PALMERS ROAD CORRIDOR PROJECT

ASSESSMENT

under

ENVIRONMENT EFFECTS ACT 1978

Minister for Planning

March 2016

GLOSSARY

AH Act	*Aboriginal Heritage Act 2006*
BAG	The *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (DEPI, 2013)
bB(A)	A-weighted sound levels (instead of decibel (dB)) is an adjusted decibel scale taking into account the varying sensitivity of the human ear to different frequencies of sound
BCS	The *Biodiversity Conservation Strategy for Melbourne's Growth Corridor* (DEPI 2013)
CHMP	Cultural Heritage Management Plan, prepared under *Aboriginal Heritage Act 2006*
CEMP	Contractor Environmental Management Plan
CMA	Catchment Management Authority
DELWP	Victorian Department of Environment, Land, Water and Planning
DEPI	former Victorian Department of Environment and Primary Industries
EE Act	*Environment Effects Act 1978*
EES	Environment Effects Statement
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMS	Environmental Management System
EPA	Victorian Environment Protection Authority
EP Act	*Environment Protection Act 1970*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealths)
ESD	ecologically sustainable development
EVC	Ecological Vegetation Class
FFG Act	*Flora and Fauna Guarantee Act 1988 (Vic.)*
GCP	Growth Corridor Plan
Hha	habitat hectare
ha	hectare
HCS	high conservation significance
km	kilometres
km/h	kilometres per hour
LA&C Act	*Land Acquisition and Compensation Act 1986*
LPPF	Local Planning Policy Framework
m, m^3	metres, cubic metres
NP Act	*National Parks Act 1975*
OAAV	Office of Aboriginal Affairs Victoria
PAO	Public Acquisition Overlay
PEPS	Project Environmental Protection Strategy
P&E Act	*Planning and Environment Act 1987*

PPTN	Principal Public Transport Network
PRCP	Palmers Road Corridor Project
PSA	Planning Scheme Amendment
RAP	Registered Aboriginal Party
RM Act	*Road Management Act 2010*
SEPPs	State Environment Protection Policies
SPPF	State Planning Policy Framework
TI Act	*Transport Integration Act 2010*
VHCS	very high conservation significance
WSRD	Water Sensitive Road Design

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1 INTRODUCTION

1.1 Purpose of this Document

This document is the assessment of environmental effects ("Assessment") under the *Environment Effects Act 1978* (EE Act) for VicRoads' proposed Palmers Road Corridor Project (PRCP) described on the following page. It represents the final step in the Environment Effects Statement (EES) process under the EE Act, by which the Minister for Planning provides authoritative advice to decision-makers on the likely environmental effects of the proposal, their acceptability and how they are to be addressed in relevant statutory decisions. The Assessment is largely informed by the Inquiry Report and EES, together with public submissions.

This Assessment will inform the decisions required under Victorian law for the proposal to proceed, in particular decisions under the *Planning and Environment Act 1987*(P&E Act).

1.2 Structure of this Assessment

Section 1 of this Assessment provides a brief description of the project. Section 2 of this Assessment outlines both the EES process and statutory approvals required for the proposed development. Section 3 provides a summary of the Assessment and its conclusions.

The core part of this Assessment is found in Section 4, which provides findings on the environmental effects of the project and an assessment of these effects and their acceptability, based on relevant evaluation objectives drawn from the applicable legislation and statutory policy.

Appendix 1 to this Assessment provides specific responses to the recommendations of the Inquiry.

1.3 Project Description

The Palmers Road Corridor Project (PRCP) assessed through the EES consists of development of a new north-south arterial road linking the Western Freeway (at Deer Park Bypass) and the Calder Freeway, to provide improved transport and access to the expanding areas of western Melbourne in the Cities of Wyndham, Brimbank and Melton. This will involve connecting and upgrading existing local roads (Robinsons Road, Westwood Drive and Calder Park Drive).

In the longer term the PRCP scope is a six-lane divided road (with a design speed of 80 kilometres per hour), with bicycle and pedestrian facilities on both sides, construction of a raised interchange at the Calder Freeway, a Westwood Drive connection, two new bridges over Kororoit Creek, removal of two existing railway crossings (one at the Melbourne-Bendigo railway crossing with Calder Park Drive and another at Melbourne-Ballarat railway crossing with Robinsons Road).

In the short-term VicRoads seeks to reserve the remaining portions of a 16 kilometre long and 40-60 metre wide corridor for this future arterial road in the Melton and Brimbank Planning Schemes. The full reservation would provide sufficient land to enable the construction of the six-lane divided arterial road (three lanes in each direction).

The Calder Freeway interchange and the Westwood Drive connecting road works, including the first carriageway /bridge over Kororoit Creek, is proposed to be constructed in 2016, subject to completion of the EES process and obtaining the relevant approvals. Upgrading and widening of all the roads within the Palmers Road Corridor will be implemented in stages, from two-lanes to a four-lane divided road and ultimately to a six-lane arterial road. The project is proposed to be fully constructed by approximately 2046, although this is subject to availability of funds for the progressive development this project.

VicRoads was responsible for the preparation of the EES. The EES addresses the effects of both the interim upgrade that includes construction of the raised interchange at the Calder Freeway and the new connecting section of Westwood Drive (south of Kororoit Creek), as well as the ultimate upgrade to an arterial road along the corridor.

The PRCP only requires some land to be reserved now, given that the long term planning for the area included some capacity for a road along this north north-south alignment. No residential dwellings or commercial buildings would need to be acquired, but some small parts of vacant residential land and sections of a few commercial properties would be needed for the project.

The project area for the proposal being assessed via the EES process is shown on Figure 1.

A detailed description of the PRCP, its staging and the proposed construction and operation is provided in Chapter 5 of the EES.

1.4 Background

The proposed PRCP was identified in past strategic planning of transport infrastructure and services for western Melbourne, as outlined in the Melton East Strategy Plan (1997) and the Outer Western Suburbs Transport Strategy (OWSTS) (2001). The OWSTS was completed by then Department of Transport, VicRoads and various councils, to apply a regular network pattern of arterial roads with supporting collector roads in order to address areas of rapid growth and enhance local accessibility for this developing area of western Melbourne.

The Palmers Road arterial corridor is also identified in current strategic planning documents, in particular Plan Melbourne and the West Growth Corridor Plan.

The total extent of this arterial road corridor is 25 km, between the Princes Freeway (at Point Cook) in the south to the Calder Freeway (at Calder Park) in the north – refer to Figure 2. It consists of three broad sections: Section One (Dunnings Road to Deer Park Bypass), Section Two (Deer Park Bypass to Western Freeway) and Section Three (Western Freeway to Calder Freeway).

The EES however, only covers Sections 2 and 3 of the corridor (Deer Park Bypass to the Calder Freeway) as set out in the following section of this Assessment.

Figure 1. Palmers Road Corridor EES Project Area

2 STATUTORY PROCESSES

2.1 Environment Effects Act 1978

VicRoads referred the proposed Palmers Road arterial corridor (i.e. all three sections) under the EE Act for a decision on the need for an EES. On 13 November 2009, the then Minister for Planning decided that an EES was required for only Sections 2 and 3 (i.e. from Deer Park Bypass to the Calder Freeway).

The EES decision required VicRoads to initially prepare a report "on the availability of potentially suitable alternatives for developing appropriate arterial route capacity and future road network performance in this region", to help ensure any feasible variations or alternative alignments were identified as a precursor to the EES process. In early 2013, before commencing the EES process, VicRoads provided a 'Strategic Options Report', which confirmed the Palmers Road Corridor as the most appropriate future major arterial alignment for the western Melbourne region (spanning the Cities of Wyndham, Brimbank and Melton).

In July 2013, the Minister issued the final Scoping Requirements that specified the range of matters to be addressed in the EES for the PRCP.

The EES was prepared by VicRoads and then placed on public exhibition, together with the amendments to the Melton and Brimbank Planning Schemes and draft Cultural Heritage Management Plan, from 30 July to 31 August 2015. Thirty three submissions were received, seven of which were from State and local government bodies.

On 9 August 2015, I appointed an Inquiry under the *Environment Effects Act 1978*, to review submissions and inquire into the environmental effects of the proposal, in accordance with its terms of reference. The Inquiry members were also appointed under sections 153 and 155 of the *Planning and Environment Act 1989* to consider Amendments.

The Inquiry Panel held the directions hearing on 22 September 2015, followed by public hearings, which were held from 20 to 29 October 2015.

The Inquiry Panel provided its report to me on 23 December 2015.

Under the EE Act, for the next step I must provide an Assessment of the environmental effects of the PRCP to statutory decision-makers under Victorian law (i.e. this document). The decision-makers must then consider this Assessment before deciding whether and how the proposal should proceed. This Assessment will inform approval decisions under the Victorian law outlined below.

2.2 Victorian Statutory Approvals

The proposed PRCP requires a number of statutory approvals, including:

- Amendments to the Melton and Brimbank Planning Schemes under the *Planning and Environment Act 1987*(P&E Act) to apply a Public Acquisition Overlay to some land required for the upgraded road and apply and Incorporated Document to exempt the project from planning permit requirements, such as for the removal of native vegetation, road construction and associated activities;
- Approved Cultural Heritage Management Plans (CHMP) under the *Aboriginal Heritage Act 2006* (AH Act);
- Consents to undertake works over Kororoit Creek and near waterways under the *Water Act 1989*;
- A consent to disturb historical archaeological sites and a permit to carry out works to a heritage place under the *Heritage Act 1995*;
- A permit for the removal of protected flora under the *Flora and Fauna Guarantee Act 1988* (FFG Act); and
- A permit to take any wildlife, under the *Wildlife Act 1975.*

Exhibition of the relevant statutory notices was coordinated so that the following documents were exhibited together at a number of locations:

- The EES Main Report, Technical Reports and Summary Brochure for the PRCP;
- Amendment C143 to the Melton Planning Scheme; and

- Amendment C157 to the Brimbank Planning Scheme; and
- Draft Cultural Heritage Management Plan

2.3 Commonwealth Statutory Approval

The project was referred to the Australian Government for a decision on the need for assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

On 22 May 2009, the entire corridor (Sections one to three) was determined to be a controlled action requiring assessment and approval under the EPBC Act because of its potential impacts on matters of national environmental significance (MNES). The Commonwealth determined that the project's impacts on MNES were to be assessed via Preliminary Documentation.

The Victorian EES process was not accredited for this project as the required assessment under the Commonwealth-Victorian Bilateral Agreement[1] - the EES covers only sections 2 and 3 of the project, whereas all three sections require assessment under the EPBC Act (refer to map of entire corridor in Figure 2).

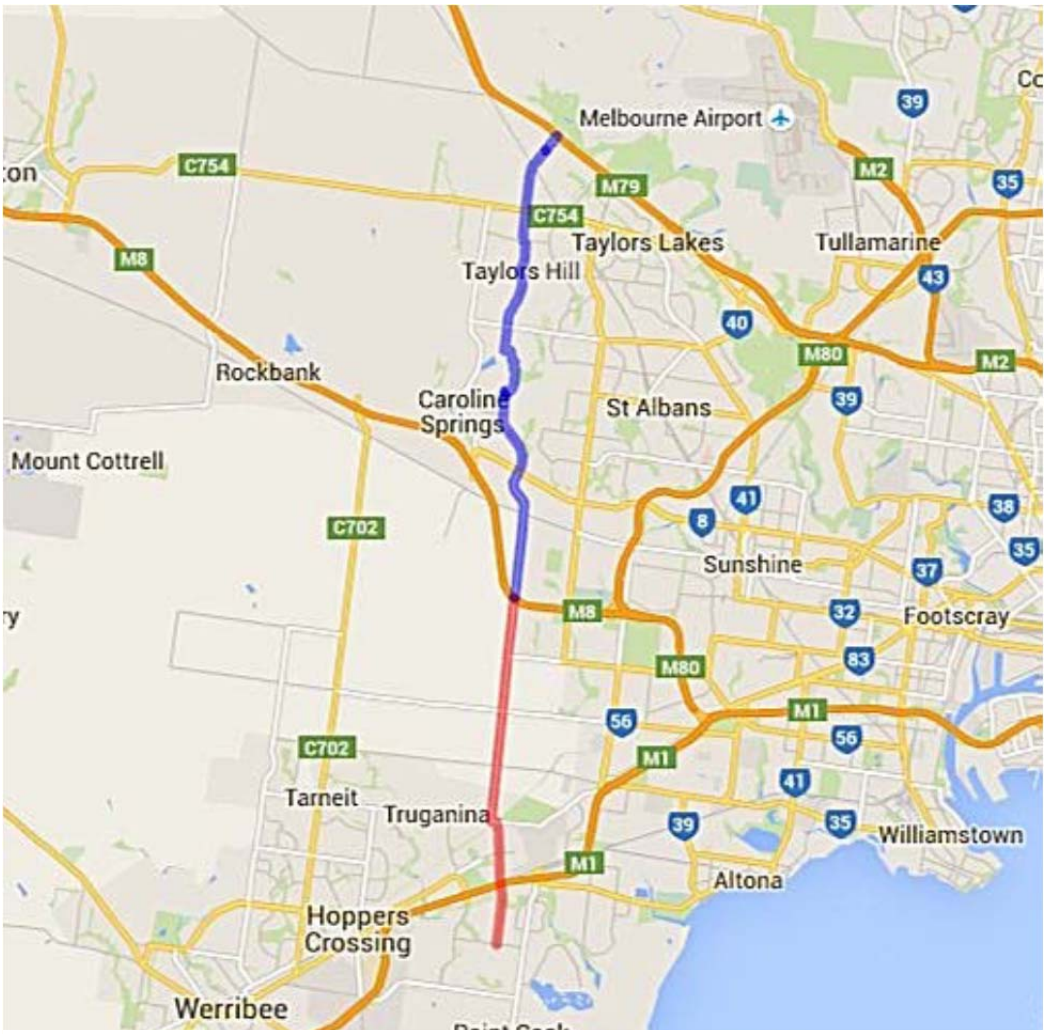

Figure 2. Entire Palmers Road Corridor. Note - blue portion (sections 2 & 3) is being assessed under the EES.

[1]The bilateral agreement under section 45 of the EPBC Act was in place since 20 June 2009 and a new bilateral agreement came into operation on 26 December 2014. Both agreements provide for the accreditation of specified Victorian statutory processes to help reduce duplication and ensure coordinated assessment of projects requiring approval under both Victorian and Commonwealth law.

3 SUMMARY OF THIS ASSESSMENT

Following careful consideration of the Inquiry Panel's findings, and for the reasons explained in the following Section, it is my assessment that the PRCP examined through the EES will not result in unacceptable effects, provided the appropriate minimisation, mitigation and management measures, as reflected in the findings of this Assessment, are implemented. Therefore, the project as proposed should be approved with minor modifications as outlined in this Assessment.

I concur with the Inquiry Panel conclusions that the arterial project is consistent with the relevant polices on transport infrastructure planning and will deliver improved transport safety, efficiency and connectivity through the west of Melbourne, as well as improve the safety and amenity of local roads and activity centres.

It is also my assessment that the project will result in some amenity impacts in local areas including significant noise impacts for residents of the Calder Park Drive section of the project and Westwood Drive section near Kororoit Creek, which need to be further mitigated. As set out within this Assessment, the detailed design for road infrastructure connecting Westwood Drive, including the proposed Kororoit Creek bridges, and section of Calder Park Drive abutting Albert Road, will need measures to mitigate noise effects for noise sensitive buildings.

The project will not cause a significant impact on visual and landscape values of the Organ Pipes National Park, Banchory Nature Conservation Reserve and the Ravenhall East Grassland Nature Conservation Reserve.

However, during the EES and public Inquiry process, it became apparent that VicRoads could give greater priority to addressing the project effects on visual and landscape values by more effective landscaping. A comprehensive landscaping plan for the whole project will be needed to explore scope for screening some affected residences and improving visual attractiveness of the final design, in particular the proposed shared pedestrian/bicycle paths along the proposed alignment. This can be achieved by substantial planting of canopy and other trees or shrubs in the relevant locations.

I further note that some adverse impacts would result from other aspects of the PRCP, including on Aboriginal cultural heritage, biodiversity and catchment values, although these have been minimised and can be addressed through mitigation and management measures, as discussed in Section 4 of this Assessment.

The overall acceptability of the environmental outcomes of the PRCP were considered, relative to the economic and social outcomes, including in the context of the principles and objectives of ESD. It is my assessment that the project will result in a net community benefit, including improved road capacity, safety and transport network performance, that outweighs the predicted adverse environmental effects.

This Assessment constitutes authoritative advice on the PRCP's environmental effects and their acceptability to decision-makers, to enable matters outlined in this document to be taken into account when making relevant statutory decisions. While this Assessment is not binding, any decision-maker proposing not to adopt part of the Minister's Assessment should advise and consult with the Minister for the Planning, as set out under the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978*.

4 INTEGRATED ASSESSMENT

4.1 Approach to this Assessment

To provide a coherent and integrated structure for this Assessment of likely adverse environmental effects, the key aspects of relevant legislation, statutory policy and the principles and objectives of ESD[2] have been synthesised into a set of evaluation objectives that are pertinent to the PRCP. A draft set of evaluation objectives was included in the Scoping Requirements for this EES, which were used by the proponent in their assessment of options and effects within the EES. The Inquiry also used the draft objectives to frame its consideration of the key issues of the PRCP.

Table 1 lists the final set of evaluation objectives used in this Assessment and the core legislation that underpins them.

Table 1. Assessment Evaluation Objectives

Evaluation objective	Key statutes
Road Safety and capacity - To improve the road based transport capacity, connectivity and safety in western Melbourne, by developing a six-lane dual carriageway arterial road connecting the Western Freeway and Calder Freeway, while maintaining the connectivity of the existing local transport routes.	RM Act P&E Act
Amenity and environmental quality - To minimise adverse noise and other amenity effects on nearby residents and land-uses, to the extent practicable.	EP Act P&E Act
Social, land use and infrastructure - To minimise adverse social and land-use effects, including impacts on existing infrastructure, to the extent practicable.	P&E Act LA&C Act
Visual and landscape values - To avoid adverse effects on the landscape and recreational values of the Organ Pipes National Park and minimise visual effects on open space areas.	P&E Act NP Act
Biodiversity and habitat - To avoid or minimise adverse effects on native vegetation and listed flora and fauna species and ecological communities, and address the offsetting of potential losses consistent with relevant policy.	F&FG Act Wildlife Act EP Act
Catchment values - To maintain the functions and values of surface water and floodplain environments and protect their beneficial uses.	Water Act P&E Act EP Act
Cultural heritage - To avoid or minimise effects on Aboriginal and historic cultural heritage values.	AH Act Heritage Act
Environmental Management Framework - To provide a transparent framework with clear accountabilities for managing environmental effects and hazards associated with construction, operation, decommissioning and rehabilitation phases of the project, in order to achieve acceptable environmental outcomes.	P&E Act EP Act AH Act
Integrated and sustainable transport - Overall, to demonstrate that the project would achieve a balance of economic, social and environmental outcomes that contribute to ecologically sustainable development and provide a net community benefit over the short and long-term.	EE Act P&E Act EP Act TI Act

[2] Ecologically Sustainable Development. See *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* made under section 10 of the EE Act; pp. 19 and 27.

4.2 Relevant Alternatives

The 13 November 2009 EES decision required VicRoads to prepare a report on availability of potentially suitable alternatives for the proposed arterial route. The report was to primarily demonstrate the basis for selecting the Palmers Road Corridor as the preferred alignment taking into consideration suitable alternative alignments and designs. VicRoads also considered project objectives (i.e. road safety, access and mobility, transport efficiency and environment) in developing the evaluation framework that was applied to identify, assess and evaluate alignment options. Chapter 4 of the EES provides a summary of this report, with specific focus on land use, traffic and social consideration.

I note that alternatives for the Palmers Road Corridor south of the Western Freeway were not considered by VicRoads, as the planning scheme amendment process for that section of the corridor had been completed, and the approvals necessary to reserve the land were in place at the time the report was being prepared. The Inquiry Panel was satisfied with this approach. I agree with the Inquiry Panel findings that planning for works south of the Western Highway has been completed and further consideration of alternative corridors was not warranted.

In its 'Strategic Options Report' VicRoads identified, assessed and evaluated three corridor options for the arterial road north of the Western Highway:

- Palmers Road Corridor
- Gourlay Road Corridor to the west
- Kings Road Corridor to the east.

VicRoads confirmed that the Palmers Road Corridor was the most appropriate future major arterial alignment for the western Melbourne region. The land use patterns in the Melton East area has been designed to accommodate a 6 lane primary north-south arterial along the Palmers Road Corridor. The Palmers Road Corridor is a core element of the arterial road network for Melbourne's west - modelling shows that the road, in particular the connection across Kororoit Creek, is critical to the transport network within this region of Melbourne.

Conclusion

It is my assessment that the identification and evaluation of three options for the arterial road north of the PRCR undertaken by VicRoads prior to preparing the EES has been comprehensive and sufficient to inform the selection of an alignment for detailed examination through the EES process.

The remainder of this Assessment considers the environmental effects of the Palmers Road Corridor north of the Western Highway (Deer Park Bypass) in detail.

4.3 Road Safety and Capacity

Evaluation Objective - *To improve the road based transport capacity, connectivity and safety in western Melbourne, by developing a six-lane dual carriageway arterial road connecting the Western Freeway and Calder Freeway, while maintaining the connectivity of the existing local transport routes.*

Key Issues

The key issues to consider regarding the project's design and its associated safety and capacity benefits are:

- Exacerbation of congestion on the existing road network in the absence of an arterial route.
- Inefficient linkages with the road network exacerbate congestion at key nodes.
- Disruption to pedestrian movements, bicycle connectivity, public transport, motor vehicle traffic during the project construction.

Issues raised in public submissions and in evidence at the Hearings included:

- Design aspects of the Calder Park Drive section of the PRCP, in particular the need for six lanes and shared bicycle/ pedestrian path on both sides of this section.
- Reduction of speed limit from 80 km/h to 60 km/h along the Westwood Drive section of the proposed arterial road in the vicinity of the Burnside Hub Activity Centre.

Relevant Context

The relevant policies and guidelines that VicRoads has applied to the development and design of the PRCP include the the AustRoads Guide to Traffic Management, Victoria's Road Safety Strategy 2013-2022 and VicRoads' SmartRoads Guidelines (2011) and Bus Stop Guidelines.

The northern part of the Palmers Road Corridor is an approximately 16 km long network of local roads between the Western Freeway at Derrimut and the Calder Freeway at Calder Park, which traverses areas of the Cities of Melton and Brimbank. It currently comprises Robinsons Road, Westwood Drive and Calder Park Drive, which are managed by the respective Councils. The capacity of local roads varies between two lanes and four lanes and its design comprises divided and undivided sections. Most sections of these roads have significant setbacks to property boundaries, where land was planned to be used (and is mostly reserved) for a future arterial road. Majority of the corridor is a continuous road with the exception of a missing section in the existing north-south road link between Westwood Drive near Commercial Road at Caroline Springs, south of Kororoit Creek. Currently, vehicles are required to detour west along Rockbank Middle Road, Caroline Springs Boulevard through the Caroline Springs Activity Centre and along Commercial Road.

The PRCP involves progressive upgrading of the existing local roads initially to a four-lane divided road and ultimately to a six-lane divided carriageway arterial road to accord with the AustRoads Guide to Traffic Management and the VicRoads strategies and guidelines mentioned above. VicRoads has advised that the PRCP is a long term project without funding, which is proposed to be fully constructed by 2046, subject to future availability of funds.

Discussion and Findings

Transport and traffic modelling undertaken for the EES considered four scenarios for different configurations of the Palmers Road corridor in 2046:

- The base case or 'no project' - Two lanes (one lane each way) with no bridge over Kororoit Creek;
- Two lanes (one lane each way) with a connecting bridge over Kororoit Creek;
- Four lanes (two lanes each way); and
- Six lanes (three lanes each way) with a second additional bridge over Kororoit Creek.

The modelling has predicted traffic volumes, congestion and travel times in 2046 for the PRCP and adjacent transport corridors under the four scenarios outlined above. The EES also assessed the network performance, including road safety and access arrangements proposed for the PRCP[3].

According to the EES[4], with the increased traffic volume along the PRCP, the congestion levels in the adjacent road network (calculated based on the length of the corridor experiencing traffic volumes at 80% of road capacity or greater) would be at 68% for two lanes, 55% for four lanes and 20% for six lanes during the peak travel period. A six-lane scenario would offer the most significant improvement in travel time[5], as well as the best improvement in accessibility and safety for vehicles, pedestrian and cyclist using the future arterial road[6].

Construction of the bridge across the Kororoit Creek will increase traffic on the Palmers Road corridor, because linking the north-south local roads within the corridor will draw traffic from the surrounding road network. Construction of this 'missing link' will also improve traffic flow along the corridor and on the surrounding road network[7].

Adverse traffic impacts during the construction period of the PRCP would be managed through the implementation of a construction staging plan developed at the detailed design stage of the project.

The EES concluded[8] that the transport and traffic modelling demonstrates a strong level of compliance for the proposed PRCP with planning policy and AustRoads Guidelines. The PRCP ability to maintain appropriate access into the local

[3] See EES Chapter 8, pages 73 - 95

[4] See EES Table 8-8, page 83

[5] See EES Tables 8-10 and 8-11 on page 90

[6] See EES Section 8.3.10, page 94

[7] See EES page 95

road and street network is also evident. A six lane arterial road would increase road network performance and allow for greater volumes of traffic expected with the population growth in the area. Replacing roundabouts with signalised intersections and removal of two existing railway crossings would result in improved safety for pedestrians.

Comparative assessment of the four scenarios against the EES evaluation objective resulted in the six lane scenario rating 'very well', the four lane scenario rating 'well', the two lane scenario with a connecting bridge over Kororoit Creek rating 'neutral' and the base case rating 'poor'.

The Inquiry Panel noted that there were no submissions or evidence that questioned the assessment of the transport capacity and connectivity benefits identified in the EES.

I note that the Inquiry Panel was satisfied that the PRCP, as assessed in the EES, meets the relevant transport evaluation adopted for this EES. I concur with the Inquiry Panel opinion that the PRCP will improve the road-based transport capacity and safety in western Melbourne, while maintaining the connectivity of the existing local transport routes.

Road category and speed limit

Some submitters questioned the need for an 80 km/h speed limit along the Westwood Drive section of the PRCP in the vicinity of the Burnside Hub Activity Centre (Burnside Hub) and sought speed reduction to 60 km/h in this section of the arterial road. This was submitted in the context of the developer aspiration to extend the Burnside Hub's area from 36,000 square metres (as shown on the Melton Planning Scheme Amendment C112) to 52,000 square metres. The concept map presented in evidence at the Hearings has shown the Burnside Hub extending such, that Westwood Drive would form the boundary of the Hub and separate it from the residential area immediately to the east. The level of pedestrian activity in this area raised safety concerns in relation to the design speed limit of 80 km/h along this section of the PRCP.

The Inquiry Panel noted that the presented concept map differs from the Burnside Hub's area covered by the Development Plan Overlay Schedule 17 in the Melton Planning Scheme, west of Westwood Drive. Further, as the Burnside Hub has been designed as a car dependent centre with a main car park separating pedestrians on the PRCP from the Hub's facilities, it is not unreasonable to assume that driving to it would be a preferred option over walking for most people. The proposed controlled intersection on Westwood Drive will provide a safe pedestrian crossing. Also, shared pathways will be provided on both sides of this section of the PRCP[9].

Having considered the EES and evidence, the Inquiry Panel concluded that the AustRoads Category 2A (or 2B over the southern section), including a design 80 km/h speed limit, should apply to the PRCP. Therefore the sought reduction in the speed limit from 80 km/h to 60 km/h along Westwood Drive adjacent to the Burnside Hub is not warranted. I support the Inquiry Panel's finding on this matter.

Six lanes in the Calder Park Drive section of the PRCP

Some submitters questioned design aspects of the Calder Park Drive section of the PRCP, in particular the need for six lanes and a shared bicycle/ pedestrian path on both sides of this section. They noted that the EES indicates the future traffic volumes of this section of the arterial road are likely to be three times lower compared to other sections of the PRCP. Consequently, there would be no improvement in travel speed for the morning peak travel period with the upgrade from four to six lanes.

Evidence on behalf of VicRoads explained that the transport and traffic modelling undertaken for the EES significantly underestimates the longer-term traffic volumes for this section of the PRCP, as the modelling did not include the potential future development of the industrial zoned site on the east side of Calder Park Drive, nor the potential expansion or alternative use of the Calder Park Motorsports Centre. Future volumes on the Calder Park Drive section of the PRCP are likely to be higher than those predicted in the modelling[10].

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[8] See EES page 95

[9] See Inquiry Panel Report page 18

[10] See Inquiry Panel Report page 19

I note that the inquiry Panel was satisfied[11] that upgrade to six lanes is warranted for the entire PRCP, including the Calder Park Drive. For this section of the PRCP it will provide capacity for future development of the industrially zoned land, as well as to facilitate and encourage development of that land. The future widening of Calder Park Drive to six lanes would also improve access to the Calder Park Motor Sports Centre by ensuring that the proposed signalised intersection on Calder Park Drive between the new Calder Freeway interchange and the railway line operates efficiently. This is likely to allow for more effective and intensive use of this facility.

Shared path on both sides in the Calder Park Drive section

A submission considered the proposed shared pedestrian/bike path on both sides of an upgraded Calder Park Drive unnecessary when there was already a footpath along Albert Road and pedestrian and cyclist activity was generally low in the area. According to the cross section design of this part of the PRCP, the proposed shared path would use six metres of the corridor width. This space could be used for more landscape treatment to mitigate effects of the project.

The Inquiry Panel supported[12] the inclusion of shared paths on both sides of the PRCP, including the Calder Park Drive section, as this design aspect of the project provides for the improved road safety outcomes. I agree with the Inquiry Panel's findings on this matter.

Conclusions

Having regard to the EES, submissions and the Inquiry Panel Report, it is my assessment that PRCP would enable road capacity and safety to be improved between the Western Freeway at Derrimut and the Calder Freeway at Calder Park. Further, the project will contribute to the upgrade in capacity and network performance of adjacent transport networks, enabling the efficient movement of public transport and other road users through this corridor.

4.4 Amenity and Environmental Quality

Evaluation Objective - *To minimise adverse noise and other amenity effects on nearby residents and land-uses, to the extent practicable.*

Key Issues

The key amenity-related issues associated with both construction and operation of the arterial road are:

- The potential for increases in noise levels from the project's operation to significantly affect amenity in adjacent residential and parkland areas.
- The potential for increased vehicle traffic to adversely affect local air quality, relative to *State Environmental Protection Policy*.

Issues raised in public submissions and in evidence at the Hearings included:

- Amenity and noise impacts related to the proposed removal of landscape mound adjacent to Albert Road, Sydenham.
- Adverse noise effects on residents directly affected by the construction and operation of a new section of road (Westwood Drive) and a new bridge over the Kororoit Creek.

Relevant Context

VicRoads has applied the VicRoads Traffic Noise Reduction Policy (2005) to its development and design of the PRCP.

The VicRoads Traffic Noise Reduction Policy (2005) seeks to limit noise for a "new alignment" to 63 dB(A) for residential dwellings (Category A) between 6 am and midnight and for schools and other noise sensitive buildings (Category B) between 6 am and 6 pm. Further, where the noise level adjacent to either Category A or B buildings prior to the road

[11] See Inquiry Panel Report page 21

[12] See Inquiry Panel Report page 21

improvements is less than 50 dB(A), consideration is given to limiting the noise level increase to 12 dB(A). The VicRoads policy further states that consideration will be given to retrofitting mitigation measures to buildings for eligible projects where the traffic noise levels exceed 68 dB(A)[13].

This policy is adopted and used by VicRoads across the State, although it does not form part of the planning policy framework or related planning provisions[14].

VicRoads submitted at the Hearings that '*the policy guidelines at Clause 13.04-1 Noise Abatement of the State Planning Policy Framework state that the VicRoads 2003* 'A Guide to the Reduction of Traffic Noise' *must be considered as relevant. This Guideline is in effect a summary of the VicRoads Traffic Noise Reduction Policy and therefore (...) the State Planning Policy Framework requires the Panel to have regard to the Guideline which includes thresholds identical to those in the VicRoads Traffic Noise Reduction Policy'.*

The Inquiry Panel gave consideration to the 'Guide to the Reduction of Traffic Noise' (VicRoads 2003) in the context of the relevant effects of the PRCP[15].

The relevant policies and guidelines that VicRoads have applied to the development and design of the PRCP to manage potential adverse air quality effects are: the SEPP (Air Quality Management) (SEPP (AQM)), SEPP (Ambient Air Quality) (SEEPP (AAQ)), the *EPA Environmental Guidelines for Major Construction Sites (Publication No. 480)* and the *VicRoads Noise Guidelines – Construction and Maintenance Works 2007*.

Discussion and Findings

Noise

The EES predicts some significant increases in traffic noise affecting a number of residential properties in close proximity to the project, in particular as a result of the construction of the new Westward Drive connection (bridge) over Kororoit Creek.

The noise modelling in the EES considered three scenarios[16] to predict adverse operation traffic noise impacts on noise sensitive buildings (i.e. residences, schools, community buildings) within the PRDP area:

- *Scenario1* – The potential increase in traffic noise on 44 noise sensitive buildings along the missing Westwood Drive connection (across Kororoit Creek) from the existing conditions, to the upgraded two-lane road in the near future (i.e. the 'first' bridge).
- *Scenario 2* – The potential increase in traffic noise on 752 noise sensitive buildings along the corridor from the existing conditions (i.e. without any Westwood Drive connection) to the upgraded six-lane road in 2046.
- *Scenario 3* – The potential increase in traffic noise on 752 noise sensitive buildings along the corridor from the upgraded 2 lane road (i.e. with a Westwood Drive connection) to the six- lane upgraded road in 2046 (the 'second' bridge).

The modelling in the EES predicted noise levels at residences for Scenario 1 (i.e. following the new section of Westwood Drive and first bridge over Kororoit Creek[17]) to increase from between 4 dB(A)[18] to over 15 dbB(A): 24 out of the 44 residences are predicted to experience an increase of greater than 15 dB(A) . This is attributable to the development of the new road bridge that would connect the local roads. The EES stated that this significant increase in noise levels is

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[13] See section 3.2 of Road Design Note: Interpretation and application of VicRoads Traffic Noise Reduction Policy 2005.

[14] In 2012, the Inquiry panel appointed by the then Minister for Planning to assess VicRoads' Princes Highway Duplication Project EES noted (on pages 90-91 of its report) that the VicRoads Traffic Noise Reduction Policy did not form part of the planning policy framework or related planning controls and as such was not explicitly part of their considerations under a planning scheme or binding on the Panel's consideration of noise effects for that project.

[15] See Inquiry Panel Report page 25

[16] See EES page 101

[17] See EES page 107

[18] The units for the predicted noise levels are dB(A) $L_{A10\ (18\ hour),}$ which is the average of he noise levels exceeded for 10% of the time over 18 hours, from 6am to midnight.

attributable to the low level of existing background noise presently in this area in the absence of the connecting road bridge.

A 3 dB(A) increase is considered likely to be detected by humans at residences, a 5 dB(A) increase is considered to be a clearly noticeable increase, whereas a 10 dB(A) increase is perceptible by humans as a doubling of the existing noise levels[19].

The modelling for Scenario 2 predicted increased noise levels at 750 properties in the long term, of which 109 properties are predicted to have an increase of over 10 dB(A), including 48 properties with predicted increases of over 16 dB(A) when the entire project is completed by approximately 2046.

The modelling for Scenario 3 predicts increased noise levels at 723 properties, of which 224 properties are predicted to have an increase of over 4 dB(A), including 38 properties with predicted increases of over 7 dB(A) in the longer term (by approximately 2046).

VicRoads' position at the hearing was that consideration of noise mitigation should be applied only to Scenario 3 (the upgrade from a linked two-lane road to six-lane road in 2046), after the first bridge over the creek (Scenario 1) is constructed by the Melton Council. Further to this, VicRoads highlighted that the duplication of an existing road does not qualify for noise attenuation under the VicRoads Traffic Noise Reduction Policy and that the arterial corridor was identified in the Melton East Strategy Plan (1997), included in the Planning Scheme in 1999 via a Development Plan Overlay. Therefore, all development and subdivisions within the project area occurred subsequent to that being encompassed within the Planning Scheme.

The Melton Council's evidence[20] at the Hearing has confirmed that it intends to implement the Scenario 1 works as soon as possible, subject to completion of the EES process.

The Inquiry Panel did agree that the future arterial corridor was identified and able to be considered at the time residential development and subdivision took place in the area. However, it concluded that it would have been reasonable for the prospective purchasers / developers to assume that appropriate mitigation of future traffic noise would be undertaken when the arterial road was implemented[21].

The Inquiry Panel concluded that the decision on the necessary mitigation needs to be based on the significance of the predicted noise impacts of the project and that affected residents in this area should not be unreasonably impacted regardless of when and who constructs the bridges[22].

The construction of the Westward Drive connection will facilitate the most significant predicted short term increases in traffic noise for a large number of residential properties, particularly within proximity to Koroit Creek. These impacts are predicted to be significant for many of the residences and should be mitigated wherever possible in the design and development of the bridges.

Other increases in traffic noise levels assessed for 752 buildings along the entire PRCP (i.e. for Scenarios 2 and 3) are changes that would occur in stages over a longer period of time (between 2016 and approximately 2046), as the traffic volumes grow and the road's capacity is progressively upgraded from two-lanes to four-lanes and then to the ultimate six- lane design. The need to mitigate effects that may stem from the progressive upgrading of the road infrastructure along the entire PRCP should be considered by VicRoads at the time each stage of upgrading occurs, in the context of both the significance of the predicted noise impacts at that time and any relevant policy.

Landscape mound adjacent to Albert Road

Submitters along Albert Road were concerned that the proposed removal of an existing landscape mound along a portion of the route, adjacent to Albert Road, Sydenham, will expose residents to increased traffic noise level from the proposed Calder Park Drive section of the PRCP.

VicRoads evidence at the Hearings confirmed that in the current concept design the existing mound is proposed to be removed. The removal of a mound does not trigger a requirement for noise attenuation measures under the VicRoads

[19] See Princes Highway Duplication EES (VicRoads, 2012) page 16-11.

[20] See Inquiry Panel report page 52

[21] See Inquiry Panel report page 24

[22] See Inquiry Panel report page 25

Traffic Noise Reduction Policy, as the mound is not a 'building' currently shielding other buildings from the existing traffic noise. Further evidence explained[23] that the mound has little acoustic reduction properties because of its relatively low height compared to the height of the noise source on the road and the height of the adjacent residences. Modelling undertaken for the Hearings indicates that there would be approximately 1 dB(A) increase in noise levels in both the existing and 2046 conditions if the mound were removed.

Despite the argument of whether the policy does or does not apply and potentially negligible noise level increases, VicRoads confirmed[24] at the Hearings that it is prepared to retain part of the mound, subject to detailed design. It would also consider providing noise attenuation measures in sections where it is not feasible to retain the mound.

I note that this commitment made by VicRoads is clearly beneficial to residents of Albert Road, Sydenham and should be commended. I further note that VicRoads' interpretation of its policy is this context is inconsistent with its response to the adverse noise effects on Westwood Drive residents. The issue of equitable policy application was clearly in the Inquiry Panel mind and is reflected in its finding that:

> *The current practice of assessing [applicability of] the VicRoads Traffic Noise Reduction Policy against only works undertaken by VicRoads where initial works are done initially by another road authority should be reviewed[25].*

I concur with the Inquiry Panel's findings on these matters.

Air quality

The VicRoads Air Quality Screening Tool (AQCT), developed in consultation with the EPA, was used as an approved regulatory near-road air quality model, in accordance with the SEPP (AQM) requirements,

The EES indicates that the PRCP's effect on air quality will largely be confined to construction dust as the increase in operational air emissions from vehicles travelling along the upgraded road would be negligible and remain below the relevant intervention levels under the SEPP (AQM)[26].

The EES states that, under the proposed Environmental Management Framework (EMF) for PRCP, VicRoads will implement a dust management controls and procedure to minimise these impacts including by a staged approach to construction and promptly rehabilitating cleared areas[27].

Conclusions

It is my assessment that:

- The operational noise effects of the new road connecting Westwood Drive by the proposed Kororoit Creek bridges will be significant for a number of noise sensitive buildings in the vicinity of Kororoit Creek and warrant mitigation.
- The operational noise increases attributable to the remaining sections of the PRCP are not likely to result in any significant adverse effects for sensitive receptors in the short term. These predicted increases to noise levels are likely to manifest more gradually as the project is progressed in stages between 2016 and approximately 2046.
- Effects on air quality are likely to be confined to construction dust, which can be readily managed through standard procedures and additional measures that are outlined in the EMF.

Further it is my assessment that:

a) The detailed design for road infrastructure connecting Westwood Drive, including the proposed Kororoit Creek bridges, include measures to mitigate significant noise effects for noise sensitive buildings identified in the EES, irrespective of which authority constructs the works.

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[23] Ibid

[24] Ibid

[25] See Inquiry Panel Report page 27

[26] See EES Table 9-8, page 106

[27] See EES Table 16-3, page 209

b) VicRoads consider the need for any future noise mitigation for the remaining sections of the PRCP at the time it is progressively upgraded from two-lanes to four-lanes, and then from four-lanes six-lanes, in the context of the significance of predicted changes to noise levels at those times and any relevant policy.

c) Incorporated Document to be amended, where appropriate, to:
   - Add the requirement for the mitigation of noise impacts of the proposed Kororoit Creek bridges required to link Westwood Drive to achieve the VicRoads Traffic Noise Reduction Policy objectives; and
   - Add the requirement for acoustic fencing and appropriate landscaping along the section of Calder Park Drive abutting Albert Road to achieve at least existing noise levels.

4.5 Social, Land use and Infrastructure

Evaluation Objective - To minimise adverse social and land-use effects, including impacts on existing infrastructure.

Key Issues

In the context of relevant legislation and policy, the key issue for the assessment of impacts on land use and infrastructure is the potential for dislocation and diminished social wellbeing due to severance or reduced access to social networks and community facilities.

Issues raised in public submissions and in evidence at the Hearings included:

- Land acquisition related to the intersection design at Calder Park Drive/ Hume Drive (Lynette Court in Taylors Hill area), Deer Park service station site and Burnside Hub Activity Centre.
- Reduced property access, including to the Calder Park Motor Sports Centre, Albert Road and Erskine Way in Sydenham area, Deer Park service station site and Burnside Hub Activity Centre.
- Reduced vehicle and pedestrian access to cross the arterial road in the vicinity of the Burnside Retirement Village.

Discussion and Findings

Impacts of land use disruption

The PRCP is unlikely to result in any major land use changes due to effective strategic planning already undertaken in this area. The EES states that the project is consistent with State and local planning polices considering provisions for major transport infrastructure[28].

VicRoads owns most of land required to facilitate the project and no residential buildings will be acquired[29]. The acquisition of small parts of up to 26 properties, including some portions of three residential properties, will not result in a significant social impact. Land acquisition will be compensated in accordance with requirements of the *Land Acquisition and Compensation Act 1986*.

Overall, economic impacts on business viability or operations are unlikely, because access issues can be addressed in the detailed design in consultation with the land owners.

Some submitters raised concerns regarding design aspects of the project that will reduce or changed the existing property access, including to the Calder Park Motor Sports Centre, Albert Road and Erskine Way in Sydenham area, Lynette Court in Taylors Hill area, Deer Park service station site and Burnside Hub Activity Centre[30].

The Calder Park Motor Sports Centre opposed the project in its exhibited form, as there was concern that the proposed closure of direct access to Calder Freeway for events less than 10,000 patrons will affects this facility's operation.

[28] See EES page 125

[29] See EES Table 10-3, page 122

[30] See Inquiry Panel report pages 29 - 34

However, at the Inquiry Panel hearing, VicRoads agreed to consider a project design allowing for a left-turn slip lane in and out of the Centre at Calder Park Drive, constructed at the cost of the land owner[31].

Ten submissions from property owners in the Albert Road, Sydenham area were concerned with the inconvenience that would result from removing the right-turn lane from Calder Park Drive into Albert Road and Erskine Way. As this area is bound by major highways and a railway line, this could potentially affect the connectivity of this community with the surrounding areas[32]. In response to submissions, VicRoads proposed a new u-turn point approximately 200 metres north of Erskine Way to assist with the connectivity in this area, which addresses these concerns.

One property owner in Lynette Court, Taylors Hill requested that the design of Calder Park Drive/Hume Drive intersection be reviewed to avoid a portion of his property being acquired. This property backs onto Calder Park Drive on the north east corner of the Calder Park Drive/Hume Drive intersection. The adjoining property is also affected by land acquisition[33].

The Panel concluded that the design of the Calder Park Driveway/ Hume Drive intersection needs some review, in order to remove the slip lane on the north east corner, thus removing the need for some acquisition that affects the two aforementioned properties. This left-turn slip lane was considered unnecessary by the Panel, unless further analysis by VicRoads demonstrates otherwise[34].

Having considered the EES and evidence at the hearings the Inquiry Panel concluded[35] that the construction of raised interchange with Calder Freeway, Bendigo railway overpass and lane duplication on Calder Freeway could cause disruption to the Calder Park Motor Sports Centre. Consequently, these works require careful management. Further, the proposed Calder Park Drive access for Calder Park Motor Sports Centre via the controlled intersection with seven access lanes in and out of the Centre can adequately cater for future traffic demand. This intersection can be mirrored to adequately cater for future traffic demand at the Calder Park industrial site.

I support the Inquiry Panel's findings on the above matters.

Existing infrastructure

Construction of the project will have short-term impacts on existing infrastructure due to the imposed temporary restrictions on traffic movement. These impacts will be able to be appropriately managed through the implementation of CEMPs and Traffic Management Plans (TMP). Access for emergency service vehicles will be maintained during construction through TMPs which will need to be developed in consultation with various emergency service bodies.

According to the EES[36], when operational the project will not restrict access to retail and community facilities, as their development was informed by the knowledge that a major arterial road will be constructed in the area and are located on both sides of the corridor.

However, owners of the Deer Park service station were concerned that the current design removes the northern Westwood Drive access to the station, restricts southbound traffic from entering the site and restrict patrons from turning right into Westwood Drive. They requested design changes to avoid these impacts[37].

Burnside Hub Activity Centre questioned adequacy of two access points provided in the project design to the Centre at Westwood Drive. This was submitted in the context of the developer aspiration to extend the Burnside Hub's area from 36,000 square metres (as shown on the Melton Planning Scheme Amendment C112) to 52,000 square metres.

Burnside Retirement Village raised concerns about vehicle and pedestrian access to cross the arterial road in the vicinity of the Retirement Village[38]. The proposed road widening includes a median that will require drivers to u-turn at the

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[31] See Inquiry Panel report page 29

[32] See Inquiry Panel report page 32

[33] See Inquiry Panel report page 33

[34] See Inquiry Panel report page 37

[35] Ibid

[36] See EES page 113

[37] See Inquiry Panel report page 34 to 35

[38] Ibid

Rockbank Middle Road intersection over one kilometre north to access Burnside Shopping Centre which is immediately to the south and the Western Highway. The project also removes direct access to a bus stop at Westwood Drive, opposite the Retirement Village. This would require residents to walk a considerable distance to Burnside Hub Shopping Centre to safely access a bus stop.

The Inquiry Panel stated[39] that it did not consider it safe for traffic to turn right into, or from, Westwood Drive to access the service station, as this arrangement is in conflict with the Project's road safety and capacity evaluation objective. It concluded that the PAO and access changes proposed for the Deer Park service station are appropriate and are unlikely to adversely impact on its operation[40].

In response to the Burnside Hub Activity Centre submission, the Inquiry Panel concluded[41] that the Public Acquisition Overlay proposed adjacent to the Hub adequately responds to the its access requirements and has the capacity to accommodate increased traffic volumes in the future, should the Centre's area be extended.

In case of the Burnside Retirement Village, the Inquiry Panel has recommended adding a u-turn point on Westwood Drive near Kelly Avenue, approximately 400 metres north of Nichol Avenue to facilitate both vehicle access to Burnside Shopping Centre and safe pedestrian access to a bus stop at Westwood Drive[42].

I support the Inquiry Panel findings on these matters.

Conclusions

It is my assessment that:

- The effects of acquisition of small parts of commercial or residential properties required for the proposed road reservation, and the associated economic effects on business viability or operations, are not significant and have been minimised, and are therefore acceptable.

Further, it is my assessment that:

a) While the assessment of social and economic effects have been comprehensive in the EES, further consideration of mitigation measures for the detailed design by VicRoads is necessary, in relation to effects on Taylors Hill and Sydenham areas and for the Burnside Retirement Village, as set out in this Assessment.

b) The Incorporated Document be amended, where relevant, to:
   - Add a u-turn point on Calder Park Drive (turning from north to south) approximately 200 metres north of Erskine Way, Sydenham.
   - Add a u-turn point on Westwood Drive near Kelly Avenue, approximately 400 metres north of Nichol Avenue.
   - Remove the south-bound left slip lane from Calder Park Drive to Hume Drive in Taylors Hill (as shown in Design Drawings Sheet 30) unless detailed design demonstrates that it is required for satisfactory operation of the intersection.

c) Public Acquisition Overlay Schedule 1, allowing for the south-bound left slip lane, be deleted from the proposed Calder Park Drive and Hume Drive intersection in Taylors Hill, unless this slip lane is confirmed to be necessary following further analysis.

[39] Ibid

[40] See Inquiry Panel report page 37

[41] Ibid

[42] See Inquiry Panel report page 38

4.6 Visual and Landscape Values

Evaluation Objective - To avoid adverse effects on the landscape and recreational values of the Organ Pipes National Park and minimise visual effects on open space areas.

Key Issues

In the context of relevant legislation and policy, the key issues for the assessment of impacts on land use and infrastructure are:

- The potential for effects on the landscape and recreational values of the Organ Pipes National Park from the Project, in particular the proposed raised interchange at Calder Freeway.

Issues raised in public submissions and in evidence at the Hearings included:

- Limited landscape treatment proposed in the EES will not adequately mitigate visual impacts of the project in the residential areas.
- Adverse visual impact in the Albert Road, Sydenham area due to the proposed removal of the existing landscape mound and provision of share pathways on both sides of the upgraded road.
- Significant adverse impact on the Kororoit Creek visual amenity from the proposed bridge linking Westwood Drive.

Relevant Context

VicRoads considered natural landscape values of the Organ Pipes National Park, Banchory Nature Conservation Reserve and Ravenhall East Grassland Nature Conservation Reserve and the Kororoit Creek environs,

The Organ Pipes National Park, located north of the Calder Freeway, is a park designated under the *National Parks Act 1972*. The geological features of the park – the Organ Pipes, Tessellated Pavement and Rosette Rock – were the primary reason for its listing under the Act.

The Banchory Nature Conservation Reserve is located between Calder Park Drive and the Bendigo-Melbourne railway and the Ravenhall East Grassland Nature Conservation Reserve is located between Robinsons Road and Western Freeway. The reserves are established to protect remnant areas of native grassland. The Organ Pipes National Park and both grassland reserves are managed by Parks Victoria.

Discussion and Findings

The EES provides an evaluation of the potential visual and landscape impacts of the PRCP, based on a systematic analysis of landscape character types and their sensitivity to change. Three landscape character types were identified within the PRCP view-shed for this assessment:

- Basalt Plains: Organ Pipes National Park, Calder Park, Banchory Nature Conservation Reserve, Kororoit Creek, Ravenhall East Grassland Nature Conservation Reserve;
- Residential: Sydenham, Taylors Hill, Watervale, Burnside, Deer Park and Derrimut; and
- Commercial: Ravenhall.

Their scenic quality was rated on a scale from high (e.g. National Park) to low[43]. The visual study evaluated the level of change within three areas along the PRCP on a scale from negligible to high[44]. The level of impact in each area, and a corresponding impact rating, were determined by combining the magnitude of visual effect from PRCP and the sensitivity of the landscape character to change. These impacts were then rated against the EES evaluation objective on the scale of a 'very poor' to 'very well'[45].

[43] See Technical Appendix H, page 43

[44] See Technical Appendix H, page 53

[45] See EES Table 11-1 page 138

The EES stated that majority of the proposed road would be constructed through a built landscape comprising almost entirely of residential developments with low scenic quality. The impact on the visual amenity of dwellings and public open spaces along the alignment was assessed in the EES as mostly insignificant.

The EES visual study considered impacts on the Basalt Plains natural landscape in more detail. The study showed that the project will affect scenic values of this natural landscape, including high scenic quality of the Organ Pipes National Park and medium scenic quality of the Kororoit Creek corridor, Banchory Grove Nature Conservation Reserve and Ravenhall East Grassland Nature Conservation Reserve.

The EES concluded[46] that the proposed Calder Freeway raised interchange would not significantly impact on majority of the Organ Pipes National Park, including on key visitor destinations in the park (i.e. the visitor centre and the geological features) due to screening provided by its extensive vegetation. The proposed screen planting near Calder Freeway interchange would further mitigate the PRCP effects on the Park's visual and landscape values.

The impact on visual and landscape values of the Banchory Nature Conservation Reserve and Ravenhall East Grassland Nature Conservation Reserve grass land will not be significant.

The proposed bridges and road widening works would have a moderate impact on the Kororoit Creek corridor predominantly natural landscape. The EES noted that the effects can be mitigated to some extent by creating a light well between the two proposed bridge structures and planting indigenous vegetation on the embankments[47].

The EES outlines a range of measures[48] that would be implemented to mitigate visual and landscape impacts through sensitive road design, screening or landscaping along the PRCP.

After implementation of the proposed mitigation measures, the EES rated the project overall performance against the landscape and visual evaluation objective as 'neutral', although its effect on the Kororoit Creek corridor was rated as 'poor'.

The Inquiry Panel considered the potential visual and landscape impacts of the PRCP and took into account submissions from Parks Victoria and a number of local residents whose views are likely to be impacted by the project.

With the exception of viewpoints from the Kororoit Creek corridor and Albert Road in Sydenham, the Inquiry Panel agreed with VicRoads' EES regarding the low significance of the visual and landscape impacts.

I note that the Inquiry Panel was satisfied with the level of consideration VicRoads gave in the EES to the Parks Victoria's requirements regarding mitigation of the potential adverse visual effects of the PRCP on the Organ Pipes National Park and two grass reserves. Parks Victoria advised that their concerns were addressed during the development of the EES[49].

The Inquiry Panel concluded that VicRoads should give more consideration to landscape planning during detailed design for the PRCP to address submitters' concerns and to ensure that the visual and landscape effects were minimised.

I accept the Inquiry Panel conclusion on this matter.

Conclusions

It is my assessment that:

- The potential visual amenity and landscape impacts of the PRCP on the Organ Pipes National Park and the Banchory and Ravenhall East Conservation Reserves are not likely to be significant, provided the mitigation measures specified in the EES are incorporated into the design and implemented.
- However, there is likely to be a moderate impact on the landscape values of the Kororoit Creek corridor, which requires mitigation to ensure it is acceptable.

[46] See EES page 147

[47] See EES page 142

[48] See EES page 144

[49] See Inquiry Panel Report page 41

Further, it is my assessment that:

- The design of the PRCP be refined, in particular to:
    - minimise visual impacts on the Kororoit Creek corridor from the proposed two bridges by designing the bridges so that they are sympathetic to their environment, and by creating a light well between the two bridges and planting indigenous vegetation is on the embankments.
    - further minimise visual impacts on Albert Road, Sydenham by implementing landscape treatment on the wider road reserve near the northern end of this road and by planting canopy trees and other suitable vegetation.
    - incorporate a safe reduction in width of the centre median of the proposed arterial road, or use of protective barriers, to create areas of wider road verges, especially near the share pedestrian/bicycle paths, for planting canopy trees and shrubs to help reduce the visual impacts.
- The Incorporated Document be amended to require a Comprehensive Landscape Plan, that includes specific objectives and mitigation in relation to landscape and design outcomes, to be prepared at the detailed design stage(s) for the project, in consultation with the local Councils.
- Independent design advice or design review is required (at key milestones) and should be built into the design and implementation of the project. This should include a review by the Victorian Design Review Panel (VDRP), managed by the Office of the Victorian Government Architect.
- Following this independent design review, final plans need to be submitted showing the detailed design, including the design of the Calder Freeway interchange, Kororoit Creek bridge, approaches, related structures, and landscaping for approval (via a condition under the incorporated document).

4.7 Biodiversity and Habitat

Evaluation Objective - To avoid or minimise adverse effects on native vegetation and listed flora and fauna species and ecological communities, and address opportunities for offsetting potential losses consistent with relevant policy.

Key Issues

In the context of the relevant legislation and statutory policy, the evaluation of potential effects on biodiversity and native vegetation needs to address the following issue:

- Loss of or degradation to significant habitat for listed protected flora and fauna species and communities, such as those associated with the remnant grasslands and Kororoit Creek environs.

Issues raised in public submissions and in evidence at the Hearings included:

- Need to develop a CEMP or similar document for the construction phase of the project to ensure that adequate mitigation measures and offset arrangements for the proposed native vegetation clearance are in place.

Relevant Context

In the context of the potential adverse biodiversity effects, VicRoads have considered the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (DEPI, 2013) (BAG) and the *Biodiversity Conservation Strategy for Melbourne's Growth Corridor* (DEPI 2013) (BCS).

The BCS sets requirements for urban development in this area in the context of the potential impacts on Matters of National Significance and form part of the Commonwealth[50] and State approval processes.

The Ravenhall Quarry Site Precinct (PSP 1084) is a small section of the project that lies within the BCS covered area[51].

[50] The Commonwealth approval process for the PRCP is ongoing and separate to the state EES process. Offsetting arrangements under the EPBC Act will be made separately by VicRoads.

Discussion and Findings

Native Vegetation and Habitat of Listed Species

The EES revealed that the project area[52] was likely to support three Ecological Vegetation Communities: Heavier-soils Plains Grassland (EVC 132-61), Plains Grassy Wetland (EVC 653) - also referenced as Aquatic Herbland - and Creekline Grassy Woodland (EVC 68). However, the subsequent EES surveys established that the Creekline Grassy Woodland mapped along Kororoit Creek no longer meets the condition thresholds of an EVC[53].

The PRCP would affect up to 11.19 hectares (ha) or 2.64 habitat hectares (Hha) of remnant vegetation within two EVCs:

- 2.63 Hha (11.16 ha) of a very high conservation significance Heavier-soils Plains Grasslands which occurs within 43 patches across the project area in 11 Habitat zones[54]. This EVC corresponds to the FFG listed community Western (Basalt) Plains Grasslands and its condition varies from high quality within conservation areas to very poor quality vegetation along roadside reserves[55].
- 0.01 Hha (0.03 ha) of a very high conservation significance Plains Grassy Wetland, which occurs in the project area as small patches within large remnant Plains Grassland patch[56].

The Project could also result in the removal of two large scattered trees in the riparian zone of Kororoit Creek[57].

In the selection of alignment for the PRCP, VicRoads gave a high priority to avoiding and minimising effects on native vegetation and known habitat areas for FFG Act (and EPBC Act) listed fauna species. The EES stated[58] that the project's functional design footprint avoids the Organ Pipes National Park and Ravenhall Grasslands Nature Conservation Reserve, so these conservation areas will not be directly impacted. This will avoid the potential impacts on the following listed fauna species previously recorded within these areas:

- Striped Legless Lizard within the Organ Pipes National Park; and
- Striped Legless Lizard, Spiny Rice-flower, Pale Swamp-everlasting and Slender Bindweed within the Ravenhall Grasslands Nature Conservation Reserve.

The acquisition of 0.13 ha of the Banchory Grove Nature Conservation Reserve and a small section of the Pioneer Park (the state significant BioSite 5270 managed by the Brimbank City Council) will be required. These conservation areas potentially contain habitat of the following listed species: Striped Legless Lizard, Spiny Rice-flower, Clover Glycenia and Rye Beetle-grass. The Inquiry Panel considered the acquisition impact of these areas of habitat to be relatively minor especially given VicRoads is going to address relevant offset provisions under the BAG[59].

The EES calculated[60] that a General Offset of 2.425 Biodiversity Equivalent Units is required under the BAG to compensate for the proposed clearance of 2.64 Hha of remnant native vegetation required by the PRCP. Offset will need to be secured by VicRoads prior commencement of the project.

The Ravenhall Quarry Site Precinct (PSP 1084), which lies within the BCS covered area, proposed to be acquired by the PRCP. According to the EES[61] the applicable offset targets under the BCS for this area:

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[51] See EES page 150

[52] See EES Figure 12 -1 page 151. The project area is defined as the functional design footprint nominated by VicRoads plus additional areas surveyed by Ecology and Heritage Partners Pty Ltd in 2009

[53] See EES page 154

[54] See EES Figure 12-2 & 12-5 on pages 155 and 158

[55] 3.27 ha of this EVC meets the condition thresholds of the nationally significant community Natural Temperate Grassland of the Victorian Volcanic Plain

[56] 0.03 ha of this EVC meets the condition thresholds of the nationally significant community Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains

[57] See EES Figure 12-4 page 157

[58] See EES page 159

[59] See Inquiry Panel Report page 46

[60] See EES page 165

[61] See EES page 165

- 0.047 ha of native vegetation at a cost of $4,468.53;
- 0.047 of Spiny Rice-flower habitat at a cost of $373.03; and
- 0.99 ha of Golden Sun Moth habitat at a cost of $7,838.86

Listed Flora Species

The EES assessment indicates that the PRCP has the potential to impact on four flora species of state significance protected under the FFG Act (and EPBC Act), namely on Spiny Rice-flower, Tough Scurf-pea, Basalt Podolepis and Fragrant Saltbush[62]. Spiny Rice-flower was not recorded in the EES field surveys (in 2009 and 2013), but VicRoads put considerable effort into avoiding the areas where it was recorded in the past in the PRCP design. Tough Scurf-pea was not recorded in the surveys in the Kororoit Creek corridor, however the EES stated that it is possible this species may occur elsewhere in the corridor (Melton City Council when planning the first bridge across the creek in 2013, translocated the population of these plants to a site 100m east of the project design footprint). Basalt Podolepis plants recorded in the earlier surveys were not found in the 2013 survey as the area previously supporting this species had been disturbed by residential development. However it may occur elsewhere in the project area. Fragrant Saltbush was recorded in both native and non-native grasslands throughout the project area.

The PRCP impact on the listed flora species is not considered to be significant given VicRoads were able to largely avoid and minimise impacts on these flora species during the process of route selection and conceptual design.

Listed Fauna Species

Targeted surveys were conducted for the EES in 2009 and 2013 for a range of fauna species listed under the FFG Act (and EPBC Act) that were likely to be present in the study area, including Striped Legless Lizard, Golden Sun Moth, Growling Grass Frog, Grey-headed flying fox and Swift parrot[63].

No Growling Grass Fogs, Striped Legless Lizard or Golden Sun Moth species were recorded. However, it cannot be confirmed as being absent, as suitable habitat exists for these species in the project area (e.g. the Kororoit Creek corridor contains high quality breeding habitat for Growling Grass Fog).

Suitable foraging habitat also exists for Grey-headed flying fox along the Kororoit Creek corridor, but there is no suitable roosting habitat in the project area. The road corridor provides limited forage potential for Swift parrot. Both those species are likely to fly over the project area.

The EES concluded that 10 listed fauna species were assessed to occur in the project area, but none are likely to be directly affected by the PRCP[64]. If not adequately mitigated, the PRCP construction effects, such as noise, vehicle movements and works within the Kororoit Creek corridor may indirectly affect some native species of fauna.

Having considered submissions, the Inquiry Panel accepted the DELWP's advice that the EES adequately identified the potential PRCP effects on biodiversity and habitat and that it considered and met policy requirements for native vegetation removal[65].

Based on its analysis of submissions and the EES, the Inquiry Panel concluded that the PRCP's overall impacts on native vegetation, listed flora and fauna species and conservation areas will be relatively limited and are not considered to be significant[66].

[62] See EES page 162

[63] See EES page 159

[64] See EES Table 12-3 page 165

[65] See Inquiry Panel Report page 45

[66] See Inquiry Panel Report page 47

Conclusions

Having regard to the Inquiry's analysis, the EES and submissions, it is my assessment that:

- The PRCP is not likely to have effects of regional or state significance on biodiversity values, although it will involve clearing up to 11.6 ha of native vegetation that has some habitat values for FFG Act-listed species and ecological communities.
- These losses are considered acceptable given the proposed mitigation and offsets, consistent with the relevant policy framework (BAG), and in light of the avoidance and minimisation of vegetation losses undertaken through the EES process.
- The PRCP is not likely to have significant effects on the listed floral species Spiny Rice-flower, Tough Scurf-pea, Basalt Podolepis and Fragrant Saltbush. While only Fragrant Saltbush was recorded within the proposed footprint, there are measures in place to help ensure effects are not significant on three other species in the event they are discovered through pre-construction surveys.
- The PRCP is not likely to have significant direct effects on terrestrial and aquatic fauna through the loss of habitat for species listed under the FFG Act, including the Striped Legless Lizard, Golden Sun Moth, Growling Grass Frog, Grey-headed flying fox and Swift parrot.
- The proposed offset calculated in the EES is considered acceptable. However, as noted by the Inquiry Panel, it needs to be confirmed in consultation with DELWP and secured prior to commencement of the PRCP works.

Further, it is my assessment that:

- The commitments in the EES for avoiding, managing and offsetting potential impacts on native vegetation and listed flora and fauna species are to be fully implemented.
- The Inquiry Panel recommendation regarding the preparation of a Construction Environmental Management Plan, to detail additional measures to reduce the impacts on native vegetation and other biodiversity values identified through detailed design and to address native vegetation offset requirements of both the BAG and BCS is implemented, in consultation with and to the satisfaction of DELWP before construction commences.

4.8 Catchment Values

Evaluation Objective - To maintain the functions and values of surface water and floodplain environments.

Key Issue

The key issue in relation to water and catchment values are:

- The potential for adverse effects on the functions and values of adjacent water environments (primarily Kororoit Creek and its floodplain).

No issues were raised in submissions on this matter.

Discussion and Findings

Surface Water and Floodplains

The PRCP will cross four significant named watercourses (Kororoit Creek, Taylors Creek, Sydenham Drain, Billingham Road Drain) and one unnamed drain (located south of Ballart Road) within the Port Phillip and Westernport Catchment Management Authority's (PPWCMA) area. Figure 13-1 in the EES[67] shows all watercourses potentially affected by the project, as well as the relevant planning controls for the corridor. The planning controls include:

- Environmental Significant Overlay Schedule 2 (Wetlands, Waterways and Riparian Strips) that applies to Koraroit Creek within the Melton Council's area.

[67] See EES page 173

- Urban Floodway Zone and Land Subject to Inundation Overlay in the areas where Kororoit and Taylors Creeks cross or are adjacent to the corridor, and the unnamed drain area downstream of Whiteside Drain.
- Special Building Overlay in the vicinity of the Sydenham Drain indicating that this area acts as overland flood path due to insufficient capacity of the drain infrastructure in this area.

The EES identifies specific sites where there are risks to ecological conditions of waterways, including two proposed bridge crossings of Kororoit Creek which has significant aquatic health values. The potential impacts on catchment values were identified during construction and operation phases of the PRCP. These included the reduction of floodplain hydraulic capacity due to the project footprint and decrease in water quality due to contaminants and pollutants in stormwater runoff from the arterial road surface.

VicRoads has adopted Water Sensitive Road Design (WSRD) measures to avoid risks to surface water and floodplains environments in the context of the SEPP WoV and the Victorian EPA's guidelines. The EES proposed[68] that the PRCP adopts the following mitigation measures during its construction and operation: appropriate location of temporary work office and hazardous materials storage; implement restriction on cutting and filling activities and stockpiles volumes and locations; staging of works to minimise changes to natural flow regime of surface water and to maintain floodplain function.

The EES concluded that adoption of these measures during detailed design and the preparation of a CEMP would achieve policy compliance and therefore the project rates overall as 'neutral' against the EES evaluation objective in terms of its potential construction and operation impacts[69].

Approval from Melbourne Water[70] for works on waterway will be required under the *Water Act 1989* before commencement of any works near waterways.

Considering that Melbourne Water (in its role as the responsible CMA) would need to be involved in detailed design of the PRCP and that the EES identified appropriate procedures and practices to mitigate any potential adverse impacts on catchment values, the Inquiry Panel concluded that the project impacts were likely to be minor and acceptable[71].

Conclusions

It is my assessment that the potential environmental effects from works on and near waterways are likely to minor and are acceptable.

Further, it is my assessment that:

- Detailed design of waterway crossings occur in consultation with Melbourne Water (the CMA) and relevant landowners, such that potential impacts on waterway and floodplains' environments, flooding extent and behaviour are avoided or minimised.
- The Inquiry Panel recommendation on including in a CEMP additional measures to reduce the effects on catchment values, which were identified through detailed design, is implemented in consultation with and to the satisfaction of Melbourne Water before construction commences.

[68] See EES pages 175 1nd 176

[69] See EES Table 13-2 page 177

[70] PPWPCMA has delegated authority to Melbourne Water to manage for drainage management within its operation area

[71] See Panel Report p. 37

4.9 Cultural Heritage

Evaluation Objective –To avoid or minimise effects on Aboriginal and historic cultural heritage values.

Key Issues

The key issues to be considered for this section are:

- The potential for adverse effects on Aboriginal cultural heritage.
- The potential for the loss of significant historic heritage values.

There was no concern relating to the impact of the PRCP on cultural heritage values raised in any submission.

Relevant Context

Under the AH Act the preparation of a CHMP is compulsory when the EES is required under the EE Act. The CHMP requires Desktop, Standard and Complex Assessments for high impact activities where the 'activity area'[72] has not been subject to significant ground disturbance.

Registered Aboriginal Parties (RAPs) are determined by the Aboriginal Heritage Council under the AH Act, as the cultural heritage decision-makers for a designated area. The Wurundjeri Tribe Land Cultural Heritage Council (Wurundjeri RAP) is the RAP for the Calder Drive section of the PRCP, north of the Bendigo railway. The EES Figure 14-1 shows the Wurundjeri RAP area[73]. As there is no RAP for the area south of the Bendigo railway the Office of Aboriginal Affairs Victoria (OAAV) is responsible for this area.

The *Heritage Act 1995* (Heritage Act) provides for two types of protection for cultural heritage places:

- The Victorian Heritage Register (VHR), which is a register for cultural heritage places of state significance; and
- The Victorian Heritage Inventory (VHI), which is an inventory of archaeological sites of varying significance.

Under the Heritage Act, a permit or consent is required from Heritage Victoria before undertaking any works that would cause damage to any cultural heritage places listed on either the VHR or VHI.

Discussion and Findings

Aboriginal Cultural Heritage

The subsurface excavations undertaken for the EES confirmed that most of the PRCP area was heavily disturbed by previous activities. There were, however, some areas of undisturbed ground where undisturbed archaeological deposits were present. The most notable areas of Aboriginal cultural material are sites north of the Calder Freeway near the Jacksons Creek valley and near Kororoit Creek.

Twelve Aboriginal cultural heritage sites were identified in the EES project area[74]. The PRCP alignment would directly impact all these sites[75]. One of the sites (Jackson Creek Escarpment located north of the Calder Freeway) is of moderate-high significance and 32 per cent of it would be affected. Two of these sites – one north of Kororoit Creek (Karmadonna Park 1) and another north of Calder Freeway (Rainey's Hotel) - are of moderate significance. Respectively, about 19 per cent and less than 5 per cent of each of these sites would be affected. The other four affected sites are of low significance and the remaining five sites are of very low significance.

The EES assessed the overall risk to Aboriginal cultural heritage from the project as being neutral[76].

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[72] The draft CHMP refers to the 'Project Area' shown on EES Figure 14-1 (page 180) as the 'Activity Area'

[73] See EES page 180

[74] See EES Figure 14-1 page 180

[75] See EES Table 14-1 page 183

[76] See Table 14-4 of the EES, page 188.

VicRoads have prepared a draft CHMP for the PRCP in consultation with OAAV and the Wurundjeri RAP, in accordance with the AH Act requirements, to assess the potential adverse cultural heritage effects of the project and to specify appropriate mitigation measures. Approval of the CHMPs will be sought from the Wurundjeri RAP and the OAAV shortly.

The Inquiry Panel was satisfied that the EES assessment of potential effects on Aboriginal cultural heritage in the project area provides an adequate basis for the decision-making process under the AH Act. The Panel also concluded that this process provides for appropriate consideration of the highest level of mitigation of the project risks to Aboriginal cultural heritage[77]

Historic Heritage

A total of 9 historical sites were identified within and adjacent to the study area. Table 14-2 in the EES summarised the results of the field survey that identified the status of historical sites and areas of archaeological significance [78]. No sites of state cultural significance listed in the VHR, nor the potential built heritage sites were identified during the survey.

The historical assessment identified 3 sites listed on the VHI in the PRCP area. These were:

- The Ravenhall 2 Magazine and Storage Facility (located east of Robinsons Road and south of Riding Boundary Road) - The northeast corner of this site will be affected by the project and consent from Heritage Victoria under the Heritage Act would be required for any works in this area.
- Cobbled Road (formerly located along Rockbank Middle Road) – The section of cobble road, east of Westwood Drive, have been completely destroyed by the construction of Rockbank Middle Road. Although there does not appear to be any part of the road remaining within the project area, consent would still be required from Heritage Victoria before works could commence in this area.
- Drover's Hut site (located immediately north of Kororoit Creek) - This site was to be affected by preliminary works for the first bridge over Kororoit Creek proposed to be constructed by the Melton City Council[79].

The EES proposes mitigation measures to minimise impacts on cultural heritage. The measures include further investigations for the Ravenhall 2 Magazine and Storage Facility and Drover's Hut sites[80].

In evidence at the Hearings the Melton City Council has advised that it has obtained consent from Heritage Victoria under the Heritage Act to excavate the Drover's Hut site and completed historical assessment of this site in preparation to the anticipated construction of the first bridge over Kororoit Creek. The Inquiry Panel noted that the permit under this Act for this section of the PRCP is not longer required[81].

The EES concluded that overall rating of the project impact on cultural heritage would be 'well'[82].

The Inquiry Panel concluded that the project impacts on the cultural heritage sites will be minor[83].

Overall, the EES evaluated the PRCP performance against the cultural heritage evaluation objective as neutral[84].

Conclusions

It is my assessment that likely effects on Aboriginal cultural heritage and historic heritage values are likely to be acceptable and that residual risks can be readily managed through the consideration and approval of the CHMPs under the AH Act and the permit process under the *Heritage Act 1995*.

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[77] See Inquiry Panel Report page 53

[78] See EES page 185

[79] I note the Inquiry Panel finding regarding the proposed review of the OAAV's procedures in light of the CHMP being prepared by the Melton Council for the Kororoit Creek bridge works. This is a procedural matter outside of my Assessment on the PRCP environmental effect.

[80] See EES page 191

[81] See Inquiry Panel Report page 53

[82] See EES Table 14-5 page 189

[83] See Inquiry Panel Report page 53

[84] See EES Table 14-7 page 194

4.10 Environmental Management Framework

Evaluation Objective –To provide a transparent framework with clear accountabilities for managing environmental effects and hazards associated with construction, operation, decommissioning and rehabilitation phases of the project, in order to achieve acceptable environmental outcomes.

Key Issues

The key issue to be considered for this section is:

- Weak management of environmental effects during project construction and operation could result in failure to meet statutory requirements and sustain community confidence.

No issues were raised in submissions on this matter.

Discussion and Findings

The EES provides an outline of an EMF, which allocates responsibility and outlines the overall approach for the management of potential environmental effects of PRCP, from detailed design through to construction and operation. The proposed framework is set up to ensure that the mitigation and management measures suggested in the EES will be incorporated into project decisions and approvals. The PRCP will be delivered in accordance with the VicRoads' Environmental Risk Management Guidelines introduced to assist in implementation of its Environmental Management System for construction projects[85].

Key elements of the EMF proposed to guide environmental management of the PRCP are shown below in Figure 3. The process includes preparation of a VicRoads' Project Environment Protection Strategy (PEPS), and contract specifications, so VicRoads can set requirements for environmental management and track the implementation of the EES environmental commitments and all approval conditions.

The PEPS would contain the contractor risk register and commitments register and all the environmental management measures required for the detailed design, construction and operation of the PRCP. The contractor(s) will be required, as a condition of the contract, to prepare site-specific CEMPs and other management plans to address residual effects of the project (e.g. Offset Plan under the BAG). The CEMPs and management plans would be developed in consultation with relevant authorities and to address the EPA Environmental Guidelines for Major Construction Sites.

The EES provides an outline of all the environmental measures that would be incorporated into the design, construction and operation of the PRCP, as shown in Figure 3. Tables 16-4 to 16-8[86] in the EES specify the objectives, effects and environmental measures that would apply to PRCP for the relevant environmental aspects of the project assessed in the EES.

[85] See EES page 204

[86] See EES pages 210 to 215

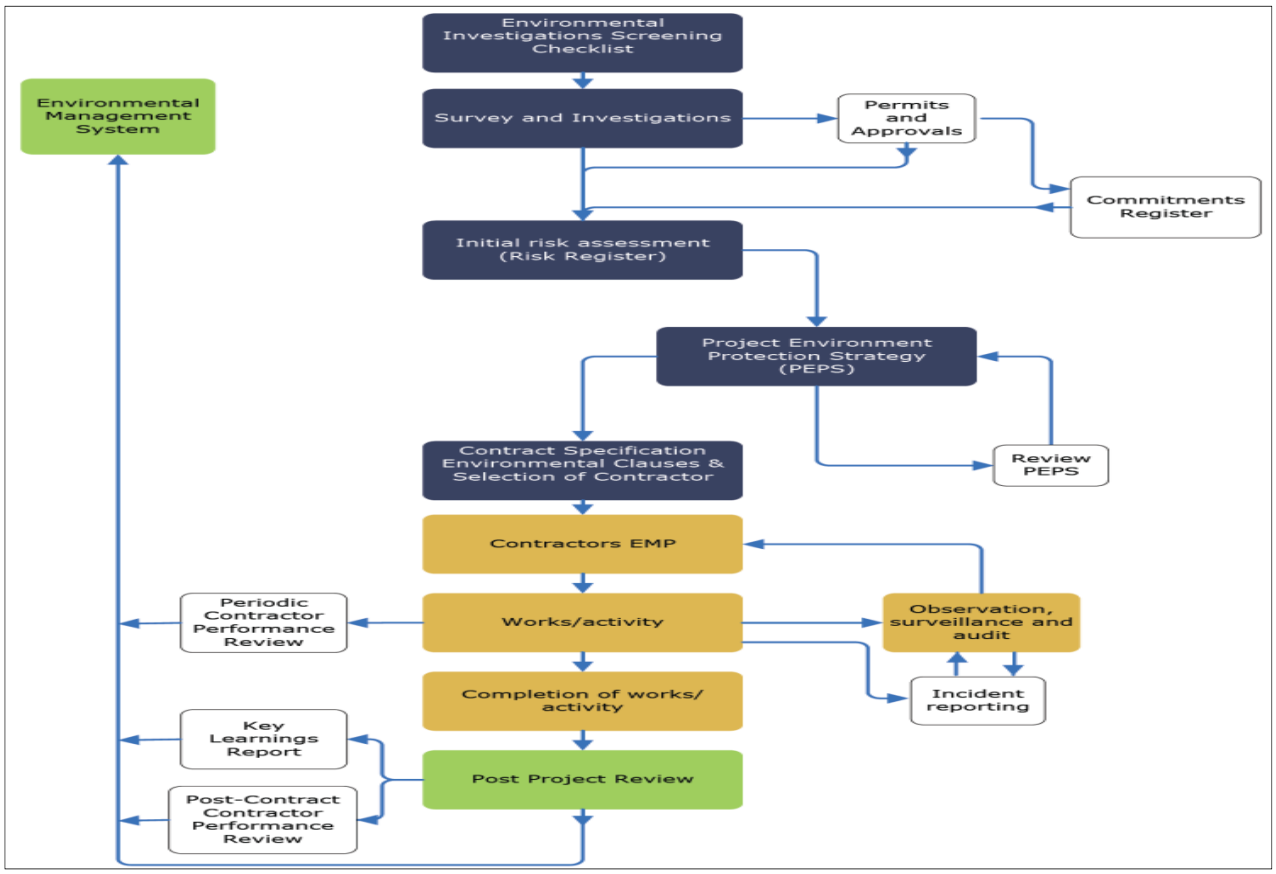

Figure 3. VicRoads Environmental Risk Management System for Construction Projects

Conclusions

It is my assessment that the EMF for PRCP, as outlined in the EES, will provide a robust and transparent framework for the management of residual environmental effects and achievement of acceptable environmental outcomes, subject to the findings of this Assessment.

Further, it is my assessment that:

- VicRoads ensure measures set out within the EES and included in the findings of this Assessment are addressed in the project's implementation, and (where identified in this Assessment) within the Incorporated Document, the EMF and appropriate management plans (e.g. CEMPs).
- The EMF and core management plans be included as conditions (generally as set out below) of the PSA Incorporated Document and be developed in consultation with and to the satisfaction of the appropriate authority(s) or agency(s):
  - *EMF*: Prior to the commencement of construction or works associated with the project, an EMF or equivalent document must be prepared for the project to address measures set out in the EES, as well as the relevant requirements set out in the Minister for Planning's Assessment under the EE Act. The EMF or equivalent document needs to be submitted to and endorsed by the Minister for Planning (or delegate).
  - *CEMPs*: Consistent with the staging of works, and prior to the commencement of construction or carrying out of any works, Construction Environmental Management Plan(s) must be prepared in consultation with DELWP, Melbourne Water, the relevant municipality (Melton City Council and/or Brimbank City Council), and then be submitted to, and endorsed by the Secretary of DELWP (or delegate).
  - *Management Plans:* The following management plans should be prepared: Native Vegetation Offset Strategy, Threatened Species Management Plan, Traffic Management Plan and Comprehensive Landscape Plan; in consultation with the relevant stakeholders and agencies, to the satisfaction of the relevant authorities.

4.11 Integrated and Sustainable Transport

Evaluation Objective – Overall, to demonstrate that the project would achieve a balance of economic, social and environmental outcomes that contribute to ecologically sustainable development and provide a net community benefit over the short and long-term.

Key Issues

The key issue to be considered for this section is:

- The balance of economic, social and environmental outcomes from the project needs to be beneficial over the short and long-term.

Relevant Context

This section focuses on the acceptability of the environmental outcomes of PRCP, relative to economic and social outcomes, including in the context of the principles and objectives of ESD. The Ministerial Guidelines made under section 10 of the EE Act specifically require the assessment of the proposal and its effects to consider the principles and objectives of ESD. The PRCP's overall consistency with the following ESD objective and principle of ESD are particularly pertinent:

- To protect biological diversity and maintain essential ecological processes and life-support systems.
- Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equity considerations.
- Decisions and actions should provide for broad community involvement on issues which affect them.

Environmental and Socio-economic Outcomes

In summary, this Assessment has identified the following key environmental and socio-economic outcomes:

- The project will deliver a safe and efficient arterial road that would improve connectivity through the west of Melbourne, which would benefit residents and businesses alike, likely to attract investment and improve the safety and amenity of local activity centres and infrastructure.
- Disruption to local businesses, residents and local activity centres will occur during the construction period and some property owners will be affected by public acquisition of land.
- The project will result in some amenity impacts in local areas including significant short term noise impacts near Calder Park Drive and Westwood Drive, adjacent to Kororoit Creek.
- The project will not cause a significant impact on visual and landscape values of the Organ Pipes National Park, the Banchory Nature Conservation Reserve and the Ravenhall East Grassland Nature Conservation Reserve.
- The project will result in minor visual impacts on most residential areas, with the exception of Albert Road, Sydenham and Westwood Drive near Kororoit Creek.
- The project will result in the permanent loss of some native vegetation (up to 11.19 ha), as well as approximately 2 old trees, which is not considered to be significant given the proposed mitigation and offsets.
- The project is unlikely to result in any significant unacceptable impacts on FFG-listed communities or species, including Spiny Rice-flower, Fragrant Saltbush Striped Legless Lizard, Golden Sun Moth, Growling Grass Frog through habitat removal.
- The project will not result in a significant impact on catchment values and floodplain functions, including on Kororoit Creek and its floodplains.
- Impacts on Aboriginal cultural heritage values are likely, although these can be readily addressed through the review and approval of CHMPs required under the AH Act.
- The implementation of the EMF, consistent with the findings of this Assessment, should enable the proposal to be implemented in a manner that is environmentally acceptable overall.

Overall Conclusions

I concur with the Inquiry Panel[87] that, subject to the implementation of the appropriate offsets and mitigation measures proposed by VicRoads, and other measures consistent with the findings of this Assessment, the environmental effects of the PRCP can be managed to acceptable levels.

Having regard to the Inquiry Panel's report, the EES and matters raised in submissions, it is my overall assessment that:

- The potential environmental effects and risks of the PRCP are acceptable, provided the appropriate minimisation, mitigation and management measures are implemented consistent with the findings of this Assessment.
- The PRCP will provide a net benefit to the State of Victoria, having regard to both long-term and short-term economic, environmental and social considerations.
- The PRCP should proceed in a manner consistent with this Assessment, including the responses to the recommendations of the Inquiry Panel as set out in Appendix 1.

RICHARD WYNNE MP
Minister for Planning

[87] See Inquiry Panel Report page 61

Appendix 1 - Response to Inquiry's Recommendations

Inquiry's recommendations (in the left column) and the Minister for Planning's response to the recommendations (in the right column).

Inquiry Panel Recommendation	Response
1. Amend the Project design and Incorporated Document, where appropriate, to:	
a) Add the requirement for acoustic fencing combined with appropriate landscaping along the section of Calder Park Drive abutting Albert Road to achieve at least existing noise levels.	Agreed
b) Add the requirement to design the acoustic fencing along the section of Calder Park Drive abutting Albert Road in consultation with the owners of affected properties in Albert Road.	Agreed
c) Add a u-turn point on Calder Park Drive (turning from north to south) approximately 200 metres north of Erskine Way.	Agreed
d) Add a u-turn point on Westwood Drive near Kelly Avenue, approximately 400 metres north of Nichol Avenue.	Agreed
e) Remove the south-bound left slip lane from Calder Park Drive to Hume Drive in Taylors Hill, as shown in Design Drawings Sheet 30, unless further analysis demonstrates that it is required for satisfactory operation of the intersection.	Agreed
f) Create areas of wider road verges by reducing the width of the centre median subject to minimum requirements to provide turning lanes at intersections.	Agreed
g) Require canopy trees to be planted on the road verges subject to safety considerations.	Agreed
h) Require landscaping treatment on the wider road reserve near the northern end of Albert Road to be maximised through canopy trees and other planting.	Agreed
i) Implement mitigating measures that reduce the visual impact on the Kororoit Creek corridor including: • creating a light well between the two bridges • designing the bridges so that they are sympathetic to their environment	Agreed

Inquiry Panel Recommendation	Response
• planting indigenous vegetation on the embankments.	
j) Require a comprehensive Project-wide landscape plan to be prepared at the detailed design stage of the Project in consultation with the surrounding community.	Agreed
2. Amend the Incorporated Document to:	
a) Require the Contractor Environmental Management Plan to include measures for protecting the ecological values of the Project area and surrounding landscape.	Agreed
b) Require the Contractor Environmental Management Plan to include measures for protecting the ecological values of the Project area and surrounding landscape.	Agreed
c) Add the following requirement: Prior to the commencement of any works, the views of Australia Pacific Airports (Melbourne) Pty Ltd or its successor, must be sought and considered in respect of the detailed design [north of Melton Highway], including in relation to: • potential to impact airspace; • avoiding protrusion of bridges and other structures into prescribed airspace; • air emissions; • landscaping; and • lighting.	Agreed
3. Delete Public Acquisition Overlay Schedule 1 from the proposed Calder Park Drive and Hume Drive, Taylors Hill left slip lane if this slip lane is no longer required.	Agreed
4. Translate and incorporate the scope and intent of all the Panel's recommendations into the VicRoads Project Environment Protection Strategy and all contracts, the Environment Management System and the various Contractor Environmental Management Plans.	Agreed, subject to findings of this Assessment
The Panel also recommends: 5. Melton Planning Scheme Amendment C143 be adopted subject to recommendations 1, 2 and 3. 6. Brimbank Planning Scheme Amendment C157 be adopted subject to recommendations 1 and 2.	Agreed in principle, subject to findings of this Assessment.