated Environment Officer to VicRoads (RRV) Major Projects team where significant risks are involved
- capturing criteria important to the community as well as those mandated by scoping requirements.

WHCG acknowledged recommendations regarding individual tree counts had been implemented for this Project.

Mr McCaffrey acknowledged the Project's impacts on trees and responded that measures to avoid, minimise and offset these losses included extensive exploration of alignment options, road design and construction footprint to constrain the impacts, further development of no-go zones through BH01, ecological restoration and revegetation (in BH11) and the requirement for State and Federal offsets for native vegetation and golden sun moth habitat (MD07 and MD08).

The IAC queried if Mr McCaffrey considered the requirement for an arborist survey during detailed design should be elevated to a specific mitigation measure in the EMF. Mr McCaffrey responded it should.

Mr Lane's peer review identified seven additional large trees in the area between Box Cutting Rise and the Western Highway, one of which appeared likely to be impacted by the Project. The peer review considered that "*similar discrepancies may occur elsewhere*" but that the proposed arborist assessment was suitable to account for any further discrepancies. Ultimately, the peer review stated that any trees identified by the arborist to be removed will need to be offset. Mr McCaffrey responded that a thorough assessment of trees had been undertaken and it appeared there was only one tree different between the experts – a negligible difference.

The IAC queried Mr Lane's evidence that the discrepancy in trees in this location may signal a larger issue with the accuracy of data. Mr Lane expressed confidence in the surveys, indicating he was satisfied the construction footprint had been suitably surveyed to provide general confidence in the figures.

In response to a query from the IAC in relation to maximising the lessons learnt from Section 2, Mr McCaffrey responded that a greater need for transparency, engagement and communication with the community was required.

In response to questions, WHCG indicated it would be interested in knowing the outcome of future surveys and to be kept informed of all further activities.

WHCG submitted suggestions for tree and timber re-use and repurposing. DEWLP submitted details of the tree re-use should be provided including the number and type of replacement logs and hollows to be installed to compensate the loss as described in the EES. Mr McCaffrey gave evidence that Technical Appendix C included a number of recommendations for timber re-use and re-purposing but that no mitigation measure had been included in the EMF. He recommended this be remedied with a new measure to develop a Tree and Timber Re-use and Repurposing Strategy with engagement from community groups. RRV agreed in substance but proposed to include the requirement for the plan in the Incorporated Document.

#### **(iv) Discussion**

The IAC agrees the loss of native vegetation and trees from the Project will result in a significant impact and acknowledges the related issues highlighted by the WHCG submission. The IAC is comfortable the impacts have been appropriately characterised for the purpose of the EES and that further arborist assessment during detailed design will ensure further minimisation, where possible, and that all impacts are accounted for in accordance with current offset policy. The IAC agrees with Mr McCaffrey's evidence the arborist assessment should be captured in the mitigation measures in the EMF, particularly considering the EES indicates such an assessment is not required by the Native Vegetation Guidelines. The IAC has recommended a new mitigation measure to this effect.

RRV (previously VicRoads) has made concerted efforts to learn from the experience of Section 2 in terms of sampling and community consultation. There is a social impact associated with Project impacts on biodiversity and it would be appropriate to continue to engage the community, including through the publication of further arborist assessment and revegetation/reinstatement activities. This should be included in the Community and Stakeholder Engagement Plan (MD12) or as a new mitigation measure.

The IAC agrees to the inclusion of a measure to develop a Tree and Timber Re-use and Re-purposing Strategy as outlined in Mr McCaffrey's evidence. The IAC accepts RRV's choice to include it in the Incorporated Document.

The IAC considers mitigation measure BH06 should be strengthened to require a Hollow Replacement Strategy with a minimum replacement ratio of 1:1.

## **(v) Findings**

The IAC finds:

- The Project will result in a significant number of trees being removed, noting that the that the Options Assessment Report supports the C2 alignment as requiring the least trees to be removed.
- The EES was informed by detailed tree surveys, and the IAC has confidence in the reported impacts on trees for this stage of the Project development.
- Remaining uncertainty will be resolved through the pre-construction arborist assessment which the IAC has recommended be included in the EMF.
- Public confidence would be served by continuing to engage with the community regarding impacts to biodiversity and a new mitigation measure to this effect is required. The Community and Stakeholder Engagement Plan (MD12) or a new mitigation measure should provide for further engagement with the community, including through the publication of further arborist assessment and revegetation/reinstatement activities.
- A Tree and Timber Re-use and Re-purposing Strategy and a Hollow Replacement Strategy should be developed for the Project and be included in the environmental documentation.

## **5.4 Threatened flora species and communities**

### **5.4.1 EPBC Act listed communities**

#### **(i) What did the EES say?**

The Project is likely to result in the removal of up to 0.312 hectares of Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains from a larger contiguous patch. This was considered a minor reduction in the extent of a lower quality part of this community and as such, unlikely to represent a significant residual impact. Potential indirect impacts included the potential to modify existing conditions (such as hydrology, increased pollution or spills) which could impact remaining areas of the threatened ecological community. Provided mitigation measures including water sensitive road design elements were incorporated into the Project, the EES considered the likelihood of significant indirect impact was low.

Alignment C2 was unlikely to result in a significant impact to the White Box-Yellow Box Blakely's Red Gum Grassy Woodland Community as it would avoid any direct clearance. Mitigation measures were proposed as a precaution to prevent inadvertent clearing of adjacent habitat or indirect impacts from dust, weeds and pathogens.

#### **(ii) Key issues**

The key issues are potential impacts on threatened ecological communities.

**(iii) Evidence and submissions**

DELWP's submission noted an unspecified area of the Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains could be affected by a change in the watering regime as a result of the Project.

Mr Lane gave evidence the area of the EPBC-listed community that may be affected by a change in the watering regime should be provided. He explained that, being seasonal, the community must dry out to persist. Despite this, he considered, careful drainage design could ensure changes to water regimes do not compromise the persistence of this community where it exists adjacent to the Bypass. RRV submitted engineering controls could be implemented to ensure the hydrological regime mimics pre-existing conditions.

In response to IAC questioning, DELWP provided further analysis of the EES<sup>25</sup> which identified that there was an unspecified area of Seasonal Herbaceous Wetland in Wetland 35402, downstream of bridges, that would experience an increase of 1 to 2 centimetres of flooding for a 1 per cent Annual Exceedance Probability Event (AEP) Climate change flood event. The EES provided there would however be no change in duration or velocity and the EES had concluded the impact of the Project on the community was unlikely to be significant.

**(iv) Discussion**

The IAC accepts the EES, evidence and submissions that engineering controls can be implemented to ensure the hydrological regime mimics pre-existing conditions such that indirect impacts on Seasonal Herbaceous Wetlands are minimal. The IAC accepts the likelihood of significant impact on this community from the Project is low. The IAC accepts the conclusion of the EES that the likelihood of significant impact on the White Box-Yellow Box Blakely's Red Gum Grassy Woodland Community from the Project is low.

**(v) Findings**

The IAC finds:

- The likelihood of significant impact on threatened ecological communities from the Project is low.

**5.4.2 Threatened flora****(i) What did the EES say?**

Alignment C2 impacts the following threatened flora species:

- matted flax-lily: two records, one in construction footprint
- river swamp wallaby-grass: two records, one in current construction footprint
- Yarra gum: two records, one likely impacted
- Ben Major grevillea: two records, both likely to be avoided based on current construction footprint.

In addition, offset requirements were also triggered based on Habitat Importance Models in the study area for the following species:

- Ben Major grevillea

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<sup>25</sup> Document 62



- emerald-lip greenhood
- Wimmera scentbark
- rough wattle.

With the exception of Ben Major grevillea, no actual records of the above species were found in the construction footprint. The EES indicated DEWLP had accepted an alternative arrangement for Wimmera scentbark.

**(ii) Request for further information**

The IAC requested an update of any changes to the biodiversity assessment in light of the *Flora and Fauna Guarantee Amendment Act 2019* coming into effect, or the process for any updates.

**(iii) Key issues**

The key issues are:

- potential impacts to threatened flora
- need for further surveys.

**(iv) Evidence and submissions**

DEWLP submitted that the documentation and proposed Threatened Species Management Plans needed to address species whose conservation status had changed to a more threatened category as a result of recent FFG Act changes. In particular, DEWLP recommended further pre-construction surveys for a number of species.

RRV relied upon Mr McCaffrey's evidence that the FFG Act changes had been anticipated and that impacts and mitigation measures for species either recorded or considered at least moderately likely to exist in the study area, were considered in the impact assessment. Mr McCaffrey's evidence considered the implications of the conservation status change and concluded additional consideration was only required for the Yarra gum. Mr McCaffrey stated pre-clearance surveys were recommended in the EES and elaborated such surveys should include threatened flora that had been previously recorded or deemed likely to occur in the study area. DELWP had recommended targeted surveys be undertaken for several species which Mr McCaffrey considered were of a low likelihood of being. He therefore considered only opportunistic surveying for those species was required.

Mr Lane's peer review considered some further targeted surveys were required for several flora species. These surveys were recommended based on the justification that either:

- the species had been newly listed under the FFG Act and insufficient justification had been provided for the exclusion of the species from targeted surveys (in other words he disagreed with the assessment they had a low likelihood of occurrence), or
- methodological issues were identified with the targeted surveys undertaken for several species.

To rectify this situation, Mr Lane recommended targeted surveys of those species prior to detailed design, in order to inform the final bypass alignment within the PAO.

Mr Lane further identified species for which he considered the survey methodology was suitable to demonstrate a significant population did not occur, but inadequate to determine the exact location and abundance of the species within the Project area. For these species, Mr Lane

recommended targeted surveys be undertaken pre-construction, possibly coupled with pre-clearance surveys where seasonally appropriate.

RRV adopted a hybrid approach, proposing changes to the Incorporated Document (Clause 5.1.1 (f)) in its Final Hearing Version to require additional surveys for Yarra gum prior to detailed design and for the remainder of the species recommended by DELWP, with the exclusion of swamp fireweed, to be surveyed pre-construction. Additional species recommended by Mr Lane were not taken up by RRV.

Despite recommending further targeted surveys, Mr Lane was comfortable the surveys undertaken to date were adequate and appropriate for the impact assessment. He considered seasonally appropriate surveys undertaken prior to detailed design could assist in a final alignment (within the PAO) that avoids as many listed species as possible, and that pre-construction surveys would identify the need for any management actions, such as translocation to occur prior to construction.

The species considered appropriate for further investigation by parties and experts are represented in Table 4.

**Table 4 Further targeted surveys of FFG-listed species recommended by parties and experts**

| Species             | McCaffrey               | Lane                       | DEWLP                   | RRV                        |
|---------------------|-------------------------|----------------------------|-------------------------|----------------------------|
| Basalt sun-orchid   |                         | Pre-detailed design        |                         |                            |
| Candy spider-orchid | Opportunistic           | <b>Pre-construction</b>    | <b>Pre-construction</b> | <b>Pre-construction</b>    |
| Dwarf boronia       |                         | Pre-detailed design        |                         |                            |
| Emerald lip orchid  | <b>Pre-construction</b> | Pre-detailed design        | <b>Pre-construction</b> | <b>Pre-construction</b>    |
| Golden cowslips     | Opportunistic           | <b>Pre-construction</b>    | <b>Pre-construction</b> | <b>Pre-construction</b>    |
| Purple blown-grass  |                         | Pre-detailed design        |                         |                            |
| Rough wattle        | Pre-construction        | <b>Pre-construction</b>    | <b>Pre-construction</b> | <b>Pre-construction</b>    |
| Small milkwort      |                         | Pre-detailed design        |                         |                            |
| Spiny rice-flower*  |                         | Pre-detailed design        |                         |                            |
| Spiral sun-orchid*  | Opportunistic           | Pre-detailed design        | <b>Pre-construction</b> | <b>Pre-construction</b>    |
| Swamp everlasting   | Opportunistic           | <b>Pre-construction</b>    | <b>Pre-construction</b> | <b>Pre-construction</b>    |
| Swamp fireweed      | Opportunistic           | <b>Not mentioned</b>       | Pre-construction        | <b>Not mentioned</b>       |
| Yarra gum           | Pre-construction        | <b>Pre-detailed design</b> | Pre-construction        | <b>Pre-detailed design</b> |

Notes: **bold** highlights position adopted by RRV, \* indicates species also listed under the EPBC Act

DELWP submitted that translocation plans should be developed for matted-flax lily, river swamp wallaby-grass and the other listed flora species recommended to be subject to further pre-construction surveys. DELWP clarified its position that the definition of translocation includes seed collection and propagation (not limited to transplanting).

In response, RRV proposed updating mitigation measure BH17 to require the translocation/relocation plan to allow for measures for any additional FFG Act or EPBC Act-listed species identified during pre-construction surveys which cannot be avoided.

RRV and Mr McCaffrey agreed with DELWP's submission that Yarra gum needed to be included in the list of Threatened Species Management Plans in the EMF.<sup>26</sup>

RRV agreed with DEWLP's submission for mitigation measures to minimise impacts on Ben Major grevillea, specifically related to dust, to be included in the EMF.

#### **(v) Discussion**

The IAC accepts the evidence that the surveys undertaken to date are adequate for the purpose of impact assessment, and to inform the preferred alignment.

Both DEWLP and Mr Lane recommended further targeted surveys for several flora species. Mr Lane recommended more species be surveyed for than DEWLP and also recommended a larger number of these species be undertaken prior to detailed design. DELWP's recommended surveys were all pre-construction. Mr Lane's approach is obviously more conservative and would provide the best opportunity to further avoid listed species, should they occur in the C2 alignment corridor.

The IAC prefers Mr Lane's approach as providing the best opportunity to avoid and minimise impacts. Having said that, ultimately DELWP is the regulator and should have the final say. In addition, two species (spiny rice-flower and spiral sun-orchid) are also listed under the EPBC Act and should be considered by DCCEEW as to whether further surveys are required prior to detailed design.

The IAC notes there is also a difference in intensity of surveys being proposed with Mr McCaffrey recommending that opportunistic surveys, as opposed to detailed targeted surveys, would suffice for some species.

The EES recommends pre-clearing survey for threatened flora but does not go into details about targeted species or the level of survey effort. Similarly, the EMF provides a general measure for pre-clearing survey for threatened flora to be undertaken by the construction contractor (BH16).

Considering the Project's uncertain timeframes and potential for changes to the environment or knowledge base regarding listed species, the IAC considers it appropriate to avoid listing the flora species in the Incorporated Document (which would require a PSA to amend) and instead provide a process for a secondary consent by DELWP to approve a plan for undertaking additional surveys of listed flora species at either, or the pre-design and pre-construction phases of the Project. The EMF could then be updated to list potential species to be considered – and include Mr Lane's more conservative list so that the final survey program can be reconsidered at a later stage once Project funding is received.

<sup>26</sup> EMF Table 17.5 and mitigation measure BH12

Any newly identified threatened species would need a management plan. RRV captured this in its Final Hearing version of the Incorporated Document (Clause 5.1.7 (b)) and this is supported by the IAC.

The IAC endorses RRV's proposed change to capture the requirement for translocation plans, to include Yarra gum in the Threatened Species Management Plan list and to include mitigation measures to minimise impacts on the Ben Major grevillea.

#### **(vi) Findings**

The IAC finds:

- The survey effort for threatened species and communities is adequate at this stage of the Project development for the impact assessment.
- Further targeted surveys for some flora and fauna species are warranted to inform the detailed design and pre-construction stages.
- Details of further surveys can be determined at a later stage via secondary consent from DELWP.
- For any threatened species located, management plans will be required as captured in RRV's Final changes to the EMF and Incorporated Document.

## **5.5 Impacts to threatened fauna**

Impacts to threatened fauna included habitat loss and habitat disturbance. This chapter discusses habitat loss and the following chapter discusses impacts of habitat disturbance as this is common among all fauna (wildlife).

### **5.5.1 Victorian Temperate Woodland Bird Community**

#### **(i) What did the EES say?**

The Project will clear up to 32.80 hectares of habitat with a residual impact rating of high due to the unavoidable nature of this removal. Without appropriate mitigation, indirect impacts may also occur through unapproved clearing, dust and weeds.

The EMF requires the preparation of a Threatened Species Management Plan (MD09 and BH12) including for this fauna community. More detailed mitigation measures were provided in Technical Appendix C.<sup>27</sup>

#### **(ii) Key issue**

The key issue is the impacts on this fauna community and the potential opportunity to offset habitat loss.

#### **(iii) Evidence and submissions**

DEWLP submitted landscape planting should recreate habitat for this community. RRV agreed, noting this had been included in the EES, and RRV proposed the EMF be updated to include specific reference to this.

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<sup>27</sup> Section 10.3.11

Mr Lane gave evidence that, as much as practicable, consideration should be had to selecting offset sites that support this community, although he conceded there were no controls for such offsets under the FFG Act. Mr Lane explained the FFG Act did not itself provide a mechanism for offsets, although offsets for FFG species were often generally captured by the Habitat Importance Models used to determine offsets under the Native Vegetation Guidelines. Although offsets for native vegetation removal would provide some mitigation, an FFG-listed fauna community is not specifically addressed through the Habitat Importance Models or native vegetation offsets. Considering the Project would result in removal of over 30 hectares of habitat for this FFG-listed threatened community, and having regard to the EES referral criteria under the *Ministerial Guidelines for Environment Effects Statement's in Victoria*<sup>28</sup>, Mr Lane considered it reasonable to conclude that clearing this much habitat would likely result in a significant impact worthy of offsetting to the extent practicable.

RRV did not respond specifically to this recommendation.

McCaffrey indicated he was generally in agreement with the peer review and did not address this point specifically.

#### **(iv) Discussion**

The IAC considers that revegetation works within the Project area should recreate the original habitat for this community. Section 10.3.11 of EES Technical Appendix C goes further than this and recommends other measures such as staged habitat removal, pre-clearance surveys and avoiding works during breeding times. The IAC considers all these measures should be considered for inclusion in the Threatened Species Management Plan for this community and this could be captured by a specific cross-reference to this section in BH12 or a new mitigation measure.

The IAC accepts and agrees with Mr Lane's analysis concluding that the Project will result in a significant impact to the FFG-listed Victorian Temperate Woodland Bird Community and that providing offset for this, if practicable, would be desirable. The IAC notes the Threatened Species Management Plan under the EMF is generally described to include management actions such as offsetting for habitat loss. Considering the evidence however, the IAC has recommended this be specifically mentioned and explored through the Native Vegetation Offset Strategy.

#### **(v) Findings**

The IAC finds:

- The Project will have a significant impact on the Victorian Temperate Woodland Bird Community via the direct loss of over 30 hectares of habitat if practicable, it would be appropriate for this impact to be offset.
- The Threatened Species Management Plan should include measures for this community outlined in the EES, including staged habitat removal, habitat improvement works and re-creating original habitat in revegetation.
- Consideration should be given to selecting an offset site which also supports this community.

<sup>28</sup> The Ministerial Guidelines generally regard clearing more than 10 hectares of significant native vegetation as being a potentially significant effect

## 5.5.2 Golden sun moth

### (i) What did the EES say?

The golden sun moth was recorded in the study area during surveys in 2015 to 2018. This was a new record for the study area.

The Project will result in the removal of:

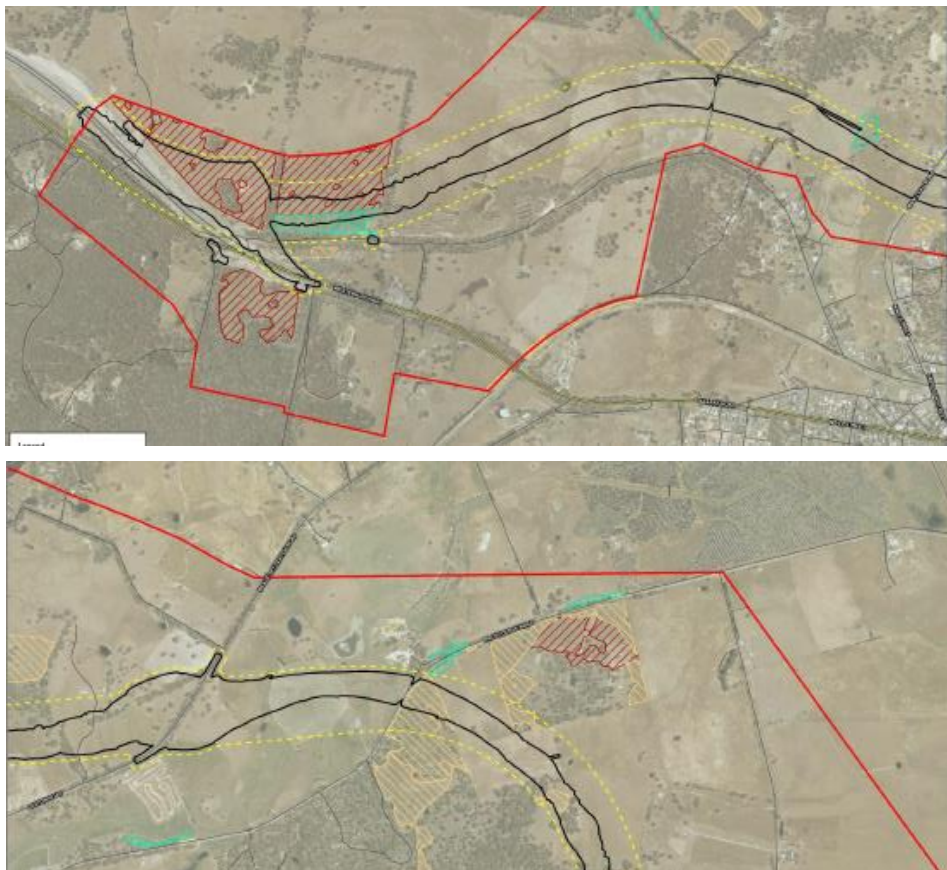
- 1.672 hectares of known occupied habitat
- 9.434 hectares of higher quality potential habitat
- 2.822 hectares of lower quality potential habitat.

The species were recorded at different locations over the years. The expected residual impact was considered High. A significant impact on this species was considered likely based on the *Significant impact guidelines for the critically endangered golden sun moth* (DEWLP, 2009), particularly by exceeding the impact threshold of greater than 0.5 hectare of habitat loss, degradation or fragmentation.

According to the assessment, EPBC Act offsets will be required and a preliminary assessment of these was provided.

Key areas of habitat are shown in Figure 17 below (aqua hatching represents confirmed habitat, and red hatching represents high quality potential habitat and yellow hatching low quality potential habitat). Further areas are identified in Appendix Q to Technical Appendix C. The EES specifies potential haulage routes which do not include Racecourse Road.

**Figure 18 Golden sun moth habitat (western tie in and along Racecourse Road)**



Source: Appendix Q to Appendix C page Q-15, Map 1 of 5 and Map 4 of 5

**(ii) Key issues**

The key issues are:

- potential impacts on the golden sun moth
- need for further surveys closer to detailed design or pre-construction.

**(iii) Evidence and submissions**

Noting the location for golden sun moth had changed over survey years, the IAC queried if additional surveys would be required prior to detailed design or pre-construction, particularly around the western interchange. Mr McCaffrey explained surveys to date had adequately characterised the known and potential habitat, however the location of the moth could change depending on the timing of the Project and land uses (including for example sheep grazing). Mr McCaffrey suggested if the Project were to proceed 5 to 10 years after current surveys an audit would be recommended. Mr Lane endorsed this suggestion.

DELWP advised “*the threatened species management plan for Section 2B of the Western Highway duplication required further baseline information for nationally threatened species to be collected within 100 metres of known records of the species prior to construction works*”. In that case, the requirement for offsets for golden sun moth were required by the Project’s EPBC Approval and were detailed in a separate offset management plan. DELWP suggested in this case, the Offset Management Plan could be appended to the Threatened Species Management Plan and, given the application of the Bilateral Agreement, the Incorporated Document could require the offset management plan for nationally threatened species either as an appendix of the Threatened Species Management Plan or as a separate condition.

RRV did not respond to this suggestion.

Mr Kelly gave evidence that if there was a reason to avoid Racecourse Road for construction or haulage, this could likely be accommodated.

**(iv) Discussion**

A key area explored for reduction in the construction footprint during the Hearing was the western interchange as discussed in Chapters 4.3.1 and 4.5 of this Report. The IAC considers it important for the detailed design process to seek to further avoid impacts on golden sun moth habitat, placing priority on avoiding occupied and high-quality potential habitat. To this end, the IAC recommends an additional mitigation measure adopting the words of BH01 but focusing on golden sun moth habitat which may or may not be native vegetation.

The EES used the *Significant impact guidelines for the critically endangered Golden Sun Moth (Synemon plana)* (DEWHA, 2009a) for its significant impact assessment.<sup>29</sup> These Guidelines include three significant impact thresholds for golden sun moth<sup>30</sup> including:

- habitat loss, degradation or fragmentation of a large or contiguous area of habitat (greater than 10 hectares) by removal or impact on greater than 0.5 hectares
- any habitat loss, degradation or fragmentation of a small or fragmented habitat area (less than 10 hectares)

<sup>29</sup> Appendix Q, Section Q2 to EES Technical Appendix C

<sup>30</sup> See Table 3 of *Significant impact guidelines for the critically endangered golden sun moth* (DEWHA, 2009)

- fragmentation of a population through the introduction of a barrier to dispersal including a break in habitat greater than 200 metres.

These Guidelines note:

The elements and thresholds in the table above give guidance to the level of impact that is likely to be significant for the species at a site. They are not intended to be exhaustive or prescriptive, but rather to highlight those actions that threaten the persistence and recovery of the golden sun moth.

The EES considered the Project exceeded the thresholds for habitat loss and fragmentation as follows:

- the habitat in question was a large or contiguous habitat area,
- greater than 0.5 hectares was to be removed
- the Project would fragment a patch of partly confirmed and partly high-quality potential habitat north of Martins Lane
- although less than 200 metres in width, the roadway was considered a barrier to dispersal between these habitat patches.

The EES stated the Project impacts were *“likely to locally impact the species, although is considered unlikely to substantially impact the species as whole”*.<sup>31</sup> The assessment concludes *“based on the significant impact criteria, a significant impact should be assumed unless otherwise determined by DAWE”* (Commonwealth department now currently named DCCEEW).

The *Significant impact guidelines for the critically endangered golden sun moth (Synemon plana) (DEWHA, 2009a)* should be read in conjunction with the more recent *Significant impact guidelines 1.1 Matters of National Environmental Significance* (Department of Environment, 2013). In doing so, the significant impact criteria are amended somewhat to be less quantitative, (acknowledging the 2009 thresholds were not intended to be *“prescriptive”*) and more focused on the likelihood of a significant impact on an *“important population”*.

While the opinion of DCCEEW may need to be sought to confirm whether it considers the population in question to be ‘important’, the IAC considers it is likely so, based on the precautionary principle and considering the EES notes that these were new records for the region.<sup>32</sup> In any case the IAC accepts the conclusion of the EES that the Project will result in a high residual impact to the golden sun moth and that this is likely to be a significant impact on a matter of national environmental significance triggering the need for offsets.

Although RRV did not respond to DELWPs suggestion for the golden sun moth Offset Management Plan to be included as a requirement of the Incorporated Document, it is included in the EMF. Whilst golden sun moth was listed in the EMF in MD09 it should also be listed in BH12 in Table 17.8.

The IAC notes the habitat quality scores rely upon attributes including the species stocking rate, with lower value being attributed to low quality habitat where the species has not been recorded. The IAC is concerned that if the attributes of the identified habitat should change, for better or worse, the habitat quality scores would differ and so too, could the corresponding offset requirement.

<sup>31</sup> See pages Q-12 and Q-14 of Appendix Q to EES Technical Appendix C

<sup>32</sup> See section 6.6.1.2 of EES Technical Appendix C



Considering the Project's uncertain timeframe, the IAC considers it appropriate that the Threatened Species Management Plan include the requirement to consider the need for further survey work (audit of previous surveys or detailed surveys) of known and potential golden sun moth habitat to inform final detailed design and offset requirements.

The IAC has recommended including a new mitigation measure in Table 17.8 of the EMF, however the same outcome could be achieved by different means. As the EMF includes the requirement for the EPBC Act offset plan, and this could be a condition of Commonwealth approval (if it is assessed there is a significant impact), the IAC has not specifically recommended this be included in the Incorporated Document though this is also an appropriate approach.

In addition to direct habitat loss, the golden sun moth could be indirectly impacted by compaction or dust from haulage outside the construction footprint. Although there are specific measures to minimise dust, considering the feasibility of avoiding Racecourse Road altogether for haulage, the IAC considers this would be preferential. This should be considered in the Threatened Species Management Plan through a new mitigation measure.

#### **(v) Findings**

The IAC finds:

- The Project will likely have a significant effect on the golden sun moth. Further opportunities to avoid potential golden sun moth habitat (including non-native vegetation) should be required.
- Offsets will need to be provided in accordance with the EPBC offset policy.

### **5.5.3 Other threatened species**

#### **(i) What did the EES say?**

Table 5 includes the IAC's summary of the impacts to threatened fauna and wildlife identified in the EES.

**Table 5** Impacts to threatened fauna and wildlife

| Species/community       | Habitat loss   | Observations  | Residual impact   |
|-------------------------|--|---|---|
| Wetland bird habitat    | 1.52 hectares of moderate quality habitat  | Wetland habitat in the study area consists of seasonal wetlands, farm dams and drainage lines   | Low for all wetland bird species  |
| Woodland bird habitat   | 32.8 hectares  | Includes habitat for members of the Victorian Temperate Woodland Bird Community and powerful owl<br><br>Largest area impacted being at Camp Hill State Forest           | Moderate for brown treecreeper - due to the low number of records and lower number of large trees available for nesting.<br><br>Moderate for powerful owl largely due to loss of potential foraging habitat.<br><br>Low for remaining species |
| Growling grass frog     | Potential aquatic habitat:<br>- 0.281 ha high quality<br>- 1.132 ha moderate quality<br>Potential terrestrial habitat:<br>- 17.285 ha high quality<br>- 68.179 ha moderate quality | Growling grass frog were not detected during surveys. Most impacts are expected to occur at Yam Holes Creek floodplain between Racecourse Road and Beaufort-Lexton Road | Low<br><br>Preliminary significant impact criteria assessment concluded the Project is unlikely to significantly impact the species   |
| Brown toadlet           | 1.680 ha potential habitat.  | Recorded in 2015, but not subsequently in 2016-17 surveys   | Low, particularly accounting for habitat connectivity mitigations   |
| Brush-tailed phascogale | 6.99 hectares of moderate quality<br>15.598 hectares of high-quality   |   | Moderate associated with direct clearing  |
| Little galaxias         | 7 creek crossings  | Recorded in 2011, but not subsequently in 2016 and not known to have self-sustaining population in any of the creeks  | Low<br><br>Preliminary significant impact criteria assessment concluded a significant impact is not anticipated from the Project  |

Source: IAC - Combination of Table 9.17 in EES Main Report and Table 11.1 of EES Appendix C

**(ii) Request for further information**

The IAC requested an update of any changes to the biodiversity assessment in light of the *Flora and Fauna Guarantee Amendment Act 2019* coming into effect, or the process for any updates.

**(iii) Key issues**

The key issues are:

- potential impacts on threatened fauna species
- need for further surveys to account for newly FFG-listed fauna species
- need for further surveys closer to Project funding.

**(iv) Evidence and submissions**

WHCG submitted the Project should be rejected based on biodiversity reasons including the loss of habitat generally, on the basis that, in its' opinion "*Australia has the worst extinction rate in the world and is losing more biodiversity than any other developed nation.*" WHCG did not consider efforts to recreate habitat should be counted on to compensate habitat loss.

Mr McCaffrey responded that experts had undertaken comprehensive surveys, the Project had been rigorously assessed with various mitigation measures to minimise impacts as much as practicable, and so "*provided that these measures are successfully implemented and followed, any impacts are likely to be acceptable and not lead to a significant impact on any threatened species or communities*".

Mr McCaffrey considered additional consideration of newly listed fauna species for the impact assessment was not required as, in his opinion, they had already been considered satisfactorily. Mr McCaffrey agreed with DEWLP's submission that further surveys for brown toadlet to inform detailed design could be beneficial and reiterated that the EES had recommended additional pre-construction surveys for threatened fauna species.

Mr Lane's evidence concurred further brown toadlet surveys should be undertaken, and specifically in autumn (as opposed to spring and summer, when the surveys were undertaken). Despite this, Mr Lane considered the approach of habitat mapping and assumed presence was suitable for the impact assessment.

Mr Lane recommended further surveys prior to detailed design for the newly FFG-listed little eagle and tussock skink due to their high likelihood of occurrence and that they were not previously subject to targeted surveys.

RRV adopted these recommendations and included these species in recommended surveys pre-detailed design in the Incorporated Document.

DEWLP submitted<sup>33</sup> the Threatened Species Management Plan ought to address all potential impacts to listed threatened species including those recently included as threatened. Mr McCaffrey agreed to this recommendation, citing it was also recommended in Section 10.3 of Technical Appendix C. RRV addressed this recommendation in their Final Hearing version of the Incorporated Document.

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<sup>33</sup> Submission 14, paragraph 3.26

DEWLP submitted the EMF ought to be updated to address risks, mitigation and threats for including brush-tailed phascogale, little galaxias, squirrel glider, brolga and brown toadlet. Mr McCaffrey agreed to the extent the list included species which had been recorded or were likely to occur. In his opinion, squirrel glider had a low likelihood of occurrence and therefore should not be included. Mr Lane's evidence concurred it was unlikely the squirrel glider was present in the study area. RRV adopted the evidence and agreed to update the EMF for all but the squirrel glider.

**(v) Discussion**

The IAC accepts the WHCG submission that habitat creation cannot compensate for the loss of habitat from the Project. The IAC considers this has been acknowledged in the residual impact ratings which for many species note the key factor is the unavoidable loss of habitat.

The IAC notes that the preliminary significant impact assessment for the growling grass frog relied upon the specific significant impact guidelines for this species. Again, the IAC understands these specific criteria need to be read in conjunction with the overarching *Significant impact guidelines 1.1. Matters of National Environmental Significance*, particularly the significant impact criteria for vulnerable species. Despite this, the IAC considers the overall assessment of the residual impact on the species would likely remain low based on the information in the EES, including that the species is unlikely to currently occur and breed in the C2 alignment.

The IAC notes the remaining preliminary significant impact assessment for EPBC-listed fauna species adopted the Significant Impact Guidelines 1.1 criteria. The IAC accepts the residual impact ratings for the remaining threatened fauna species.

The IAC supports further surveys for little eagle, tussock skink and brown toadlet prior to detailed design. All parties agreed that this requirement could be included in the Incorporated Document as opposed to the EMF. However, this would require a planning scheme amendment to amend the Incorporated Document if any of these species are removed from the threatened list (or if any new species were added) before Project construction commences. The IAC considers that it is preferable to adopt the approach outlined above for flora, with species listed in the EMF.

The IAC supports further amendments to the Incorporated Document and EMF as essentially agreed between the parties. The IAC accepts the evidence that the squirrel glider is unlikely to be present in the study area and supports RRV's proposed changes.

Residual impact ratings on fauna species were based on the implementation of proposed mitigation measures spelt out in detail in the Technical Appendix C. Some, but not all of these were translated in the EMF. Some may be included in a general sense but are not immediately obvious. The IAC considers the detailed mitigation measures in the EES are useful and the Threatened Species Management Plan section of the EMF should be updated to include cross-reference to the mitigation measures provided in Section 10.3 of Technical Appendix C as a minimum.

With respect to remaining threatened fauna species, the IAC accepts the findings impact assessment as summarised in Table 5 above as the assessment was robust, comprehensive and otherwise unchallenged by Mr Lane and DEWLP.

**(vi) Findings**

The IAC finds:

- The Project will have a moderate residual impact on brown treecreeper, powerful owl and brush-tailed phascogale and a low residual impact on remaining threatened species.
- Further surveys of brown toadlet, as well as newly listed little eagle and tussock skink are required at pre-detailed design stage.
- Minor amendments to EMF and Incorporated Document proposed by RRV are supported.

**5.6 Wildlife impacts**

Wildlife impacts are common in nature across fauna species including threatened fauna species discussed above and non-threatened wildlife species.

**5.6.1 Loss of habitat connectivity****(i) What did the EES say?**

A separate impact and mitigation assessment was undertaken by the University of Nottingham<sup>34</sup> which assessed the potential impacts of the Bypass on ecological connectivity within the broader landscape. This used leading practice connectivity modelling approaches to characterise how the Project will fragment the landscape and affect wildlife movement. It also identified mitigation measures to avoid or reduce this affect. Five conservation targets were modelled which represented a diverse range of dispersal behaviours and movement patterns:

- woodland birds
- echidna
- brush-tailed phascogale
- growling grass frog
- golden sun moth.

The four alignment options were considered and mitigation measures (such as rope bridges, land bridge at Camp Hill and bridge/culvert crossings) were assessed for effectiveness (refer Figure 19 below). The codes in Figure 19 represent different types of proposed wildlife corridor crossings:

- L – land bridge
- C – culvert
- R – rope ladder
- U – underpass
- B – bridge (underpass),
- U – underpass/road verge.

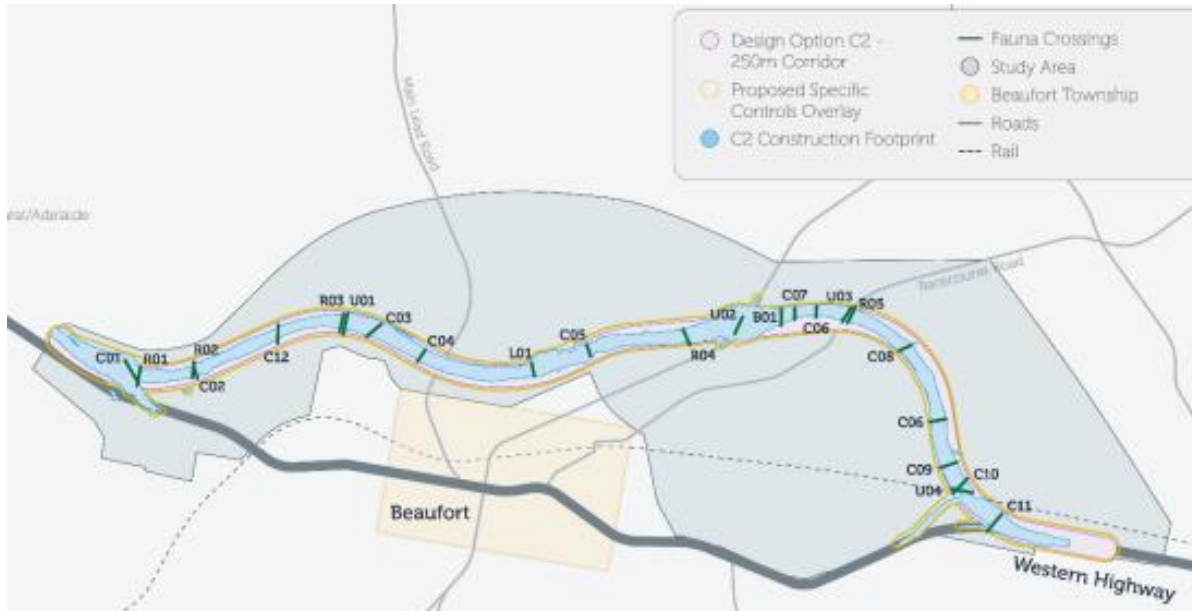
The report concluded:

Mitigation measures which restore connectivity across the road are critical for maintaining connectivity in the study area for species which perceive the bypass as a barrier. The mitigation modelling provided support for a land bridge being important for connecting patches to the north and south for woodland dependant species. Importantly, we found that each additional mitigation measure resulted in significant increases in connectivity for Brush-tailed Phascogale.

<sup>34</sup> Appendix M to Technical Appendix C

If we consider the study area in the context of how it contributes to habitat outside the study area, the isolation of patches in the north from the patches in the south **will potentially have significant long-term consequences for regional scale connectivity**. (IAC emphasis)

**Figure 19** Threatened ecological communities in the study area



Source: EES Figure 9.23

In terms of the brush-tailed phascogale, whilst the land bridge provided the most improvement in connectivity, each additional rope bridge continued to improve connectivity for this species and so the combination of these measures was considered important.

Due to limitations of the model<sup>35</sup>, including the reliance upon expert-based modelling of species dispersal patterns (as opposed to field data), it was *“recommended that ongoing monitoring and adaptive planning be undertaken as a precaution”*.

The EES indicated the location where connectivity loss was greatest for woodland species was the cutting through Camp Hill State Forest and other locations where wooded habitat is bisected by the road.<sup>36</sup>

The EES recommended a land bridge at the Camp Hill State Forest location and for a detailed feasibility study to be undertaken to explore options for a land bridge in this location.<sup>37</sup> The EES provided that monitoring of land bridges in Australia *“has shown extensive use by a wide range of species”* and that *“there is an increasing and overwhelming body of evidence from Australia and internationally that vegetated land bridges are the most effective approach to restore connectivity for a wide range of species”*.

Mitigation measure BH02 required the use of structures to improve connectivity including a land bridge, modified drainage structures, culverts and strategic revegetation. It was proposed that detailed design of these features would be developed in consultation with ecologists and the precise location of such structures would be *“determined during detailed design in consideration*

<sup>35</sup> Explained in Section 5.2 of Appendix M to Technical Appendix C

<sup>36</sup> Section 10.4.2 of Technical Appendix C

<sup>37</sup> Section 10.4.2 of Technical Appendix C

*with the habitat connectivity assessment completed as part of the flora and fauna impact assessment”.*

The residual impact of loss of connectivity was assessed as moderate, reduced from high once mitigation measures are employed.

**(ii) Key issues**

The key issues are:

- connectivity measures
- strategic revegetation.

**(iii) Evidence and submissions**

WHCG submitted the legislative and policy background did not consider non-threatened fauna species resulting in likely impacts which could contribute to the decline of species to warrant listing as threatened. Dr Jones for the WTOAC submitted this same legislative and policy background was at odds with traditional owner perspectives which considered all flora and fauna as equally important. The WTOAC noted the positive aspirations of RRV generally and the Project specifically in seeking to facilitate habitat crossings for a wide range of species.

DELWP’s submission noted analysis in the EES showed C2 alignment would have the greatest impact on wildlife habitat, acting as stepping stones (14.462 hectares), but the least impact on wildlife corridors (especially core habitat areas).

DELWP noted the EES proposed a detailed assessment of design improvements for connectivity and to reduce the rate of collisions. DELWP supported this and submitted it should be part of a Wildlife Management Plan which should identify management actions to improve connectivity for the life of the Project and all interactions with wildlife during construction.

Relying upon Mr McCaffrey’s evidence, RRV initially submitted such measures could be included in the Threatened Species Management Plan, to avoid the need for a further separate plan. In closing, RRV agreed to include the requirement for a Wildlife Management Plan in the Incorporated Document.

Council expressed concern that providing crossings adjacent to existing rail/road infrastructure (where the bypass crosses over) may funnel wildlife such as kangaroos to unsafe crossing points. Council was also interested as to how the location of crossings were determined, whether based on engineering convenience or fauna considerations.

RRV relied upon Mr McCaffrey’s response that proposed locations had been determined based on fauna considerations. Whilst Mr McCaffrey agreed the ‘gold standard’ would be to provide standalone fauna crossings (not co-located with road or rail infrastructure) in all instances, he considered solutions to improve the safety of a co-located crossing point were not cost prohibitive (for example fencing, planting) and simply required further thought.

Mr Lane gave evidence the mitigation measures proposed to improve connectivity are *“in line with the current recommendations for the taxa of interest, and with the latest evidence from similar successful case studies.”*

One land bridge is proposed (as identified in Figure 19) with a feasibility study recommended in the EES Technical Appendix C Section 10.4.2.

The IAC noted that this would be the first land bridge in Victoria and queried the intent of the detailed feasibility study. Mr McCaffrey clarified his intention was for the feasibility study to explore the detailed specifications of the bridge as opposed to whether or not to have a land bridge at all. Mr McCaffrey gave evidence land bridges can feasibly be built and can function to improve connectivity and that design requirements were provided in the EES<sup>38</sup>. He suggested a cross-reference to these in the EMF may assist improving the outcome.

In relation to strategic revegetation, Mr Lane gave evidence the Project would benefit from undertaking some strategic revegetation (outside the road reserve) to reinforce links in the current habitat network. He considered an approach could be for the tender documents to include incentives for a connectivity outcome through strategic revegetation.

#### **(iv) Discussion**

The IAC concurs with RRV's position to adopt DELWPs submission for a separate Wildlife Management Plan.

The IAC is comfortable the EES demonstrates significant consideration and analysis has been undertaken to determine the most beneficial crossing locations for a range of wildlife. Mitigation measure BH02 allows for finalisation of the locations of crossings based on the ecological, as opposed to other considerations.

The IAC notes the limitations of the connectivity impact and mitigation assessment and considers it appropriate that a monitoring program be developed with appropriate contingencies for improving connectivity should the measures implemented not achieve the results sought. Such a program should also seek to specify the objective timeframes under which connectivity ought to be successfully re-established. The IAC has recommended this be included in the Wildlife Management Plan required by the Incorporated Document and mentioned in mitigation measure BH02.

The IAC has proposed minor wording changes to BH02 to tighten the language regarding detailed design of these features and the involvement of a suitably qualified ecologist.

The IAC notes RRV's proposed wording in the Incorporated Document requires DELWP to approve the final Wildlife Management Plan. DELWP's initial submission did not include this requirement, however DELWP did not specifically object to this inclusion in its response. The IAC considers it would be beneficial for DELWP to approve such a plan and supports RRVs proposal.

The EES indicates locations for potential strategic revegetation along the C2 alignment corridor which appears to be within the road corridor.

Benefits from improving north-south fauna corridors through strategic revegetation in the broader study area would obviously be greater than focusing solely on links on the reservation particularly considering the impacts from the Project on stepping stones as noted by DELWP. It is however, unclear how this can be implemented through the Project approvals considering such land would not be subject to the PAO and is unlikely to be in the ownership or control of the Proponent and therefore would require co-operation from surrounding landowners.

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<sup>38</sup> Section 10.4.2.4 of Technical Appendix C



Having said that, it is worth pursuing the idea and any potential opportunities that arise, and the IAC has made a recommendation to this effect.

## **(v) Findings**

The IAC finds:

- If the proposed connectivity measures are successful, the Project is likely to have a moderate residual impact on connectivity for fauna species.
- Monitoring with appropriate contingencies is required to ensure the benefits for connectivity are realised by the proposed crossing structures.
- Strategic revegetation on and off the road reservation would strengthen the success of connectivity measures.

### **5.6.2 Habitat disturbance**

#### **(i) What did the EES say?**

All fauna could be impacted by habitat disturbance including noise and dust during construction, visual impacts, introduction and spread of weeds and pathogens, road kill and rubbish. Mitigation measures BH03-BH08, BH10, BH19, BH20 and BH21 were proposed to manage these impacts.

The EPBC Act allows the listing of key threatening processes which “*threaten or may threaten the survival, abundance or evolutionary development of a native species or ecological community*”.

The FFG Act includes potentially threatening processes. The EES concluded:

The Project has the potential to exacerbate several threatening processes listed under the EPBC Act or FFG Act. For all alignments, the Project involves the loss of large trees and native vegetation which increases habitat fragmentation and may advantage noisy miners and red foxes. Clearing may also provide opportunities for weeds and soil pathogens to establish within the area and can increase the amount of sediment run off and toxic substances entering waterways resulting in wetland loss and/or degradation<sup>39</sup>.

An assessment of the Project against these threatening processes was undertaken. It concluded 13 of the 21 EPBC-listed key threatening processes were relevant<sup>40</sup> and 17 of the FFG-listed potentially threatening processes were relevant.<sup>41</sup>

#### **(i) Key issue**

The key issue is habitat disturbance and modification.

#### **(ii) Evidence and submissions**

DELWP highlighted a number of risks to habitat and biodiversity from wetland loss and degradation, weeds, pathogens and pest animal species that had not yet been addressed by the EMF including blackberries, fox and phytophthora cinnamomi.<sup>42</sup> RRV agreed to update the EMF to address these risks.

<sup>39</sup> See Executive Summary and Tables 7.21 and 7.23 of Technical Appendix C.

<sup>40</sup> See Section 5.1.2.3 of Technical Appendix C

<sup>41</sup> See Section 7.11.2.3 of Technical Appendix C

<sup>42</sup> Soil-borne mould that causes ‘root rot’ or ‘dieback’ in plants

The WTOAC submitted the Project would increase threats of urban development, weeds and rabbits to Country – which are identified as key threats to Country in the Wadawurrung Country Plan.

Further, there was a *“need for a culturally-attuned appraisal of the risks to our vegetation and animal species”*. Mr McCaffrey responded this would be appropriate and perhaps should be included in AH01.

### **(iii) Discussion**

The IAC supports the proposed changes by RRV to address DELWP’s submission. However, there are additional risks of threatening processes outlined in the EES which should also be addressed in the EMF. For example, it is recognised the Project may advantage noisy miners through clearing and modification of woodland habitat. Noisy miners have the ability to aggressively exclude other birds from habitat. Though present in the study area, it is noted it is unlikely they are currently doing so. Considering the presence of habitat for and direct Project impacts on, the Victorian Temperate Woodland Bird Community, the IAC considers it important the EMF be updated to include any practicable, proven mitigation measures to prevent a further increase in noisy miners in the Project areas.

The IAC accepts the findings of the EES that the Project is unlikely to cause a significant increase in the local rabbit population. In terms of weeds and urban development, the IAC is comfortable the EMF as proposed to be updated provides a robust framework for these threats to be appropriately managed.

The WTOAC submission is further discussed in Chapter 6.2 in this Report.

### **(iv) Findings**

The IAC finds:

- The EMF should be updated to address risks to habitat and biodiversity from weeds, pathogens and pest animal species.
- The updated EMF otherwise provides a robust framework for threats to be appropriately managed.

## **5.7 Habitat restoration**

### **(i) What does the EES say?**

Habitat creation is recommended for several species including broilga<sup>43</sup>, brown toadlet<sup>44</sup> brush-tailed phascogale<sup>45</sup>, growling grass frog<sup>46</sup> and golden sun moth. Each of these sections refer to the general section on rehabilitation, habitat creation and landscape plan<sup>47</sup> which states *“habitat creation should be included in the landscape plan”*.

Recommendations for rehabilitation, habitat creation and the landscape plan include<sup>48</sup>:

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<sup>43</sup> Technical Appendix C, section 10.3.4

<sup>44</sup> Technical Appendix C, section 10.3.5

<sup>45</sup> Technical Appendix C Section 10.3.6

<sup>46</sup> Technical Appendix C, section 10.3.7

<sup>47</sup> Technical Appendix C, section 10.4.2.1

<sup>48</sup> Technical Appendix C, section 10.4.1.2

- revegetation to be undertaken using site-indigenous species from the study area's EVCs with plants or seeds of local provenance
- additional revegetation in the broader study area where it may help shield or buffer habitat from potential impacts or improve connectivity
- planting should be undertaken with reference to planting densities in Appendix 1 of *Native vegetation gain scoring manual version 2* (DEWLP, 2017) and be incorporated into the landscape plan
- creation of golden sun moth habitat should occur near known habitat
- creation of growling grass frog habitat should occur at a minimum at entrances of culverts designed for connectivity for this species

Relevant mitigation measures include BH02, BH06, BH11 and BH29-31.

The key issues are:

- habitat creation
- timing of restoration activities.

## **(ii) Evidence and submissions**

DEWLP and WHCG submitted landscape planting should recreate habitat for existing species. Mr Lane responded the EES already recommended such measures.<sup>49</sup> Council submitted all post construction rehabilitation be undertaken with local native provenance species, except where agricultural activity will be resumed.

DELWP submitted landscape planting should recreate habitat for fauna species and communities such as Victorian Temperate Woodland Bird Community. In addition, habitat restoration activities should be identified around culverts for growling grass frog and river swamp-wallaby grass. RRV agreed to update the EMF to implement these changes.

Ms Bauer gave evidence there should be ecological input into the preparation of landscape plans. RRV agreed and proposed amending LVO3 to include this requirement.

WHCG submitted any early measures that could be done in advance of the Project (for example seed collection or nest box installation), should be done early to ensure the best possible outcome. Mr Lane and McCaffrey agreed early timing of such activities would be beneficial.

Mr McCaffrey thought it was ideal to collect seed in advance, where possible, allowing time to test and achieve propagation success from a number of plants. He noted that the timing of Project funding may not coincide with an appropriate seeding event with some seeding events being influenced by erratic weather patterns, and suggested such measure could be included in a Threatened Species Management Plan.

Mr Lane agreed early seed collection and strategic revegetation was worthy. Such activities may require preliminary funding and agreements with current landowners.

WHCG suggested *“word should be spread around so that local seed collectors know in advance e.g., Seeding Victoria”*.

In relation to nest boxes, Mr Lane considered there was an opportunity to replace or relocate these in advance of construction to minimise and mitigate future impacts. Mr McCaffrey advised

<sup>49</sup> Technical Appendix C Sections 10.4.2, 10.3.8 and 10.4.1.2

he did not have any data on the existing nest boxes but if available, would suggest this be incorporated into the Hollow Replacement Strategy that had been recommended as part of the EES.<sup>50</sup>

RRV submitted it would not have the funds available for such activities in advance of the Project being funded. Having said that, RRV gave an indicative timeframe of a similar project which illustrated some years between funding being provided, the award of the contract and the commencement of early works, providing the opportunity for some of these activities to be undertaken. RRV considered it appropriate the approval documents identify the opportunities but leave the details up to MRPV to finalise during detailed design.

### **(iii) Discussion**

Revegetation and habitat creation is a good example where the detail of the EES has been lost to in general mitigation measures in the EMF. The IAC considers more detail of the habitat creation proposed as mitigation measures in the EES should be included in the EMF by specific references and cross references. The IAC's recommendation below represents the minimum wording required. In addition, there needs to be clear input from ecologists into the Landscape Management Strategy and Landscape Design Plans.

The IAC accepts RRV's submission that it would be unable to undertake works prior to funding being received for the Project. There is however opportunity to commence some mitigation works (such as habitat creation, strategic revegetation, seed collection and propagation and nest box relocation) as soon as funding has been provided (in advance of the contract being awarded). Further consideration is needed of which activities should be prioritised based on either potential risks or gains.

The IAC considers WHCG's suggestion for local seed collectors to be advised in advance is sound and should be included in RRV's stakeholder engagement strategy, although this should not detract from RRV's obligations to ensure appropriate seed collection occurs prior to clearance.

### **(iv) Findings**

The IAC finds:

- There are opportunities to strengthen the EMF with specific reference in BH29 to species to be targeted for habitat creation and, specific reference to revegetation practices.
- The Landscape Design Plans (LV03) and Landscape Management Strategy (LV01) should be prepared with input from an experienced ecologist.
- Local seed collectors should be included as a stakeholder in the Community and Stakeholder Engagement Plan.

## **5.8 Native vegetation offsets**

### **(i) What did the EES say?**

The EES risk assessment<sup>51</sup> identified the potential risk of State offsets being difficult to source, leading to project delay and expense. Controls proposed were to source offsets early and to consider impacts and resulting offsets in route selection and detailed design.

<sup>50</sup> Technical Appendix C Section 10.4.1.2

Offset requirements provided in Technical Appendix C<sup>52</sup> were as follows:

**General offset amount**

- 2.041 general habitat units

**Species offset amount**

- 27.002 specific habitat units for Ben Major grevillea
- 32.250 specific habitat units for emerald-lip greenhood
- 28.002 specific habitat units for rough wattlle.

Results of a DELWP Native Vegetation Credit Register search for the C2 alignment<sup>53</sup> indicated that some, but not all required species-units offsets were currently available on the register.

Specifically, there were insufficient confirmed sites of specific habitat units for Ben Major grevillea and rough wattlle. In considering the feasibility of sourcing these offsets, the EES<sup>54</sup> considered the presence of potential sites and the total area of the available habitat in Victoria based on data from Habitat Importance Models to conclude that sourcing the required amount of offsets would likely be feasible.

An assessment of the Project against the application requirements of the Native Vegetation Guidelines<sup>55</sup> was provided including the offset requirements (application requirement 1) and an avoid and minimise statement (application requirement 5). Application requirement 9 requires an offset statement including evidence that required offsets have been identified. The EES stated:

The feasibility to secure all state offsets are considered likely given the confirmed availability through offset brokers and extent of modelled habitat coverage. Offsets need to be secured prior to commencement of construction.

**(ii) What does the draft Planning Scheme Amendment require?**

The Incorporated Document requires a Native Vegetation Management Plan to be prepared prior to the removal of any native vegetation, excluding preparatory works. Clause 5.1.3 provides:

The plan must include an assessment of native vegetation to be removed, lopped or destroyed for the Project in accordance with the requirements of the *Guidelines for the removal, destruction or lopping of native vegetation* or its successor.

The exhibited draft Incorporated Document permitted preparatory works, including native vegetation removal (Clause 5.2), to be undertaken prior to the satisfaction of Clause 5.1 conditions including the preparation of the:

- EMF
- Native Vegetation Management Plan
- Offset Statement
- Threatened Species Management Plan.

Preparatory works could also proceed prior to the securing of native vegetation offsets in accordance with the Native Vegetation Guidelines.

<sup>51</sup> Attachment III, risks BIO1a-d

<sup>52</sup> EES Table 9.23 and Table 12.1 of Technical Appendix C)

<sup>53</sup> Technical Appendix C, Section 12.1.1

<sup>54</sup> Table 12.2 of Technical Appendix C

<sup>55</sup> EES Table 9.23

**(iii) Key issues**

The key issues are whether:

- suitable offsets can be provided
- the preparatory works provision is appropriate and reasonable.

**(iv) Evidence and submissions**

DEWLP submitted an offset strategy would be needed following the completion of an endorsed native vegetation assessment. DELWP noted the current shortfall in available species offsets and submitted the EES did not identify a strategy for how this could be met.

Mr Lane gave evidence the EES did not satisfy the Scoping Requirements for an offset strategy.

Mr McCaffrey considered it was appropriate that evidence of offsets be provided as a condition of the Native Vegetation Offset Strategy (MD07) once Project funding was provided. He conceded the EES had not explained how any shortfall would be met and gave evidence that once funding was available, the shortfall would be investigated by one or a combination of the following:

- Re-do a search of the DELWP Native Vegetation Credit Register
- Send an additional Request for Information to DEWLP accredited offset brokers to determine if there are any unregistered sites and/or landholders with all or some of the three required specific units.
- Undertake an analysis of landholdings with combined species units to determine where potential offset sites may occur for further investigation if the steps above are unsuccessful.

He stated these steps should be included in the Native Vegetation Offset Strategy in the EMF.

Dr Jones submitted it would be the WTOAC's preference for offsets to be provided on Country.

The IAC queried if any residual lots from land parcels being severed by the Project might be purchased for offsets. RRV submitted offsets were better managed on large – contiguous lots as opposed to several discrete lots.

The IAC asked Mr Lane and Mr McCaffrey whether they considered it necessary for the Incorporated Document to allow for native vegetation clearance for preparatory works, considering the long-lead time of the Project (see Clause 5.2.1 (a), (b) and (g)).

Mr Lane gave evidence that ideally, all procedures would be in place prior to any native vegetation clearance. Mr McCaffrey gave evidence such clauses were not unusual to provide some flexibility and in his opinion, the clause was not unreasonable.

In closing, RRV submitted such an early works provision is "*routinely included*" in major road projects and tabled the incorporated documents for several previous projects.<sup>56</sup> RRV submitted the language proposed was consistent with, and based on, the language in the Mordialloc and Koo Wee Rup examples together with North East Link. RRV submitted the early works provision was both appropriate and usual and that any vegetation removed under that provision would be offset and that "*there is no risk of native vegetation impacts not being accounted for because of the early works provision*".

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<sup>56</sup> Mordialloc Bypass, Koo Wee Rup Road upgrade, Western Port Highway upgrade and Cranbourne Frankston Road Bypass.

**(v) Discussion**

The IAC accepts Mr McCaffrey's evidence that due to the uncertain timing of Project funding, a pragmatic approach to determining the availability of offsets is suitable. The analysis in the EES of the likely feasibility of offsets being available for the Project is useful. DELWP legitimately identified a gap in the EES in failing to outline a strategy to secure offsets in future and Mr McCaffrey provided a reasonable response. The IAC accepts that offsets will need to be secured prior to the removal of native vegetation in accordance with the Incorporated Document (Clause 5.1.5), save for preparatory works.

Residual lots left over from severed properties are unlikely to provide the best offsets for the Project. However, such parcels could assist in providing some strategic revegetation. This would have to be considered in the context of the access management strategy and discussions with landowners.

The examples provided of similar provisions allowing preparatory works in other incorporated documents varied in their information requirements to support clearing of native vegetation as part of early works. At the most, information to address application requirements 1, 5, 9, 10 and 11 in Tables 4 and 5 of the Native Vegetation Guidelines were required. At the minimum (as per the current proposed wording) only information to address application requirement 1 is required.

The EES already includes information to address application requirement 5 so the IAC considers it would be reasonable to require information to be provided prior to clearance for early works. Logically, a site assessment report (application requirement 10) would need to be commenced prior to the clearance to include the necessary assessment of vegetation.

The IAC accepts some flexibility is appropriate for such projects particularly around the securing of offsets. The IAC therefore considers it reasonable that evidence of offsets having been secured is not required to undertake any preparatory works. However, considering the information provided in the EES with respect to the availability of offsets and the examples of similar provisions provided, the IAC considers it most appropriate that, at a minimum, a suitable offset statement (in accordance with application requirement 9) is provided prior to the removal of native vegetation as part of preparatory works.

Whilst the IAC does not consider addressing application requirements 5, 10 and 11 would be particularly onerous for a Project as progressed as this, the most important requirement to be addressed is the offset statement to provide confidence that offsets are available and are able to be attained. The IAC has included a recommendation to this effect.

**(vi) Findings**

The IAC finds:

- The EES did not provide an appropriate offset strategy. Mr McCaffrey's evidence provided a reasonable response which will be incorporated into the EMF.
- The EMF should include a requirement to consider opportunities to provide strategic revegetation to strengthen habitat corridors both within the PAO and SCO and in the broader study area.
- There remains uncertainty as to the availability of suitable offsets.
- The IAC considers it reasonable that an offset statement be required prior to undertaking any preparatory works to ensure this uncertainty is resolved prior to any clearance.

## 5.9 Recommendations

The IAC recommends:

### Environmental Management Framework

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- **Amend the Threatened Species Management Plan (MD09) to include RRV's Final changes in relation to Yarra Gum and other minor changes (items 2, 3 and 7).**
- **Amend the Native Vegetation Offset Strategy (MD07) to include RRV's Final changes, and in addition a requirement to consider offset sites which may offset impacts to the Victorian Temperate Woodland Bird Community (item 4).**
- **Amend the Community and Stakeholder Engagement Plan (MD12) or include a new mitigation measure to continue engagement with the community regarding impacts to biodiversity and mitigation measures and opportunities for involvement in rehabilitation/reinstatement (item 5).**
- **Amend the Native vegetation Offset Strategy (MD07) to include RRV's Final changes for consideration of the Wadawurrung Traditional Owners Aboriginal Corporation recommendations, and in addition consider offset sites which support the Victorian Temperate Woodland Bird Community (item 8).**
- **Amend the description of the Construction Environment Management Plan (MD04) to refer to applicable Major Road Projects Victoria standards (item 9).**
- **Amend the Access Management Strategy (MD06) and mitigation measure T02 to require assessment of any native vegetation required to be cleared for providing new access, a statement outlining how the removal of such vegetation has been avoided and minimised, and to include any such native vegetation in the Native Vegetation Management Plan (item 13).**
- **Amend mitigation measure BH02 to include (item 28):**
  - a requirement for ongoing monitoring program of crossing structures and their effectiveness and adaptive management measures
  - cross-reference to the crossing structure design guidelines in Technical Appendix C Flora and Fauna Impact Assessment
  - involve a qualified ecologist.
- **Amend mitigation measure BH06 to require a hollow replacement strategy with a minimum replacement ration of 1: 1 (item 30).**
- **Amend mitigation measure BH12 to identify Yarra Gum, golden sun moth and cross reference technical Appendix C Flora and Fauna Impact Assessment (item 26).**
- **Amend mitigation measure BH17 consistent with RRV's Final changes (item 20).**
- **Amend mitigation measure BH29 to:**
  - include specific reference to habitat creation for brolga, brown toadlet, brush-tailed phascogale, growling grass frog, and golden sun moth
  - cross-reference Technical Appendix C Flora and Fauna Impact Assessment including specific reference to revegetation using local provenance species (item 31).



- Amend mitigation measures LV01 and LV03 to ensure landscape planting recreates habitat for species/communities such as Victoria Temperate Woodland Bird Community woodland birds (item 50).
- Amend mitigation measures LV01 the require the Landscape Management Strategy to be prepared in conjunction with ecological expertise, and to consider opportunities for the rehabilitation of existing native vegetation habitat within the Project area (item 53).
- Insert a new mitigation measure to minimise impacts on the Ben Major grevillea, including through the management of dust associated with the construction of the fire track in Camp Hill (item 14).
- Provide implementation details of the Tree Re-use program (item 15).
- Insert a new mitigation measure to require a feature survey and an arborist assessment of all trees above 10 centimetres diameter at breast height in close proximity (15 metre buffer) to the construction footprint (item 32).
- Insert a new mitigation measure to require the Threatened Species Management Plan for golden sun moth to include consideration of the need for further survey work of known and potential habitat to inform final detailed design and offset requirements (item 33).
- Insert a new mitigation measure to ensure the Threatened Species Management Plan for the Victorian Temperate Woodland Bird Community captures mitigation measures outlined in Technical Appendix C Flora and Fauna Impact Assessment (item 34).
- Insert a new mitigation measure which requires a protocol for the development of further seasonally appropriate targeted surveys (item 29):
  - Pre-detailed design: basalt sun-orchid, dwarf boronia, emerald-lip orchid, purple blow-grass, rough wattle, small milkwort, spiny rice-flower, spiral sun-orchid, Yarra gum
  - Pre-construction: candy spider-orchid, golden cowslips, swamp everlasting and swamp fireweed.
- Insert a new mitigation measure to consider implementing any proven practicable measures to reduce risk of invasion by noisy miners (item 35).
- Include details consistent with RRV's Final changes to address Department of Environment, Land, Water and Planning's concerns regarding permit responsibilities (items 16 and 17).
- Require surveys for little eagle, tussock skink and brown toadlet prior to detailed design (item 18).
- Provide for habitat restoration around culverts for growling grass frog and river swamp wallaby-grass (item 19).
- Amend existing or insert additional mitigation measures for:
  - Blackberry (item 21)
  - wildlife crossing infrastructure to consider predation of wildlife (item 22)
  - wetland loss and revegetation of drainage swales and channels (item 23)
  - to manage the risk and spread of *Phytophthora cinnamomic* (items 24 and 25).

- **Insert a new mitigation measure to consider opportunities to provide strategic revegetation to strengthen habitat corridors outside the PAO and SCO and within the broader study area (item 36).**

Draft Planning Scheme Amendment

**Amend the draft Beaufort Bypass Project Incorporated Document as shown in Appendix G to include RRV's Final changes to Clause 5.1.1 (Environmental Framework), Clause 5.1.3 (Native Vegetation), Clause 5.1.6 (Threatened Species Management Plan) and Clause 5.1.8 (Wildlife Management Plan) with the IAC's additional recommended changes:**

- **Amend Clause 5.1.1 to remove identified flora species surveys (in sub-clause (f)), and provide for the assessment of vegetation to be removed for vehicular access (in sub-clause (h)).**
- **Amend Clause 5.1.3 Native Vegetation to simplify the requirements for the Native Vegetation Management Plan.**
- **Amend Clause 5.1.8 Wildlife Management Plan to require a monitoring program of the effectiveness of crossing structures (usage by targeted species as well as potential use by predators) and adaptive management measures.**
- **Amend Clause 5.2.2 to require an offset statement be provided prior to any native vegetation removal (including for early works).**

## **5.10 Overall conclusions on biodiversity and habitats**

The IAC concludes:

- There are no impacts on biodiversity and habitats that preclude the Project being approved.

## 6 Cultural and historic heritage

### 6.1 Introduction

Aboriginal cultural heritage and historic heritage are discussed in EES:

- Chapter 10
- Technical Appendix A (the Aboriginal Cultural Heritage Impact Assessment, prepared by Archaeology At Tardis, May 2021)
- Technical Appendix E (the Historic Cultural Heritage Impact Assessment, prepared by Archaeology At Tardis, June 2021).

The evaluation objective is:

Avoid, or minimise where avoidance is not possible, adverse effects on Aboriginal and historic cultural heritage.

As exhibited, the EES proposed the following to manage impacts on Aboriginal cultural heritage and historic heritage:

- Aboriginal cultural heritage mitigation measures to be applied during the design phase (AH01 - AH03), and construction phase (AH04, AH05) - see EES Table 10.6
- Historic heritage mitigation measures to be applied during the design phase (HH01, HH02) and construction phase (HH03) - see EES Table 10.7.

Technical Appendix A concluded:

- Alignment option C2 has the least areas of Aboriginal cultural heritage compared with the other alignments. Previous impacts from gold prospecting and farming would have resulted in the loss and destruction of many Aboriginal cultural heritage sites except potentially some relatively undisturbed land on Camp Hill and on the hill crests throughout the study area.
- Consultation has not identified any cultural landscapes nor intangible cultural heritage values, however thorough consultation throughout the remaining CHMP process is required.
- All Aboriginal cultural heritage impacts can be managed appropriately through a CHMP.

Technical Appendix E concluded:

- Alignment Option C2 contains the least areas of historical heritage.
- Due to the significant changes to the landscape that have occurred, sites associated with mining, former pastoral and soldier settlement activity are unlikely to possess significant archaeological value.
- While there was a short lived and intensive gold rush commencing in the 1850's these sites have very low potential to contain archaeological deposits. Many better preserved mining sites (both alluvial and deep lead) exist in the broader region which contribute more to interpretive and scientific value.
- Historical heritage within the study area can be managed in accordance with relevant consents from Heritage Victoria.

The Options Assessment Report concluded that the C2 alignment had:

The least amount of potential impacts on the number of known or registered sites for aboriginal and historic importance.

## 6.2 Aboriginal cultural heritage

### (i) What did the EES say?

The Aboriginal people in the Melbourne region belong to the Kulin nation, made up of five language groups being the Woiworong, Taungurong, Jajowrong, Bunurong and Wathaurung (Wadawurrung). The EES identifies:

The Wadawurrung occupied land to the west of the Werribee River at the time of European contact. Their language boundary extended from the Otway Ranges in the west to the Werribee River in the east, to the headwaters of Fiery Creek (Beaufort) in the north and also throughout the Bellarine Peninsula and Geelong.

The Wadawurrung language group is divided into 25 clans. The clan recorded near Beaufort at the time of contact was Moner balug (Trawalla Station, Mount Emu Creek). Clan estates were not clearly defined or tightly restricted to one specific area. The Wadawurrung people would have moved through their country in small mobile bands of varying sizes largely dependent on seasonal availability of resources and social and ceremonial obligations.

Aboriginal groups would have had access to a variety of rich and diverse resources in close proximity to Yam Holes Creek. Well-drained, elevated land in this area would have provided ideal camping locations, with river valleys often being used as travelling routes, where Aboriginal people would be seen to utilise their most abundant resources

There are 16 registered Aboriginal places within the upper catchment of Yam Holes Creek.

Alignment C2 intersects with two previously registered Aboriginal places:

- LDAD7523-0322, seven components of which were destroyed by previous highway construction but there was potential for a medium impact on undiscovered place locations
- a Scarred Tree VAHR7523-0372 - comprising a gum tree which has been cut down mid scar at a height of approximately 80 centimetres and which will be directly impacted to a high level. The EES noted that following discussions with the WTOAC through the CHMP process it could be possible to relocate the tree to a suitable location for cultural education and interpretation purposes.

Alignment C2 contains approximately 29.1 hectares (10.5 per cent) of land considered to have Aboriginal archaeological sensitivity, including landforms such as the southern slope of Camp Hill, unnamed hills and valleys to the west and east and low rises near Yam Holes Creek. The potential impact on potentially sensitive, undisturbed landforms is considered to be high.

Potential impacts on cultural heritage including intangible cultural heritage values in the absence of complex assessment (such as a CHMP) is considered high.

While previous mining activity has reduced the likelihood of undisturbed deposits there is the potential for as yet unrecorded artefacts or places of significance to be discovered within the Project area including stone artefact scatters, particularly during the construction phase when the ground will be disturbed.

The CHMP (once approved by the WTOAC) is identified as the primary mitigation measure for managing the Aboriginal cultural heritage impacts of the Project.

### (ii) Key issues

The key issue is the impact on Aboriginal cultural heritage.

### (iii) Submissions

The WTOAC's submission referred to the *Paleert Tjaara Dja: Wadawurrung Country Plan (2020)* which aims to protect and conserve Wadawurrung Country cultural sites and places, 'Yalluk', 'Inland Country', and native animal<sup>57</sup> values from threats including urban development, weeds and rabbits and other feral animals.

The WTOAC did not object to the draft PSA, Project or Option C2 alignment having regard to the:

- completed Technical Appendix A
- completed and approved CVA<sup>58</sup> prepared for the project in 2021 by DoT in partnership with, and approved by Wadawurrung Traditional Owners acting as the Registered Aboriginal Party
- Wadawurrung living cultural heritage within the study area.

The WTOAC referred to the important role of the approved CVA for both the detailed design phase, mitigation measures that extended beyond the CHMP and during construction. The CVA includes the following Statement of Significance for the study area:

Beaufort (Yarram Yarram) as with all of Wadawurrung Country is a living cultural landscape. From Mount Pisgah to Lake Burrumbeet the cultural values and significance of Country to Wadawurrung People is complex holding both spiritual and material values.

Our stories from this area have been passed down from our old people.

They are derived from the mountains, lakes and country in between.

We see evidence of our existence through our many cultural sites which demonstrate our continuing connection to country from deep time through to present day.

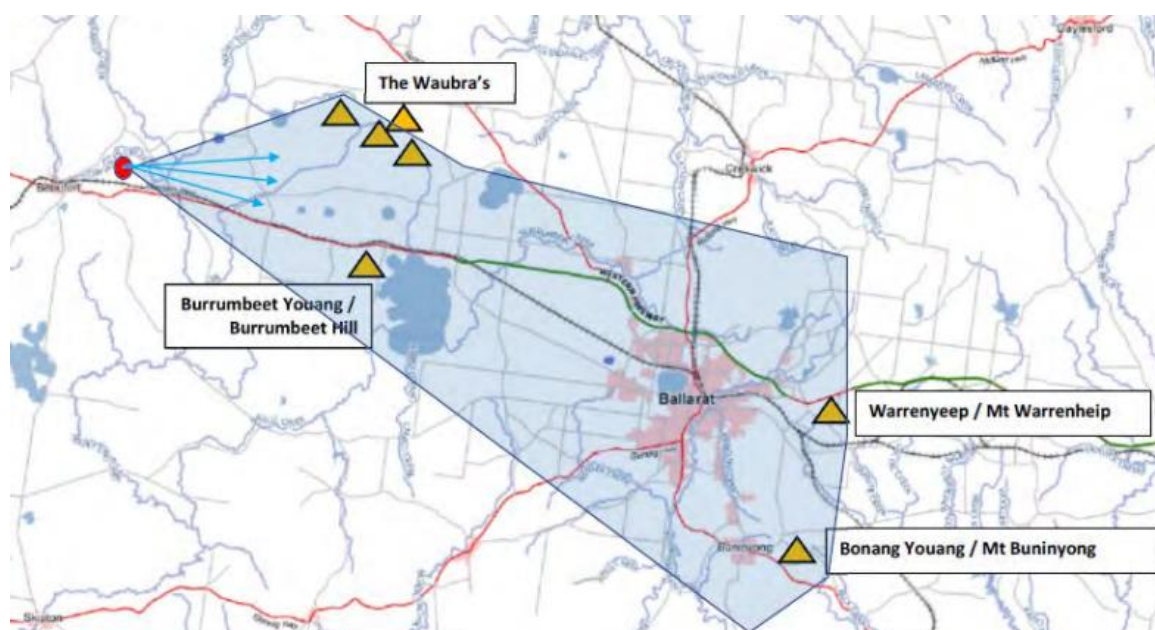
The CVA contains 19 actions associated with eight themes. Key recommendations for the Project include:

- *Paleert Tjaara Dja: Wadawurrung Country Plan* and video be essential resources to consultants and contractors engaged in the Project and linked to EES documentation
- staff and contractors involved in the construction phase participate in Wadawurrung Cultural Awareness Training and those involved in the design and planning phase participate in a Wadawurrung 'Designing in Country' training workshop
- compliance with CHMP recommendations
- cultural water flows be respected and maintained during construction and operational phases for waterway health
- the design process for sound walls and roadway excavations involve input from the WTOAC
- investigate opportunities for Language informed names (or dual naming) for water courses and geographical features, new interchange or bridge structures and for Wadawurrung inspired art/landscaping design
- provide for an unobstructed sightline from the bypass to the Waubra Hills, *Burrumbeet Youang/Burrumbeet Hill*, *Warrenyeep/Mt Warrenheip* and *Bonang Youang/Mt Buninyong*, and that any middle/upper storey vegetation selection, landscape design proposals and road signage does not obstruct this sightline (refer Figure 20)

<sup>57</sup> The definition of 'Native Animals' includes all terrestrial, avian, aquatic, microfauna and macrofauna  
<sup>58</sup> Document 58

- design through Camp Hill to minimise vegetation removal, maintain cultural flows, minimise flora and fauna impacts, minimise light pollution and minimise or obscure the visual impact of the cutting (through colour, design and texture to existing environment characteristics)
- the Landscape Design Strategy provide habitat venues and use local provenance species
- manage weeds and noxious and exotic animals consistent with EES Technical Appendix C
- final road design to minimise impacts as far as practical on the habitats of vulnerable and critically listed species
- provide biodiversity refuges including through salvaging large dead trees and provide wildlife corridor and crossing infrastructure.

**Figure 20** Visual sightline from the Beaufort Bypass



Source: Beaufort Bypass Cultural Values Assessment and the WTOAC submission (Document 56)

The WTOAC considered the RRV engagement process with WTOAC exemplary including that RRV had been listening at the early planning phase. The WTOAC were pleased with the considered and innovative flora and fauna measures and hydraulic and road construction initiatives reflected in the EES. The WTOAC submitted that the C2 alignment was preferred as it was understood to follow a trade route creating an interesting parallel and provided an opportunity to celebrate an important vista to cultural landscape features to the east free of clutter from vegetation and signage.

The WTOAC:

- sought an approach that focused on respecting and healing Country rather than exaggerating or compounding harm, identifying that opportunities existed around Yam Holes Creek to restore flows and wetland values, repair damage caused by mining and reinstate traditional food, resource and medicine plant species
- identified that culturally attuned approaches were required to consider risks to animal and vegetation species that were culturally important including as totemic or indicators of healthy Country but not necessarily identified as threatened or endangered.

- submitted that mitigation measures and design considerations needed to go beyond the CHMP and deal with intangible cultural values, highlighting the importance of the CVA recommendations
- identified a desire for an ongoing engagement role with the WTOAC in the next phases of the Project.

In response to RRV's Day 1 changes, the WTOAC identified a preference for native vegetation offsets being located within the Pyrenees Shire Council and the Corangamite Catchment Management Authority area (excluding Colac Otway and Corangamite Shire areas), or in Wadawurrung Country within the GHMA and Corangamite CMA areas.

RRV identified that mitigation measure AH01 directly addresses consultation with the Wadawurrung during the detailed design to manage both tangible and intangible evidence. However, it accepted that reference to the CVA could usefully augment this measure and AH03 which refers to the CHMP. RRV proposed the following alternative wording for AH01:

During detailed design consider the Beaufort Bypass Cultural Values Assessment dated 11 August 2021 in consultation with the Registered Aboriginal Party, to ensure that the design will be optimised to, where possible, avoid harm to Aboriginal cultural heritage (tangible and intangible).

RRV considered that the preparation of a Wildlife Management Plan (discussed in Chapter 5.6.1 of this Report) would address the WTOAC submission for a wider consideration of fauna and flora species beyond threatened species.

RRV proposed the following additional EMF changes (detailed in Appendix F of Report No. 2):

- in Table 17.3 (Roles and responsibilities for environmental management) under the tasks and responsibilities require MRPV to have regard to the CVA
- in Table 17.5 (Environmental management documentation) include detail about the CVA and its recommendations
- in Table 17.5 provide that the Native Vegetation Offset Strategy enables the consideration of the WTOAC recommendations if offsets are not practical within the relevant geographic area
- reference the CVA in mitigation measures in AH01, AH03, AH04, AH05 and LV03
- reference the CVA in Chapter 17.6.3 (Cultural heritage) of the EMF, but not as a listed standard as requested
- consistently refer to the WTOAC instead of 'Registered Aboriginal Party'.

#### **(iv) Discussion**

RRV has meaningfully engaged with the WTOAC for this Project. This was apparent in the WTOAC's submission and positive to hear. Early engagement has provided the opportunity for some important opportunities to repair and enhance important ecological and landscape values and vistas as well as provide valuable opportunities to engage with the WTOAC on design elements to minimise landscape impacts, provide for Language informed names and Wadawurrung inspired art and landscaping design.

While the finalisation of the draft CHMP is an important mitigation measure and approval step, it does not deal with the more intrinsic or intangible cultural values or the opportunities to inform design of Project structures, landscaping or cutting treatments for example. In this regard the CVA is an important document. It establishes a relationship with a number of mitigation measures

relating to the Wildlife Management Plan, Landscape Management Strategy, Landscape Design Plans and vegetation offsets as discussed in Chapters 5, 6 and 11.

The IAC considers that the recommendations of the CVA have not been fully captured in the exhibited mitigation measures that are largely limited to the CHMP. They should be. RRV has addressed this with proposed EMF changes. The IAC supports these changes which will ensure that the evaluation objective of avoiding or minimising any adverse effects on Aboriginal cultural heritage can be achieved. However, the IAC considers the following EMF changes are also required:

- AH01 should be amended to refer to the opportunity for detailed design to implement CVA recommendations and opportunities to appropriately respond to cultural landscape values (rather than to just avoid harm)
- the CEMP (MD04) and relevant mitigation measures should identify the *Paleert Tjaara Dja: Wadawurrung Country Plan* and the associated video as references for contractors (it is noted that the CEMP currently already makes provision for environmental induction and training but does not refer to the training identified in the CVA or reporting identified in the CHMP)
- changes to encourage offsets to be provided in Wadawurrung Country where practical.

The IAC further discusses the WTOAC submission and its responses to that submission in the context of mitigation measures for infrastructure detailed design, flora and fauna and landscape in Chapters 5 and 11 of this Report.

## (v) Findings

The IAC finds:

- Based on the information available to the IAC, impacts on known sites of Aboriginal cultural heritage significance will be avoided.
- While there is potential for sites or artefacts to be discovered during construction, the CHMP is the appropriate mechanism to manage any unexpected finds
- The proposed mitigation measures AH01 to AH05, with RRV's proposed changes in Appendix F, are generally appropriate to manage impacts to Aboriginal cultural values. However, there is a need to further embed the CVA in the mitigation measures to support opportunities to enhance Aboriginal cultural values through the detailed design process.
- Contractors should receive cultural heritage induction that includes reference to *Paleert Tjaara Dja: Wadawurrung Country Plan* and the associated video.
- Native vegetation offsets should be provided in Wadawurrung Country practical.

## 6.3 Historic heritage

### (i) What did the EES say?

The most significant historic theme associated with post-contact history of the Beaufort region relates to gold mining, and the Gold rush of 1854 which followed the discovery of gold in Yam Holes Creek. Alluvial and deep lead mining was relatively short but intensive around Beaufort (mid 1800s to early 1900s) centred along Yam Holes Creek and its tributaries and to the Main Lead to the north of Beaufort. Remnant features include water races, soil hummocks, mullock heaps and the remains of machinery beds.



EES Technical Appendix F identified three sites on the Heritage Victorian Inventory within the Study area with only one within the C2 corridor – the Nil Desperandum Mine Feature (H7523-0071). The site comprises a deep lead mine comprising two large mullock heaps, brick scatter and sludge pond. It is identified as having low archaeological, historic and scientific significance. The residual impacts on the mine are identified as extreme with the assumption that the Project will require the complete removal of the site features.

A further site within the C2 corridor – ‘Camp Hill Shallow Workings, South’ - has been assessed as having local historic and very low archaeological potential. It contains a water race, partially infilled pits and glass and china scatter. The Project will result in the complete removal of the remaining features.

There is low potential for archaeological deposits associated with miners’ camps to be present (scatters or infilled pits containing domestic refuse), however their integrity is likely to be very low due to the significant reworking of soil deposits.

The identified procedure for the management of unexpected discoveries of historical relics or deposits is included in the CEMP.

**(ii) Key issue**

The key issue is whether the impacts on heritage sites will meet the evaluation objective of avoiding or (where avoidance is not possible) minimising impacts on heritage.

**(iii) Submissions**

There were no submissions regarding the impact on historic heritage sites.

RRV advised that Heritage Victoria:

- was actively involved during the preparation of the EES and was a member of the EES Technical Reference Group
- attended historic heritage site inspections with the consultants preparing the Historic Heritage Impact Assessment
- reviewed and commented on the Historic Heritage Impact Assessment before it was finalised
- did not object or raise concern in relation to the potential need to for a Consent under the Heritage Act 2017 to damage the Nil Desperandum Mine at any stage throughout the development of the EES.

RRV submitted that while the Nil Desperandum mine was within the C2 alignment, it was located outside the current design footprint. Accordingly, it may be possible to avoid damage or destruction and the need for Consent under the *Heritage Act 2017*.

**(iv) Discussion**

The IAC inspected the Nil Desperandum Mine site which is a distinctive feature in the landscape. The remnant features of the Camp Hill Shallow Workings, South located on private land are visible from Raglan Track, Camp Hill Forest. While both sites are identified as having local heritage significance they are not individually identified within a Heritage Overlay and are identified as having low archaeological potential and no social, aesthetic or scientific significance. The Camp Hill Shallow Workings South have not been deemed appropriate for inclusion on the Victorian Heritage Inventory.

The IAC is satisfied that the Historic Heritage Impact Assessment is thorough and robust and is underpinned by an appropriate assessment methodology, the *Burra Charter* values and engagement with Heritage Victoria. The Assessment provides for a series of mitigation measures that have been appropriately translated into the EMF. As identified in the Historic Heritage Impact Assessment many better preserved mining sites (both alluvial and deep lead) exist in the broader region which contribute more to interpretive and scientific value.

The impacts on the Camp Hill Shallow Workings South are unavoidable given the reduced vegetation impact posed by the C2 alignment in that location, and are considered acceptable.

While impact on the Nil Desperandum Mine site might be avoided or minimised following detailed design, the Consent process under Heritage Act 2017 will provide the appropriate opportunity for more detailed investigation of the impacts and identification of management strategies. The IAC considers this an acceptable response.

The identified procedure for the management of unexpected discoveries of historical relics or deposits to be written into the CEMP is an appropriate mitigation measure.

#### (v) Findings

The IAC finds:

- Complete avoidance of known historic heritage sites is not justified or required to achieve acceptable outcomes that are consistent with the legislative and policy framework.
- The EMF mitigation measures are reasonable, capable of being implemented, and sufficient to ensure that known heritage values and any unexpected finds will be appropriately managed to acceptable levels.

## 6.4 Recommendations

The IAC recommends:

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2 to:**

- **Amend Table 17.3 to require Major Road Projects Victoria to have regard the recommendations of the *Beaufort Bypass Cultural Values Assessment* (item 1).**
- **Amend the Construction Environment Management Plan (MD04) to identify the *Paleert Tjaara Dja: Wadawurrung Country Plan* and the associated video as references for contractors, refer to relevant mitigation measures and include detail about the *Beaufort Bypass Cultural Values Assessment* and its recommendations (item 11).**
- **Amend the introductory content at Section 17.6.3 to refer to the *Beaufort Bypass Cultural Values Assessment* (item 37).**
- **Amend the description of the Cultural Heritage Management Plan (MD10) as proposed in RRV's Final changes (item 6).**
- **Amend mitigation measure AH01 to refer to the opportunity for detailed design to implement *Beaufort Bypass Cultural Values Assessment* recommendations and opportunities to enhance cultural values (item 38).**
- **Amend mitigation measures AH03, AH04, AH05 and LV03 to reference the *Beaufort Bypass Cultural Values Assessment* (items 39 and 52).**

- **Replace references to Registered Aboriginal Party with Wadawurrung Traditional Owners Aboriginal Corporation where appropriate (item 56).**

## **6.5 Overall conclusions on cultural and historic heritage**

The IAC concludes:

- There are no impacts on Aboriginal cultural heritage or historic heritage that preclude the Project being approved.
- No modifications to the Project or the proposed mitigation measures for historic heritage are required in order to achieve acceptable heritage outcomes.

## 7 Catchment values and hydrology

### 7.1 Introduction

Surface water and groundwater and geotechnical impacts are discussed in EES:

- Chapter 11
- Technical Appendix D (the Groundwater Impact Assessment prepared by WSP)
- Technical Appendix L (the Surface Water Impact Assessment prepared by WSP).

The evaluation objective is:

To protect catchment values, surface water and ground water quality, stream flows and floodway capacity, and avoid impacts on protected beneficial uses surface water.

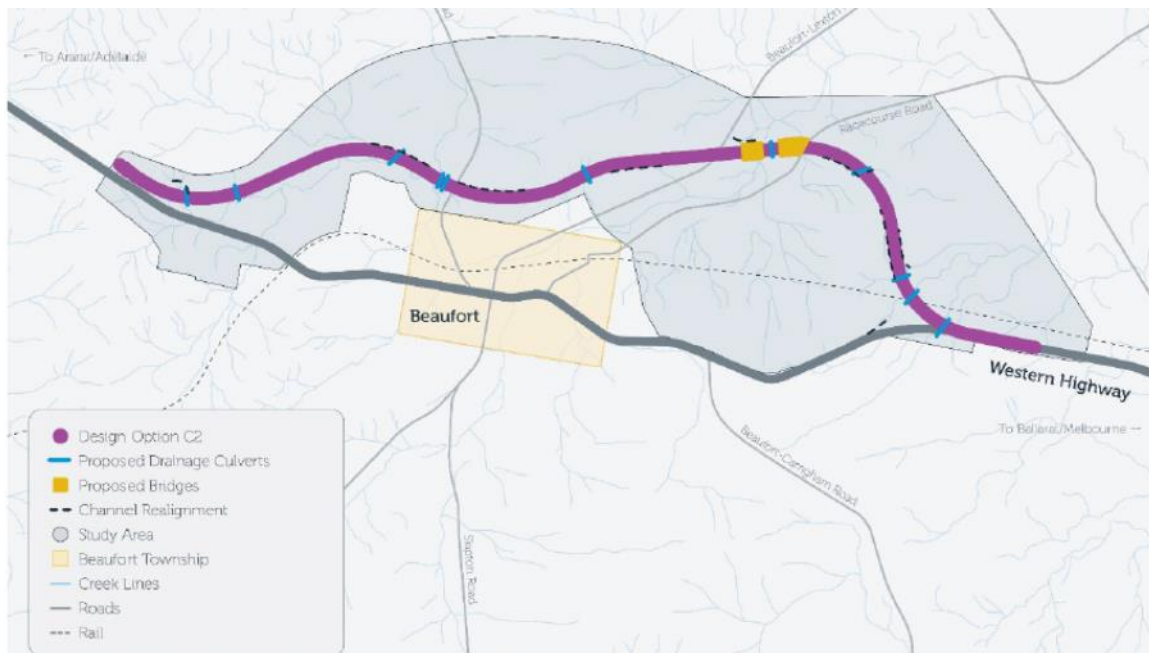
As exhibited, the EES proposed the following to manage impacts on catchment values and hydrology:

- surface water mitigation measures to be applied during the design phase (SW01 – SW04) and construction phase (SW05 – SW08) - see EES Table 11.17
- groundwater mitigation measures to be applied during the construction and operation phase (GW01) - see EES Table 11.18.

Figure 21 shows the proposed waterway management works associated with the Project with key elements including:

- three crossings of the Yam Holes Creek and its tributaries
- 14 box culverts and bridge structures
- 10 minor watercourse realignments (which may consist of swale drains within the road corridor)

**Figure 21** Proposed culverts, bridge and channel realignments layout



Source: EES Figure 4.12

## 7.2 Groundwater

### (i) Key issues

The key issue is impact on groundwater.

### (ii) What did the EES say

Technical Appendix D for groundwater concluded that the Project's groundwater impacts are low to negligible. It found:

- Preliminary testing identified no groundwater at the proposed Project's excavation depths and road cuttings and as such would have negligible groundwater impacts.
- Where groundwater was encountered, it was of a brackish nature (Segment C classification<sup>59</sup> - suitable for irrigation of some crops and livestock). There are only a few registered bores with records of low yields and generally poor quality which suggest it is not a significant water resource within the investigation area.
- Changes made to the functional design include embankment structures being replaced with bridge structures (Yam Holes Creek floodplain environs) to minimise ground compaction and consolidation which may adversely affect groundwater flow.

### (iii) Discussion

Groundwater issues were not contested through submissions or by parties.

The IAC is satisfied that groundwater impacts have been appropriately assessed. The groundwater investigations were extensive, and the resultant analysis and reporting contained in Appendix D is comprehensive, rigorous and robust.

The IAC accepts the detailed analysis and findings that groundwater risks associated with the Project are low and can be readily managed with standard RRV environmental and engineering management procedures which are covered in mitigation measure GW01.

### (iv) Findings:

The IAC finds:

- Groundwater issues can be managed by appropriate design and construction practice to meet the evaluation objective and ensure appropriate environmental outcomes are realised.
- The mitigation measures are consistent with standard practice used on major road projects and are reasonable and practical to ensure groundwater impacts are managed to an acceptable level.

## 7.3 Surface water, catchment values and drainage design

### (i) What did the EES say?

The study area topography (described in Section 2.4) was considered in the development of the reference design, to minimise the requirements for cut and fill for construction.

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<sup>59</sup> Beneficial uses classification outlined in State Environment Protection Policy (Waters)

Technical Appendix L for surface water found:

- Floodplain impacts are mainly concentrated around Yam Holes Creek near Racecourse Road.
- No buildings are affected but surrounding areas would experience increased flood levels and hazard.
- Climate change effects (a 20 per cent increase in flooding was assumed) would only have a minor impact.
- Localised flood impacts for the 1 per cent AEP occur along sections of the bypass route and where the wastewater treatment ponds are sited (Beaufort-Lexton Road) but these locations will be subject to further investigation and mitigation during detailed design.
- Best practice for stormwater treatment measures are required at all road drainage discharge points to protect downstream receivers such as Yam Holes Creek, tributaries and wetlands.
- Water quality impacts during the operational phase are anticipated to be low, and mitigation measures (bioretention basins, additional lengths of swales to remove pollutants from the road runoff prior to discharge) will be refined during detailed design.
- The Project may impact nine wetlands including two along the Yam Holes Creek that will be affected by increased flood levels, but impacts are considered to be minor due to the low speed of flood waters, localised impacts and limited duration of the flood event(s)
- The proposed stormwater treatment measures will protect wetlands from the project's runoff.
- Some of the existing wetlands (3, 7 and 8) and surrounding areas are susceptible to salinity which is consistent with the brackish nature of groundwater and associated Yam Holes Creek drainage lines.
- Construction activities can have major impact on water quality with clearing of vegetation and excavation increasing run off rates and adverse water quality outcomes including increased sedimentation. Careful construction management strategies will ultimately be required through mitigation measure SW05 including the development of a:
  - CEMP and associated Erosion and Sediment Control Plans
  - stormwater management plan consistent with State Environment Protection Policy (Waters) requirements.

Water quality objectives will be maintained using a combination of swale drains, bioretention systems, basins and wetlands. Where feasible, RRV's preference is for the design to utilise the road reserve to retain rainfall runoff to increase groundwater recharge and/or evaporation.

Detailed flood modelling assessments will inform the design of bridge and culvert crossing in consultation with GHCMA.

The Options Assessment Report identified that Option C2 would have the greatest impact on surface water as more of the road alignment was placed along the flood plain resulting in:

- a greater amount of ground disturbance within 50 metres of a watercourse
- generally resulting in a greater area being inundated during the 1 per cent AEP.

The Options Assessment Report acknowledged that the impacts on waterways and floodplains of all four alignments could be mitigated through design and standard engineering solutions to GHCMA's satisfaction and as such, was not a contributing factor in the identification of a preferred alignment.

**(ii) Key issues**

The key issues are:

- flood management and potential adverse impacts on wetlands and watercourses
- impacts on catchment values
- whether the EMF addressed the GED for surface water
- whether the EES addressed the Scoping Requirement to consider climate change impacts on flooding events
- impacts on farm dams and properties from stormwater inflows.

**(iii) Evidence and submissions**

Mr Leslie's evidence considered the Project's potential changes to flooding and water quality conditions and identified appropriate mitigation measures to maintain conditions as close as practical to existing baseline conditions. The overarching premise was to direct flood flows through and around the road corridor to maintain existing flooding patterns. Further refinement will occur during detailed design and are captured by EMF mitigation measures SW01 to SW04. He agreed that stormwater related design measures should include expert ecological input. In response, RRV's Final changes proposed to include specific reference to an ecologist within mitigation measures SW01 to SW04.

Mr Leslie advised that the mitigation measures for drainage, flooding and surface water quality demonstrated a prevention-based approach to eliminate or minimise the Project's environmental impacts consistent with the GED. Similarly, during the construction phase, the CEMP would include several measures to address flooding and water quality issues to address the GED.

The Yam Holes Creeks floodplain and associated wetlands are an important element and a bridge structure overpass is proposed (the reference design shows a series of box culverts and associated embankments which has now been superseded) to provide superior flood characteristics resulting in flood levels being similar to existing conditions – further refinement and minor regrading of the floodplain (outside of the wetland) should provide additional flood capacity, further reducing flood afflux impact.<sup>60</sup> This would occur as part of detailed design.

Mr Leslie identified that mitigation measure SW05 requires a CEMP to implement best practice measures to manage temporary impacts on water quality and flooding during construction.

He considered that for the operational phase, the proposed mitigation measures (bio retention ponds, grass line swales) are reasonable and practical to manage and treat runoff from the road corridor.

Submissions (including submissions 2, 7, 14, 15, 20, 24 and 25) centred around local drainage and flooding issues including:

- flooding and associated impacts along water courses
- continued protection of run off into farm dams
- stormwater runoff from existing roads and localised flooding associated with earlier Western Highway upgrades (discussed in Chapter 4.3.1).

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<sup>60</sup> Flood afflux refers to the predicted change in flood levels between 'no project' and project case

GHCMA's submission sought minor technical and editorial changes to the EES to improve clarity around roles and responsibilities, changes to mitigation measure SW03 to address design impacts of floodplain afflux and to the Incorporated Plan (Clause 5.1.8 Flood management).

RRV supported in full the proposed changes by GHCMA in its Day 1 version of EMF changes.

The WHCG was concerned that the impacts of climate change had not be considered as part of the Project Design.

In response to submissions Mr Leslie advised:

- localised flooding at or near 11 Box Cutting Rise is not attributable to the Project, but there may be an opportunity during detail design to assess existing drainage issue in the area and address them through new and or adjusted highway drainage
- GHCMA had identified a number of technical and administrative oversights which should be addressed – he supported all the GHCMA's suggested changes
- adverse impacts on run off into local dams and waterways is not anticipated to occur as modelling show no diversions away from existing dams or waterways. Some localised minor increases in flood levels may occur.

#### **(iv) Discussion**

The IAC is satisfied that surface water impacts can be managed to ensure appropriate environmental outcomes are realised by appropriate design, construction practice and mitigation measures that will apply during the Bypass' operation. The mitigation measures outlined in the EMF (subject to minor amendments) as recommended by Mr Leslie and GHCMA and accepted by RRV are consistent with standard practice used on major road projects and are reasonable and practical. This includes RRV's Final changes to adopt Mr Leslie's advice to include expert ecological input into stormwater design measures. This is particularly relevant to ensure appropriate treatments for fauna crossings and sensitive vegetation areas.

The IAC accepts Mr Leslie's assessment, that subject to detailed design, flood afflux and impact on the associated wetlands can be effectively managed. This is essentially endorsed by the GHCMA which required only minor amendments to the mitigation measures and Incorporated Document.

The IAC is confident that the Project through proposed mitigation measures will not adversely affect farm dams (other than where they are to be directly impacted by the construction) and associated water courses.

The IAC is satisfied proposed suite of mitigation measures will appropriately maintain water quality and provide appropriate outcomes for Yam Holes Creek and its tributaries.

Existing drainage issues are not attributable to the Project and are not a matter that needs to be addressed by the EES. Nevertheless, the IAC undertook an accompanied site inspection of 11 Box Cutting Rise and nearby properties to better understand the localised flooding and runoff. It appears to be associated with maintaining existing drainage infrastructure (swale drains, clearing of pits and drainage lines). RRV suggested it was associated with the 'old' Western Highway alignment which is now Box Cutting Lane and would be Council's responsibility. Landowners at the site inspection acknowledged the recent endeavours of Council to investigate drainage matters.

The WTOAC's submission touched on wider cultural values that have a relationship with the wider catchment values. These are addressed by referencing the CVS in the mitigation measures and the detailed design of the Project, as discussed in Chapter 6.2. The wider catchment impacts of the



Project have been considered in detail in Technical Appendices D and L, and the IAC notes that subject to minor issues the GHCMA was supportive of the Project and did not identify wider catchment values or other issues associated with the *Glenelg Hopkins Regional Catchment Strategy 2013-2019*.

The IAC acknowledges the WHCG's concerns regarding climate change. Mr Leslie confirmed that more extreme flood events due to climate change had been considered and would result in only minor impacts. The IAC is satisfied that the climate change impacts (in relation to climate induced flood events) have been appropriately considered and addressed through the EES and mitigation consistent with the EES Scoping Requirements.

The IAC considers that the residual impacts after implementation of mitigation measures will meet the evaluation objective for the protection of catchment values, surface water, stream flows and floodway capacity and impacts on protected beneficial uses of surface water can be avoided and minimised appropriately.

#### **(v) Findings**

The IAC finds:

- With appropriate design, construction practice and mitigation measures applied during the bypass' ongoing operation, surface water impacts can be managed to ensure the evaluation objectives can be met and appropriate environmental outcomes are achieved.
- The Project should not adversely impact inflows into farm dams if designed in accordance with the mitigation measures.
- Climate change induced flood events have been considered and accommodated in the mitigation measures.
- The mitigation measures are consistent with standard practice used on major road projects and are generally reasonable and practical, and the IAC supports the amendments proposed in RRV's Final changes to SW01 to SW04, including to ensure design management measures are implemented in conjunction with expert ecological input and to address GHCMA's concerns.
- RRV's Final changes to Incorporated Document to address the GHCMA's issues as set out in Appendix G are appropriate.

## **7.4 Recommendations:**

The IAC recommends:

### Environmental Framework Plan

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- **Amend mitigation measure SW03 to address Glenelg Hopkins Catchment Management Authority issues (item 40).**
- **Amend mitigation measures SW01, SW02, SW03, SW04 to provide for ecological design input (item 41).**

### Draft Planning Scheme Amendment

**Amend the Beaufort Bypass Project Incorporated Document as shown in Appendix G to include RRV's Final changes to address Glenelg Hopkins Catchment Management Authority issues.**

## **7.5 Overall conclusions on catchment values and hydrology**

The IAC concludes:

- There are no impacts on catchment values and hydrology that preclude the Project being approved.

## 8 Social impacts

### 8.1 Introduction

Socio-economic impacts are discussed in EES:

- Chapter 12
- Technical Appendix J (the Social Impact Assessment, prepared by WSP).

The evaluation objective is:

To minimise and manage adverse effects on the well-being of the local community, including potential impacts on cohesion and severance of community access to services, facilities and infrastructure.

As exhibited, the EES proposed the following measures to manage social and community impacts:

- during the design phase (S01 – S06) and pre-construction/construction phase (S02, S03, S05 - S08) - see EES Table 12.4.

Technical Appendix J concluded:

- The most significant adverse impacts on local community arise from acquisition and impacts to valued attributes of the local environment. These impacts will be significant for individual landowners.
- The bypass would enhance community amenity of the wider Beaufort community and visitors by improving pedestrian access, walkability and safety in the town centre
- Implementing mitigation measures will result in low residual impacts for the wider community related to severance and accessibility including access to community facilities
- The overall residual impacts from displacement and to community amenity and wellbeing from the Project are considered to be moderate.
- Engagement with the local community, Council and relevant agencies is required to manage social change resulting from the reduction of through-traffic along the main street.
- Evaluation of social impacts needs to be monitored to manage any residual impact to the social fabric of Beaufort.

### 8.2 Impact on landowners from land acquisition, displacement, severance, and access to properties

#### (i) What did the EES say?

The extended timeframe and options assessment process has generated some uncertainty and distress for some directly affected households.

A total of 22 private landowners are expected to be permanently impacted by acquisition of land from 47 private land parcels. One dwelling will be directly impacted by the Project resulting in the displacement of the existing residents. The loss of dwellings and acquisition of land will result in major changes to the lives of those affected and may adversely affect their wellbeing. As such, the potential social impact to the affected residents is high, resulting in an overall medium level of impact with the implementation of mitigation measures.

There are some anticipated changes to property access during construction. These impacts are temporary, lasting up to 2 years, and would be mitigated by providing alternate access during the

construction period. In addition, properties that will be bisected by the alignment will experience impacts to external and internal property access as described in Chapter 4.4 of this Report. All 22 private landholders subject to acquisition have the potential to be impacted by access changes during construction but the residual impacts will be low as a result of mitigation measures including:

- construction and operational access strategy (SO2)
- minimise land acquisition and severance impacts (RE03).

## **(ii) Key issues**

The key issues are:

- impacts on landowners resulting from land acquisition and displacement
- impacts associated with the severance of land and access.

## **(iii) Submissions**

Several submissions were made by landowners who occupied larger rural residential lots that had been purchased because of the rural character, outlook and the opportunity to use land for rural purposes including horse keeping.

Mr and Mrs Lee (Submitter 10) accepted that their property and home (which they had custom built over a number of years) was to be acquired for the project and would result in them having to establish a new home elsewhere. Their key concern was associated with the lack of certainty around the timing of any acquisition and the capacity for them to plan for their relocation and future.

Ms Angus (Submitter 18) identified that the proposed C2 corridor alignment effectively severed their property east to west, resulting in the loss of half of it and creating two separate and disconnected parcels to the north and south. This:

- removed the prime location for a planned future dwelling
- removed existing dams, fencing, shed and driveway
- removed productive elements of the property for haymaking and horse grazing
- prevented safe access to Camp Hill for horse riding and made access to the northern severed parcel circuitous and impractical which limited its value for grazing or haymaking.

Ms Angus identified a frustration with the impact of the extended timeframes associated with the Project and their ability to forward plan site improvements. The impact of uncertain project time frames was a consistent theme in other submissions including Submissions 9, 21, 23 and 24.

The Swadlings (Submitter 21) identified concerns about the loss of productive land for growing hay and horse keeping.

Council's submission acknowledged the compensation provisions of the *Land Acquisition and Compensation Act 1986* (LAC Act) but encouraged "*prompt engagement with affected land owners to mitigate against some of the negative social and wellbeing impacts that have resulted due to the length of time that this project has been under consideration*".

RRV referred to and endorsed the findings of the June 2011 C128 Ballarat and C29 Pyrenees Planning Scheme panel report relating to the Western Highway upgrade Ballarat to Beaufort<sup>61</sup> which observed that compensation processes under the LAC Act:

... are beyond the scope of the Panel. However, our assessment is based on the expectation that compensation (with some limitations) will be paid for disruption and necessary reorganisation of properties and businesses along the Project route. This will involve further assessment and consultation between VicRoads and those affected regarding appropriate, cost-effective outcomes.

It submitted that the LAC Act provided the appropriate mechanism to address, in financial terms, the unavoidable impacts of the Project in acquiring land. RRV submitted the LAC Act (and the PE Act) could address the range of potential impacts of the Project from the time the PAO is imposed through to the time the Project is funded and acquisition occurs. The claim process arises:

- if a planning permit is refused on account the land is required for a public purpose (Section 98(2) of the PE Act)
- if the land has been sold at a lower level than ‘the owner might reasonably have expected to get if the land or part of the land had not been reserved’ (Section 106 of the PE Act)
- when acquired under the LAC Act.

RRV explained the LAC Act provides a process for compensation under a range of heads of compensation which include the market value of the land, any special value of the land, and loss attributable to severance.

#### **(iv) Discussion**

While future processes under the LAC Act are beyond the scope of the IAC’s task, the impacts of the application of the PAO on landowners are social impacts arising from the Project.

It is inherent in a project of this nature that land acquisition will be required. As such, there will be significant impacts on some members of the community including impacts upon land ownership, partial loss of the use of land or from restricted access. This issue exists for all alignment options which affect a similar number of landowners and a similar acquisition area.

These impacts are real and confronting for a number of the submitters. A clear sentiment from several submitters was for the acquisition process to be progressed quickly to enable greater certainty and the capacity to plan around changes to land use and site investment through to finding somewhere else to rebuild lives and move on. In a scenario where the Project is unfunded there is little likelihood of this issue being resolved early.

This impact can be minimised by progressing discussions with landowners and confirming the extent of land acquisition as soon as practical. While RRV advised it did not have a general funding pool to enable land acquisition prior to specific Project funding being available, the potential for early strategic purchase should ideally be explored to address significant impacts on individual landowners, in particular the Lees who cannot sell their property and are effectively left in limbo until funding is available and their land is acquired. This is not a satisfactory situation. In the interim however RRV are encouraged to continue to liaise with affected landowners and provide advice about the LAC Act process and explore more suitable options.

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<sup>61</sup> Document 50a

The IAC considers that issues relating to impacts on access can be appropriately managed through access strategy mitigation measures in the EMF as identified in Chapter 4.4 of this Report.

Where properties are partially acquired, in some cases leaving small remnant parcels which will be difficult to access or use for rural purposes, the landowners' ability to use and enjoy their properties can be substantially diminished. These impacts are further discussed in Chapter 9.3 of this Report.

These impacts are significant for the individual landowners affected. However they are largely unavoidable and limited to a small number of landowners. Impacts, can in part be addressed through the LAC Act process. In the context of a wider net community benefit associated with the Project, the IAC considers these impacts acceptable.

#### **(v) Findings**

The IAC finds:

- There will be residual social impacts on individual landowners resulting from full or partial land acquisition and the ongoing use and enjoyment of land. These will in some cases be very significant.
- However, these impacts are largely unavoidable, and given the broader benefit the Project will provide to the community, are considered to be acceptable.
- That said, impacts should be minimised to the extent possible. RRV should explore options for early acquisition or negotiated land purchases with those landowners most affected by the application of the PAO, and maintain clear and effective dialogue with those owners on the progress of the Project.

### **8.3 Social fabric, community amenity and wellbeing**

#### **(i) What did the EES say?**

During the construction phase, particularly of the Beaufort-Lexton Road interchange, access and connectivity may be indirectly impacted by temporary or occasional disruptions along existing roads, including Beaufort-Lexton Road, Back Raglan Road, Main Lead Road and Racecourse Road. This may temporarily disrupt school bus services or pick-up/drop-off points.

During construction, there is potential for disruption to access to community services and facilities, and to community activities and events, due to temporary traffic access changes, increased construction traffic and amenity impacts. The impact is considered to be low to medium without mitigation, given the temporary nature of works. Mitigation measure S02 (construction and operational access strategy) will reduce impacts.

The potential impacts of the project on community wellbeing resulting from the loss of native vegetation and culturally significant trees has been minimised through the alignment selection process.

Community amenity impacts are likely to be temporary and experienced during the construction phase and may include dust, vibration, noise and temporary access changes. The magnitude of amenity impacts during construction is considered low, however, the high sensitivity of the community toward amenity impacts will result in medium level of impact.

There is a risk that during construction, the Beaufort community's sense of contentment and social cohesion may decline. However, with the implementation of mitigation measures, this impact is

likely to be short lived, with the potential for a greater sense of acceptance, community pride and restoration of social networks and identity as the Project evolves.

**(ii) Key issues**

The key issues are:

- access to community facilities and infrastructure
- impact on Beaufort's social fabric and community amenity and wellbeing.

**(iii) Evidence and submissions**

Council submitted that the detailed design process should include specific consideration of cycling and pedestrian connectivity generally, and to Camp Hill (along Main Lead Road) specifically. Council submitted that this connection is important from a community wellbeing and tourism perspective. Further, Council requested it be identified as a stakeholder in terms of future engagement in mitigation measure S05.

In response, RRV's Final Hearing Version of the EMF proposed to amend the wording of S05 and LV03 to include:

The preparation of Landscape design plans should consider comments of the Pyrenees Shire Council on issues of connectivity including recreation, pedestrian and cyclists networks.

The Old Beaufort Primary School 60 Committee advocated for funding and commitment to establish a community hub at the heritage buildings on the former school site. The submission considered that delivering the community hub would provide an opportunity to house a number of community services and groups and make a significant contribution to mitigating the social and economic impacts of the Project.

WHCG supported the establishment of an Environmental Consultation Group or Community Engagement Group to establish regular engagement between RRV/MRPV and key stakeholders to maintain effective communication and to assist in final design fine tuning.

The IAC asked RRV about the potential to consolidate the different stakeholder engagement activities into a single comprehensive engagement strategy. RRV responded that the EMF contemplates a broad range of stakeholder communications and engagement activities that would involve particular engagement actions with different stakeholders and inputs from specific expert disciplines depending on the subject matter. It concluded:

Given the distinct stages and inherent diversity in the consultation requirements, RRV considers it is not necessary to attempt to create an overall consultation plan that regulates consultation or attempts to predetermine that this consultation can be practically implemented in a holistic manner. Timing of plan preparation will vary in accordance with a range of matters such as when it is appropriate for vegetation surveys to occur, or practical for discussions about acoustic treatments to occur. Opportunities may present that see streamlining of interactions but these opportunities cannot be mandated to predicted at this time.

RRV's Final EMF changes proposed to add to the text regarding the development of a Community and Stakeholder Engagement Plan (MD12) in Table 17.5, to set out processes and measures:

... to provide the community and special interest groups with information on project design, proposed construction timeframes and staging and progress/performance prior to and during the life of the project.

The suggested changes also proposed notice be extended to the community more broadly, not just key or potentially affected stakeholders.

#### **(iv) Discussion**

The IAC accepts the findings of the Options Assessment Report that there is little difference in social impacts from the Project alignment alternatives.

The more significant social impacts to the wider community including access to businesses and infrastructure, recreation areas and services will be during the construction phase. These impacts can be managed to a reasonable and acceptable level through the various mitigation measures including the development of a construction and operation access strategy.

The IAC considers that any ongoing social impacts during the operational phase will be within acceptable levels. The bypassing of Beaufort by large volumes of vehicles including trucks is anticipated to bring other opportunities resulting from improved amenity (from noise reduction, pedestrian safety and a more comfortable, functional and accessible town centre) and the potential to transition the town to a destination place. Community building and strategic work will be needed to support this transition. This potentially includes opportunities for townscape improvements, development of economic and planning strategies and considering the role of key sites such as the Old Beaufort Primary School site. The IAC makes no comment on what those outcomes might look like – they should be looked at strategically in a coordinated manner.

Moving forward, having a robust community engagement strategy will be critical to minimising the Project's social impacts and developing and maintaining a social licence. It will be important for RRV to keep directly affected landowners and business and the wider community updated about the Project, including funding the detailed design process, outcomes of additional surveys, land acquisition processes and Off Reservation Treatments for noise management, implementation, monitoring and reporting as well as Project contacts. The IAC supports RRV's Final EMF changes proposed to the Community and Stakeholder Engagement Plan (MD12) and considers these will go some way to providing community (including key stakeholders) confidence in the Project and that the mitigation measures will be properly integrated into the detailed design process.

The IAC supports RRV's Final EMF changes to mitigation measures S05 and LV03 to address Council's concerns about connectivity. These will be important to ensure the benefits of the Project can be realised for the local community and access to important assets such as Camp Hill maintained to an acceptable standard or that can be enhanced later by Council.

#### **(v) Findings**

The IAC finds:

- Disrupted access to community facilities and infrastructure and amenity impacts from construction will be temporary (during the construction phase), and can be appropriately managed to an acceptable level through the mitigation measures.
- Once operational, the net impacts on Beaufort's social fabric and community amenity and wellbeing are likely to be positive, with the mitigation measures ensuring any impacts are managed to an acceptable level.
- Ongoing engagement with the community will be critical for the Project to minimise social impacts and develop and maintain a social licence.
- RRV's Final changes to the wording of the Community and Stakeholder Engagement Plan and mitigation measures S05 and LV03 are appropriate with further changes to ensure



engagement with the community regarding impacts to biodiversity and mitigation measures and opportunities for involvement in rehabilitation/reinstatement as identified in Chapter 5.

## 8.4 Recommendations

The IAC recommends:

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- **Amend the Community and Stakeholder Engagement Plan to include RRV's Final changes with additional changes to continue engagement with the community regarding impacts to biodiversity and mitigation measures and opportunities for involvement in rehabilitation/reinstatement (item 5).**
- **Amend mitigation measures S05 and LV03 to include RRV's Final changes regarding Pyrenees Shire Council input into Landscape design plans (item 42).**
- **Amend mitigation measures S07 and RE05 to include RRV's Final changes to provide for a governance structure regarding, and in addition, provides for community representation or input (item 44).**

## 8.5 Overall conclusions on social impacts

The IAC concludes:

- There are no social impacts that preclude the Project being approved.

## 9 Land use and economics

### 9.1 Introduction

Land use and amenity are discussed in EES:

- Chapter 13
- Technical Appendix G (Planning and Land Use Impact Assessment, prepared by WSP, March 2022 including Appendix C Beaufort Bypass Agricultural Report, prepared by Phillips Agribusiness 2017)
- Technical Appendix I (Regional Economy Impact Assessment, prepared by Ethos Urban, May 2021).

The evaluation objective is:

To minimise and manage adverse effects on local business (including agriculture) and existing or planned land uses.

As exhibited, the EES proposed the following measures to land use planning and regional economy impacts:

- mitigation measures to be applied during the design/construction phase (RE1 - RE05, LU01) - see Table 13.7.

Technical Appendix G concluded:

The project is generally supported by strategic planning for the region and local planning policies. Importantly, the location of the study area to the north of Beaufort generally aligns with the future land use strategies within the PPS<sup>62</sup>, which identifies several constraints to the future expansion of the township into the study area including Camp Hill, the Yam Holes Creek floodplain and the buffer around the Beaufort Wastewater Treatment Plant. Overall it is considered that none of the four proposed alignments would impact on the future growth and development of Beaufort, as policy does not favour future growth and development occurring to the north of the town within the study area.

Technical Appendix I concluded:

Once the bypass is operational, an uplift in revenues for local businesses through improved township amenity, safety and environment is a possibility. However, this potential benefit is a long-term consideration and is predicated on Council, local businesses and other stakeholders undertaking targeted, strategic initiatives that facilitate population growth and broadened the township's appeal to visitors.

The EES concluded that in terms of regional economic impacts the potential cost/benefits are similar for all alignment options and not a factor in the Options Assessment Report. The potential impacts of the four proposed alignments would not result in any significant inconsistency with planning policies and local and regional plan.

### 9.2 Impact on businesses and future economic growth

#### (i) What did the EES say?

Revenue foregone due to bypassing and flow-on employment impacts over the short-term after the bypass commenced operation will be high. The application of economic initiatives will ensure

<sup>62</sup> Pyrenees Planning Scheme

impacts for Beaufort businesses are short-term and can be reduced to low residual levels through the implementation of the EMF, including:

- the preparation of a business disruption plan (RE01)
- a local procurement strategy (RE02)
- transitional planning initiatives aligned to the *Pyrenees Economic Development Strategy – February 2022* (Economic Development Strategy) (RE05).

The land use, acquisition and severance impacts to landowners can be reduced to low residual level impacts through the compensation provisions of the LAC Act and implementation of EMF mitigation measures including:

- minimise land acquisition and severance impacts (RE03)
- construction and operational access management strategy (RE04).

## **(ii) Key issues**

The key issues are whether the Project and C2 alignment will:

- have adverse impacts on local businesses and agriculture including through loss of passing traffic and land severance or acquisition
- limit the future economic growth of Beaufort.

## **(iii) Evidence and submissions**

### **Business impacts**

No submissions were made by existing commercial businesses, and Council confirmed there were no local Chambers of Commerce or established trader groups within Beaufort.

Mr Noronha provided economic evidence which included an overview of the key employment sectors and businesses in and around Beaufort including highway dependent operations. His evidence identified:

- a gross annual economic output for the Beaufort Statistical Area Level 2 (SA2)<sup>63</sup> of \$181 million supporting 622 jobs in the broader area dominated by the agriculture and forestry sector
- 'Health care and social assistance', 'Public administration and safety' and 'Retail Trade' were the dominant industry sectors of employment for the residents within SA2. The primary sector (agriculture including livestock grazing and cropping and timber harvesting) account for 7.8 per cent of jobs
- over half of businesses located within SA2 are associated with 'agriculture, forestry and fishing' sector (51 per cent), with the next highest sector being 'construction' (12 per cent), highlighting Beaufort's important role in servicing the agricultural sector and other industry sectors such as manufacturing and construction in terms of end markets and support services
- highway and related tourism businesses/activities in and around Beaufort included eight bakeries/cafes, eight accommodation places, nine craft/gift/opportunity shops and 10 tourism attractions
- highway trade represents only 6 per cent of SA2's gross annual economic output but is the sector most impacted in the short term by the Bypass

<sup>63</sup> Beaufort State Suburb Code

- Beaufort's highway dependent trade is estimated to generate an annual gross revenue of \$31.6 million of which \$10.4 million, or 34 per cent is directly attributable to Beaufort's highway trade. This translated to a 68 percent revenue related to highway trade for the two services station, 47 per cent for food and drink premises and 26 per cent on specialty food and groceries (butcher, bakeries).

Mr Noronha's evidence was that the more significant economic impacts of the Bypass would include:

- temporary uplift in commercial accommodation occupancy and retail revenues during construction
- a loss of \$5.2 million or 16 per cent of annual revenues for highway dependent businesses (highest for the two service stations and food and drink businesses) and 27 full time equivalent jobs in the short term.

This impact would diminish once the Project became operational, when an uplift is expected in business revenue resulting from improved amenity, safety and environment. This position was informed by the experiences of other post Bypass transition examples cited (Karuah and Kempsey in New South Wales and Woodend and Kyneton in Victoria). Mr Noronha noted that Beaufort's diverse economy, relatively small dependence on highway trade, strong social and economic connections to Ballarat and Ararat, and continued steady population growth would diminish the residual economic impacts post construction. Important mitigation measures were required to assist the transition of Beaufort to a destination town including:

- a Business Disruption Plan (MD13), including provision for appropriate business consultation
- initiatives to attract new and diverse businesses and employment opportunities to Beaufort
- identifying the critical population mass required to enhance the social and economic sustainability of Beaufort
- branding and promotion including appropriate signage
- undertaking public realm and amenity improvements
- identifying infrastructure improvements that support tourism, investment and the liveability of Beaufort.

Mr Noronha concluded that:

... the recommended mitigation measures if fully implemented will minimise and manage potential adverse effects on local businesses and agriculture. This opinion holds, even under a scenario where diversion of through traffic is greater than the 50% anticipated through traffic modelling undertaken for the EES (e.g 75% diversion rate).

Submitter 1 considered the project would provide economic benefits in terms of tourism and made the comparison to the Woodend bypass and the resultant growth of that town.

Submitter 6 acknowledged the short term impact on Beaufort highway trade related businesses when the bypass becomes operational and identified that it will take *"time and money to re-adjust"* and for Beaufort to redefine itself. Submitter 6 considered it vital that Council have a plan for town centre rejuvenation including streetscape and shop front improvements and for new attractions. It noted that there was an opportunity to establish a Cyril Callister Museum celebrating the inventor of Vegemite and food sciences.

As identified in Chapter 4, the submission of the Western Highway Action Committee highlighted the importance of signage along the bypass to highlight the features of Beaufort and to entice motorists into the town.

Council's original submission to the EES set out the importance of RRV closely engaging with Council to develop transitional initiatives to reposition Beaufort from a highway town to a destination town to assist its economic and social recovery post Bypass. This included aligning ESS transitional measures (including mitigation measure S07) with the *Pyrenees Economic Development Strategy, February 2020*, with the following initiatives identified:

- attracting new and diverse businesses and employment opportunities to Beaufort
- planning and design projects to be implemented in support of new and existing business and employment opportunities and population growth within the township
- identifying the critical population mass required to enhance the social and economic sustainability of Beaufort
- branding and promotion including appropriate signage
- public realm and amenity improvements
- identify infrastructure improvements that support tourism, investment and the liveability of Beaufort.

Council submitted that it was financially constrained and did not have the capacity independently to fund, develop and implement the necessary strategies to respond to the opportunities and challenges of the bypass on the Beaufort township. It sought some qualification of the expected level of support to be provided by the Project in the EMF mitigation measures including personnel and financial contributions, scheduling and timing for strategic partnership work.

Council identified a number of strategies and projects requiring support:

- development of a Beaufort Framework Plan (including stakeholder engagement and strategic analysis)
- Beaufort Streetscape Activation plan and delivery (including stakeholder engagement, detailed design, and partial delivery)
- any implementing Planning Scheme amendments
- development of a Beaufort Growth Strategy to identify and expediate opportunities to facilitate and encourage growth and activation
- development of a Tourism Strategy which identifies opportunities to enhance Beaufort's profile as a destination town
- development of an Economic Adaptation Strategy (incorporating elements of the Business Disruption Plan) to assist Beaufort's commercial and industrial sectors in identifying new opportunities and transitioning to new markets
- reviewing expired or out of date strategies referred to in the EES documentation:
  - *Pyrenees Shire Council Growth Strategy 2017 – 2021*
  - *Pyrenees Shire Council Tourism Strategy 2016-2019*
  - *Pyrenees Shire Council Plan* (various years referenced and since expired)
  - *Pyrenees Shire Council Towards 10,000 – Economic Development Strategy*
  - *Pyrenees Futures* (Strategic Planning Project – Concept only).

Council sought:

- well-designed off ramps that utilise width, line of sight, lighting, and signage to encourage township visitation by highway users
- An improvement to the amenity of the Beaufort-Lexton Road (VicRoads managed road) which will form as the primary entrance into the township post bypass

- A financial contribution into place making initiatives that will encourage visitation by highway users, including an off-leash dog park, public toilet facilities, electric vehicle recharging stations, recreational vehicle facilities and passive recreation infrastructure.

RRV provided materials associated with the Calder Freeway bypass of Harcourt<sup>64</sup> and considered that the types of proactive actions taken for that project were analogous with the proposed EMF mitigation measures proposed for the Project.

In response to Council's submission RRV's Final EMF changes proposed to amend mitigation measures RE05/S07 to:

- provide for the identification of 'a governance structure'
- add the following paragraph:
 

Once transitional initiatives have been identified, RRV and Council will agree on how transitional initiatives are to be implemented during the pre-construction, construction and post construction phases of the project
- update references to the Pyrenees Economic Development Strategy – February 2020 'or its successor'.

RRV's Final changes also proposed to amend the Incorporated Document Clause 5.1.1 to require the EMF to include:

the process for identifying and implementing initiatives to support Council to reposition Beaufort from a highway town to a bypassed town to assist its economic and social recovery post construction.

### **Agriculture impacts**

Mr Noronha advised that his evidence had not examined impacts on productive agricultural land but identified that this impact this had been investigated in the Agricultural Report prepared by Phillips Agribusiness (Appendix C of EES Technical Appendix G).

Mr Noronha's evidence acknowledged that there would be an impact associated with reduced access to water and loss of irrigated land, loss of access and the ability to move equipment and livestock and potential impact on animal health through noise exposure. These impacts would be limited to the construction phase and impact would be acceptable as a result of the proposed mitigation measures (including the Business Disruption Plan and land acquisition processes).

Several submitters expressed concern about the impacts on larger properties used for rural or agricultural purposes including loss of productive capacity or impacts on the efficient use of land through reduced access (internal and external) or loss of land.

Submitter 24 identified that the alignment would impact existing dams and waterways important to their farming operation located on the Western Highway adjacent to the southern side of the eastern bypass tie-in. Submitter 25 raised similar concerns about the unknown land take and associated impacts of the alignment on their property spread over several parcels between Packhams Lane and Smiths Lane and dissected by the C2 alignment. These impacts included the capacity to farm the land, loss of productive land and stock shelter areas and loss of access to sections of the property. Submitter 23 identified that the C2 alignment was located where a dam was proposed.

As identified in Chapter 8.2, Submitters 10, 18 and 21 raised concerns about impacts on the rural related use of land as a result of potential acquisition, loss of land and access.

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<sup>64</sup> Documents 50d, 50e and 50h

**(iv) Discussion****Business impacts**

Council's Economic Development Strategy identifies that the municipality's key private sector industries include agriculture (sheep, cattle and grain crops), wine manufacturing, construction and tourism. Unique features including distinctive landscapes, including the Pyrenees Range, Mount Cole and Mt Buangor, heritage places and precincts and wineries. The Strategy aims to facilitate sustainable economic growth in these sectors while protecting key natural and built environmental values. The Strategy acknowledges the impacts of the Project and the need for a more detailed understanding of these impacts.

The EES appropriately identifies that the impacts on the Beaufort township's businesses, particularly highway related business, will be significant once operational. The IAC accepts the evidence of Mr Norhona that these impacts will be principally focused on highway trade related activities and which will diminish with an uplift in economic activity expected to result from an improved amenity and repositioning of Beaufort as a destination town. The IAC acknowledges that similar outcomes have been achieved in the post bypass town transition cited by Mr Noronha and RRV.

The IAC's inspections of the Beaufort town centre reveal a busy, traditional strip style local centre with heritage character and many food related shops providing for travellers and local residents. The enjoyment of this environment (and its potential to further expand) is hampered somewhat by the large volumes of vehicles and trucks moving through it. The IAC agrees with the EES, economic evidence, RRV and Council that the removal of large volumes of traffic from the town centre will provide an opportunity for a more comfortable and attractive centre in which to visit and invest. The town's proximity to the large regional centre of Ballarat, anticipated population growth, broad economic base, nearby natural features and environments and proximity of quality agricultural produce and wineries establish a foundation for a successful transition.

Key to a successful transition will be the undertaking of the strategic work required to guide and support this transition. Early planning will assist existing business to prepare for post the transition. The types of further strategic work and investments identified in Council's submission point to the types of further work required to commence this planning.

It is vital that this work is not left solely to Council and that an appropriate level of support is provided by RRV given the direct impacts of the Project on Beaufort. Effective community (including business operator) engagement will also be critical if the project advances. This can be accommodated through the Community and Stakeholder Engagement Plan (MD12/S04) as amended (refer Chapter 8.3).

The IAC considers that the proposed mitigation measures including RE01 and RE05 will be fundamental to minimising economic impacts to an acceptable level. The changes proposed by RRV in response to Council's submission are appropriate and strongly supported. This includes a governance structure that will work out the finer detail of support and implementation actions.

The IAC notes that there was a desire within the community to bring something new to the town. Examples included the Cyril Callister museum and transforming the old Beaufort Primary School into a community hub. This is a community with big ideas that needs to be supported and involved in revitalising the town post bypass. While the proposed amendment to mitigation measure RE05 provides for a governance structure being developed with Council, there is potentially a role for community representation on the governance structure. While this is not

explicitly excluded from the language of the mitigation measure there is benefit in its explicit identification.

### **Agricultural impacts**

State planning policy supports the sustainable use of agricultural land and protecting productive and strategically important agricultural land. The Committee notes the conclusions of the Agriculture Report which identified the natural resource base for agriculture across the Study area to be moderate to low due to landform, soil, vegetation and climate characteristics. It considered this correlated with larger tenements on more productive land and “*smaller tenements concentrated on poorer country to meet rural living demand*”.

In the absence of a municipal rural strategy that provides specific strategic planning direction around the protection of agricultural land, the IAC can only conclude that the impact on agricultural production is likely to be limited to properties that are within the alignment itself. While the impacts on some properties will be significant including the loss of productive land, impacts are not widespread. They are limited to rural land on the edge of the township which is not generally considered to be high quality agricultural land.

Mitigation measures associated with minimising land acquisition and preparation of an Access Management Strategy will assist in mitigating impacts to operational farms to an acceptable level. More generally it is anticipated the Project will support agriculture through the improvement of access to markets and exposure to other potential agricultural opportunities such as viticulture associated with Beaufort’s transition away from a highway service centre. This benefit is considered to outweigh the disbenefit of impacts to a relatively small number of producers.

### **(v) Findings**

The IAC finds:

- The economic impacts of the Project on businesses reliant on highway trade will be significant and will result in revenue and employment losses.
- These impacts are anticipated to be offset by a diverse economy, proximity to Ballarat and population growth, and a transitioning of Beaufort to a destination town post bypass.
- The identified mitigation measures (as amended in RRV’s Final changes and identified in Appendix F) will ensure that overall, the economic impacts of the Project will be acceptable, and the Project will support the economic growth of the township and the region.
- Mitigation measure RE05 should be amended to require community representation for the governance structure.
- The economic impacts on agriculture are expected to be limited to rural properties within the immediate alignment that are to be partially acquired. Proposed mitigation measures relating to access and confining the extent of land acquisition will assist in reducing these impacts.

## **9.3 Planning policy, land use and future growth**

This section focuses on whether the Project is consistent with or supported by planning policy within the Pyrenees Planning Scheme. The specifics of the PSA including appropriateness of the application of the SCO and PAO are discussed in Chapter 15.1 of this Report.



**(i) What did the EES say?**

Overall, the EES identifies that the Project is consistent with strategic planning policy which does not support future growth and development to the north of Beaufort township and anticipates a bypass of Beaufort. Land use impacts can be further managed through the implementation of the EMF and associated management plans, and the following mitigation measures:

- minimise land acquisition and severance impacts (RE03)
- transitional planning initiatives that are aligned to the Pyrenees Economic Development Strategy (RE05).

**(ii) Key issue**

The key issue is whether the Project is consistent with or implements planning policy.

**(iii) Evidence and submissions**

Ms Peterson's evidence provided an extensive overview of the relevant policy provisions of the Pyrenees Planning Scheme, a range of other strategies including the Central Highlands Regional Growth Plan, Ministerial Directions and Planning Practice Notes. She identified that:

- the Project was largely consistent with planning policy although she noted that there would be remnant lots created through the acquisition process that were less than the minimal lot size for the Farming Zone
- the C2 alignment was not identified for future growth
- the application of the PAO and SCO were strategically justified, but identified in relation to the PAO that she considered the design process should:
  - ... further consider the effects of fragmentation, in line with mitigation measure RE03, to minimise the creation of inappropriate sized lots, and could be considered through the acquisition and compensation process to encourage consolidation of parcels with adjoining landowners
- minor changes were recommended to Clause 17.01-1R to refer to the Bypass and deletion of a strategy under Clause 17.02-1L relating to Beaufort's identified role as a 'highway service centre' and a future review of Clause 17.02 and/or Clause 17.04 as part of further strategic work to guide the towns economic and tourism reinvention.

Ms Peterson concluded that the benefits associated with the Project outweighed the negative impacts and would result in a net community benefit subject to implementation of the identified mitigation measures.

RRV identified that development of the Project was part of the wider Western Highway duplication, a project recognised in policy. Its Part A submission set out the relevant policy provisions and considered the project consistent with them.

RRV relied on the evidence of Ms Peterson and proposed changes to address her evidence regarding the consistency of the Project with planning policy. It did not support progressing the suggested changes to Clause 17.02-1R and 17.02-1L considering this was best left for a further process after the necessary strategic work was undertaken.

Council's submission agreed that the Project is consistent with planning policy. It did not support changes proposed by Ms Peterson to Clause 17.02-1L as it created potential policy and strategy conflict. While it identified potential alternative wording to reinforce Beaufort's strategic role, Council preferred any policy change be subject of a further strategic planning process.

Council's submission acknowledged that the PAO would result in the creation of remnant land parcels less than the minimum lot size and that this was contrary to policy. It provided an overview of the operation of the existing Beaufort Environs Restructure Area included in the Restructure Overlay (RO27) which applies to the north of Beaufort and aims to encourage small lot consolidation. It sought post acquisition funding to undertake the strategic work to align the RO27 mapping and necessary amendments to the related RO27 incorporated plan to align with the ultimate bypass road reserve. In the interim it identified several options to manage the smaller 'child lots' that would effectively be created by the Project:

Priority 1 – 'Child' lots of less than 1ha in size, to be incorporated into the project reserve and revegetated for ecological values.

Priority 2 – Consolidate into adjoining lot/s (amend Restructure Parcel Boundary if required).

Priority 3 – Application of 173 agreement to highlight land use constraints for the benefit of current and future landowners.

RRV submitted that flexibility existed within the RO to support the management of any small parcels created. In this regard it noted that the relevant RO incorporated document enabled adjustment to the boundary of a Restructure Area to accord with tenement boundaries and this could be pursued once the final project alignment was confirmed.

RRV did not consider it necessary or appropriate to expand the PAO to avoid creating small remnant parcels and submitted that consideration of this impact should not drive the formation of the Project. It submitted that limiting the application of the PAO to land to be acquired or reserved for a public purpose:

- was consistent with its purpose
- would reduce uncertainty for landowners about the impact on properties until the detailed design process was completed
- reduced the potential of increasing compensation payable which would not serve to balance the present and future interests of all Victorians consistent with the PE Act and the principles of integrated decision making.

RRV noted that the EMF already provides for consideration of design optimisation having regard to land acquisition (mitigation measure RE03).

RRV did not support Council's proposal for section 173 agreements on 'child lots'. It considered that a requirement for section 173 agreements through the compulsory acquisition process would not be effective as there was no permit or planning control mechanism that could require a landowner to enter into such an agreement.

RRV submitted that the other options identified by Council to deal with 'child lots' were not matters that could be addressed with certainty at this time given the scope of the PAO, the approach to purchasing additional land and the unknown views of owners at the time of construction. It submitted these were matters appropriately addressed through the EMF governance structure (RE05) at the relevant time.

RRV's Final changes in response to Council's request for support proposed to amend mitigation measures S07 and RE05 to include a further bullet point:

Any planning projects to update the Pyrenees planning scheme controls as necessitated by the final land acquisition footprint.

**(iv) Discussion**

The IAC has set out the key planning policy and provisions of the Pyrenees Planning Scheme and the relevant Ministerial Directions and Planning Practice Notes in Appendix E of Report No. 2. The identification and analysis of relevant planning policy in the EES, Technical Appendix G, RRV's Part A submission and the evidence of Ms was extensive. The IAC considers this analysis was thorough and complete.

The IAC generally agrees with the submission of RRV and evidence of Ms Peterson that the proposal is broadly consistent with the Planning Policy Framework including the policies for Beaufort. While there is no clear spatial policy in place for Beaufort's growth, based on the IAC's questions of Council it is confident that the C2 alignment does not inhibit the anticipated residential and rural residential or commercial growth of the Beaufort township.

The IAC agrees with RRV and Council that it is not necessary to amend the Planning Policy Framework for Beaufort to identify the shift away from a highway service centre. This should be done as part of a more considered strategic approach. The IAC notes that Council is currently preparing the *Beaufort Township Framework Plan* which will include a Town Centre Activation Plan.

The IAC is satisfied based on the analysis included in the Agriculture Report that the C2 alignment minimises the impacts on productive agricultural land. There is no Rural Strategy referred to within the Pyrenees Planning Scheme that would suggest the Project would have a significant negative rural land use impact. The IAC notes that all alignment options impact on properties within the Farming Zone. Such an impact is unavoidable. The C2 alignment (which is closer to the urban and fringe areas of Beaufort) minimises the impacts on rural land use.

The PAO is to be applied to areas of land required for the Project's construction based on the reference design. The primary policy disconnect results from the application of the PAO in a manner that effectively creates 16 remnant parcels which will be below the 1 hectare minimum identified in RO27. This is generally inconsistent with Clauses 02.02-1, 11.01-1L, and 14.01-1S which seek to consolidate small lots in rural areas so to discourage the dispersal of dwellings through rural landscapes and impact agricultural land use.

Based on the property cadastre and property parcel information provided by RRV<sup>65</sup> and overlain with the PAO, SCO and RO extents, while some of these parcels can be consolidated into adjoining lots, some of them cannot be readily accessed or practically used for rural activity. An example is the small portion of land remaining outside the PAO on the properties of Submitters 10 and 18 which is adjoined by Crown land. This outcome creates the potential for land use conflicts and landowner expectations for more intensive land uses of the small remnant areas including rural living because they cannot be used consistent with the purpose of the Farming Zone.

While the IAC understands the rationale of RRV to limit the extent of acquisition to that necessary for a public purpose, the creation of small lots that cannot readily be consolidated, are adjoined by public land and that cannot practically be used consistent with the zone purpose is not an ideal planning outcome. The IAC is comforted to some extent that the RO overlaps with the proposed PAO and sites in private ownership that will have small remnant lots created. This should ensure that the strategic planning issues and outcomes (as opposed to LAC outcomes) are appropriately

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<sup>65</sup> Document 66

managed. The IAC notes that through the LAC Act process, potential full property acquisition remains an option.

The IAC supports RRV's proposed changes to mitigation measures S07 and RE05 to provide support for any planning projects to update the Pyrenees Planning Scheme controls necessitated by the final land acquisition footprint. However, consistent with Ms Peterson's evidence, the IAC considers that mitigation measure RE03 should be amended to consider the impacts of land fragmentation. This is included in the IAC's recommended changes to the EMF in Appendix E in Report No. 2.

## **(v) Findings**

The IAC finds:

- The Project is broadly consistent with the Planning Policy Framework and will not impact the strategic growth of Beaufort.
- The creation of remnant land parcels within the Farming Zone not included in the PAO will create the potential for the use of land inconsistent with rural policies and the purpose of the zone (for example through the construction of additional dwellings). These impacts in the main can reasonably be managed to an acceptable level through the provisions of the Restructure Overlay.
- RRV should however review the final extent of the PAO to ensure that portions of land within the Farming Zone which cannot reasonably or practicably be consolidated into adjoining freehold lots or accessed are included in the PAO. This is discussed further in Chapter 15.1.
- Mitigation measure RE03 should be amended to consider the impacts of land fragmentation.
- RRV's proposed changes to mitigation measures S07 and RE05 to provide support for any planning projects to update the Pyrenees Planning Scheme controls necessitated by the final land acquisition footprint are therefore largely appropriate.

## **9.4 Impact on infrastructure**

### **(i) What did the EES say?**

The Project will sever a large agricultural landholding between Beaufort-Lexton Road and Racecourse Road which includes irrigation infrastructure associated with the Beaufort Wastewater Treatment Plant.

In addition to land acquisition, some farm infrastructure and one dwelling will need to be removed.

### **(ii) Key issues**

The key issues are the Project's impacts on:

- the Beaufort Trunk Main, Beaufort Waste Water Treatment Plant and associated irrigation areas
- other existing infrastructure.

**(iii) Submissions**

CHW raised concerns about the impacts of the C2 alignment on the Beaufort Trunk Main (situated along Main Lead Road), Beaufort Waste Water Treatment Plant and associated irrigation areas adjacent to Racecourse Road. The submission sought greater acknowledgement and regard for the impact on these assets in the EMF and Incorporated Document.

RRV proposed a number of changes generally consistent with those drafted by CHW that:

- amend mitigation measure LU01 (Construction impacts Central Highlands Water sewerage treatment plant irrigation infrastructure) to consult with CHW to determine the impact on its assets and manage impacts, minimise infrastructure disruption and arrangements for alternative disposal prior to decommissioning effected assets and irrigation areas
- insert in the Incorporated Document a new Clause 5.1.12 and 5.1.13 (Central Highland Water's (CHA) Beaufort Trunk Water Main (BTWM) and Beaufort Waste Water Treatment Plant).

CHW accepted the proposed changes.

Council sought a 'Post-construction Asset Handover Plan' be prepared by RRV in consultation with Council to ensure its existing assets impacted by the Project or new assets that it would inherit would be properly reinstated or constructed to its satisfaction.

Submissions about the loss of farm infrastructure and dwellings are discussed in Chapters 8 and 9.2 of this Report. RRV considered this impact would be mitigated through the land acquisition process.

RRV's Final EMF changes proposed to update the requirement for the Operations and Maintenance Plan (MD21) to include the following reference:

The operations and management plan is to include a description of any assets to be handed over to the Pyrenees Shire Council (including landscaping) to be prepared in conjunction with the council.

**(iv) Discussion**

The Beaufort Trunk Main (situated along Main Lead Road), Beaufort Waste Water Treatment Plant and associated irrigation areas are important public assets and critical to the future residential and economic growth (including agriculture) of Beaufort. The Planning Policy Framework seeks to protect such assets from detrimental or operational impact. The IAC therefore strongly supports RRV's proposed Final changes to the EMF and Incorporated Document to respond to the CHW submission. It appreciated the efforts of RRV and CHW to reach an agreed position.

The IAC is satisfied that the Project does not have significant impact on existing infrastructure that is contrary to planning policy, requires a change to the Project or cannot be managed through the mitigation measures.

**(v) Findings**

The IAC finds:

- The Project could, without mitigation, significantly impact the Beaufort Trunk Main (situated along Main Lead Road), Beaufort Waste Water Treatment Plant. With appropriate mitigation measures in place, these impacts can be managed to an appropriate and acceptable level.

- RRV's proposed changes to mitigation measure LU01, Operations and Maintenance Plan (MD21) and the Incorporated Document in response to CHW's submission are appropriate.

## 9.5 Recommendations

The IAC recommends:

### Environmental Management Framework

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- **Amend the Operations and Maintenance Plan (MD21) to include RRV's Final changes regarding future Pyrenees Shire Council assets (item 10).**
- **Amend mitigation measure LU01 to include RRV's Final changes regarding Central highlands Water's assets (item 43).**
- **Amend mitigation measures RE03 to amend the first dot point to add: "*and reduce land fragmentation*" (item 45).**

### Draft Planning Scheme Amendment

**Amend the Beaufort Bypass Project Incorporated Document as shown in Appendix G to introduce new Clause 5.1.12 and Clause 5.1.13 (Central Highland Water's (CHA) Beaufort Trunk Water Main (BTWM) and Beaufort Waste Water Treatment Plant).**

## 9.6 Overall conclusions on land use and economics

The IAC concludes:

- There are no impacts on land use and economics that preclude the Project being approved.

# 10 Amenity

## 10.1 Introduction

Amenity impacts in the context of dust and noise are discussed in EES:

- Chapter 14
- Technical Appendix B (Air Quality Impact Assessment, prepared by CEE, January 2021)
- Technical Appendix H (Noise Vibration Impact Assessment, prepared by WSP, May 2021).

The evaluation objective is:

To minimise adverse air quality, noise or vibration effects on the amenity of residents and local communities, as far as practicable during construction and operation.

As exhibited, the EES proposed the following measures to air quality and noise impacts:

- air quality mitigation measures to be applied during the construction phase (AQ01, AQ02) - see Table 14.18
- noise and vibration mitigation measures to be applied during the construction phase (NV01, NV02) and operation phase (NV03) - see Table 14.19.

Technical Appendix B concluded air quality impacts during the two year construction period are expected to extend a short distance beyond the construction corridor (up to about 200 metres, although generally less than 150 metres) on dry days with moderate to strong winds. During operations, air quality impacts are expected to be negligible due to the small number of vehicles using the bypass.<sup>66</sup> In town however, the Project will result in an improvement in air quality.

Technical Appendix H concluded:

The predicted noise levels indicate that noise levels are likely to exceed the project objectives, thereby requiring noise mitigation.

Project Objective Noise Limits (PONL) have been established in accordance with the VicRoads Traffic Noise Reduction Policy and Road Design Note 06-01 for the proposed bypass alignment options. The following noise mitigation solutions have been considered to achieve PONLs at all areas:

- lower noise road surface (surface correction), 7 millimetre spray seal
- noise barriers, up to 4 metres in height. Two metre height barriers were chosen for the assessment.
- Off-reservation treatments (ORTs).

The assessment indicates that the road design can achieve the PONLs through the design and implementation of noise mitigation along each of the four alignments, inclusive of ORT at a small number of properties.

The Options Assessment Report concluded that from an air quality perspective, the C2 alignment had a smaller number of sensitive receptors (dwellings) within 100 metres, 200 metres and 300 metres from the alignment corridor. While alignment A1 performed slightly better than C2 for noise impacts, with 23 residents subject to significant impacts (pre-mitigation) compared with 27 for C2, this was considered a marginal difference.

<sup>66</sup> Predicted 8,970 vehicles per day in 2031, whereas significant changes in air quality near roads need more than 50,000 vehicles per day

The IAC requested<sup>67</sup> RRV to provide details showing how the EMF will address the General Environmental Duty (GED) and evolving state of knowledge under the *Environmental Protection Act 2017* (EP Act).

## 10.2 Dust and air emissions

### (i) What did the EES say?

Technical Appendix B identified 15 rural residences within 300 metres of the alignment that collect rainwater for domestic use. Whilst increases in dust due to the Project were considered marginal, it was conceded dust would nonetheless be higher during the construction period. A first flush device would divert the majority of dust away from tanks. It was suggested *“the project should advise households that do not have them of the potential benefits, but not take responsibility for installing them”*.

Relevant RRV/MRPV standards would apply, including the:

- VicRoads Air Quality Screening Tool
- VicRoads Contract Specifications Section 177.C – Air Quality.

The Project would also require:

- a Construction Dust Management Plan (MD14)
- a site-specific Dust Management Plan (mitigation measure AQ01)
- compliance with VicRoads/DoT Contractor Specifications including control of emissions of odorous substances and fitting appropriate emission control mechanisms (mitigation measure AQ02).

### (ii) Key issues

The key issues are whether:

- dust impacts to rainwater collection needs mitigation
- the assessment addresses the new EP Act
- air quality impacts can be acceptably managed during construction
- the Project will result in acceptable operational air quality.

### (iii) Evidence and submissions

Several submissions (9, 12 and 18 to 20 and 25) were concerned with air pollution, vehicle emissions and smell. Dr Wallis (who gave air quality evidence) explained the modelling and acknowledged the EPA had introduced Environmental Reference Standards in May 2021 which updated previous limits for assessing ambient air quality. He considered these with the modelled peak emissions for the Project (including ambient background concentrations) and concluded that in all cases, the Environmental Reference Standard air quality objectives would be met at the edge of the road reservation prior to any receptors being encountered.

In relation to dust, Dr Wallis gave evidence the Environmental Reference Standard had not updated acceptable dust levels and so the State Environment Protection Policy (Air Quality Management) remained relevant. Dust modelling indicated that during extremely hot weather

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<sup>67</sup> Document 7, Direction 13(d)



(two hottest days), two receptors within 100 metres of the roadway and four receptors within 200 metres, “are likely to experience elevated total suspended particle levels for a few days during the construction period, and marginally over the EPA design limit at the closest receptor”.

He conceded that, in practice, weather can fluctuate affecting impacts, but he considered that the recommended mitigation measures would limit the extent of any duration of nuisance dust conditions.

Submitter 23 raised concerns with dust impacting their tank water. Dr Wallis responded by reiterating that dust impacts were assessed as low, and a first-flush diverter would adequately manage such impacts. Council queried whether the first flush diverters should be provided by the Project. Dr Wallis responded that his view was everyone with tank water should have a first flush diverter installed as risks were everywhere (for instance bird droppings). He considered the Project was an opportunity to educate people, but he did not consider that RRV should provide them, as the risks were not specific to the Project.

In relation to the GED under the EP Act, Dr Wallis gave evidence that care must be taken to:

- Develop a dust management plan in accordance with EPA publication 1834 *Civil construction, building and demolition guide* (EPA, 2020)
- Implement the dust mitigation measures listed in the preceding section, and in the Contract specification
- Monitor dust levels downwind of the construction activities and before dust reaches sensitive human and environmental receptors; and
- Identify any unexpected adverse effects and take action to correct them.

Dr Wallis expressed support for the mitigation measures in the EES and concluded there were no further matters to be addressed.

In response to Dr Wallis’ evidence, RRV proposed changes to AQ01 to include a requirement for education or instalment of first flush diverters on rain water tanks and to clarify that “portable dust monitoring stations” provided real time monitoring.

#### **(iv) Discussion**

The IAC accepts that nuisance dust during construction will be short-lived and easily managed by proposed controls and that air emissions resulting from the Project are likely to be negligible. The IAC is satisfied that appropriate consideration has been given to the implications of the new EP Act and the proposed controls will assist to meet the GED. The IAC supports RRV’s proposed Final changes to mitigation measure AQ01.

#### **(v) Findings**

The IAC finds:

- Nuisance dust during construction will be short-lived and easily managed by proposed controls.
- Air emissions resulting from the Project are likely to be negligible.

## 10.3 Noise and vibration

### (i) What did the EES say?

#### Construction noise

Several scenarios of noise levels for construction activities were modelled.<sup>68</sup> Unmitigated, significant levels of noise may be encountered near construction activities. However construction noise will be temporary and only last for the duration of construction in each section. Following mitigation, residual impacts were anticipated to be low to medium when works are nearby sensitive receptors.

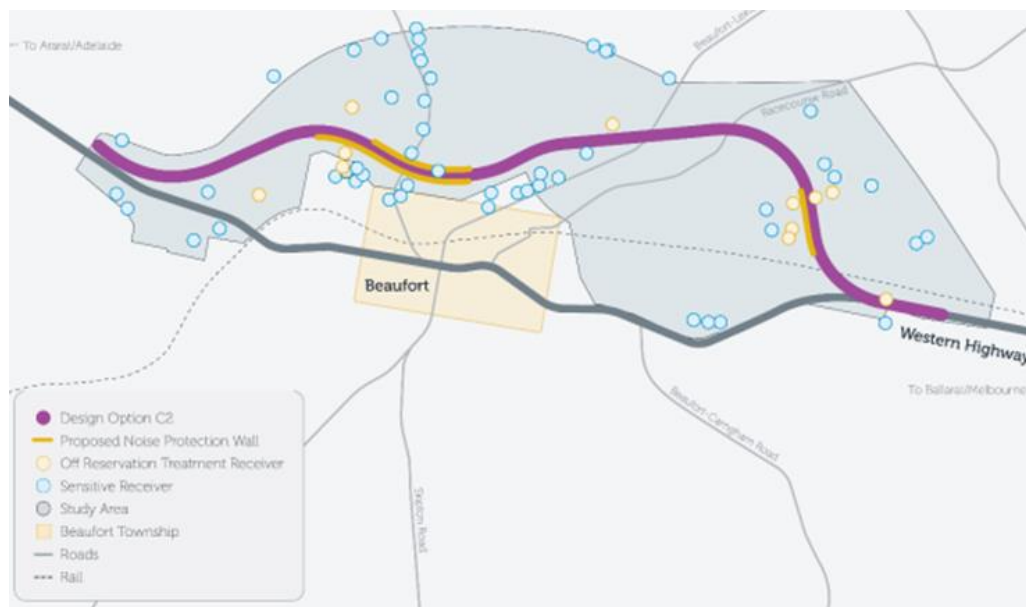
#### Operational noise

The modelling predicted that without mitigation, the noise levels would be exceeded at 27 sensitive receptors (residential properties). This is considered a high impact.

On-reservation mitigation measures, including a lower noise road surface (7 millimetre spray seal) and noise barriers up to 2 metres would reduce the number of locations at which Project Objective Noise Levels (PONLs) could not be met to 11 properties. Increasing the noise barriers to 4 metres would reduce the number further by one property. This was considered of marginal benefit and not recommended due to impacts of the noise barriers themselves (such as visual and landscape impacts). For the remaining properties, off reservation treatments are proposed in consultation with the owners. The EES indicated *“typical improvements to houses could achieve between 5 and 12 dBA internal noise level reductions, which is appropriate given the residual exceedances range from 1 to 6 dBA”*.<sup>69</sup> The EES acknowledged that this would not address outdoor noise.

Figure 22 identifies the location of the proposed 2 metre high noise barriers and sensitive receivers requiring ORTs to achieve PONLs.

**Figure 22** Proposed noise barrier locations



Source: EES Figure 4.4

<sup>68</sup> Table 9.6 of Technical Appendix H

<sup>69</sup> Technical Appendix H, Section 11.1.1

## Sleep disturbance

Modelling indicated up to 22 sensitive receivers outside the town may be impacted by engine brake noise causing sleep disturbance.<sup>70</sup> Various factors will determine the final extent of sleep disturbance. Where off-reservation treatments are installed for the control of general traffic noise, this will reduce sleep disturbance, however ORTs may not be cost-effective to implement for all properties. The report concluded:

The residual impact for these properties is therefore considered moderate and would be widespread for the majority of properties along the alignment.

## Impacts on the town

The EES indicated the Project would result in benefits of reduced noise and sleep disturbance in Beaufort.

## Vibration

Most receivers are a minimum of 100 metres from the construction footprint and are therefore considered a low risk for the experience of adverse vibration levels. For remaining houses, residual impacts are considered low.

### (ii) Key issues

The key issues are:

- potential construction and operational noise impacts
- whether local road upgrades and ORT should be considered for Beaufort-Lexton Road
- implications of the new EP Act.

### (iii) Evidence and submissions

Mr Ryan gave evidence on noise. He adopted EES Technical Appendix H as his evidence.

Mr Ryan identified that the technical assessment had established PONLs based on the alignment options and interactions with existing conditions. Predicted traffic noise impacts were estimated using acoustic modelling, mitigation measures were then designed and tested resulting in residual impacts.

Mr Tardio's peer review supported the modelling and concluded that best practice modelling techniques had been implemented.

Mr Tardio noted that beyond the requirements of the relevant policy, the assessment had included sleep disturbance and specific truck driving behaviours (for example engine braking). Mr Tardio raised minor queries regarding the baseline monitoring but concluded that any minor discrepancies could be resolved through the further baseline monitoring required in the EMF (NV03), which in his opinion would be undertaken by the contractor as standard practice.

Several submitters were concerned with potential increases in traffic noise from the Project. Mr Ryan assessed each submission and reiterated the findings of the EES that:

- some properties would experience noise similar to existing levels (no increase)<sup>71</sup>
- at some properties noise would increase but be below PONLs with mitigation measures<sup>72</sup>

<sup>70</sup> Technical Appendix H, Table 9.3

<sup>71</sup> Submissions 2, 4 and 24

- at others, noise would increase and be above PONLs with external (on-reservation mitigation measures) but likely to be able to achieve a target indoor noise level in habitable rooms of 10dB(A) below the external PONLs through potential off-reservation treatments.<sup>73</sup>

Mr Ryan noted that where ORTs are installed, beneficial outcomes for sleep disturbance and construction noise may also be realised. Mr Tardio supported using ORTs as being “*typically more efficient for rural road projects*” due to the dispersed nature of sensitive receptors. He noted in this case, 11 houses along the bypass route had been identified for such treatments.

In responding to submissions from property owners where an increase in noise would be experienced, Mr Tardio considered that the increases in noise were “*reasonable, where shown to be mitigated in accordance with the Policy*”.

Some submitters called for ORTs on Beaufort-Lexton Road. Mr Ryan gave evidence that the Project does not trigger the requirements for noise mitigation under the VicRoads Policy for local roads (including Beaufort-Lexton Road), and in any case the predicted noise impacts are likely to achieve the PONLs at sensitive receiver locations along Beaufort-Lexton Road. He considered properties on this road may experience an increase of 4dB compared with existing levels.

Mr Ryan recommended NV03 be updated to include references to *the VicRoads Traffic Noise Reduction Policy* and *Road Design Note 06-01: Interpretation and application of VicRoads Traffic Noise Reduction Policy 2005* for the purposes of appropriately assessing impacts of operational road traffic noise during detailed design. RRV adopted this recommendation in its Final version of the EMF.

Mr Ryan considered the requirement for a Construction Noise and Vibration Management Plan, including ongoing stakeholder management, to be the most appropriate to mitigate construction noise impacts.

Mr Tardio recommended several improvements to the wording of mitigation measures NV01 to NV03 which were supported by Mr Ryan and agreed by RRV. In responding to questions from the IAC, Mr Ryan referred to Mr Tardio’s recommendation for 6 months of monitoring after opening and clarified that in his opinion, this should be a minimum.

Mr Ryan outlined the process for residences eligible for ORTs. The process included significant landowner consultation and individual assessment of residential properties and potential treatments including earth mounds, mechanical ventilation, double glazing and so on. In his experience the response of recipients varied greatly and was often related to how they felt about the Project overall. In his opinion, if employed early, ORTs could benefit recipients during construction as well as operation.

Mr Ryan advised “*contemporary assessment tools created under the Environment Protection Act 2017, such as the Environment Reference Standard 2021, are not assessed in the Technical report.*” Having said that, he considered appropriate assessment and identification of reasonably practicable mitigation measures had occurred. He referred to EPA and VicRoads documents describing the meaning of “*reasonably practicable*” or “*practicability*” and gave his opinion that:

<sup>72</sup> Submissions 18, 12 and 25

<sup>73</sup> Submissions 9, 21 and 23

The current EMF should be treated as minimum requirements for the Project, which should provide opportunity to account for any known changes in future stages of the Project such as, but not limited to:

- Changes during detailed design of the chosen alignment
- Revised road traffic volumes for future project operation a years (e.g, 10 years after opening)
- Changes in material choices for mitigations (e.g., noise barriers and road surface finishes)
- Acceptance of 'best practice' assessments for contemporary major infrastructure projects (e.g, sleep disturbance and construction assessment methodologies).

#### **(iv) Discussion**

The IAC accepts evidence that the Project has been assessed against the current best practice standards. There has been commentary for some time regarding updating the VicRoads Traffic Noise policy and the IAC accepts the evidence of Mr Ryan that the EMF should be considered minimum requirements and in that context they are appropriate. The IAC recognises that some residents will experience increases in noise which should reasonably be able to be mitigated to an acceptable level. There remains a moderate impact from potential sleep disturbance for a number of residents which would not qualify for ORT. The IAC considers that any practicable measures to reduce sleep disturbance should be implemented. This is consistent with the VicRoads Traffic Noise Reduction Policy. The IAC otherwise accepts the findings of Mr Tardio's peer review that the expected noise increases are reasonable.

The IAC supports RRV's proposed changes to the EMF with an additional improvement to NV03 to account for Mr Ryan's oral evidence that operational monitoring should be for a minimum of 6 months post-opening.

The IAC considers there is an opportunity to improve outcomes for residents by commencing engagement and implementation of off-reservation treatments early after funding is received to ensure the maximum benefits in terms of noise reduction during construction. Having said that, the IAC is comfortable the proposed measures to deal with construction noise are reasonable.

#### **(v) Findings**

The IAC finds:

- The Project will result in some increase in traffic noise to a number of properties.
- This can reasonably be mitigated with a combination of on and off-reservation treatments with 11 properties being eligible for off-reservation treatment where PONLs are exceeded and cannot be mitigated by on-reservation treatments.
- There is potential for up to 22 properties to be affected by noise overnight. Some of these may benefit from off-reservation treatments undertaken for operational noise, others will not – a moderate residual impact is expected for these houses.
- Expected increases in noise are reasonable because they can be managed to acceptable level by a mix of on and off-reservation treatments.
- Subject to minor amendments, the proposed mitigation measures are reasonable and can be practically implemented.

## 10.4 Recommendations

The IAC recommends:

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- Amend mitigation measures AQ01 to include RRV's Final changes relating first flush diverters and real time monitoring (item 46).
- Amend mitigation measures NV01 and NV02 to include RRV's Final changes referring to relevant standards (items 47 and 48).
- Amend mitigation measure NV03 to include RRV's Final changes, and also to provide for a minimum 6 month monitoring period and practical measures to reduce sleep disturbance (item 49).

## 10.5 Overall conclusions on amenity

The IAC concludes:

- There are no impacts on amenity that preclude the Project being approved.

# 11 Landscape and visual amenity

## 11.1 Introduction

Land use and amenity are discussed in EES:

- Chapter 15
- Technical Appendix F (the Landscape and Visual Impact Assessment, prepared by ASPECT Studios, May 2021).

The evaluation objective is:

To minimise adverse effects on visual and landscape values as far as practicable, during construction and operation.

As exhibited, the EES proposed the following measures to mitigate landscape and visual amenity impacts:

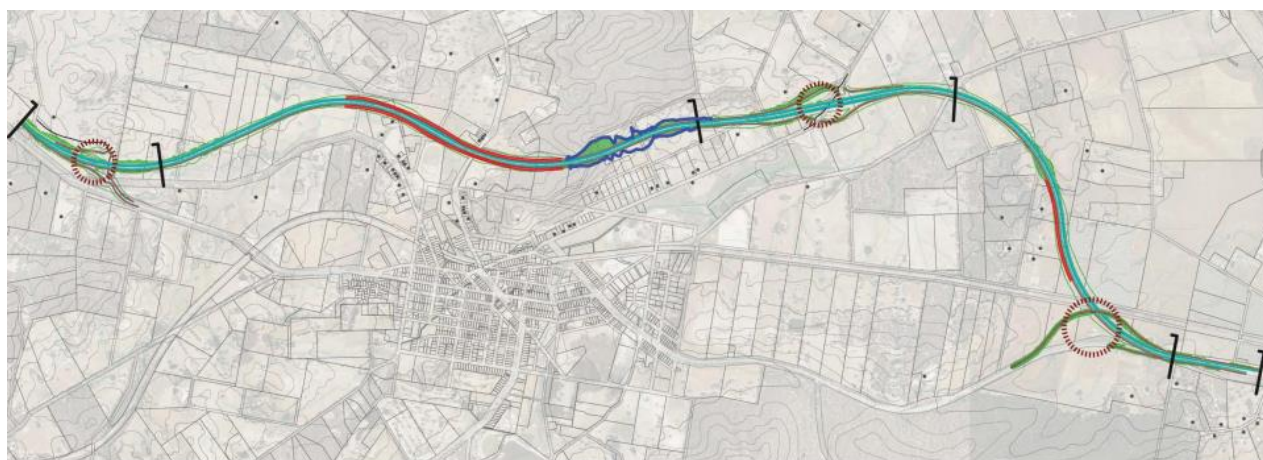
- mitigation measures to be applied during the design phase (LV01), construction phase (LV02, LV03) and operation phase (LV04) - see EES Table 15.13.

Technical Appendix F concluded that the most significant landscape and visual impacts of the C2 Alignment (refer Figure 23) are:





- impacts on nearby dwellings (especially within the 500 metres of the alignment)
- areas of fill and noise walls (especially to the north of the township where there are a number of residential dwellings and a wide valley)
- areas of significant visual cut along the southern face of Camp Hill, directly north of the township
- large scale Bypass interchanges, with the Beaufort-Lexton Road interchange forming a new landscape edge or intrusion to the north east of the township
- impacts on sensitive and public sites, primarily Camp Hill.

No alignment option was considered preferable in terms of the landscape and visual impact assessment with differing impacts for each option.

**Figure 23** Overview of significant landscape impacts



#### LEGEND

-  Bypass Interchange / High Bridges and Fill
-  Areas of Fill and Noise Walls
-  Area of Significant Visual Cut
-  Residential Properties within 500m

Source: EES Appendix F Figure 1

## 11.2 Landscape character and views

### (i) What did the EES say?

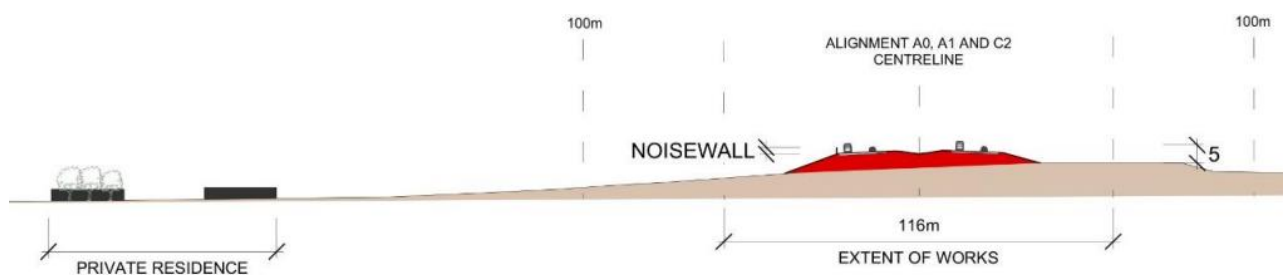
The Project will have short lived residual impacts that will remain for some time, but eventually be significantly reduced:

- Vegetation and earth mound screening adjacent to the alignment that will reduce the visual impacts over time. For the initial five years the infrastructure and landscape forms will be highly visible and bare.
- General planting in the road reserve will take up to five years to start having a considerable impact on reducing visibility or direct views of the elevated embankment or freeway itself.

Long-term permanent impacts that will remain even with mitigation measures applied include:

- On dwellings around Packhams Lane where the road is to be raised between 5 metres and 11 metres towards the bridge embankment for the railway crossing bridge (Figure 24). A 700 metre long, 2 metre high noise wall is to be located on the top of the western fill embankment. A number of dwellings are located between 100 to 500 metres of fill areas.
- Associated with the large scale interchanges, including the Beaufort-Lexton Road interchange and bridge, Racecourse Road bridge and embankments of 5 to 10 metres over culverts impacting on the Yams Holes Creek landscape character.<sup>74</sup>
- Impacts of a large cutting on the southern slopes of Camp Hill and areas of significant visual cut of up to 17 metres depth along the southern face of Camp Hill, directly north of the township (Figure 25).
- Areas of fill and noise walls (especially to the north of the township proximate to dwellings and a wide valley).

**Figure 24** Cross section east of Packhams Lane – Alignment C2



Source: Figure 93 Technical Appendix F

<sup>74</sup> RRV advised at the Hearing that it was now proposed to provide a bridge structure across the Yam Holes Creek rather than culverts



**Figure 25** Camp Hill area cut

Source: Figure 214 Technical Appendix F

## (ii) Key issue

The key issue is the potential adverse impacts on the wider landscape, visual values and sensitive landscape areas and view sheds.

## (iii) Evidence and submissions

RRV acknowledged the Project would have visual impacts, observing that a project of this nature and size could not be constructed without impact. It relied on the evidence of Ms Bauer that with mitigation techniques the residual impacts of the Project on landscape character, sensitive sites and sensitive views can be reduced to an acceptable level. It submitted that the detail of the visual impact mitigation techniques would be determined through the preparation of the required landscape plan which would be *“prepared or at least finalised at a time when the detailed design is known. This is because it is at this time that the proponent will have a proper understanding of impacts – for example whether the cutting at Camp Hill will be into rock or into rock and soil.”* In response to the ecological evidence, it acknowledged that the plan should be produced with ecological input.

Ms Bauer’s landscape evidence identified the key landscape and visual impacts of the Project.

In relation to the Yam Holes Creek landscape impacts Ms Bauer identified:

The overall impact is High, as the alignment breaks the spatial sense of the continuous waterway and valley landscape. The impact can be reduced through landscape mitigation within the right of way boundary, to an acceptable but still moderate level of landscape and visual impact.

In relation to Beaufort-Lexon Road interchange:

The landscape character of the area will change significantly in topographic form as the interchange footprint is predominantly on fill at a maximum height of around 8m above the ground. There is a residential dwelling within 100m of the outer carriageway edge of the road, north side. It will have significant views of the alignment, to the south and to the east. A row of trees will be removed from the southern view. Some of the interchange is in cut at this point, and this will reduce the impact somewhat. However, overall the impact will be quite significant for this residential dwelling.

In relation to the Camp Hill cutting:

The hillside cutting in the eastern edge near Beaufort - Lexton Road will vary from 7-12m of cut on the upper hillside and fill on the southern side between 6-12m, is visible in the landscape and the adjacent residents. The western hillside cut of 17m in height is less visible

to the broader southern Beaufort valley as it sits just behind the crest of the hill. A significant amount of vegetation is lost in the Camp Hill State Forest. Overall, there will be a moderate to high impact on the landscape character. Camp Hill is also a main viewing point for the community. ... There are some residents along Beaufort - Lexton Road that are around 100m away from the alignment. They will have some views of the alignment, particularly through the deep cuts and hillside fill that will be visible; assessed impact on these residents is moderately low. Over time the cutting on the hillside will become less visible to adjacent residents and the broader community, through planting in the right of way boundary. Landscape mitigation will help reduce the level of impact. However, there will always be areas of high impact, as the visible areas of cut is extensive and typically areas of such steep cut are difficult to mitigate with vegetation.

The residual impact (with mitigation measures in place) on significant local areas such as Snowgums Bushland Reserve and views of the wider landscape were determined as moderately low. The residual impacts to landscape character, sensitive sites and sensitive views immediately after construction would reduce after five years of vegetation growth.

In response to questions from the IAC, Ms Bauer identified that there was value in ecologist input into the Landscape Plan to ensure it provided for habitat buffering and linkage opportunities. She also acknowledged that the land bridge treatment would significantly reduce the visual impact of cuttings through Camp Hill.

Ms Bauer indicated that the replacement of an embankment and culvert arrangement over Yam Holes Creek with an open bridge structure would reduce the visual impacts as it would allow views through to the landscape beyond.

RRV's Final EMF changes proposed to amend mitigation measure LV03 to add:

Landscape plans should be prepared in conjunction with ecological expertise as appropriate and seek to achieve revegetation and habitat creation in accordance with BH29.

RRV's Final EMF changes proposed to amend the Incorporated Document to require consultation with Council in the development of the Landscape Strategy.

Council supported landscaping and visual screening using native species reflective of the immediate landscape. It acknowledged that batter planting across Main Lead Road was important to manage visual sensitivity of the works. Council sought to be involved in the development of the Landscape Strategy identified in the Incorporated Document.

The WTOAC identified the importance of landscape appreciation for the Project and to acknowledge and protect extended views to important landscape features. It also referred to the CVA which identified opportunities to respond to the Camp Hill cutting and provide for extended easterly views to important cultural landscape features (refer Figure 20 in Chapter 6).

#### **(iv) Discussion**

Cutting, filling and inserting extensive infrastructure into a predominantly open rural and township landscape will have significant impacts. These landscape impacts extend to near and long view lines to and from the town and elevated vegetated areas.

These impacts are largely inevitable with a project of this scale and cannot be readily screened from view. The EES is realistic about these impacts and acknowledges that they will be permanent, but asserts that mitigation measures including landscaping can manage these impacts so that they are acceptable. The IAC found the landscape assessment to be extensive and thorough. The evidence of Ms Bauer further assisted the IAC in understanding the more significant landscape impacts.

There is no existing identification of significant landscape values associated with the Study area (in terms of a Council or regional landscape strategy or Significant Landscape Overlay). However this does not mean that landscape impacts should not be considered.

The visual impacts of the Project elements change as the observer moves within the landscape. When viewed from a greater distance the ability to see the background landscape (through or under bridges) or behind structures will assist in reducing visual impacts. The IAC is satisfied that appropriate landscaping treatments and earth batter treatments will be able to soften and partially screen the impact of the works and structures within the landscape when viewed from the public and private public realm.

As identified by Ms Bauer landscaping will take some time to achieve this effect. Therefore, RRV should explore opportunities to maximise landscaping s at the detailed design stage and early landscaping works should be undertaken where possible, to help minimise the more obvious visual impacts in the short term. Sufficient road reserve width should be provided along more prominent sections of the alignment (from adjacent dwellings) to allow generous plantings of trees and shrubs to achieve a screening effect particularly where vehicle safety treatments may limit more substantial vegetation close to the roadway. The planting outcomes will need to be tailored to respond to the opportunities identified by the WTOAC to retain landscape views from the carriageway to landscape features to the east.

During the Hearing the IAC questioned the ecological and landscape experts about how the Landscape Design Plans (LV03) would work holistically with the development of a Wildlife Management Plan (to reinforce existing or proposed habitat links and crossing points) and utilise vegetation species consistent with the adjacent EVCs. This approach was reflected in RRV's Final changes to the EMF, which included providing for ecological expert inputs into landscape design plans. Given LV03 (Landscape Design Plans) and LV01 (Landscape Management Strategy) are interrelated LV01 should also provide for ecological expert input.

The Camp Hill cutting and land bridge will perhaps have the most landscape impacts of the Project. It is critical that landscape treatments of these Project elements are executed well and to a high quality.

Because the Project adopts a reference design approach it was not possible for RRV to identify how the significant cut adjacent to Camp Hill would be treated. The EES identifies some design examples but does not identify a specific treatment. Mitigation measures LV01 and LV03 provide some guidance. Options could vary from a rock or other hard surface benched wall, a stepped wall with landscaping, or other more natural landscaping treatments. As identified by the WTOAC, using EVC consistent vegetation, appropriate colour and design treatments would enable the cut to blend in with the Camp Hill State Forest landscape and acknowledge the Wadawurrung. As discussed in Chapter 6.2, the opportunity for the latter was not sufficiently advanced in the EMF or RRV's proposed changes. The IAC considers that this reinforces the need for a design management document to ensure that key environmental design and landscape treatments are a core consideration of the detailed design process.

The IAC considers that the land bridge treatment will assist in reducing the visual impacts of the significant cut through the Camp Hill State Forest. The adoption of an open bridge structure across Yam Holes Creek would also result reduce the visual impact on the Camp Hill and the surrounding landscape.

The IAC notes that providing a Landscape Management Strategy is not identified as one of the environmental management documents to be prepared. It is unclear why this is. The IAC considers that the role and detail of the Landscape Management Strategy and responsibility for its preparation should be detailed in EMF Tables 17.5 and 17.6. The IAC considers there is value in the Landscape Management Plan (mitigation measure LV01) also considering opportunities to rehabilitation of existing native vegetation habitat within Project area that will be significantly disturbed. This will assist with mitigating the visual impacts of the Project.

The IAC supports the identification in the Incorporated Document of a requirement to prepare a Landscape Strategy.

## **(v) Findings**

The IAC finds:

- The impacts of the Project on landscape character and views will be significant and long term. Such impacts are inevitable with a project of this scale and within this landscape setting.
- The landscape impacts can be managed to acceptable levels with the application of the proposed mitigation measures with the Final changes proposed by RRV to LV01 and LV03 and Clause 5.1.10 Landscape Strategy of the Incorporated Document.
- LV01 and LV03 should both be amended to provide for expert ecological input into the Landscape Management Strategy and Landscape Design Plans. These should be integrated with the development of a Wildlife Management Plan and should form a key component of a design management document to ensure incorporation into the detailed design process.
- The role and detail of the Landscape Management Strategy and responsibility for its preparation should be detailed in EMF Tables 17.5 and 17.6.
- The Landscape Management Plan should include consideration of opportunities to rehabilitate existing native vegetation habitat within the Project area.
- Opportunities for early landscape works should be explored.

## **11.3 Visual amenity impacts on nearby residents**

### **(i) What did the EES say?**

The most significant landscape and visual impacts will be on dwellings around Packhams Lane and adjacent to the cutting on southern Camp Hill.

Impacts will remain for some time, but eventually be significantly reduced through vegetation and earth mound screening adjacent to the alignment that will reduce the visual impacts after five years.

Noise walls will remain permanently visible, and while planting in front of them will reduce their impact, they will remain a long-term physical presence in the landscape.

### **(ii) Key issue**

The key issue is the extent of visual impact and loss of landscape visual amenity associated with the Project for adjacent residents.

**(iii) Evidence and submissions**

A number of submitters (2, 12, 13, 18, 21, 23) raised concerns about the appearance of elevated roads and bridges from their properties including the loss of rural outlook and visual amenity and the potential loss of privacy from passing vehicles on the bypass from elevated sections.

Ms Bauer identified that for Packhams Lane landowners:

There are three residential properties on the west side and within 250m of the alignment, which is primarily on fill and with noise walls to a general overall height of 5m above ground. The alignment then become deep cut as it passes through the hill to the north. These residential properties will be significantly visually impacted by the alignment. The impact can be reduced through landscape mitigation within the right of way boundary, to an acceptable but still moderate level of landscape and visual impact

Ms Bauer's evidence was that the residual impact of the section north of the township (and its crossing of Main Lead Road) would be moderate as a result of 7 to 10 metres of fill and a 100 metre long section of two metre high noise wall. She considered that the identified landscape mitigation measures would help reduce the impact over time. In particular, tree and shrub planting would reduce the scale of the fill and any noise walls to a moderate and acceptable level.

Ms Bauer considered that residual impacts would be moderate and include:

- noise walls will remain permanently visible and while vegetation planting in front of them will reduce their impact, they will remain a long-term physical presence in the landscape
- the project bridges, raised elevated lengths and interchanges will remain permanently visible and have ongoing residual impact, primarily due to their height and location in flat areas or their proximity to township areas
- the significant cut into Camp Hill will remain partially visible for some time and, even with significant tree growth, would still be permanently visible from certain viewpoints.

Ms Bauer concluded that the EES evaluation objective to minimise adverse effects on visual and landscape values, prior to mitigation rated very poor in minimising impact on existing dwellings however:

additional measures beyond the standard controls are available to reduce these impacts, including planting outside of the project area to further reduce impacts, and planting of trees and vegetation to screen elevated elements. Where practicable, elevated carriageway infrastructure is recommended to be of quality design and to blend in with existing context and colours of the surrounding landscape. The development of the landscape design should include measures to conceal the freeway from the township and residential viewpoints.

She considered that while there will always be specific areas of residual high to moderate landscape and visual impact associated with a road project of this nature, overall, the landscape and visual impacts on residents would be acceptable.

In relation to the height of the western tie in (also discussed in Chapter 4.3.1) RRV submitted existing dwellings on the southern side are already well setback with intervening existing landscaping and additional landscaping to take place in the redundant road reserve diminishing the visual impact.

In response to concerns from various parties about the timing of landscape works delivery RRV's Final EMF changes proposed to amend LV01 to include an additional bullet point:

The identification of any opportunities for early delivery of landscaping having regard to the staging of the Project, the management of visual impacts and the maintenance of habitat connectivity.

**(iv) Discussion**

The elevated elements of the proposed carriageway (including noise walls) will present a significant visual intrusion into the landscape for nearby landowners particularly those on the east side of Packhams Lane. This impact extends to the loss of enjoyment of the rural setting and outlook currently enjoyed by those residents. Landscaping will not screen the entire impact of the Project from these homes.

The reference design provides only a general indication as to how close the elevated roadway elements will be to existing dwellings and how high the carriageways will be above ground level or what the noise barriers will ultimately look like. Clarity around these issues will only occur once detailed design is finalised. This situation was frustrating for a number of submitters.

The visual impacts for residents on the west side of Packhams Lane and Smiths Lane will not be as significant given dwelling setbacks and the extent of existing vegetation.

The landscaping mitigations (LV01 to LV04) will assist in ensuring landscaping outcomes (including noise walls) will help to reduce the visual impacts on residents to an acceptable level for a project of this nature. However, it will take at least 5 years for the planted vegetation to start to have some screening effect.

RRV should explore opportunities for the early delivery of landscaping and RRV's proposed Final changes to mitigation measure LV01 now accommodate this approach. The IAC supports this approach. Early communication with the most impacted landowners on the development of the Landscape Management Strategy (LV01) and Landscape Design Plans (LV02) will enable landowners to explore their own plans for any landscaping enhancement at an earlier stage.

Noise walls are to be located at the top of batters adjacent to the carriageway. Noise walls will provide some visual (privacy) barrier into several adjoining properties in Packhams Lane. The noise walls will have an additional visual impact until softened by vegetation and the design of them should reflect this so that they are not an immediate unattractive element for nearby residents. In some instances, planted earthen mounds rather than noise walls will be an appropriate alternative and this is provided for in mitigation measure LV03. Where possible the detailed design process should maximise the area available for landscaping including earth mounding for those properties close to the elevated roadway.

At the western tie in end of the Project, the IAC is satisfied that the combination of factors including distance to the elevated roadways from existing dwellings to the south that are well setback, intermediate vegetation and opportunities for additional landscaping within the redundant road reserve will enable the visual impacts to be reduced to an acceptable level.

The visual impact on the rural landscape and Camp Hill for Beaufort-Lexton Road residents will be significant and long lasting. The impact is largely unavoidable. However, the landscape mitigation measures proposed including LV01 and LV03 generally provide for design responses that will assist in reducing the visual impacts.

Noting the evaluation objective is to minimise adverse effects as far as practicable, the IAC considers that the mitigation measures will achieve this objective.

As identified above sufficient width should be provided along more prominent sections of the alignment to allow generous plantings to screen as far as practicable properties that will be most impacted by the visual aspects to the carriageway and acoustic walls. The planting outcomes will need to be tailored to respond to the opportunities to provide effective screening and to ensure

the acoustic walls are appropriately designed to minimise their prominence. The opportunity for early planting will assist in landscaping being more established when the project becomes operational and to enable landowners to undertake additional complimentary landscaping.

#### **(v) Findings**

The IAC finds:

- The landscape impacts including enjoyment of rural outlooks and visual impacts on adjacent residents along Beaufort-Lexton Road will be significant and long lasting.
- The proposed mitigation measures LV01 to LV04 will assist in reducing the visual impact of the Project to an acceptable level for a project of this nature, consistent with the evaluation objective.
- The Landscape Management Plan and Strategy should have expert ecological input, and LV01 and LV03 should be amended accordingly.
- Providing opportunities for early landscaping works will be important to minimise the visual impacts of the Project as far as practicable.

## **11.4 Recommendations**

The IAC recommends:

### Environmental Framework Plan

**Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- **Amend mitigation measures LV03 to include RRV's Final changes to provide for expert ecological input into landscape plans and outcomes consistent with mitigation measure BH29 (item 51).**
- **Amend mitigation measure LV01 to include RRV's Final changes to provide opportunities for early landscaping (item 53).**
- **Identify the role and detail of the Landscape Management Strategy and responsibility for its preparation (item 53).**

### Draft Planning Scheme Amendment

**Amend the Beaufort Bypass Project Incorporated Document as shown in Appendix G to introduce a requirement to prepare a Landscape Strategy.**

## **11.5 Overall conclusions on landscape and visual amenity**

The IAC concludes:

- There are no impacts on landscape and visual amenity that preclude the Project being approved.

## 12 Soils, geology and contaminated land

### 12.1 Introduction

Land use and amenity are discussed in EES:

- Chapter 16
- Technical Appendix K (the Soils and Geology Impact Assessment, prepared by WSP, May 2021).

The evaluation objective is:

To protect catchment values, surface water and ground water quality, stream flows and floodway capacity, and avoid impacts on protected beneficial uses.

As exhibited, the EES proposed the following measures to soils, geology and contamination impacts:

- mitigation measures to be applied during the design/construction phase (SG01 – SG05) - see Table 16.6.

### 12.2 Geotechnical and contaminated land

#### (i) What did the EES say?

Technical Appendix K (Soils and geology impact assessment) concluded that:

- The potential for contamination is medium.
- The potential for acid sulfate soils<sup>75</sup> is low.
- There is a high risk associated with encountering soils unsuitable for construction (of low strength, high silt and dispersive) such that it is likely that significant amounts of fill will need to be imported.
- Construction impacts are likely to have minor impact on protected beneficial uses.
- Construction works causing sediment to enter watercourses is medium.

These risks are largely consistent across the four alignment options.

Technical Appendix K referred to standard controls to be implemented and identified the need for an additional control being *“to undertake intrusive soil assessment along the preferred alignment and analysis for relevant contaminants of potential concern in accordance with EPA Victoria Publications IWRG702 and 621”*.

Risks associated with encountering unsuitable soils on slopes included erosion (with steeper slopes generating higher velocity and erosion compared to shallow slope angles), and long term maintenance.

VicRoads Standard 204 advises silt soils cannot be adopted as fill material and that *“earthworks design will need to consider opportunities to treat unsuitable soils for reuse as embankment fill or contain them within zoned embankments to minimise the volume of imported fill.”*<sup>76</sup> The impact

<sup>75</sup> Acid sulfate soils occur naturally. When these soils are exposed to water and air can generate sulfuric acid which can acidify soil, rock and groundwater adversely affecting human health, the environment and corrode concrete and steel

<sup>76</sup> Technical Appendix K, Section 9.6



of unsuitable soils is considered likely to affect the design phase “*but could extend into construction if unexpected ground conditions were encountered*”.

Previous sections of the Western Highway included the use of shallower vegetated cut slopes, but these required more land and the removal of more vegetation. In this case it was considered that steep slopes may be acceptable, provided additional engineering supports were employed (soil nails and shotcrete) particularly through the Camp Hill area where there was an increased desire to reduce land take and vegetation impacts.<sup>77</sup>

RRV’s standard environmental protection measures would be applied to the Project. The EMF includes standard conditions (applicable to soils and geotechnical issues) such as:

- geotechnical investigations to inform detailed design and engineering responses
- acid sulfate soil investigation and laboratory testing during detailed design
- CEMP to be prepared prior to construction commencing
- spoil management strategy/plan ensuring material is not spread by wind or rain
- acid sulfate soil management plan to be prepared if these soils are identified during detailed design
- erosion and sediment controls in accordance with EPA best practice guidelines
- works near waterways to be controlled by the VicRoads (now RRV) requirements set out in *Section 177 Environmental Management (Major)* 2015 and SEPP (Waters).

These issues and others are essentially captured in EMF mitigation measures SG01 to SG05.<sup>78</sup>

**(ii) The issue**

The issue is the potential for unsuitable soil conditions including potential of unearthing acid sulfate or contaminated soils.

**(iii) Discussion**

Geotechnical issues were not contested at the Hearing and no substantive submissions were made relating to soils, geology or contaminated land.

No changes were proposed to the EMF in relation to soils, geology or contaminated land.

The potential risks to soils, geology or contaminated land are largely consistent across the four alignment options.

Given the key risks identified in the EES, the IAC considers SG02 could be improved by highlighting the key areas of concern for further investigations as detailed in Technical Appendix K. In particular, the geotechnical investigations need to specifically address the:

- need for intrusive soil assessment and analysis relating to relevant contaminants of potential concern as per Section 10.2 of Technical Appendix K.
- extent and location of soils unsuitable for reuse in construction to inform earthworks design and to either treat or contain such soils within zoned embankments
- need to inform the appropriate design of the slope for the Camp Hill area, balancing any erosion risks with the desire to reduce land take and vegetation impacts

<sup>77</sup> Technical Appendix K, Section 7.1.3

<sup>78</sup> Note Appendix K identifies seven mitigation measures (SG01-SG07) which have been consolidated down to five measures in the EMF (mitigation measures SG01-SG05)

- confirm the duration and extent of ground settlement.

The IAC considers that SG02 should be expanded along these lines.

The exposure and management of unsuitable soils (especially dispersive soils) is of concern for the success of rehabilitation and protection of surface waters. The IAC agrees this has the potential to extend to the operation phase if unexpected conditions are encountered. The IAC considers the CEMP could be strengthened by including contingencies in the event of encountering unexpected contaminated, unsuitable or acid sulfate soils during construction. The IAC has recommended this be added to the Spoil Management Plan in SG04.

While the soils and geological assessments set out in Technical Appendix K rely largely on desktop analysis, the IAC is confident that this is appropriate for impact assessment considering the identification for further geotechnical and ground investigations will be undertaken to inform detailed design (mitigation measures SG02 and SG03).

The IAC notes Technical Appendix K refers to both a soil management strategy/plan and a spoil management strategy/plan – the former only once. The EMF only requires a spoil management plan. The IAC does not have a strong view as to whether one or both is required. Subject to recommended expansion of SG02, the IAC is satisfied the key issues are identified in the EMF.

Subject to the IAC's recommendations, the preparation of the CEMP, Spoil Management Plan, Acid Sulfate Soil Management Plan and identified VicRoads/RRV environmental management standards will provide for the effective management of key issues.

The IAC accepts that the risks of the Project in relation to soils and geology are medium to low and that potential impacts during construction can be effectively managed using the mitigation measures and Management Documents to an acceptable level.

#### **(iv) Findings**

The IAC finds:

- Geotechnical issues can be managed to ensure appropriate environmental outcomes are realised by appropriate design and construction practice
- EMF mitigation measures are reasonable and practical and will ensure the evaluation objective is met.

## **12.3 Recommendations**

The IAC recommends:

### **Amend the Environmental Management Framework as shown in Appendix F in Report No. 2:**

- **Amend mitigation measure SG02 to require further geotechnical investigations (item 54).**
- **Amend mitigation measure SG04 to include a requirement for the Spoil Management Plan to include contingencies for encountering contaminated, unsuitable or acid sulfate soils during construction (item 55).**

## **12.4 Overall conclusions on soils, geology and contamination**

The IAC concludes:

- There are no impacts on soils, geology and contamination that preclude the Project being approved.

## 13 Reference design approach

### 13.1 Additional design coordination

#### (i) The issue

The issue is whether the EMF mitigation measures provide for an appropriate translation of the reference design and key design inputs at the time of detailed design.

#### (ii) Submissions

During the Hearing there were questions from the IAC and submissions made about specific traffic considerations and road design detail. For example, WHCG suggested moving the western interchange to minimise impacts on vegetation (discussed in Chapter 4.3) while the WTOAC identified opportunities to protect distant landscape views from the bypass by limiting signs and other potential obstructions, and to influence detailed design elements including the major cut at Camp Hill (discussed in more detail in Chapter 6.2). The IAC had wider concerns about securing the land bridge outcome which it considers essential (discussed in Chapter 5) and opportunities to integrate mitigation measures relating to wildlife crossings, flooding of wetlands, landscaping and revegetation and the potential for early staging of certain works to enable landscape and environmental treatments to be in place well before operation of the bypass.

In response to the IAC's questions about both securing interdisciplinary inputs into the detailed design phase and identifying particular environmental or design outcomes RRV submitted that it was not necessary to identify particular design elements at this stage in the EMF as this may reduce the ability to identify other design treatment options. RRV identified that the EMF included a range of mitigation measures to ensure an optimal design would be realised such as refining the construction footprint to minimise native vegetation impacts (BH01).

#### (iii) Discussion

The IAC considers that the reference design overall provided sufficient confidence that the key impacts could be identified and assessed, and that it was a suitable document on which to base mitigation measures.

Throughout the Hearing process new ideas, issues and concepts were presented from a range of parties and explored by the IAC itself, and which the IAC believes should be considered in a more definitive manner. There would be benefit in reinforcing some of the design challenges set out in Chapters 4, 5, 6, 7, 10, 11 and 12 in a higher order design guideline document. This is particularly important given the potential time lag between EES assessment, funding, detailed design and construction and the different responsibilities of RRV, MRPV and the contractor. It would be undesirable for these issues to be overlooked or not captured now and needing to be revisited when the Project is funded and detailed design commences.

While RRV's suggested wording changes for BH01 go some way to ensuring issues 'stay on the table', they extend beyond native vegetation issues and the IAC considers that incorporating these issues more succinctly into the relevant documentation would ensure:

- a more efficient project delivery
- community confidence, engagement and goodwill are maintained
- opportunities for further project refinement are not impeded.

Accordingly, the IAC considers that an additional Management Document is required to provide an overarching reference point for design considerations. It is recommended this take the form of a design management document which would be added to the list of Management Documents within EMF Tables 17.5, 17.6 and other Tables with related mitigation measures. The document should set out key design objectives and considerations, a multidisciplinary process for design to ensure key expert inputs, including the incorporation of outcomes from relevant mitigation measures intended to inform detailed design (for example, further targeted flora surveys, soil investigations and the like). This approach would also enable the examination of the staging of works to ensure that a number of mitigation measures could be advanced prior to major construction activities, or so that they might be more established before the bypass is operational, such as:

- landscaping treatments
- strategic revegetation
- fauna crossing treatments particularly the land bridge.

The IAC has no fixed view about what the design management document should be called or how it would be specifically described or cross referenced to other Management Documents or mitigation measures in the EMF. The wording recommended by the IAC is proposed to provide guidance as to the nature of the suggested EMF change.

#### **(iv) Findings**

The IAC finds that:

- The reference design is appropriate and provides sufficient detail to understand the project's potential impacts.
- The EMF should be further bolstered with a requirement for the development of a design management document which sets out key design objectives and considerations, a design process including inputs from experts and key stakeholders to fully integrate the mitigation measures into the final detailed designs.

## **13.2 Recommendations**

The IAC recommends:

**Amend the Environmental Management Framework as shown in Appendix F to include a requirement to prepare a design management document that provides overarching guidance to the detailed design stage including:**

- **key design objectives and considerations**
- **a process for design development and finalisation that includes expert ecological, cultural heritage, soil and geology, landscape, dust and acoustic specialist inputs**
- **identification of the relevant Management Documents and mitigation measures and inputs to be integrated into the detailed design process**
- **identification of the approach to the following design considerations:**
  - **minimising the impact on native vegetation associated with the Project including for alternative property access**
  - **the alignment of the western tie-in treatment to avoid impacts on existing native vegetation patches and minimise intrusion into the golden sun moth confirmed and high quality potential habitat areas**
  - **provide a land bridge linking the bisected Camp Hill areas**

- opportunities to reduce to one lane the eastern tie in on ramp from the 'old' Western Highway
- appropriate design of the slope for the Camp Hill area, balancing any erosion risks with the desire to reduce land take and native vegetation impacts
- the potential staging of early works to implement habitat, fauna crossing, landscaping and amenity outcomes
- the Beaufort Bypass Cultural Values Assessment actions.

**Amend Table 17.5 under 'Design and construction contractor' to insert the design management document and description.**

**Amend Table 17.6 to identify the design management document to be prepared by the Construction contractor and for review and approval of Major Road Projects Victoria (MRPV).**

**Amend all other Tables to refer to the design management document as relevant.**

## 14 Matters of National Environmental Significance

This Chapter draws together the IAC's assessment of impacts on matters of national environmental significance (MNES), to assist the Minister for Planning to advise the Commonwealth Minister for the Environment on the assessment required under the EPBC Act.

### 14.1 Introduction

Because of its potential impacts on MNES, the Project was determined to be a controlled action under the EPBC Act on 24 February 2021. The relevant controlling provisions under the EPBC Act are 'listed threatened species and communities' (sections 18 and 18A).

The EES process is an accredited assessment process for controlled actions under the EPBC Act. The assessment of environmental effects by the Minister for Planning will be provided to the Commonwealth Minister for the Environment to inform the approvals decision under the EPBC Act.

Clause 20 of the Terms of Reference states:

... To assist the Minister for Planning in making his assessment, the inquiry should specifically identify its advice relevant to impacts on specific matters of national environmental significance examined in the EES.

Clause 38(k) requires the IAC to make:

specific findings and recommendations about the predicted impacts on matters of national environmental significance and their acceptability, including appropriate controls and environmental management.

### 14.2 Commonwealth listed species

#### (i) What did the EES say?

EES Section 9.10 addressed MNES. This included an assessment of significant impacts against the nominated species and communities listed in Table 6, in line with the *Significant impact guidelines 1.1: Matters of National Environmental Significance*. Two listed flora communities, four listed flora species and five listed fauna species were assessed. With the exception of golden sun moth, the expected overall likelihood of significant impact on remaining matters was low.

Table 6 EPBC Act listed species with a medium to higher likelihood of occurrence in the study area

| Flora species and communities   | Fauna species       |
|---|---------------------|
| Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains | Growling grass frog |
| White box – Yellow Box – Blakely's Red Gum Grassy Woodland                | Golden sun moth     |
| River swamp wallaby-grass   | Little galaxias     |
| Matted flax-lily  | Painted honeyeater  |
| Ben Major grevillea   |                     |
| Ornate pink fingers   |                     |

**(ii) Cross references**

Evidence, issues, mitigation measures and discussion for MNES is contained in the following Chapters (refer Table 7).

**Table 7** Cross-references to MNES discussion

| Matter  | Cross-reference |
|---|-----------------|
| Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains<br>White box – Yellow Box – Blakely’s Red Gum Grassy Woodland | Chapter 5.4.1   |
| River swamp wallaby-grass<br>Matted flax-lily<br>Ben Major grevillea<br>Ornate pink fingers   | Chapter 5.4.2   |
| Golden sun moth   | Chapter 5.5.2   |
| Other fauna   | Chapter 5.5.3   |

### 14.3 Overall conclusions on impacts on matters of national environmental significance

Having had regard to the EPBC Act and the significant impact guidelines (see Appendix E in Report No. 2), the IAC is satisfied that the residual impacts on MNES, after implementation of the mitigation measures, will meet the evaluation objective of avoiding, minimising and addressing relevant offset requirements for impacts on MNES.

The IAC concludes:

- There are no impacts on MNES that preclude the Project being approved.



# PART C: PROJECT IMPLEMENTATION, INTEGRATED ASSESSMENT AND RESPONSE TO TERMS OF REFERENCE

## 15 Project implementation

There are two key documents under which the Project, if approved, will be implemented:

- the draft Pyrenees Planning Scheme Amendment C50pyrn (draft PSA)
- the EMF.

This chapter brings together the IAC's assessment and recommendations in relation to these key documents.

The IAC's Terms of Reference seek:

- Recommendations with respect to the structure and content of the draft PSA, including consideration of time horizons in which the project may be constructed
- 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
- Recommendations about the structure and content of the draft environmental management framework, including with respect to mitigation and monitoring of environmental effects, contingency plans and site rehabilitation.

### 15.1 The Planning Scheme Amendment

#### (i) Introduction

The draft PSA is contained in Attachment V to the EES. It was publicly exhibited together with the EES. It proposes to:

- apply a Specific Controls Overlay (SCO) to the Project land, and introduce the Incorporated Document into the Planning Scheme to govern the use and development of the Project. The SCO is mapped to apply to a 250 metre wide corridor incorporating the C2 alignment option (refer Figure 26). The Incorporated Document allows the Project to proceed without the need for any permits under the Planning Scheme, provided works are in accordance with the conditions in the Incorporated Document
- apply the PAO1 to the Project area. The PAO1 is mapped to align more closely with the works extent based on the reference design associated with the C2 alignment (Figure 27).

The exhibited draft Incorporated Document contains the following elements:

- Introduction (Clause 1)
- Purpose (Clause 2) – *“to allow the use and development of land described in Clause 3 for the purposes of constructing the Beaufort Bypass Project”*
- Land (Clause 3) – the Project land within the SCO1
- Controls (Clause 4) setting out specific exemptions from planning scheme requirements (effectively most elements of the Project)
- Conditions (Clause 5) setting out conditions for the Project that must be complied with
- Preparatory works arrangements that can be undertaken without the Clause 5 conditions being satisfied (Clause 5.2)
- Expiry provisions if the Project is not started by 1 September 2030 or completed by 30 September 2032.

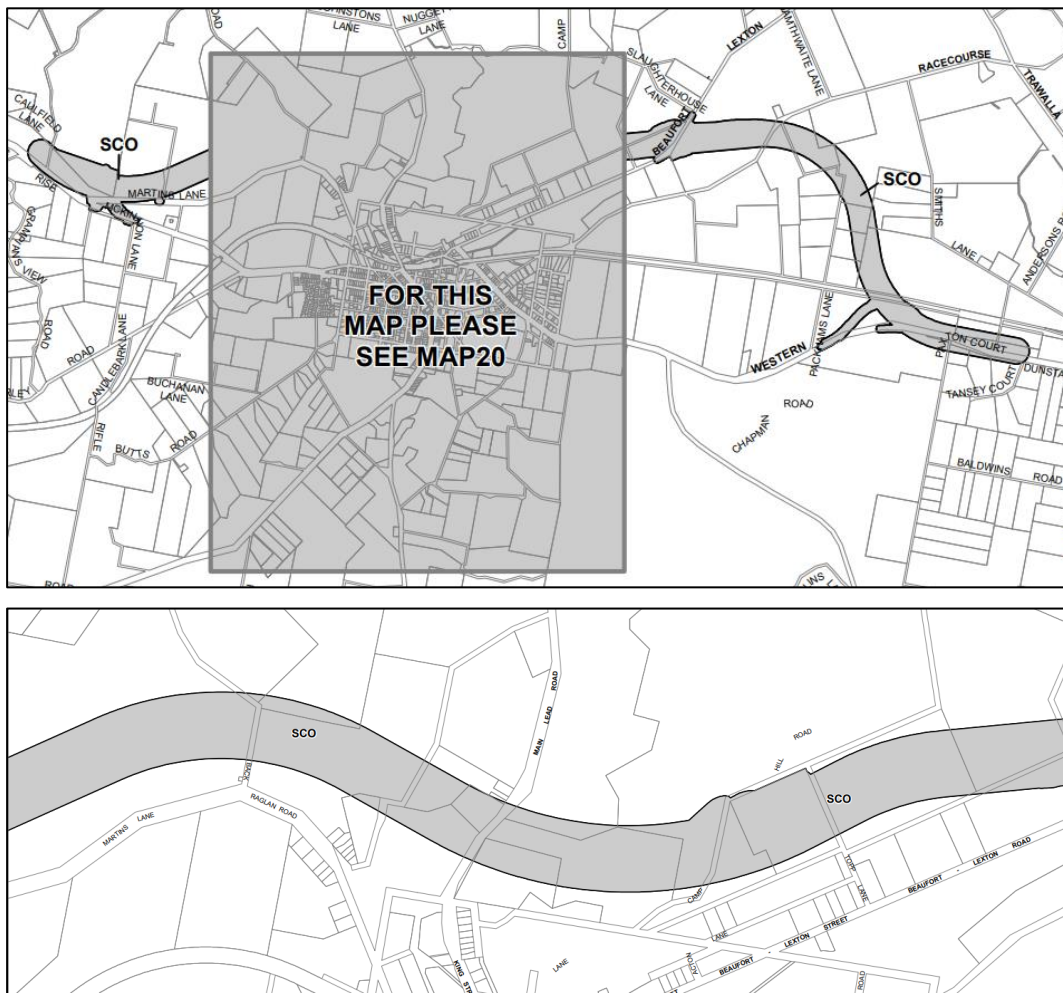
The Incorporated Document (Day 1 version) requires the development of additional plans or requirements to be prepared to the satisfaction of the responsible authority and other authorities (as relevant):

- EMF including a CEMP and processes for monitoring and auditing
- Native Vegetation Management Plan including arrangements for offsets
- Threatened Species Management Plans
- Landscape Strategy.

RRV’s Final version of the Incorporated Document included:

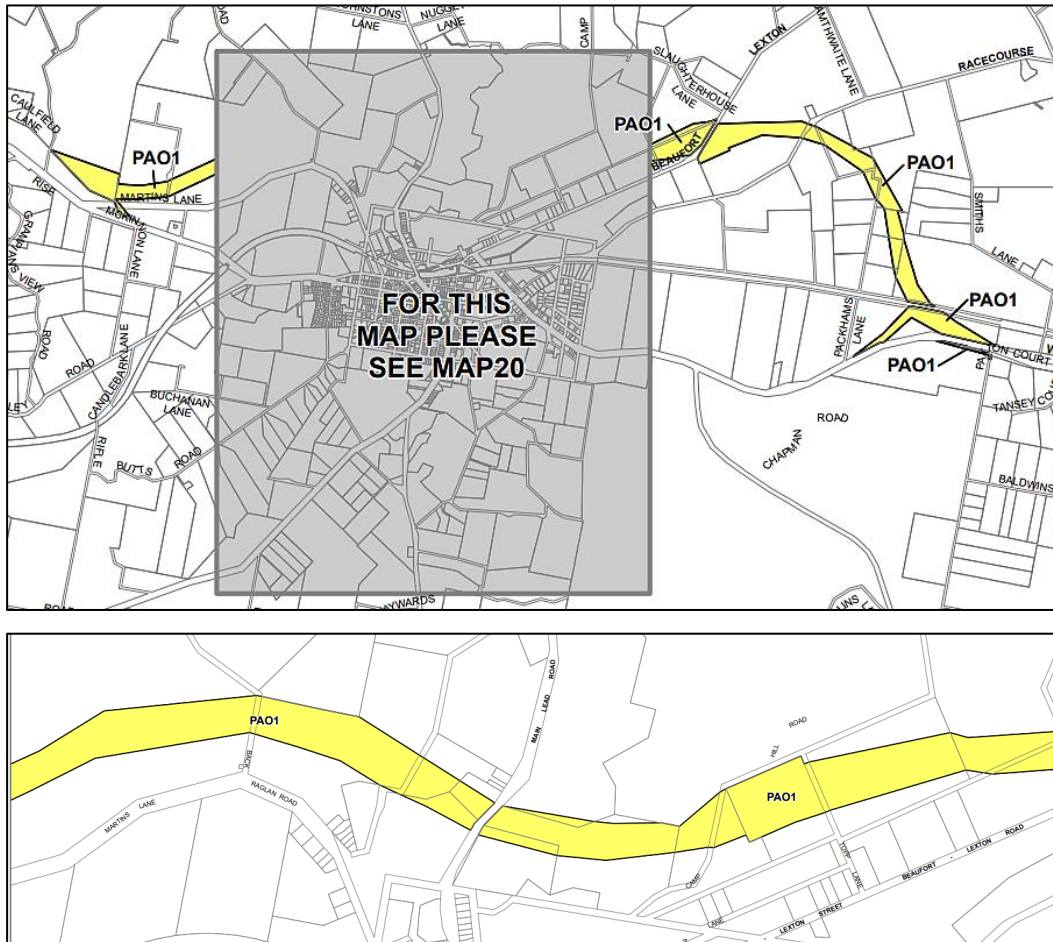
- a requirement for a Wildlife Management Plan
- arrangements for managing the impact on CHW assets
- other minor changes addressing submissions from DELWP and Council and associated Clause renumbering.

**Figure 26 Proposed extent of the SCO**



Source: EES Attachment V (proposed Pyrenees Planning Scheme Maps 19SCO and 20SCO)

**Figure 27 Proposed extent of the PAO1**



Source: EES Attachment V (proposed Pyrenees Planning Scheme Maps 19PAO and 20PAO)

**(ii) The choice of planning tools**

Ms Peterson’s evidence provided an overview of the relevant Planning Practice Notes and Ministerial Guidelines relevant to the choice of planning tools proposed by the draft PSA.<sup>79</sup>

Ms Peterson considered:

- the application of the PAO1 *“to the project corridor, as mapped, was an appropriate use of the control as a means of acquiring the required land despite the resultant part acquisition and fragmentation of land”*
- the SCO an appropriate control that avoids a myriad of planning approvals and would still allow Council oversight of the various plans to be approved as part of the EMF through the detailed design process.

Council also supported the application of PAO1 and SCO.

The IAC considers that the SCO is an appropriate planning control for a project of this nature and provides for a coordinated and transparent process that aligns Project implementation with key mitigation measures and management documents identified in the EES. It effectively provides the means for the EES mitigation measures to have statutory effect beyond the EES.

<sup>79</sup> Document 16 Evidence Statement, paragraphs 86 and 87

The PAO is an appropriate tool to apply to land parcels or portions of them that need to be acquired to enable the delivery of the Project. It provides a transparent mechanism for landowners and prospective land purchasers and the wider community to identify land that is to be acquired and the purpose of that acquisition. It also establishes a mechanism for compensation under both the PE Act and LAC Act.

The application of the SCO and PAO are consistent with the relevant Ministerial Guidelines and Planning Practice Notes a *Practitioner's Guide to Victoria's Planning Schemes* (Version 1.5, DELWP, April 2022).

### **(iii) SCO and PAO mapping**

The IAC is satisfied that the SCO is appropriately mapped to include key elements of the Project corridor including interchanges and provides sufficient flexibility to allow for carriageway alignment refinement following the detailed design process.

The IAC discussed the mapping extent of the PAO at Chapter 9.3. The IAC is generally satisfied with the mapping extent because of the overlapping application of RO27, which provides a basis for managing small land parcels. However, the IAC considers that RRV should review the application of the PAO extent to ensure that it extends to any small remnant parcels that cannot be readily consolidated into adjoining lots. The IAC considers that this situation is likely limited to the northern portion of Submitter 10's land. Including such small parcels is consistent with the purpose of the PAO where directly aligned with the purpose of creating a bypass, and with the objectives of the PE Act. These remnant parcels may also have the opportunity to be used for strategic vegetation to support habitat links.

RRV should review the PAO mapping extent to include remnant portions of freehold land not included in the PAO within the Farming Zone that cannot be readily or practically consolidated into adjoining freehold land parcels or accessed and used consistent with the purpose of the zone.

### **(iv) The Incorporated Document**

Ms Peterson supported the Incorporated Document with minor corrections (which had been agreed to by RRV) noting that *"the devil is in the detail' given the scale of the project and the range of issues. Accordingly, it is imperative that the Incorporated Document, just like a planning permit, ensures that the Responsible Authority can review each and every one of these issues as the design detail is finalised"*.

The IAC agrees with her observations that requiring the EMF as a condition of the Incorporated Document will establish the means for giving effect to mitigation measures identified through the EES process. This includes the delivery of key documents such as the CEMP, Native Vegetation Management Plan, Threatened Species Management Plan and Wildlife Management Plan and Landscape Strategy to manage design, construction and ongoing operational effects to acceptable levels.

Ms Peterson's evidence identified a number of minor Incorporated Document to:

- Clause 4.2 to correctly reference to the Transport Zone and to limit the extent of vegetation removal exemptions to be limited to that necessary for the construction of the bypass
- Clause 5.1.1 to require an access strategy to be prepared.

These changes were supported by RRV and included in its Final changes to the Incorporated Document. They are considered appropriate and are supported by the IAC.

The IAC identified concerns during the Hearing about the application of 'Clause 5.2 Preparatory buildings or works' that enable a range of identified preparatory buildings and works to be undertaken before the Clause 5 conditions are satisfied. The IAC is generally satisfied with RRV's rationale set out in its Closing submission for adopting this approach and content and that such works are largely minor routine works in projects of this nature and did not circumvent the GED or vegetation offset requirements.<sup>80</sup> The IAC is comfortable that the wording uses consistent language in this regard with other major road project Incorporated Documents subject to the inclusion of modifications recommended by the IAC relating to offsets.

The IAC considers the time horizon identified for Project completion (30 September 2032) under Clause 6 of the Incorporated Document is appropriate for a large project of this nature, and requires significant detailed design (supported by additional surveys and other supporting management documents), potentially requires other approvals, and which is not yet funded. The identified timeframe will provide sufficient time for this work to be completed.

Overall, the IAC is satisfied that the structure and content of the Incorporated Document is appropriate subject to additional modifications as identified by the IAC. The proposed conditions are appropriately constructed and have a clear nexus with the approval sought and are consistent with planning policy and particular provisions of the Pyrenees Planning Scheme, relevant Ministerial Guidelines and Planning Practice Notes and the principles and objectives of ecological sustainable development.

Given that the EMF is the key planning tool to manage the impacts of the Project through the Incorporated Document it is important that there remain a strong link between the content of the final version of the EMF and the EES Technical Appendices and the version prepared and approved under the Incorporated Document. While this is inferred in the Incorporated Document in Clause 5.1.1b) it could be strengthened. The IAC's preferred version of the Incorporated Document is included in Appendix G. It includes RRV's Final changes and further recommendations of the IAC including minor edits in blue underline (new text) and ~~red~~ strike through (deleted text).

#### **(v) Amendment process**

The Angus' submission identified that:

The process by which the proposed Pyrenees Planning Scheme Amendment C50pyrn (which includes the proposed public acquisition overlay bisecting Mr and Mrs Angus' property) has been referred to the IAC instead of being placed on exhibition by notice of amendment via the Government Gazette in the usual way, has precluded Mr and Mrs Angus from the ability to access a number of those provisions of Part 5 of the Planning and Environment Act 1987 that would have been available to them had the usual planning scheme amendment process been commenced.

It was submitted that it would be appropriate for the IAC to comment and make recommendations on the appropriateness of adopting a process that precluded them from utilising the relevant sections of Part 5 of the PE Act.

RRV did not support this position which sought to facilitate earlier compensation claims by virtue of section 98(1)(b) of the PE Act which creates a compensation trigger.

<sup>80</sup> RRV closing submission paragraphs 22-27 (Document 63)

RRV submitted that it would be beyond the scope of the IAC's Terms of Reference for the IAC to recommend a collateral process outside of the process already adopted. It submitted:

The current process is a lawful exercise of powers under the Planning and Environment Act 1987. It is not a proper matter for the Committee to say that the lawful mechanism adopted by the Minister assessing the environmental effects of the Project should be altered. The Minister, in approving the planning scheme amendment, will likely utilise a section 20(4) methodology, which is the standard methodology used in projects of this nature.

As a practical matter, there is also no or at least limited utility behind the request. In the event that the matter proceeds and the Minister makes her assessment (at which time presumably any recommendation of the IAC would be considered), it is expected that following the Minister's assessment, a section 20(4) amendment request will be submitted. The proposed process would be unlikely to be quicker than the process already on foot, or if it was quicker not materially so.

The IAC agrees it is outside the scope of its Terms of Reference to recommend an alternate PSA process.

## **(vi) Findings**

The IAC finds:

- The draft PSA is an appropriate mechanism to facilitate the Project and has generally been appropriately drafted and structured to ensure that the environmental effects are acceptable having regard to legislation, planning policy and particular provisions of the Pyrenees Planning Scheme, best practice, and the principles and objectives of ecologically sustainable development.
- The application of the PAO and SCO are appropriate and strategically justified.
- The time horizon identified for Project completion in the Incorporated Document is appropriate for a large project of this nature.
- The Incorporated Document as amended by RRV is appropriate in its structure and content subject to the changes identified by the IAC in its preferred version in Appendix G.
- RRV should review the PAO mapping extent to include remnant portions of freehold land not included in the PAO within the Farming Zone that cannot be readily or practically be consolidated into adjoining freehold land parcels or accessed and used consistent with the purpose of the zone.

## **15.2 The Environmental Management Framework**

### **(i) Introduction**

This Chapter addresses overarching aspects of the EMF. Overarching issues relating to environmental mitigation measures are discussed in Chapter 15.3. Specific Mitigation Measures are addressed in the relevant chapter in Part B.

### **(ii) The Scoping Requirements**

The Scoping Requirements indicate that the EMF evaluation objective is:

To provide a transparent framework with clear accountabilities for managing environmental effects and hazards associated with construction and operation phases of the project, in order to achieve acceptable environmental outcomes.

Key elements that the EMF must include are:

- outline the means by which a register of environmental risks associated with the project will be developed and maintained during project implementation (including matters identified in preceding sections in these directions as well as other pertinent risks)
- proposed framework for managing the risks of adverse environmental effects including:
  - the Environmental Management System to be adopted, including organisational responsibilities and accountabilities
  - the environmental management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes
  - proposed objectives, indicators and monitoring requirements
- outline Environmental Management Plans for construction and operational phases
- outline a program for community consultation, stakeholder engagement and communications during the construction and operation of the project, including opportunities for local stakeholders to engage with the proponent to seek responses to issues that might arise when the project is undertaken
- assessment of likely effects
- approach to manage performance.

**(iii) Monitoring, risk assessment, auditing and reporting**

The Scoping Requirements require the EMF to include:

- Procedures for:
  - verifying or monitoring environmental performance and compliance with requirements; and
  - review of the effectiveness of the environmental management framework for continuous improvement.
- Arrangements for management of and access to baseline and monitoring data, to ensure the transparency of environmental management.
- Develop a risk assessment process and mitigation measures to minimise the impact.

The EMF contains a monitoring program across a range of mitigation measures and incorporated into key Management Documents including:

- CEMP (MD04)
- Threatened Species Management Plan (MD09)
- Groundwater Management and Monitoring Plan (MD11)
- Construction Dust Management Plan (MD14)
- Construction Noise and Vibration Management Plan (MD15)
- Landscape Design Plan (MD16)
- Operational Environmental Management Plan (MD21).

EMF Section '17.7.1 Compliance' sets out that the obligations imposed by the identified Management Documents, will be managed through:

- detailed design development and incorporation of design related environmental management measures
- routine audits of project compliance with the approved EMF, CEMP and other environmental plans by an independent environmental auditor during construction, with audit reports to be submitted to MRPV by the contractor
- six-month audits of compliance by MRPV extending past completion of project construction for a period of least two years



- audit reports submitted to the Minister for Planning and sub-reports to other statutory approval authorities as required and published on the project website
- ongoing monitoring compliance against the Environmental Management Strategy, CEMP and other environmental plans by MRPV
- monitoring compliance with the approval conditions by the statutory authorities
- execution of contingency measures under the CEMP and other environmental plans to ensure that harmful effects are adequately controlled if monitoring, auditing or other means determines more significant harmful effects than predicted or permitted, or if issues or risks not anticipated are identified
- implementation of remedial action in the event any non-compliance issue is identified.

Audits are to be conducted by independent, suitably qualified and experienced environmental auditors.

EMF Section '17.7.2 Reporting' sets out that the construction contractor will be required to report to MRPV regularly on the progress and compliance against the relevant environmental management requirements, including:

- status of current and planned works, key environmental issues and management measures
- advice on any proposed changes to the EMS, CEMP and other environmental plans
- records of compliance with Environmental Management Plans and approval conditions and environmental legislation, policies and standards
- copies of applications for consents, licences and approvals and the responses from authorities
- details of complaints or incidents and corrective and preventative actions taken
- summary of any consultation with regulatory authorities or other stakeholders, including summary of key issues raised and how they have been responded to
- a copy of any environmental studies, monitoring results and analysis
- a summary of contingency measures implemented to address adverse effects not permitted, predicted or anticipated
- a copy of audit reports, and any review of the CEMP.

MRPV will prepare environmental performance reports through the construction period to the Minister for Planning at least quarterly, or as otherwise agreed by the Minister.

#### **(iv) Discussion**

The EES has been developed around the understanding of Project risks through an Environmental Risk Assessment (ERA) (Attachment II). This has provided a sound basis for identification of mitigation measures in the EMF including the provision of critical Management Documents. Although initially developed to inform the EES impact assessment, it is understood by the IAC that the ERA is to be updated by RRV and that it will be maintained as part of the CEMP and contractors risk register.<sup>81</sup> This approach is appropriate.

The proposed monitoring, auditing and reporting arrangements included within the mitigation measures and EMF 'Section 17 Performance Management' are considered appropriate and

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<sup>81</sup> As identified in its Final changes documents included in Appendix F

establish a robust process that provides Project transparency. It provides for appropriate responses to contingencies and rehabilitation. The IAC considers there is scope for further monitoring of fauna crossings and of operational traffic noise and has recommended this.

As identified in Part B of this Report the Project will have significant impacts on the environment, landscape and amenity of the Beaufort community and nearby residents. The identified mitigation measures in the EMF will be critical to ensuring these impacts can be managed to an acceptable level. Important to this process will be:

- the community engagement strategy and transition strategies
- the approach taken to land acquisition
- delivery of critical fauna crossing treatments
- design adjustment to minimise vegetation and habitat impacts as much as practicable.

As discussed in Chapter 5.9 of this Report there is a balance to be struck between providing an overarching framework and constraining development of the iterative and responsive design of the Project through detailed commitments.

The IAC considers the EMF represents a reasonable overarching framework with appropriate mitigation measures but it does not go to the level of detail sometimes seen with environmental commitments and performance requirements. While this is appropriate for this stage of the Project, there is a risk that detailed mitigation measures in Technical Appendices could be lost in the next phase of the Project. The IAC has recommended changes to the Incorporated Document and some further cross-referencing in mitigation measures to address this however, in future this could be achieved by augmenting the EMF with detailed environmental commitments or performance requirements.

Despite this, the IAC is confident that the EMF mitigation measures have addressed most of the impacts identified in the EES and are practical and reasonable, noting the IAC's recommendation for a coordinating design management document.

The IAC considers that the EMF, subject to the changes proposed by RRV and recommended by the IAC will satisfy the EES scoping requirements and evaluation objectives. It contains the elements sought in the Scoping Requirements relating to:

- managing adverse environmental effects
- providing for community consultation and stakeholder engagement
- clear accountabilities.

## **(v) Findings**

The IAC finds:

- The EMF generally provides a transparent framework with clear accountabilities for managing environmental effects and hazards associated with construction and operation phases of the Project.
- As identified in Part B of this Report changes are required to the mitigation measures in order to achieve acceptable environmental outcomes consistent with the evaluation objective.
- The monitoring, auditing and reporting requirements in the EMF are appropriate subject to the additional operational noise and fauna crossing monitoring recommended by the IAC. This will ensure there is appropriate accountability and transparency in relating to the construction and operation of the Project.

## 15.3 Mitigation measures

### (i) What did the EES say?

As exhibited, the EMF proposed biodiversity and habitat mitigation measures would be developed in accordance with a number of existing relevant RRV/MRPV processes and standard specifications.

Additional mitigation measures centred around the refinement of design and management of clearance activities, are provided in Table 17.8 in the EES and are outlined in Chapter 5.1 of this Report. Specific environmental management plans are proposed in the EMF.

### (ii) Background

The IAC wanted to understand the relationship between the:

- Incorporated Document
- EMF in EES Chapter 17
- mitigation measures and recommendations presented elsewhere in the EES
- the EMF to be approved under the Incorporated Document.

The IAC was also keen to explore whether the EMF in EES Chapter 17 and Incorporated Document appropriately capture the full suite of environmental mitigation measures, commitments and performance requirements.

### (iii) Key issues

The key issues are the:

- the relationship between various documents
- whether the EMF and Incorporated Document appropriately capture the full suite of environmental mitigation measures, commitments and performance requirements.

### (iv) Evidence and submissions

RRV submitted the IAC should consider the EMF provided in EES Chapter 17 as the base document or starting position for the final EMF which would be updated in light of recommendations and outcomes from the Minister's Assessment. RRV submitted the EMF in EES Chapter 17 should "*pick up on the processes of what will implement the measures in the rest of the EES.*" RRV considered it was unlikely there would be any examples of substance explained in the technical reports not being captured in EES Chapter 17.

Further in submissions, RRV noted the drafting of the Incorporated Document did not require the EMF to be "*in accordance with*" EES Chapter 17 and considered it likely there would be some evolution of the EMF throughout the process. However, RRV anticipated the EMF to be prepared would be closely in accordance with what is in the EES. Having said that, RRV noted that, under the current drafting, in order to secure a measure in binding sense, the measure would need to be included in the Incorporated Document. Indeed, RRV had chosen to include some measures in the Incorporated Document in response to submissions such as the need for a tree and timber re-purpose strategy and a requirement to implement an access strategy.

RRV considered there was a balance to be struck between providing certainty of outcomes and flexibility considering the status of the Project and potential long-lead time prior to implementation.

When pondering the question of the level of detail to be included in the EMF, Mr McCaffrey considered this to be a common conundrum. In his opinion, the aim should be to capture enough detail to ensure conditions are implemented without having an excess of detail which makes the EMF unreadable. He gave an example of two recent projects where more detail had been included (compared to Chapter 17) by way of environmental performance requirements. In his opinion, the more detail provided, the better the project outcomes.

Mr Lane gave evidence that further cross-referencing in the EMF of the measures in Chapter 10 of Appendix C could be a useful means of ensuring further detail in the impact assessment is appropriately considered and followed up on.

#### **(v) Discussion**

Chapter 10 of Technical Appendix C provides very thorough details of commitments and recommendations for implementation of the Project. The IAC understands some of these measures may be from one of the existing relevant RRV/MRPV processes and standard specifications listed in the EMF. There are other measures, which the IAC considers have been specifically recommended for this Project. It is unclear which are which. The IAC appreciates RRV's submission that it would be undesirable for the Incorporated Document to include a vast array of specific commitments for a Project at the stage of a reference design, with an uncertain timeframe for implementation. Having said that, the IAC has understood the assessment of residual impacts from the Project to have been based on the assumption that the recommended measures would be implemented to the extent feasible.

It is the IAC's opinion that the majority of mitigation measures detailed in Technical Appendix C ought to be implemented through the EMF either directly, or through subsequent plans to be developed. Further detailed cross-referencing at this stage could assist with this. The IAC considers recommendations for further documentation for example, management plans, surveys, assessments, protocols should be included in the EMF and not considered a detailed mitigation measure that will be picked up through cross-checking at a later stage. The IAC has therefore made recommendations throughout this Report that such plans and the like are captured in a specific mitigation measure in the EMF, where they are not already.

The IAC understands RRV's submission regarding the different role of the Incorporated Document and EMF and the additional burden of requiring a planning scheme amendment to change the Incorporated Document. The IAC does not however consider this rationale necessarily explains the approach adopted. For instance, without the land bridge the brush-tailed phascogale is likely to experience significant effects to its connectivity at a regional scale and yet the land bridge at Camp Hill State Forest is not mandated by the Incorporated Document, only the EMF. The IAC has based its assessment (as the EES has) on the assumption that mitigation measures will be implemented and critical aspects such as the land bridge will form part of the fully funded Project scope.

#### **(vi) Findings**

The IAC finds:

- The impact assessment has assumed various detailed mitigation measures are implemented which should be incorporated into the EMF or various supporting plans.
- The final EMF ought to use EES Chapter 17 and specific mitigation measures in Technical Appendix C as a starting point.

- The IAC does not agree with RRV's submission that requirements in the Incorporated Document are of greater import than those in the EMF.

## 15.4 Recommendations

The IAC recommends:

Environmental Framework Plan

**Amend the Environmental Management Framework as indicated in Appendix F in Report No. 2.**

Draft Planning Scheme Amendment

**Approve draft Pyrenees Planning Scheme Amendment C50pyrn subject to:**

- **amend the Beaufort Bypass Incorporated Document as shown in Appendix G to include the Final changes of RRV and changes recommended by the Inquiry and Advisory Committee.**
- **review the PAO mapping extent to include portions of freehold land in the Farming Zone that cannot be readily or practically consolidated into adjoining freehold land parcels or accessed and used consistent with the purpose of the zone.**

## 16 Integrated assessment

### 16.1 Introduction

Previous chapters in Part B of this Report have considered the environmental effects of the Project on discrete environmental values. This chapter provides the IAC's integrated assessment of the environmental effects of the Project as a whole, assessed against the evaluation objectives. It also includes the IAC's more detailed considerations in relation to net community benefit, in the context of assessing the appropriateness of the draft PSA.

### 16.2 Assessment against the legislative and policy framework

The legislative and policy framework is summarised in Appendix E in Report No. 2.

The PE Act requires an integrated assessment of the draft PSA having regard to its environmental, economic and social impacts, and to balance the present and future interests of all Victorians. The IAC considers that, subject to the IAC's recommended changes to the proposed mitigation measures, the Project achieves an appropriate balance of competing policy objectives under the PE Act and the Pyrenees Planning Scheme, including policies that encourage economic development and policies that seek to protect and preserve the natural environment and agricultural land.

The FFG Act objectives emphasise the need to prevent species and communities from becoming threatened, to recover species and communities that are threatened, and to prevent threatening processes (such as the spread of pathogens) that can lead to biodiversity decline. Protecting Victoria's Environment – Biodiversity 2037, the State's biodiversity strategy under the FFG Act, recognises the need to halt species decline and improve biodiversity outcomes over the next 20 years. The IAC finds that the risks posed by the Project to habitat and biodiversity values are able to be managed to acceptable levels. The IAC is satisfied there are no impediments to approval under this Act, subject to compliance with relevant mitigation measures.

The IAC found the Project will have significant impacts associated with native vegetation clearance and habitat loss, including for FFG-listed golden sun moth and FFG-listed Victorian Temperate Woodland Bird Community. Habitat Importance Models did not identify the requirement for any fauna offsets. The golden sun moth is also listed under the EPBC Act and will likely trigger the need for offsets under that approval.

As discussed in Chapter 5.1.1 of this Report, the IAC is concerned the significant loss of habitat for the Victorian Temperate Woodland Bird Community may not trigger specific offset requirements under the current policy framework. The IAC accepted evidence this is undesirable and has made a recommendation for native vegetation offsets to include habitat for this fauna community.

Direct clearance aside, the loss of connectivity between the north and the south of the wider study area has the potential to significantly impact regional scale connectivity in the long-term for listed species such as brush-tailed phascogale and other wildlife. The IAC has recommended strengthening strategic revegetation measures and the development of a monitoring program with appropriate contingencies for improving connectivity should the measures implemented not achieve the results sought.

Subject to these recommendations, the IAC is satisfied there are no impediments to approval under the *Wildlife Act 1975*, subject to compliance with relevant mitigation measures.

The Water Act 1989 requires the State's water catchments to be managed to conserve and manage water resources and maintain water quality and integrate all elements of the of the terrestrial water cycle. The IAC finds that with the application of mitigation measures, water quality objectives can be maintained, and the Project will not have unacceptable impacts on surface water or groundwater resources. The impacts on flood storage and flood mitigation and catchment values can also be managed to an acceptable level with the application of mitigation measures consistent with the objectives of the *Catchment and Land Protection Act 1984* and the Glenelg Hopkins Regional Catchment Strategy.

Cultural heritage and post-contact heritage impacts are not inconsistent with the *Aboriginal Heritage Act 2006* and the *Heritage Act 2017*, and the mitigation measures in the EMF as well as the further consents and approvals required under those Acts combine to provide an appropriate framework for managing heritage impacts to acceptable levels.

The implications of the EP Act and the GED are discussed in Chapters 5 and 10. IAC is satisfied that the recommended mitigation measures are consistent with and will implement the EP Act requirements and guidance.

The EES noted the Proponent is responsible for seeking a decision under the EPBC Act on whether the Project is a controlled action and, if so, an approval for the Project (if required).

The IAC is not aware of any matters that would require or preclude approval under the EPBC Act. The IAC notes this is a matter for the Commonwealth to determine.

### 16.3 Assessment against evaluation objectives

The Scoping Requirements state that the EES Sustainable Development evaluation objective is:

Overall, to identify an alignment and conceptual design for the Western Highway bypass of Beaufort that would achieve a sustainable balance of environmental, economic and social outcomes and provide a net community benefit.

The Terms of Reference require the IAC to assess the Project's impacts having regard to the evaluation objectives and the principles and objectives of ecologically sustainable development. These and other key decision-making principles are summarised in Appendix E in Report No. 2.

Table 8 summarises the IAC's assessment of whether the Project meets the evaluation objectives and provides a cross reference to the relevant discussion in the Report.

Consistent with the evaluation objectives and Clauses 5 and 38 of the Terms of Reference, the IAC's assessment has had regard to relevant legislation and policy, principles of ecologically sustainable development and environmental protection, and net community benefit.

Table 8 IAC's integrated assessment against the evaluation objectives

| Evaluation objective  | IAC's integrated assessment<br>Relevant chapters of this Report   |
|---|---|
| <p><b>Road efficiency, capacity and safety</b> - To provide for an effective Western Highway bypass of Beaufort, to improve travel efficiency, road safety, and capacity, as well as improve amenity and local transport network in Beaufort</p>  | <p>Subject to the application of modified and strengthened mitigation measures, the IAC considers that the Project meets the road efficiency, capacity and safety evaluation objective. No substantial Project modifications are required.</p> <p>Refer to Chapter 4</p>  |
| <p><b>Biodiversity</b> - To avoid and minimise adverse effects on native vegetation, as well as habitat for threatened flora and fauna species and ecological communities, including those listed under the FFG Act, and address offset requirements for predicted losses consistent with relevant policy</p> | <p>Subject to the application of modified and strengthened mitigation measures, the IAC considers that the Project meets the biodiversity evaluation objective. No Project modifications are required.</p> <p>Refer to Chapter 5</p>  |
| <p><b>Catchment values and hydrology</b> - To protect catchment values, surface water and ground water quality, stream flows and floodway capacity, and avoid impacts on protected beneficial uses</p>  | <p>The IAC is satisfied that subject to the application of modified and strengthened mitigation measures the Project meets the catchment values and hydrology evaluation objective. No Project modifications are required.</p> <p>This evaluation objective has also been applied in the EES to the impact on soils, geology and contaminated land. The application of the mitigation measures meets the evaluation objective for this impact without change.</p> <p>Refer to Chapters 7 and 12</p> |
| <p><b>Cultural heritage</b> - To avoid and minimise adverse effects on Aboriginal and historic cultural heritage values, and to identify best practice mitigation measures</p>  | <p>The IAC is satisfied that subject to the application of modified and strengthened mitigation measures the Project meets the and cultural heritage evaluation objective. No Project modifications are required.</p> <p>Refer to Chapter 6</p>   |
| <p><b>Social and community</b> - To minimise and manage adverse effects on the well-being of the local community, including potential impacts on cohesion and severance of community access to services, facilities and infrastructure</p>  | <p>Subject to the application of modified and strengthened mitigation measures the IAC is satisfied that the Project meets the social, and community evaluation objective. No Project modifications are required.</p> <p>Refer to Chapter 8</p>   |
| <p><b>Land use and economic</b> - To minimise and manage adverse effects on local business (including agriculture) and existing or planned land uses</p>  | <p>The IAC is satisfied that subject to the application of modified and strengthened mitigation measures the Project meets the land use and economic evaluation objective. No Project modifications are required.</p> <p>Refer to Chapter 9</p>   |



| Evaluation objective   | IAC's integrated assessment<br>Relevant chapters of this Report  |
|--|--|
| <b>Amenity</b> - To minimise adverse air quality, noise or vibration effects on the amenity of residents and local communities, as far as practicable during construction and operation  | Subject to the application of modified and strengthened mitigation measures, the IAC is satisfied that the Project meets the amenity evaluation objective. No Project modifications are required.<br>Refer to Chapter 10   |
| <b>Landscape and visual</b> - To minimise adverse effects on visual and landscape values as far as practicable, during construction and operation  | The IAC is satisfied that subject to the application of modified and strengthened mitigation measures the Project meets the landscape and visual evaluation objective. No Project modifications are required.<br>Refer Chapter 11                                |
| <b>Environmental Management Framework</b> - To provide a transparent framework with clear accountabilities for managing environmental effects and hazards associated with construction and operation phases of the proposed project, in order to achieve acceptable environmental outcomes | Subject to the application of modified and strengthened mitigation measures, the IAC is satisfied that the Environmental Management Framework meets the evaluation objective.<br>Refer to Chapters 5 to 13 and 15 and 16   |
| <b>Sustainable development</b> - Overall, to identify an alignment and conceptual design for the Western Highway bypass of Beaufort that would achieve a sustainable balance of environmental, economic and social outcomes and provide a net community benefit                            | The IAC is satisfied that subject to the application of modified and strengthened mitigation measures the Project achieves a sustainable balance of environmental, economic and social outcomes and will provide a net community benefit.<br>Refer to Chapter 16 |

## 16.4 Net community benefit and sustainable development

Net community benefit is relevant for assessing whether the draft PSA is appropriate. It is also an evaluation objective for the EES.

A Project such as this invariably will have competing policy objectives and analysis of these assists to determine whether the Project will result in acceptable outcomes that achieve a net community benefit.

Clause 71.02-3 of the Victoria Planning Provisions 'Integrated decision making' provides that:

Victorians have various needs and expectations such as land for settlement, protection of the environment, economic wellbeing, various social needs, proper management of resources and infrastructure. Planning aims to meet these needs and expectations by addressing aspects of economic, environmental and social wellbeing affected by land use and development.

The Planning Policy Framework operates together with the remainder of the scheme to deliver integrated decision making. Planning and responsible authorities should endeavour to integrate the range of planning policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development for the benefit of present and future generations. (IAC underlining)

These competing policy objectives must be balanced in favour of net community benefit. The 'community' is not just the immediate local community of Beaufort. Section 4(1)(g) of the PE Act states that planning is to balance the present and future interests of all Victorians.

The Pyrenees Planning Scheme for Beaufort supports tourism and economic development and acknowledges the role of the Western Highway in facilitating social and economic inclusion and providing greater accessibility to jobs and services. The competing policy objectives are those that support the protection of agricultural land from fragmentation, protecting native vegetation and retaining the rural character and amenity. These key policies are discussed in detail in Appendix E in Report No. 2.

The IAC concluded in Chapter 9 that the Project is broadly consistent with the Planning Policy Framework. Its impact on agricultural land activities is limited to areas traversed by the Project and which are highly fragmented and include rural living activity. The Project is likely to have wider benefits for regional agriculture through improved access to transport networks. The removal of large volumes of truck and through traffic from the main street of Beaufort will have positive safety and amenity impacts and enable future growth of the town and its commercial centre.

The impacts on the landscape and native vegetation and associated habitat and biodiversity values will be significant and are potential disbenefits. These impacts are largely unavoidable and on balance, they are considered acceptable with the implementation of the proposed mitigation measures. There will be an opportunity to secure improved environmental outcomes including potential restoration of floodplain ecology, improved fauna linkages and strategic revegetation.

The objectives and strategies of Clause 13.02-1S have been considered in the preparation of the PSA to ensure the Project does not result in a 'net increase in risk to existing and future residents, property and infrastructure. Discussions between RRV and the CFA have addressed issues associated with fire breaks and fire management access. The EMF appropriately requires the preparation of a Bushfire Management Plan in conjunction with Fire Rescue Victoria which includes maintenance arrangements.

While the Scoping Requirements do not specifically refer to the consideration of climate change, they identify the need to improve energy efficiency and reduce greenhouse emissions. The Sustainability Management Plan (MD20) will detail the initiatives to reduce the carbon footprint during road construction, adopt 'avoid, minimise, mitigate and offset' principles and opportunities for continual improvement of environmental performance throughout the construction phase, in line with RRV's *VicRoads Sustainability and Climate Change Policy* and *VicRoads Sustainability and Climate Change Strategy 2015-2020*. The contractor will be required to prepare and implement an Environmental Management System (MD03) which will identify and manage environmental risks and impacts, and ensure comprehensive and integrated identification and management of environmental risks and issues through project design and construction.

The IAC has systematically reviewed and assessed each of the key impacts of the Project. Most impacts can be mitigated, although in some cases modifications to the mitigation measures or additional mitigation measures are required to achieve acceptable outcomes.

Having regard to the Project's broader local, regional metropolitan and State benefits, the IAC is satisfied the Project will result in a net community benefit, subject to applying its recommended mitigation measure modifications or additions.

## 16.5 Suitability of bypass corridor alignment C2

The Terms of Reference require the IAC to provide:

Advice on the suitability of the proposed alignment (C2) for the project on balance, compared to alternative alignments (C0, A0 and A1) examined within the EES, based on the EES documents and public submissions, as well as documentation and evidence presented to the IAC.

Recommendation on whether the proposed C2 alignment should progress to planning approval stage or if a relevant alternative alignment (e.g, C0, A0 and A1) should be pursued in place of C2.

The relevant evaluation objective is

Overall, to identify an alignment and conceptual design for the Western Highway bypass of Beaufort that would achieve a sustainable balance of environmental, economic and social outcomes and provide a net community benefit.

As concluded in Chapter 3, the EES process has followed a rigorous assessment of the four alignments. The four alignments have fairly similar benefits (in terms of removing large volumes of vehicles through the centre of Beaufort and in improving travel times along the Western Highway). They each have different positive and negative social, amenity, hydrology, historic heritage and landscape impacts.

Alignment C2 however is the better performing of the alignments in terms of:

- requiring less native vegetation to be removed and lesser impact on biodiversity and habitats
- minimising the impact on the Camp Hill State Forest
- having the least impact on cultural heritage and potentially some synergies with a former trade route.

With the implementation of mitigation measures, Alignment C2 can manage impacts to an acceptable level consistent with all Scoping Requirements and in most cases performs better than the other alignments.

The IAC recommends:

**The C2 alignment is the optimum of the four alignment options and should progress to planning approval stage subject to modifications to the Environmental Management Framework and draft Pyrenees Planning Scheme Amendment C50pryn as set out in Appendix F and Appendix G of Report No. 2.**

## 17 Response to Terms of Reference

Clause 38 of the IAC's Terms of Reference specifies the matters the IAC's report must contain. The IAC's response is included in Table 9. The IAC has formulated its advice and recommendations having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development as required under clause 38.

**Table 9 IAC response to Terms of Reference Clause 38**

| Clause | Terms of Reference   | IAC response and findings   | Report reference  |
|--------|--|---|-------------------|
| 38(a)  | Analysis and conclusions with respect to the environmental effects of the Project and their significance and acceptability   | Most environmental effects of the Project can, with mitigation measures, be managed to within acceptable levels. In some cases, the mitigation measures and/or requirements of the Incorporated Document need to be strengthened to achieve acceptable outcomes                         | Chapters 4-15     |
| 38(b)  | Advice on the suitability of the proposed alignment (C2) for the project on balance, compared to alternative alignments (C0, A0 and A1) examined within the EES, based on the EES documents and public submissions, as well as documentation and evidence presented to the IAC   | The C2 alignment is a suitable alignment. Through the mitigation measures it is able to meet all the evaluation objectives and in most cases performs better than the other alignments  | Chapters 3 and 16 |
| 38(c)  | Recommendations for any feasible modifications to the project, necessary to achieve appropriate environmental outcomes, including in relation to the selection of an alignment, refinement of the preferred alignment, alternate configuration of mitigation measure(s), variations to the proposed design and/or environmental monitoring and management measures | No modifications are required to the Project or the preferred alignment. Modification of a number of mitigation measures and inclusion of additional mitigation measures are necessary to manage impacts to an acceptable level necessary to achieve appropriate environmental outcomes |                   |
| 38(d)  | Recommendation on whether the proposed C2 alignment should progress to planning approval stage or if a relevant alternative alignment (e.g. C0, A0 and A1) should be pursued in place of C2  | The C2 alignment is the optimum of the four alignment options and should progress to planning approval stage. This is facilitated through the draft PSA which is supported subject to recommended changes   | Chapter 15        |

| Clause | Terms of Reference  | IAC response and findings   | Report reference            |
|--------|---|---|-----------------------------|
| 38(e)  | 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   | In most instances, yes  | Chapters 5-16               |
| 38(f)  | Recommendations on specific measures appropriate to prevent, mitigate or offset adverse environmental effects to achieve acceptable environmental outcomes, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development  | Amended and additional mitigation measures are recommended – refer Table 11 below and Appendix F of Report No. 2 (Items 1 to 56)  | Chapters 4-14               |
| 38(g)  | 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 | Conditions are recommended in the form of amended Clauses and conditions in the draft Incorporated Document. See Table 11 below and Appendix G of Report No. 2.   | Chapters 5, 7, 9, 11 and 15 |
| 38(h)  | Recommendations about the structure and content of the draft environmental management framework, including with respect to mitigation and monitoring of environmental effects, contingency plans and site rehabilitation  | The structure of the EMF is suitable. The content requires some modification, primarily through changes to mitigation measures. Monitoring requirements are largely appropriate, with some adjustments to the monitoring requirements for operational noise and fauna crossings | Chapters 4-13               |
| 38(i)  | Recommendations for any changes to the proposed environmental commitments and performance requirements to be included in the environmental management framework   | No changes recommended  |                             |

| Clause | Terms of Reference   | IAC response and findings  | Report reference                       |
|--------|--|--|--|
| 38(j)  | Recommendations with respect to the structure and content of the draft PSA, including consideration of time horizons in which the project may be constructed   | The structure and content of the draft PSA including the expiry provisions are appropriate subject to the IAC's recommended modifications to the Incorporated Document and review of the PAO mapping | Chapters 5, 7, 9, 11 and 15 Chapter 15 |
| 38(k)  | Specific findings and recommendations about the predicted impacts on matters of national environmental significance and their acceptability, including appropriate controls and environmental management | Predicted impacts on MNES will be acceptable, subject to implementation of modified mitigation measures  | Chapter 14                             |

Clause 39 specifies the matters the IAC's report should include. This information is summarised in Table 10.

**Table 10** IAC responses to Terms of Reference Clause 39

| Clause | Terms of reference requirement  | Report reference |
|--------|---|------------------|
| 39(a)  | Information and analysis in support of the IAC's findings and recommendations | Parts B and C    |

| Clause | Terms of reference requirement  | Report reference  |
|--------|---|---|
| 39(b)  | A list of all recommendations, including cross references to relevant discussions in the report               | <p>Table 11</p> <p>The IAC’s recommendations for the EMF are consolidated in Appendix F of Report No.2 (items 1 to 56). Appendix F identifies where the IAC has agreed with RRV’s Final changes to the EMF or recommends further amendments and includes the more detailed recommendations for additional mitigation measures referred to in this Report.</p> |
| 39(c)  | A description of the public hearing conducted by the IAC, and a list of those persons consulted with or heard | <p>Table 11</p> <p>Chapter 1.6 and Appendix C</p>   |

| Clause | Terms of reference requirement  | Report reference |
|--------|---|------------------|
| 39 (d) | A list of all submitters in response to the exhibited EES and draft PSA | Appendix B       |
| 39(e)  | A list of the documents tabled during the proceedings                   | Appendix D       |

The IAC's recommendations for the EMF are consolidated in Appendix F of Report No.2 (items 1 to 56). Appendix F identifies where the IAC has agreed with RRV's Final changes to the EMF or recommends further amendments and includes the more detailed recommendations for additional mitigation measures referred to in this Report.

**Table 11** Cross references between recommendations and discussions

| Recommendation   | Report reference                                      |
|--|---|
| <b>Preferred alignment</b>   |   |
| The C2 alignment is the optimum of the four alignment options and should progress to planning approval stage subject to modifications to the Environmental Management Framework and draft Pyrenees Planning Scheme Amendment C50pryn | Recommendation 1<br>Chapter 16                        |
| <b>Environmental Management Framework</b>  |   |
| Include the preparation of a design management document.   | Recommendation 2                                      |
| Amend Table 17.5 under 'Design and construction contractor' to insert the design management document and description.  | (Appendix F item 12)<br>Chapter 13                    |
| Amend Table 17.6 to identify the design management document to be prepared by the Construction contractor and for review and approval of MRPV  |   |
| Amend Table 17.3 to require MRPV to have regard to the CVA consistent with RRV's Final changes   | Recommendation 2<br>(Appendix F item 1)<br>Chapter 4  |
| Add Yarra Gum to the list of species to be covered in the Threatened Species Management Plan (MD09) in Table 17.5  | Recommendation 2<br>(Appendix F item 1)<br>Chapter 13 |
| Amend to amend the description of Threatened Species Management in Table 17.5 Plan (MD09) consistent with RRV's Final changes  | Recommendation 2<br>(Appendix F item 3)<br>Chapter 5  |



| Recommendation   | Report reference                                      |
|--|---|
| Amend the Native Vegetation Offset Strategy (MD07) in Table 17.5 as proposed in RRV's Final changes with a further change that considers offset sites which may offset impacts to the Victorian Temperate Woodland Bird Community  | Recommendation 2<br>(Appendix F item 4)<br>Chapter 5  |
| Amend the description of the Community and Stakeholder Engagement Plan (MD12) in Table 17.5 as proposed in RRV's Final changes with the addition of further changes (or an additional mitigation measure) to continue engagement with the community regarding impacts to biodiversity and mitigation measures and opportunities for involvement in rehabilitation/ reinstatement   | Recommendation 2<br>(Appendix F item 5)<br>Chapter 5  |
| Amend the description of the Cultural Heritage Management Plan (MD10) in Table 17.5 as proposed in RRV's Final changes   | Recommendation 2<br>(Appendix F item 6)<br>Chapter 6  |
| Correct the spelling of grevillea in the description of the Threatened Species Management Plan (MD09)  | Recommendation 2<br>(Appendix F item 7)<br>Chapter 6  |
| Amend the description of the Native Vegetation Offset Strategy (MD07) in Table 17.5 consistent with RRV's Final change with a further additional change to provide for an additional requirement to consider offset sites which support the Victorian Temperate Woodland Bird Community  | Recommendation 2<br>(Appendix F item 8)<br>Chapter 5  |
| Amend the description of the Construction Environment Management Plan (MD04) in Table 17.5 to refer to applicable MRPV standards   | Recommendation 2<br>(Appendix F item 9)<br>Chapter 5  |
| <p>Amend the Construction Environment Management Plan to:</p> <ul style="list-style-type: none"> <li>• reference the identify the Paleert Tjaara Dja: Wadawurrung Country Plan and the associated video as references for contractors</li> <li>• refer to relevant mitigation measures</li> <li>• include detail about the Beaufort Bypass Cultural Values Assessment and its recommendations.</li> </ul>  | Recommendation 2<br>(Appendix F item 11)<br>Chapter 5 |
| Amend the description of the Operations and Maintenance Plan (MD21) in Table 17.5 consistent with RRV's Final changes  | Recommendation 2<br>(Appendix F item 10)<br>Chapter 9 |
| <p>Amend mitigation measure T02 consistent with RRV's Final changes and with a further change which requires:</p> <ul style="list-style-type: none"> <li>• an assessment of any native vegetation required to be cleared for providing new access (which has not previously been assessed)</li> <li>• a statement outlining how the removal of such vegetation has been avoided and minimised</li> <li>• include any such native vegetation in the Native Vegetation Management Plan.</li> </ul> | Recommendation 2<br>(Appendix F item 13)<br>Chapter 5 |
| Amend the Access Management Strategy (MD06) in the same way  |   |
| Include a new mitigation measure in Table 17.8 to minimise impacts on the Ben Major grevillea, including through the management of dust associated with the construction of the fire track in Camp Hill using Section 10.3.2 of Technical  | Recommendation 2<br>(Appendix F item 14)<br>Chapter 5 |

| Recommendation   | Report reference                                      |
|--|---|
| Appendix C as a starting point   |   |
| Provide implementation details of the Tree Re-use program and consistent with Section 10.4.1.2 of Technical Appendix C in Table 17.8   | Recommendation 2<br>(Appendix F item 15)<br>Chapter 5 |
| Provide a requirement for clearing to be undertaken in accordance with the Project's Protected Flora Permit  | Recommendation 2<br>(Appendix F item 16)<br>Chapter 5 |
| Amend the EMF consistent with the changes sought by DELWP relating to permit responsibilities under the FFG and Wildlife Acts  | Recommendation 2<br>(Appendix F item 17)<br>Chapter 5 |
| Amend the EMF to require further surveys be undertaken for little eagle, tussock skink and brown toadlet prior to detailed design  | Recommendation 2<br>(Appendix F item 18)<br>Chapter 5 |
| Amend the EMF to provide for habitat restoration around culverts for growling grass frog and river swamp wallaby-grass   | Recommendation 2<br>(Appendix F item 19)<br>Chapter 5 |
| Amend mitigation measure BH17 consistent with RRV's changes  | Recommendation 2<br>(Appendix F item 20)<br>Chapter 5 |
| Include a new mitigation measure for Blackberry  | Recommendation 2<br>(Appendix F item 21)<br>Chapter 5 |
| Amend an existing mitigation measure or include a new mitigation measure for wildlife crossing infrastructure to consider predation of wildlife  | Recommendation 2<br>(Appendix F item 22)<br>Chapter 5 |
| Amend an existing mitigation measure or include a new mitigation measure that considers: <ul style="list-style-type: none"> <li>• the impacts on wetland loss and degradation from filling, dredging, or grazing impacts</li> <li>• revegetating drainage swales, channel realignments and other water infrastructure with wetland plants to recreate habitat for waterbirds and fish</li> </ul> | Recommendation 2<br>(Appendix F item 23)<br>Chapter 5 |
| Amend an existing mitigation measure or include a new mitigation measure to manage the spread of <i>Phytophthora cinnamomi</i>   | Recommendation 2<br>(Appendix F item 24)<br>Chapter 5 |
| Amend an existing mitigation measure or include a new mitigation measure to manage the risks of <i>Phytophthora</i>  | Recommendation 2<br>(Appendix F item 25)<br>Chapter 5 |
| Amend mitigation measure BH01 consistent with RRV's Final changes with a further amendment to avoid native vegetation and known and potential habitat  | Recommendation 2<br>(Appendix F item 27)              |

| Recommendation   | Report reference   |
|--|--|
| loss for native fauna species (including golden sun moth which can favour non-native vegetation)   | Chapter 5  |
| <p>Amend mitigation measure BH12 to:</p> <ul style="list-style-type: none"> <li>include Yarra Gum as a species to be covered in the Threatened Species Management Plan</li> <li>include the golden sun moth as a species to be covered in the Threatened Species Management Plan</li> <li>include a cross-reference to mitigation measures provided in EES Section 10.3 of Technical Appendix C</li> </ul>   | <p>Recommendation 2<br/>(Appendix F item 26)<br/>Chapter 5</p> |
| <p>Amend mitigation measure BH02 to include:</p> <ul style="list-style-type: none"> <li>a requirement for an ongoing monitoring program of crossing structures and their effectiveness (usage by targeted species as well as potential use by predators) and adaptive management measures.</li> <li>cross-reference the crossing structure design guidelines in Section 10.4.2.4 of EES Technical Appendix C Flora and Fauna Impact Assessment</li> <li>the involvement of a qualified ecologist.</li> </ul>   | <p>Recommendation 2<br/>(Appendix F item 28)<br/>Chapter 5</p> |
| <p>Include a new mitigation measure which provides for a protocol for the development of further seasonally appropriate targeted surveys to the satisfaction of DEWLP and outlines proposed survey effort and timing (pre-detailed design or pre-construction), and considers as a minimum:</p> <ul style="list-style-type: none"> <li>Pre-detailed design: basalt sun-orchid, dwarf boronia, emerald-lip orchid, purple blow-grass, rough wattle, small milkwort, spiny rice-flower, spiral sun-orchid, Yarra gum</li> <li>Pre-construction: candy spider-orchid, golden cowslips, swamp everlasting and swamp fireweed.</li> </ul> | <p>Recommendation 2<br/>(Appendix F item 29)<br/>Chapter 5</p> |
| <p>Amend mitigation measure BH06 to require a hollow replacement strategy with a minimum replacement ration of 1: 1</p>  | <p>Recommendation 2<br/>(Appendix F item 30)<br/>Chapter 5</p> |
| <p>Amend mitigation measure BH29 to:</p> <ul style="list-style-type: none"> <li>include specific reference to habitat creation for species including: brolga, brown toadlet, brush-tailed phascogale, growling grass frog, and golden sun moth</li> <li>cross-reference Section 10.4.1.2 of EES Technical Appendix C Flora and Fauna Impact Assessment, including specific reference to revegetation using local provenance species as provided in sections 10.3.8, 10.4.1.2 and 10.4.2</li> </ul>   | <p>Recommendation 2<br/>(Appendix F item 31)<br/>Chapter 5</p> |
| <p>Insert a new mitigation measure to require a feature survey and an arborist assessment to assess all trees above 10 centimetres diameter at breast height (not just large trees in patches and scattered trees) in close proximity (15 metre buffer) to the construction footprint</p>  | <p>Recommendation 2<br/>(Appendix F item 32)<br/>Chapter 5</p> |
| <p>Insert a new mitigation measure to require the Threatened Species Management Plan for golden sun moth to include consideration of the need for further survey work (audit of previous surveys or detailed surveys) of known and potential habitat to inform final detailed design and offset requirements. Consider the potential for indirect impacts on golden sun moth habitat from haulage and construction vehicles and feasibility of avoiding use of transport routes (such as</p>   | <p>Recommendation 2<br/>(Appendix F item 33)<br/>Chapter 5</p> |

| Recommendation  | Report reference                                      |
|---|---|
| Racecourse Road) for haulage or construction vehicles   |   |
| Insert a new mitigation measure to ensure the Threatened Species Management Plan for the Victorian Temperate Woodland Bird Community captures mitigation measures outlined in Section 10.3.11 of EES Technical Appendix C Flora and Fauna Impact Assessment                   | Recommendation 2<br>(Appendix F item 34)<br>Chapter 5 |
| Insert a new mitigation measure to consider implementing any proven practicable measures to reduce risk of invasion by noisy miners   | Recommendation 2<br>(Appendix F item 35)<br>Chapter 5 |
| Insert a new mitigation measure to consider opportunities to provide strategic revegetation to strengthen habitat corridors outside the PAO and SCO and within the broader study area   | Recommendation 2<br>(Appendix F item 36)<br>Chapter 5 |
| Amend the introductory content to Section 17.6.3 as proposed by RRV's Final changes   | Recommendation 2<br>(Appendix F item 37)<br>Chapter 6 |
| Amend mitigation measure AH01 as proposed by RRV's Final changes with an additional provision that identifies the opportunity for detailed design to implement <i>Beaufort Bypass Cultural Values Assessment</i> recommendations and opportunities to enhance cultural values | Recommendation 2<br>(Appendix F item 38)<br>Chapter 6 |
| Amend mitigation measures AH01, AH03, AH04 and AH05 and LV03 to refer to the <i>Beaufort Bypass Cultural Values Assessment</i>  | Recommendation 2<br>(Appendix F item 39)<br>Chapter 6 |
| Amend mitigation measures SW03 to identify that wherever afflux criteria cannot be met on private land: <i>"provide for further mitigation through detailed design or landholder agreement."</i>  | Recommendation 2<br>(Appendix F item 40)<br>Chapter 7 |
| Amend mitigation measures SW01, SW02, SW03, SW04 consistent with RRV's Final changes  | Recommendation 2<br>(Appendix F item 41)<br>Chapter 7 |
| Amend mitigation measures S05/L03 consistent with RRV's Final changes   | Recommendation 2<br>(Appendix F item 42)<br>Chapter 8 |
| Amend mitigation measures LU01 consistent with RRV's Final changes  | Recommendation 2<br>(Appendix F item 43)<br>Chapter 9 |
| Amend mitigation measures S07 and RE05 consistent with RRV's Final changes with the addition that the governance structure provide for community representation or input  | Recommendation 2<br>(Appendix F item 44)<br>Chapter 9 |
| Amend Table 17.12 to amend mitigation measure RE03 to amend the first dot point to add: <i>"and reduce land fragmentation"</i>  | Recommendation 2<br>(Appendix F item 45)<br>Chapter 9 |

| Recommendation  | Report reference   |
|---|--|
| Amend mitigation measure AQ01 consistent with RRV's Final changes   | Recommendation 2<br>(Appendix F item 46)<br>Chapter 10       |
| Amend mitigation measure NV01 consistent with RRV's Final changes   | Recommendation 2<br>(Appendix F item 47)<br>Chapter 10       |
| Amend mitigation measure NV02 consistent with RRV's Final changes   | Recommendation 2<br>(Appendix F item 48)<br>Chapter 10       |
| Amend NV03 consistent with RRV's Final changes with the following additional dot points: <ul style="list-style-type: none"> <li>• ensure operational monitoring should be for a minimum of 6 months after the bypass opens</li> <li>• implement any practicable measures to reduce sleep disturbance</li> </ul>   | Recommendation 2<br>(Appendix F item 49)<br>Chapter 10       |
| Amend mitigation measures LV01 and LV03 or include a new mitigation measure to ensure landscape planting recreates habitat for species/communities, e.g., Victoria Temperate Woodland Bird Community woodland birds   | Recommendation 2<br>(Appendix F item 50)<br>Chapter 5        |
| Amend mitigation measure LV03 consistent with RRV's Final changes   | Recommendation 2<br>(Appendix F item 51)<br>Chapter 5        |
| Amend mitigation measure LV03 to refer to the <i>Beaufort Bypass Cultural Values Assessment</i>   | Recommendation 2<br>(Appendix F item 52)<br>Chapter 5        |
| Amend LV01 consistent with RRV's Final changes and with the following additional provisions: <ul style="list-style-type: none"> <li>• the Landscape Management Strategy be prepared in conjunction with ecological expertise as appropriate</li> <li>• consider opportunities for the rehabilitation of existing native vegetation habitat within the Project area</li> <li>• Identify the role and detail of the Landscape Management Strategy and responsibility for its preparation</li> </ul>   | Recommendation 2<br>(Appendix F item 53)<br>Chapter 5 and 11 |
| Amend mitigation measure SG02 to require further geotechnical investigations: <ul style="list-style-type: none"> <li>• need for intrusive soil assessment and analysis relating to relevant contaminants of potential concern as per Section 10.2 of Technical Appendix K</li> <li>• extent and location of soils unsuitable for reuse in construction to inform earthworks design and to either treat or contain such soils within zoned embankments</li> <li>• need to inform the appropriate design of the slope for the Camp Hill area, balancing any erosion risks with the desire to reduce land take and vegetation impacts</li> <li>• confirm the duration and extent of ground settlement</li> </ul> | Recommendation 2<br>(Appendix F item 54)<br>Chapter 12       |
| Amend mitigation measure SG04 to include a requirement for the Spoil  | Recommendation 2   |

| Recommendation  | Report reference                                      |
|---|---|
| Management Plan to include contingencies for unexpectedly encountering contaminated, unsuitable or acid sulfate soils during construction   | (Appendix F item 55)<br>Chapter 12                    |
| Replace references to Registered Aboriginal Party with Wadawurrung Traditional Owners Aboriginal Corporation where appropriate  | Recommendation 2<br>(Appendix F item 56)<br>Chapter 6 |
| <b>Draft Pyrenees Planning Scheme Amendment C50pryn</b>   |   |
| Amend the Beaufort Bypass Project Incorporated Document as shown in Appendix G in Report No.2   | Recommendation 3a<br>Chapters 5 and 9                 |
| Review the PAO mapping extent to include portions of freehold land in the Farming Zone that cannot be readily or practically consolidated into adjoining freehold land parcels or accessed and used consistent with the purpose of the zone | Recommendation 3b<br>Chapters 9 and 15                |