



PART 4 ENVIRONMENTAL MANAGEMENT AND CONCLUSION

13 Conclusion

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13.1 Overview

This chapter concludes the EES for the Project and provides an overview of how the assessment has responded to the Scoping Requirements issued by the Minister for Planning. It provides a summary of key impacts of the Project, outlines the Environmental Management Framework to avoid, minimise or manage adverse impacts, and concludes with next steps.

The Project aims to improve safety, access and connectivity for drivers, public transport users, pedestrians and cyclists using Yan Yean Road. The additional road capacity provided by the Project would improve speeds and travel times on Yan Yean Road, as well as on other key north-south routes in Melbourne's north-east.

By better connecting people to residential, recreational and service centres, the Project would significantly improve access to social and economic opportunities. In particular, the Project would provide connectivity for the City of Whittlesea's strongly growing suburbs of Doreen and Mernda to the townships of Plenty and Yarrambat in the Shire of Nillumbik, and to jobs and services in established neighbouring suburbs such as Greensborough and Diamond Creek. Potential benefits delivered by the Project are described in Chapter 2 *Project Rationale*.

The benefits of the Project have been evaluated against the overall significance of the likely adverse effects and environmental risks of the Project, within the context of applicable legislation, policy, strategies and guidelines. Where impacts have been identified, technical specialists have developed mitigation measures in the form of Environmental Performance Requirements to avoid, minimise and manage adverse environmental impacts.

Technical specialist investigations covering 13 technical areas were conducted for this EES to assess potential impacts associated with the construction and operation of the Project. The outcomes of these assessments in relation to key impacts are reported across two groups of topics:

Part 2 – Responding to the Scoping Requirements

- Chapter 7 *Effects on Transport Capacity and Connectivity*
- Chapter 8 *Effects on Biodiversity*
- Chapter 9 *Effects on Social and Cultural Values*.

Part 3 – Additional Impact Assessment Summaries

- Chapter 10 *Effects on Land Uses, Businesses and Social Assets*
- Chapter 11 *Effects on Physical Environment*.

Potential impacts assessed as medium or low risk are listed in the register in Attachment III *Environmental Risk Report* and discussed in the specialist technical assessments that form part of this EES. Key impacts of the Project are summarised below.

13.2 Impact assessment summary

13.2.1 Effects on transport capacity and connectivity

➔ **Evaluation Objective** – To provide for an effective corridor through the northern outer suburbs of Melbourne, to improve travel efficiency, road safety, and capacity.

The Project is expected to bring about improvements in transport capacity and connectivity during operation. This is due to benefits such as improved road safety and better traffic flow along Yan Yean Road, improved speeds and travel times along Yan Yean Road and other key north-south routes such as Plenty Road and Epping Road, and reduced pressure on local roads.

One of the most effective avenues in reducing vehicle crashes is by improving safety at intersections, primarily by installing control measures such as traffic lights and roundabouts. Safety barriers also provide greater safety for road users. Therefore, the Project would result in safer conditions for road users as all key intersections would be upgraded with control measures, right-turns would only occur at key intersections along the alignment and as a result of the installation of continuous safety barriers in the centre median and on either side of the road.

Implementing transport infrastructure projects in constrained transport corridors often results in a level of disruption to access and mobility during construction. Aspects of construction that have been identified as having the greatest potential to result in adverse impacts include construction traffic and temporary closures of Yan Yean Road, pedestrian crossings, footpaths and informal paths.

Key to avoiding and minimising impacts is the development and implementation of a Traffic Management Plan in consultation with the Department of Transport, Shire of Nillumbik and City of Whittlesea. This plan would set out measures to minimise disruption to all road users during construction, including providing detour routes as required, maintaining property access (or providing alternative access) and giving advance notice of changed traffic conditions. The Project would also be completed in phases to minimise impacts on road users, cyclists and pedestrians as detailed in the Environmental Performance Requirements.

The effective implementation of these and other mitigation measures would assist in providing for the efficient and safe operation of the transport network during construction. However, unavoidable temporary closures and the volume of construction traffic necessary to construct the Project means that some short term impacts would be experienced by road users, cyclists and pedestrians. These impacts are mostly associated with changes to existing access arrangements and detours and delays to traffic flow. This would be mitigated by the implementation of a Traffic Management Plan.

During operation the Project is expected to provide benefits and opportunities including improving safety and access along the project corridor for road users and pedestrians, as well as improving the efficiency for public transport (i.e. buses) and the amenity of walking and cycling in the area. Access to key activity and employment centres would also be improved for residents of the communities adjacent to Yan Yean Road through improved traffic flow and a reduction in travel times.

This EES also recognises that there would be other accessibility impacts through an increase in travel distance and time incurred by local traffic, by limiting (but not removing any) direct property access and local road access to left in and left out traffic movements only. However, these changes are associated with the safety benefits of the Project outlined above and the access management principles of an arterial road.

13.2.2 Effects on biodiversity

➔ **Evaluation Objective** – To avoid or, at least, minimise adverse effects on native vegetation (including remnant, planted, regenerated and large old trees), listed migratory and protected species/ecological communities and then to address offset requirements consistent with relevant state and commonwealth policies.

'Avoid and minimise' was the guiding principle used when designing the Project to reduce impacts on the environment. The Project would impact existing biodiversity values as a result of the proposed clearance of trees, native vegetation and habitat. Native vegetation unable to be retained during the design and construction phases would be offset according to the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017).

The following refinements have been incorporated during the design development process to avoid and minimise impacts on biodiversity values, while achieving road safety objectives:

- The Project has been designed to retain the two Doreen River Red Gums at the Bridge Inn Road / Yan Yean Road / Doctors Gully Road intersection
- The project area has been designed to be as narrow as possible to accommodate the road alignment and areas required for construction activities
- 144 no-go zones have been established to avoid impacts on native vegetation and scattered trees. This includes 20 no-go zones at Yarrambat Park Golf Course comprising potential Swift Parrot foraging trees. Impacts on native vegetation and trees are expected to be reduced further as the Project's design and construction methods are refined
- A wide median between Bannons Lane and Jorgensen Avenue would provide for additional landscaping opportunities and potential avoidance of existing biodiversity values (including Matted Flax-lily) and large trees.



The Project would impact up to 11.888 hectares of native vegetation, 134 large trees in patches and 204 scattered trees (40 large, 164 small) that provide habitat for a range of flora and fauna species. A total of 4,777 trees would be removed, including native, planted and exotic trees.

Native vegetation and tree removal would primarily consist of low-quality patches of Grassy Dry Forest (EVC 22), which has a bioregional conservation status of least concern and is widespread within the Highlands Southern Fall bioregion. With adequate environmental protection measures implemented, vegetation removal from the Project is not expected to result in a significant impact on Victoria's biodiversity.

The key findings of the EES impact assessment in relation to threatened species are:

- Despite the removal of occasional foraging habitat used by Grey-headed Flying-fox, the species is not expected to be impacted due to the presence of adequate suitable foraging habitat outside the project area
- If impacted by construction works, two Matted Flax-lily would be translocated to a site containing suitable habitat in accordance with a translocation plan that would be developed for the Project
- Impacts on a Studley Park Gum likely to be removed would be offset in accordance with the DELWP Guidelines
- The Project would remove up to 1,593 potential Swift Parrot foraging trees, including 354 key foraging trees (14 large, 340 small) and 1,239 secondary foraging trees (74 large, 1,165 small). The removal of this habitat may reduce foraging opportunities for the species; however, annual observed habitat use by Swift Parrot over the last 10 years occurs outside the project area in higher quality habitat areas. The Project would not remove or impact any critical foraging or breeding habitat for the species, as it breeds exclusively in Tasmania. In the local area, Swift Parrot largely use the Plenty River corridor for foraging when migrating to core habitat areas in central and north eastern Victoria
- Habitat fragmentation is a potentially threatening process to Swift Parrot, and the Project would exacerbate this at a local level. Habitat fragmentation resulting from tree loss as part of the Project is very small compared to the total Swift Parrot habitat distribution area across Victoria, and the threat of reduced connectivity is likely to be low for Swift Parrot given its high mobility and the continued presence of higher quality habitat in the local area. Vegetation and preferred foraging tree species losses resulting from the Project are unlikely to contribute to a cumulative impact on the Swift Parrot population
- A Swift Parrot Management Plan would be prepared and implemented to minimise impacts on the species during construction.

The Project is likely to impact common fauna, which are likely to reside within, or regularly occupy, habitats contained within the project area. Impacts on common fauna are expected to be mitigated through the installation of fauna bridges, fauna sensitive lighting and adequate signage to alert motorists to crossing fauna.

Implementation of the Project's Environmental Performance Requirements would help to further avoid and minimise impacts on native vegetation, trees and threatened species habitat. This includes a requirement to design permanent and temporary works to retain as many trees as possible, a Tree Protection Management Plan to protect trees during construction, further detailed arborist assessments to protect specific trees and the exploration of options to relocate and reinstate trees where practicable.

The multi-faceted value of vegetation has been understood and incorporated into the Project's Landscape Strategy (Technical Report G), with mitigation measures relevant to biodiversity including:

- Native vegetation to be retained in the project area where possible and areas adjacent to the new road would be enhanced by supplementary planting undertaken as part of the landscape works
- Landscape plantings would use plants belonging to Ecological Vegetation Classes naturally occurring in the local area and favour species used by native fauna, including threatened species such as Swift Parrot
- Reinstatement would be undertaken in consultation with relevant stakeholders including Department of Transport, Shire of Nillumbik and City of Whittlesea. Where possible, the local community and property owners would be consulted to achieve optimal results.

13.2.3 Effects on social and cultural values

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

In the context of the Project, key social and cultural values are considered to be landscape values, remnant, planted and regenerated vegetation, Aboriginal cultural heritage and historical heritage. Consultation with key stakeholders and the community has been undertaken throughout planning of the Project to gain an understanding of the concerns and preferred outcomes of local residents, businesses and other interested parties.

The Project would result in permanent changes to the local environment and valued attributes of local character in the public and private realm along the Project corridor as a result of road safety and capacity improvements. Impacts on landscape values are likely to be experienced during the initial construction phases of the Project (site establishment, civils and structures and earthworks); however, these impacts are expected to be mitigated during the reinstatement phase through the Project's Landscape Strategy. The removal of remnant, planted and regenerated vegetation associated with the Project is also expected to increase the visibility of the widened road corridor.

Socially and culturally valuable vegetation can be defined as landscape components that contribute to their environment, over and above the accepted values of other vegetation. A value assessment was undertaken as part of the Project's Landscape Strategy to highlight where vegetation triggered multiple value criteria, including aesthetic, historic, scientific, social and spiritual criteria. Two River Red Gums on the Bridge Inn Road / Yan Yean Road / Doctors Gully Road intersection (known as the Doreen River Red Gums) have been identified as having social, aesthetic, scientific and heritage value within the project area (Heritage Overlay 191 under the Nillumbik Planning Scheme). The Project has been designed to retain these two trees.

Despite not being heritage listed, the Doreen General Store (former post office) has been identified as having value through the community consultation process, and also forms a distinctive local landmark. The Project has been designed to retain the Doreen General Store.

Other 'value hot spots' identified included 'Avenue of Honour' WW1 memorial plantings at Yarrambat Primary School and important aesthetic / social value trees within Yarrambat Township. Areas of public open space (including Doreen Recreational Reserve, Orchard Park, Werther Park and Yarrambat Park) recorded social value for their contribution to amenity, while cultural value was elevated at locations along the project corridor that combined social and scientific values within screen plantings.

The Project also has the potential to impact on two Aboriginal Places (VAHR Registered 1: Stone Artefact Scatter and VAHR Registered 2: Low Density Artefact Distribution) within the road corridor. A Cultural Heritage Management Plan is being prepared for the Project in consultation with Aboriginal Victoria and the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation to ensure these places are managed appropriately and to mitigate any potential impacts on Aboriginal cultural heritage.

Impacts on social and cultural values would be mitigated through implementation of the Environmental Performance Requirements and the Project's Landscape Strategy.

The Project would be required to design permanent and temporary works to minimise adverse visual impacts, particularly in relation to heritage values, existing and proposed landmark elements, community and recreational centres and open space, and residential and business interfaces with the Project.

With the aim of realising opportunities to maximise the enhancement of social and cultural values, the Landscape Strategy addresses how high value vegetation can be protected (where feasible) and if not, how identified values can be reinforced and rehabilitated within new landscape treatments. Along with standard project controls, such as the Cultural Heritage Management Plan and Construction Environmental Management Plan, implementation of the Landscape Strategy would ensure that the Project responds effectively to the local context of Yan Yean Road, community interests and environmental sensitivities.

13.2.4 Effects on land uses, businesses and social assets

While design of the Project has sought to minimise impacts on existing land uses, businesses and social assets where possible, the acquisition of private and public land is required to facilitate the Project. The existing road corridor is not sufficiently wide to accommodate the duplication and supporting infrastructure such as service roads, the walking and cycling path, and drainage. In most cases, partial acquisition of the land would be required along the frontage of landholdings.

The Project would require the partial or full acquisition of 96 parcels of land. This land acquisition would be limited in extent and would not result in long-term land use change. However, the acquisition may result in change of access arrangements to these land uses. The potential loss of land has caused concern for some impacted land owners and residents as it may result in unanticipated changes to their properties. This includes permanent changes to access, which may lead to some land owners and occupiers having longer travel times.

Compensation would be provided for all land acquired for the Project. Land acquisition would be undertaken sensitively and in accordance with the *Land Acquisition and Compensation Act 1986*. Consultation with potentially affected land owners has already commenced and MRPV continues to undertake one-on-one consultation with affected land owners and tenants.

Businesses and community facilities - including a veterinary hospital, golf course, primary and secondary schools, childcare facility, a horse and pony club, and a slate wholesale business - would not be displaced by the Project. However, in some cases, these facilities would experience changed access arrangements or reduced land area.

The Project has been designed to retain the General Store with Australia Post outlet and associated dwelling, and a pet and stock supply retail store located at 920 / 920A Yan Yean Road. However, there would be changed access arrangements at these properties.

Implementation of the Project's Environmental Performance Requirements would assist in mitigating any adverse impacts on businesses. A Trader Engagement Plan would be prepared to engage with businesses throughout the construction phase, including the provision of timely information on key project milestones, signage to notify customers of proposed changes to business operations, measures to maintain access to businesses for customers, deliveries and waste removal, and a process for registering and managing complaints from affected businesses.

Impacts associated with permanent access changes to residential, education and commercial land uses are expected to be managed appropriately through consultation with land managers and / or responsible authorities. While there may be some changes in access arrangements, permanent access to and parking for business and commercial facilities affected by the Project works would be restored, including associated landscaping and restoration works.

The Environmental Performance Requirements would require the Project's design to protect and, where practicable, improve access to amenity for potentially affected residents, users of the transport corridor (pedestrians, cyclists, horse riders and motorists), open space and social and community infrastructure.

13.2.5 Effects on physical environment

As with all major road projects undertaken in Victoria, the Project would adhere to stringent environmental standards, statutory requirements, best practice measures and well-tested techniques and methods to mitigate impacts on the physical environment.

The impact assessments undertaken by technical specialists for this EES concluded that aspects of the physical environment typically resulting in high risk ratings on construction projects would be limited to potential noise and vibration impacts during the Project's construction phase. Potential impacts from construction activities on physical environmental aspects including air quality, contaminated land, groundwater and surface water are expected to be minimal.

The Project would be managed in accordance with a Construction Environmental Management Plan, which would set out details of all planned construction activities and describe how the Project would identify, manage and mitigate environmental risks and impacts on the physical environment during construction.

By its nature, construction can be a noisy activity, which can cause annoyance to neighbouring communities. Activities such as bulk earthworks, vegetation clearing and road paving can all generate noise. Additionally, there is potential for vibration impacts associated with driven piling works and the compaction of road surfaces. Any potential noise and vibration impacts during the Project's construction phase would be managed through the implementation of mitigation measures identified in the Environmental Performance Requirements and in accordance with the Construction Environmental Management Plan.

A Noise and Vibration Communications Sub-Plan would set out arrangements for informing the community of work scheduling and working hours. The community would also have the opportunity to raise any issues or concerns through the Project's Communications and Stakeholder Engagement Plan which will make specific provision for complaints management including via a 24-hour phone number.

Once the Project is operational, the increase in traffic on the new road is unlikely to lead to an increase in noise levels. Noise modelling has indicated that the majority of sensitive uses along Yan Yean Road would experience an increase of no more than three decibels as a result of the Project. This is characterised as 'barely perceptible'. Operational noise would be addressed by designing the Project in accordance with VicRoads *Traffic Noise Reduction Policy (2005)*.

13.3 Environmental management

Section 3.7 of the Scoping Requirements states: 'The environmental management framework in the EES should provide a transparent framework with clear accountabilities for managing and monitoring the environmental effects and hazards associated with the construction and operational phases'.

The proposed Environmental Management Framework for the construction and operational phases of the Project addresses this objective (refer to Chapter 12 *Environmental Management Framework*). Development of the framework has been informed by the specialist technical assessments completed for this EES, as well as relevant legislation, policy and guidelines.

The Environmental Management Framework outlines governance arrangements, roles and responsibilities, and clear lines of accountability for environmental management during delivery of the Project. Detailed documentation and regular reporting would be required to review compliance with the framework and the Environmental Performance Requirements. Compliance with all relevant environmental laws, approvals and guidelines would ensure that the environmental risks and impacts of the Project are managed appropriately and effectively, and that potentially adverse impacts are avoided or minimised.

The Environmental Performance Requirements set the environmental outcomes that must be achieved during design, construction and operation of the Project. This performance-based approach defines the legislative requirements, standards, limits and processes that the Project must meet, while still providing flexibility to accommodate minor modifications during the design and construction – provided the outcomes specified in the Environmental Performance Requirements are achieved.

In developing the Environmental Performance Requirements, the following hierarchy of control was used to identify potential mitigation and management measures:

- Avoidance through design refinements
- Minimisation through timing of the activities
- Mitigation or management through physical / engineering controls
- Mitigation or management through operational controls
- Induction, training and awareness
- Monitoring and measurement
- Adaptive management and contingency protocols.

As part of complying with the Environmental Performance Requirements, the Construction Contractor(s) would be required to operate in accordance with an environmental management system that is compliant with AS/NZS ISO 14001.

The Construction Contractor(s) would also be required to prepare a Construction Environmental Management Plan consistent with the Environmental Management Framework for the design and delivery of the Project. The Construction Environmental Management Plan would set out roles and responsibilities for ongoing development and implementation of the Construction Environmental Management Plan, reviewing compliance before construction commences and monitoring its effectiveness during construction.

The Construction Environmental Management Plan would also contain detailed procedures and actions for meeting all relevant approvals, approval conditions and the EPRs for works. Relevant stakeholders must be consulted in the development of the Construction Environmental Management Plan (and sub-plans) which would be approved by MRPV before construction commences.

The Environmental Performance Requirements specify the preparation and implementation of key strategies, plans and sub-plans. MRPV Plans include:

- Landscape Strategy (included in this EES as Technical Report G)
- Cultural Heritage Management Plan
- Swift Parrot Management Plan
- Yan Yean Road Upgrade – Stage 2 Environment Effects Statement Engagement Plan.

Contractor Plans include:

- Construction Environmental Management Plan
- Traffic Management Plan
- Tree Protection Management Plan
- Communications and Stakeholder Engagement Plan, including a Trader Engagement Plan and a Noise and Vibration Communications Sub-Plan.

An Independent Environmental Auditor would be appointed for the Project to conduct audits of compliance with the Project's Environmental Management Framework, relevant Environmental Performance Requirements, the Construction Environmental Management Plan, any other plans required by the Environmental Performance Requirements, and conditions of Project approvals.

Once the Project is operating, any potential impacts during operation and maintenance would be managed in accordance with the Department of Transport's environmental management system and standards for managing declared roads in Victoria.

13.4 Communications and engagement

MRPV recognises that communications and engagement with the local community is essential to achieving high quality outcomes from the Project. Section 3.7 of the Scoping Requirements also notes that 'an important aspect of the [environmental management framework] is community consultation, stakeholder engagement and communications during the construction and operation of the Project'.

During construction, the Environmental Performance Requirements would require the Project Contractor(s) to develop and implement a Communications and Stakeholder Engagement Plan that must include measures to:

- Maintain community safety, such as providing convenient and safe access across Yan Yean Road at all bus stops, activity nodes and places of community significance
- Notify communities of construction activities well in advance of works commencing
- Provide onsite signage of affected properties that provide a service to the local or regional community
- Engage residents, businesses and landholders in the preparation of a landscaping plan to offset the impacts of trees removed through acquisition and construction, and help to ensure that the landscaping adds to the valued character of the local area.

The Contractor(s) would also be required to prepare and implement a process for recording, managing and resolving complaints received from affected stakeholders during construction.

13.5 Next steps

This EES has been placed on public exhibition. During this time, members of the public can view the EES and make written submissions. At the end of this period, the Minister for Planning is expected to appoint an EES Inquiry and Advisory Committee to evaluate the effects of the Project, having regard to the EES, the proposed Planning Scheme Amendment and public submissions.

Following receipt of the Inquiry and Advisory Committee's report, the Minister for Planning would prepare an assessment of the environmental effects of the Project that considers the EES documents, public submissions, the proponent's response and the Inquiry and Advisory Committee's report. This assessment is usually provided within 25 days of the Inquiry and Advisory Committee's report being finalised. The Minister's Assessment may conclude that the Project:

- Would have an acceptable level of environmental effects, or
- Would have an unacceptable level of environmental effects, or
- Would need major modifications and / or further investigations to establish that acceptable outcomes would be achieved.

Chapter 12 *Environmental Management Framework* and Attachment II *Legislation and Policy* outline the statutory approvals required for the Project, if the Minister's Assessment concludes that the Project would be acceptable.

Subject to the outcomes of the Minister's Assessment, it is expected that the Minister for Planning will exercise his powers under the *Planning and Environment Act 1987* to amend the Whittlesea Planning Scheme and the Nillumbik Planning Scheme to introduce special planning controls for the Project called an 'Incorporated Document'. The special planning control will be limited to an area called a 'Specific Controls Overlay' that will be shown in the planning scheme maps of each municipality affected by the Project.

The Minister for Planning would also apply the 'Public Acquisition Overlay' to the extent required to facilitate the acquisition of land for the purposes of the Project. Upon publishing notice of the Planning Scheme Amendment in the Victorian Government Gazette, MRPV would then be able to commence the land acquisition and compensation process. Attachment I *Draft Planning Scheme Amendment* provides the draft conditions under which planning approval would be implemented, including the maps showing land affected by the Project.

The Minister's Assessment will also be provided to the Commonwealth Minister for the Environment who will then determine whether or not to grant approval for the Project under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.