PART 1 INTRODUCTORY CHAPTERS

1 Introduction

1.1 Introduction

Melbourne continues to grow strongly, with the city's population expected to top nine million by 2056 (Victoria in Future 2019). The northern metropolitan region of Melbourne contains some of Australia's fastest-growing suburbs and further substantial growth is forecast over the next 15 years.

In particular, the City of Whittlesea is expected to be home to approximately 141,000 additional people by 2036, with significant residential expansion taking place across the municipality (Victoria in Future 2019). While this growth is attracting new residents, businesses and jobs, it is also generating additional pressures and challenges.

Despite the region's strong growth, the transport network in the area is significantly less developed compared to many other parts of Melbourne. The ongoing expansion of the northern suburbs has substantially increased demand for transport, creating a disparity between the rate of residential development and the provision of adequate road infrastructure.

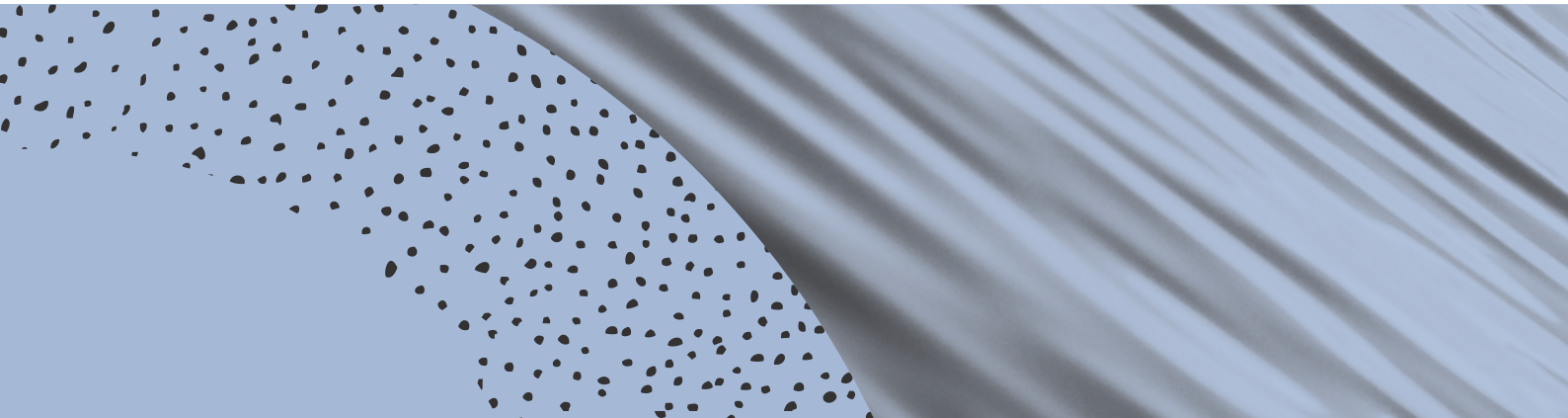
To make sure Victoria's infrastructure keeps pace with the State's growth, the Victorian Government is investing in an unprecedented number of major transport projects. The Yan Yean Road Upgrade is one of several projects that will improve transport capacity, connectivity and accessibility across Melbourne's growing northern region, including North East Link, the Mernda Rail Extension, the M80 Ring Road upgrade and the Northern Roads Upgrade project.

Yan Yean Road is located approximately 25 kilometres north-east of Melbourne's Central Business District (CBD) within the municipalities of Whittlesea and Nillumbik. It was originally designed as a local road to connect the suburbs of Greensborough, Diamond Creek, South Morang, Yarrambat, Doreen and Plenty. Now an arterial road, Yan Yean Road is struggling to cater for increased daily volumes of traffic.

While the upgrade of Yan Yean Road between Diamond Creek Road and Kurrak Road has significantly improved capacity and safety, the road continues to face challenges including congestion, longer travel times, safety and access issues, and a lack of appropriate infrastructure to support pedestrians, cyclists and public transport. The Yan Yean Road Upgrade – Stage 2 Project (the Project) proposes to duplicate a 5.5 kilometre section of Yan Yean Road, between Kurrak Road and Bridge Inn Road, from two lanes to four lanes, accompanied by further safety, access and infrastructure improvements.

On 14 October 2018, the Victorian Minister for Planning determined that an Environment Effects Statement (EES) was required for the Project under the *Environment Effects Act 1978*. The EES describes the potential effects of the Project on environmental values and identifies the means of avoiding, minimising and managing adverse effects. The EES process is not an approval process in itself; rather, it allows an assessment of potentially significant effects and their acceptability to inform key decision-makers.

The Minister determined an EES was required for the Project due mainly to the potential significant effects on biodiversity, social and cultural values as a result of the proposed clearance of trees and habitat, including potential cumulative effects on the critically endangered Swift Parrot *Lathamus discolor*. The Minister also required the EES to assess other potential effects of the Project, such as on land use, community amenity and planning, and the specific effects on transport capacity and connectivity across Melbourne's northern suburbs.



The Project was also referred to the Australian Government under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The delegate for the Commonwealth Minister for the Environment determined on 2 April 2019 that the project is a 'controlled action' and hence requires assessment and approval under the EPBC Act.

This decision was made due to potential impacts on Matters of National Environmental Significance (MNES), including the Swift Parrot and Matted flax-lily *Dianella amoena*. The EES assessment process has been accredited to assess the Project for the purposes of the EPBC Act, in accordance with the Commonwealth and Victorian EPBC Act bilateral agreement.

Major Road Projects Victoria is part of the Major Transport Infrastructure Authority, and manages the development and delivery of the Project on behalf of the State. When completed, operation and maintenance responsibilities would be handed to the Victorian Department of Transport which is responsible for the State's arterial road network. Major Road Projects Victoria (MRPV) is hereafter referred to in this EES as the project proponent.

1.2 Yan Yean Road Upgrade – Stage 2 Project

This section provides an overview of the project development phases, as well as the project objectives and associated benefits.

1.2.1 Developing the Project

The 2017-18 State Budget allocated $96.6 million towards the Project including joint funding from the Commonwealth and Victorian governments via the Black Spot Program to upgrade intersection of Jorgensen Avenue and Yan Yean Road.

An additional funding allocation for the Project was also provided in the 2018–19 State Budget as part of the Suburban Roads Upgrade (a collection of road upgrade projects across Melbourne's outer west, north and south-east suburbs). The Project has been funded under this initiative but would be delivered separately from the Suburban Roads Upgrade program of works.

➔ The project design has been developed and refined alongside ongoing environmental investigations.

The Project's development has progressed across the following key phases:

- **Project options** – During the initial stages of the Project, three project options were investigated. Following a detailed analysis of the project options based on their technical feasibility, traffic outcomes and social, environmental and economic impacts, a full upgrade of Yan Yean Road (between Kurrak Road and Bridge Inn Road) was selected as the preferred project option due to the proposed improvements to network efficiency and active transport, enhancing safety and social connectedness and best satisfying the Commonwealth and State commitments such as the Black Spot Program (refer to Chapter 3 Project development for further information on project options).
- **Design development** – The project design has been developed and refined alongside ongoing environmental investigations, as follows:
  - Several options were considered for the Yan Yean Road typical cross-section. The preferred option provides a balance that achieves the project objectives (refer to Section 1.2.2) while minimising the project footprint (and therefore impacts to the environment). The preferred cross-section was used to develop an initial design for the Project
  - Five intersection design options (Options A-E) were developed for the Yan Yean Road / Bridge Inn Road / Doctors Gully Road intersection in response to the project objectives and existing conditions. Option B was selected as the preferred option and is presented in this EES as it achieves significant improvement to road safety, capacity and walking and cycling links whilst also retaining the Doreen River Red Gums and the General Store / former post office
  - The project design continues to be investigated to identify ways to avoid or minimise impacts to existing trees and vegetation, such as at the Youngs Road roundabout, the Yarra Valley Water pump station, and the left turn lane at the approach to Golf Links Drive.

The Project's development and alternatives are discussed in detail in Chapter 3 *Project Development*.

1.2.2 Project objectives

The objectives of the Project are:

- **Improved road safety** – The Project would achieve this by isolating road users from hazards through construction of continuous safety barriers and by improving access control through signalised intersections. Congestion and the complex road environment (poor sight lines due to sharp hills and bends) are presently contributing to the poor safety record on Yan Yean Road
- **Improved experience** – The Project would achieve this by improving access and network connectivity, and providing opportunities for active transport and more road capacity
- **Improved network efficiency** – The Project would achieve improved traffic flow and a reduction in travel times by increasing road capacity and reducing congestion.

1.2.3 Project benefits

Upgrading Yan Yean Road would deliver important transport benefits in Melbourne's north. The Project will provide significantly improved safety outcomes along the alignment including at identified hazardous locations such as the intersection of Yan Yean Road and Jorgensen Avenue.

This intersection has been identified as a 'black spot' under the Federal Government's Black Spot Program and allocated funding to improve safety following a fatality in 2014. Additional capacity provided by the Project will significantly improve speeds and travel times on Yan Yean Road and free up capacity on other key north-south routes across the local road network as vehicles move to use the upgraded Yan Yean Road.

Once the Project is constructed, peak direction travel speed improvements of between 20-30 kilometres per hour during the AM and PM peaks are forecast along Yan Yean Road for 2031, relative to the 'No Project' scenario (Technical Report A – *Transport Impact Assessment*). Less variability in travel time has productivity benefits, as motorists and commuters would not need to allow for extra travel time when planning trips in the area and businesses can plan deliveries and other journeys with greater certainty.

With the addition of a new walking and cycling path, the Project would also improve access, safety, network connectivity and amenity for public transport users, pedestrians and cyclists.

The Project has the potential to provide economic, social and community benefits. In particular, access to growing residential, recreational and service centres in the North Growth Corridor would be improved, along with access to jobs and other opportunities in locations such as the La Trobe National Employment and Innovation Cluster, Melbourne Airport and the Northern Industrial Precinct.

Refer to Chapter 2 *Project Rationale* for the full description of the Project's benefits.

The Project will provide significantly improved safety outcomes along the alignment including at identified hazardous locations such as the intersection of Yan Yean Road and Jorgensen Avenue.

1.3 Project overview and location

Yan Yean Road is a significant north-south arterial road servicing the northern suburbs and providing 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.

The Project involves the duplication of a 5.5 kilometre section of Yan Yean Road between Kurrak Road and Bridge Inn Road from two lanes to four lanes (comprising two lanes in each direction). Each lane of the road would be 3.5 metres wide with most of the Project's alignment also providing a central median of 2.2 metres. The design speed along Yan Yean Road within the project area is 70 kilometres per hour, with the exception of north of Bridge Inn Road where the design speed is 80 kilometres per hour. This is consistent with existing speed limits. The key components of the Project are shown in Figure 1.1.

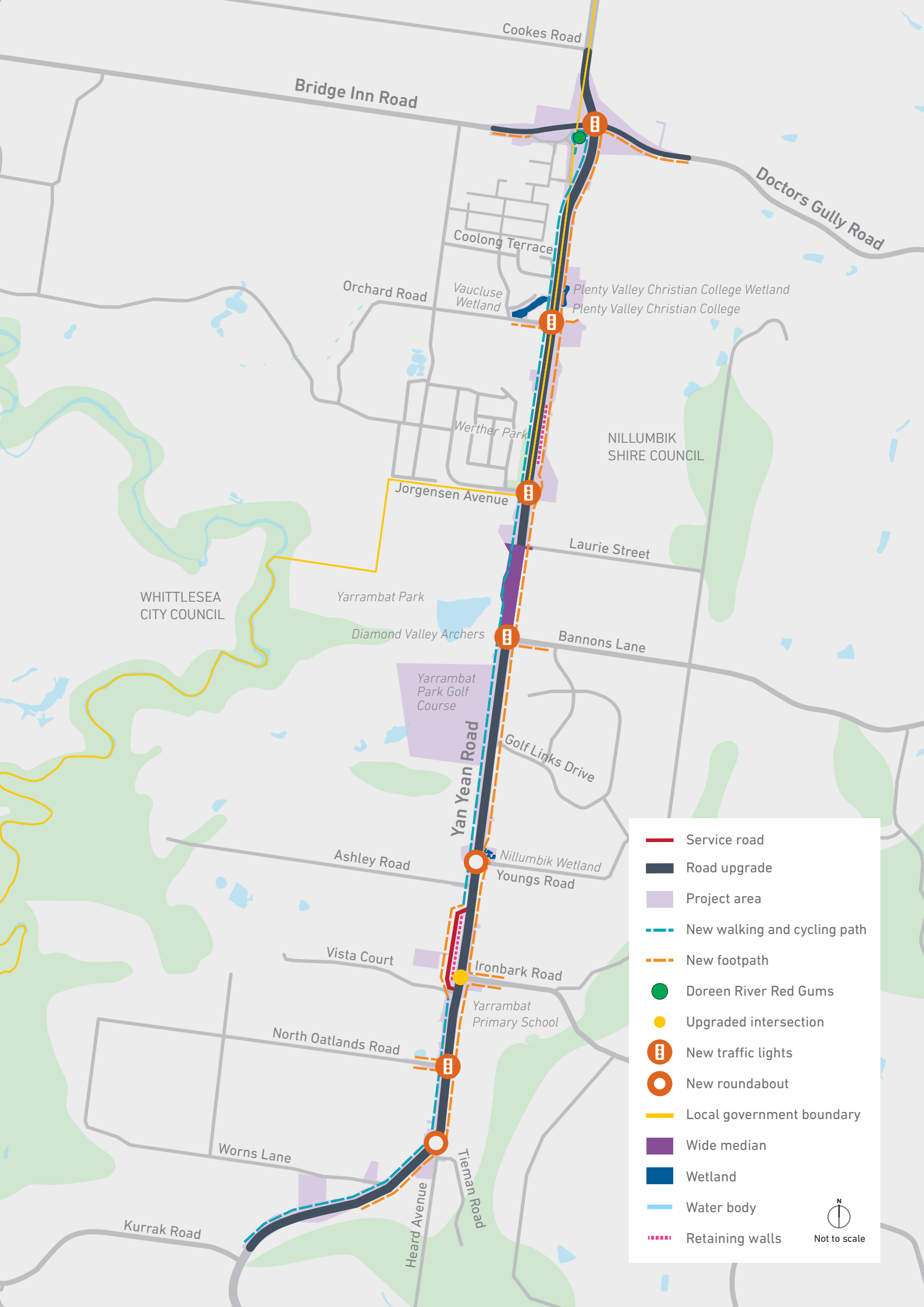
The Project includes:

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

Chapter 5 *Project Description* describes the Project and relevant design and construction details.

Figure 1.1 Key components of the Project

Figure depicted on following page.


Cookes Road
Bridge Inn Road
Doctors Gully Road
Coolong Terrace
Orchard Road
Vaucluse Wetland
Plenty Valley Christian College Wetland
Plenty Valley Christian College
Werther Park
NILLUMBIK SHIRE COUNCIL
Jorgensen Avenue
Laurie Street
WHITTLESEA CITY COUNCIL
Yarrambat Park
Diamond Valley Archers
Bannons Lane
Yarrambat Park Golf Course
Yan Yean Road
Golf Links Drive
Nillumbik Wetland
Ashley Road
Youngs Road
Vista Court
Ironbark Road
Yarrambat Primary School
North Oatlands Road
Worns Lane
Tieman Road
Heard Avenue
Kurrak Road
Service road
Road upgrade
Project area
New walking and cycling path
New footpath
Doreen River Red Gums
Upgraded intersection
New traffic lights
New roundabout
Local government boundary
Wide median
Wetland
Water body
Retaining walls
N
Not to scale

1.4 Delivering the Project

Stage 1 of the Yan Yean Road upgrade (Diamond Creek Road to Kurrak Road) was completed in 2019, and construction of Stage 2 (the subject of this EES) is scheduled for completion by 2025. The Project will not commence construction until the required approvals are received. Those approvals will be informed by the decision of the Victorian Minister for Planning on this EES.

1.5 Environment Effects Statement (EES)

The purpose of this section is to describe the process of the EES at high level.

1.5.1 Requirement for an EES

Victoria's *Environment Effects Act 1978* sets out the process under which the Minister for Planning may require the proponent of a project to prepare an EES.

On 14 October 2018, the Victorian Minister for Planning determined that an EES would be required for the Project due mainly to the potential for significant environmental impacts on biodiversity, social and cultural values as a result of the proposed clearance of a very large number of trees and habitat, including the Project's contribution to potential cumulative effects on the critically endangered Swift Parrot.

1.5.2 Purpose of this EES

The purpose of this EES is to describe the Project and identify the potential environmental effects. The EES should enable stakeholders and decision-makers to understand how the Project is proposed to be implemented and the management and mitigation measures to be employed to avoid, minimise and mitigate potential adverse environmental effects.

The EES describes the existing environment that may be affected by the Project, discusses different design alternatives considered in selecting the preferred design and assesses the impacts of the Project on the receiving environment. It also identifies a set of Environmental Performance Requirements (EPRs) to govern the detailed design, development, construction and operation of the Project to ensure that the potential for adverse effects is avoided, minimised, managed and mitigated to achieve acceptable outcomes consistent with Project objectives. The EPRs will be implemented within an Environmental Management Framework providing for monitoring and managing environmental effects during design, construction and operation of the Project.

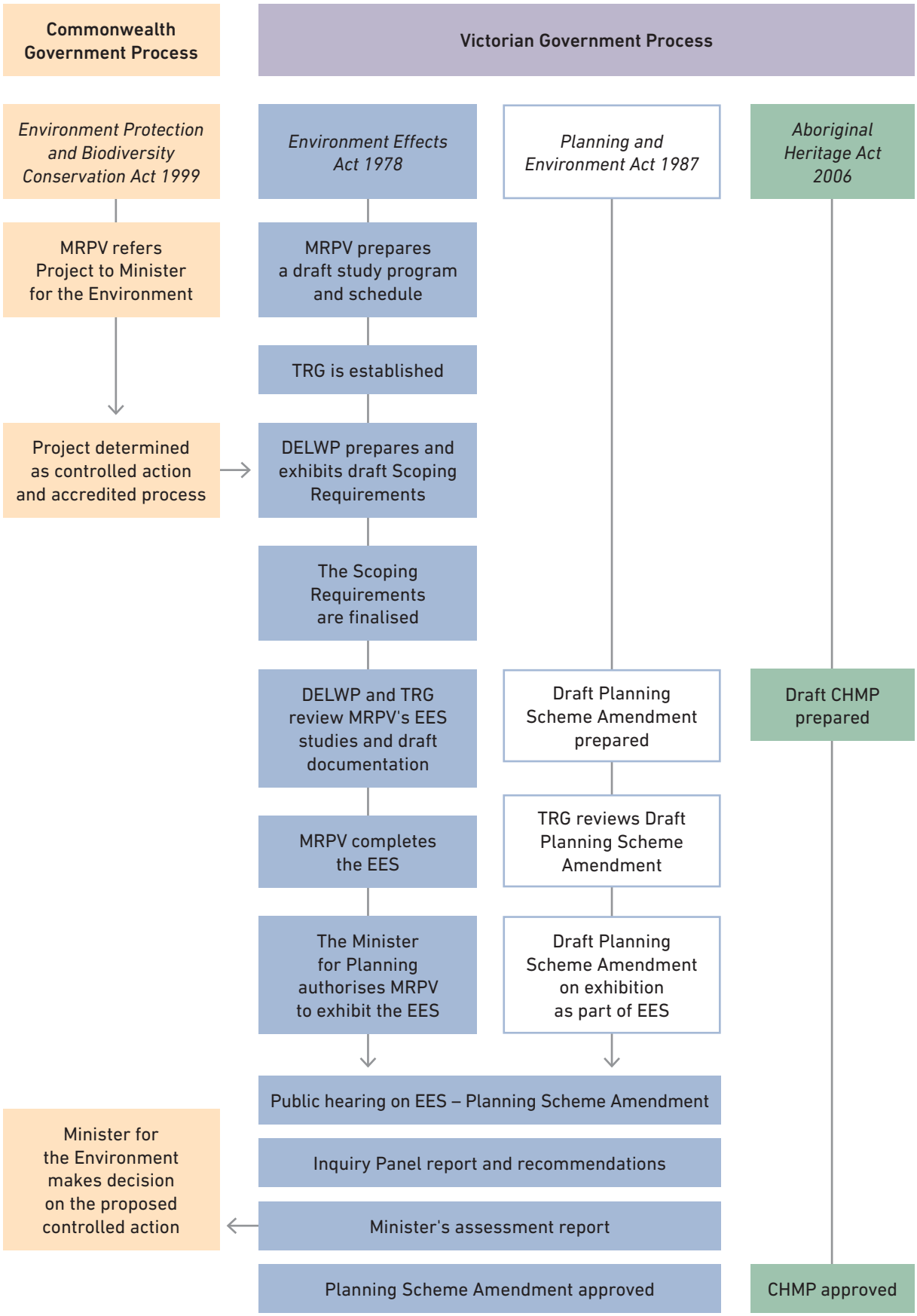
An EES is not an approval process in itself. The preparation of an EES is fundamental to demonstrating the ability of the Project to meet relevant statutory requirements. The Minister's assessment of the EES provides decision-makers with the information they need to make decisions about whether statutory approvals for the Project should be granted and, if so, what conditions should apply. The necessary statutory approvals required for the Project are outlined in Section 1.7.

Preparation of this EES includes a Communications and Stakeholder Engagement Plan to inform the public and consult with individuals and stakeholders potentially affected by the Project. This Plan outlines opportunities for public comment and input into the EES process and how MRPV will provide and manage these opportunities, as stipulated in the *Environment Effects Act 1978* and *Ministerial Guidelines for Assessment of Environmental Effects.* These opportunities include raising specific issues of concern, identifying potential impacts, proposing possible mitigation measures and providing additional information to inform the Project's design and the technical specialist investigations. Chapter 6 *Communications and engagement* provides details on the consultation process completed as part of the EES.

1.5.3 EES process

The process for this EES is rigorous and transparent, with opportunities for input from all stakeholders including the wider community to be provided. Figure 1.2 provides an overview of the main steps in the EES process for the Project, aligned with the key approvals that need to be obtained before the Project can proceed. As this figure shows, supporting documents relating to these key approvals are prepared alongside the EES. These approvals are discussed in Section 1.7.

Figure 1.2 Project EES process and key approvals



1.5.4 Scoping Requirements and Evaluation Objectives

The EES Scoping Requirements set out in detail the matters to be investigated, assessed and documented in this EES for the Project.

The final Scoping Requirements for the Project were issued by the Victorian Minister for Planning in June 2019, following the receipt of public comment on the draft Scoping Requirements, and describe in detail:

- The assessment process and required approvals
- The matters to be addressed in the EES
- Specific requirements for the assessment of environmental effects.

The Scoping Requirements established Evaluation Objectives for this EES (shown in Table 1.1). These objectives identify desired outcomes in the context of the potential environmental effects of the Project and set up a framework to guide the integrated assessment of these potential effects.

This EES also addresses other significant issues not identified in the Scoping Requirements that have emerged during the investigations and consultation process.

Table 1.1 EES Evaluation Objectives

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

This EES includes an Environmental Management Framework which provides a transparent and integrated framework for managing environmental risk for the Project.

1.6 Environmental impact assessment

Environmental impact assessments have been undertaken by a number of technical specialists to ensure this EES meets the Scoping Requirements for the Project.

The technical specialists have evaluated the environmental effects of the Project's design, proposed construction methodologies and operational requirements. The specialists have also assessed how the environmental effects of the Project can be mitigated and identified matters that should be considered for inclusion in the Environmental Performance Requirements (EPRs), which are described further in Section 1.6.1.

The specialists have applied a risk-based approach to the environmental impact assessments. This has enabled the identification and assessment of potential environmental effects across interrelated specialist studies, the prioritisation of environmental risks and consideration of potential cumulative effects. Refer to Chapter 4 *Environment Effects Statement Assessment Framework* for more details regarding the risk-based approach.

The specialist technical reports that support this EES are shown in Figure 1.3 and appended to the EES.

1.6.1 Environmental Performance Requirements

This EES includes an Environmental Management Framework which provides a transparent and integrated framework for managing environmental risk for the Project. It contains Environmental Performance Requirements (EPRs), which are the environmental outcomes that must be achieved during the Project's design, construction and operation.

Initial EPRs for the Project were prepared to inform the risk assessment. 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 detailed design process – provided the outcomes specified in the EPRs are achieved. These initial EPRs were based on standard requirements and measures that are typically incorporated into construction contracts for road projects.

The approach adopted to develop and refine the EPRs and assess environmental risks and impacts is described in Chapter 4 *Environment Effects Statement Assessment Framework*. A full list of the EPRs for the Project is set out in Chapter 12 *Environmental Management Framework*.

1.6.2 Project area

The project area defines the area in which the Project would be developed and encompasses all areas that would be used for construction and operation, including permanent structures and temporary construction work compounds and sites. The project area is shown in Figure 1.1 and further detail provided in Chapter 5 *Project Description* and Attachment VI *Map Book*.

1.7 Project approvals

The Project must obtain a number of statutory approvals before it can proceed. These approvals are summarised in this section. Details of the applicable legislation are provided in Attachment II *Legislation and policy*.

1.7.1 Commonwealth approval

The Commonwealth EPBC Act provides the legal framework to protect and manage designated Matters of National Environmental Significance. Under the EPBC Act, if the Commonwealth Minister for the Environment decides that a project potentially could have a significant impact on a Matter of National Environmental Significance, the project becomes a 'controlled action' that must be assessed and approved by the Minister before it can proceed.

A referral under the EPBC Act was lodged for the Project on 30 January 2019 (2018/8371). On 2 April 2019, the delegate for the Commonwealth Minister for Environment determined that the Project is a controlled action, to be assessed under the Commonwealth and Victorian EPBC Act bilateral agreement. The decision was made on the basis that the proposed action would likely have a significant impact on listed threatened species and communities – Swift Parrot and Matted flax-lily, protected by the EPBC Act.

1.7.2 Key Victorian approvals

The Project requires the following key approvals under Victorian legislation:

- Amendments to the Whittlesea and Nillumbik Planning Schemes under the *Planning and Environment Act 1987*
- A Cultural Heritage Management Plan under the *Aboriginal Heritage Act 2006*.

1.7.3 Other approvals and consents

Other approvals required for the Project under Victorian legislation may include:

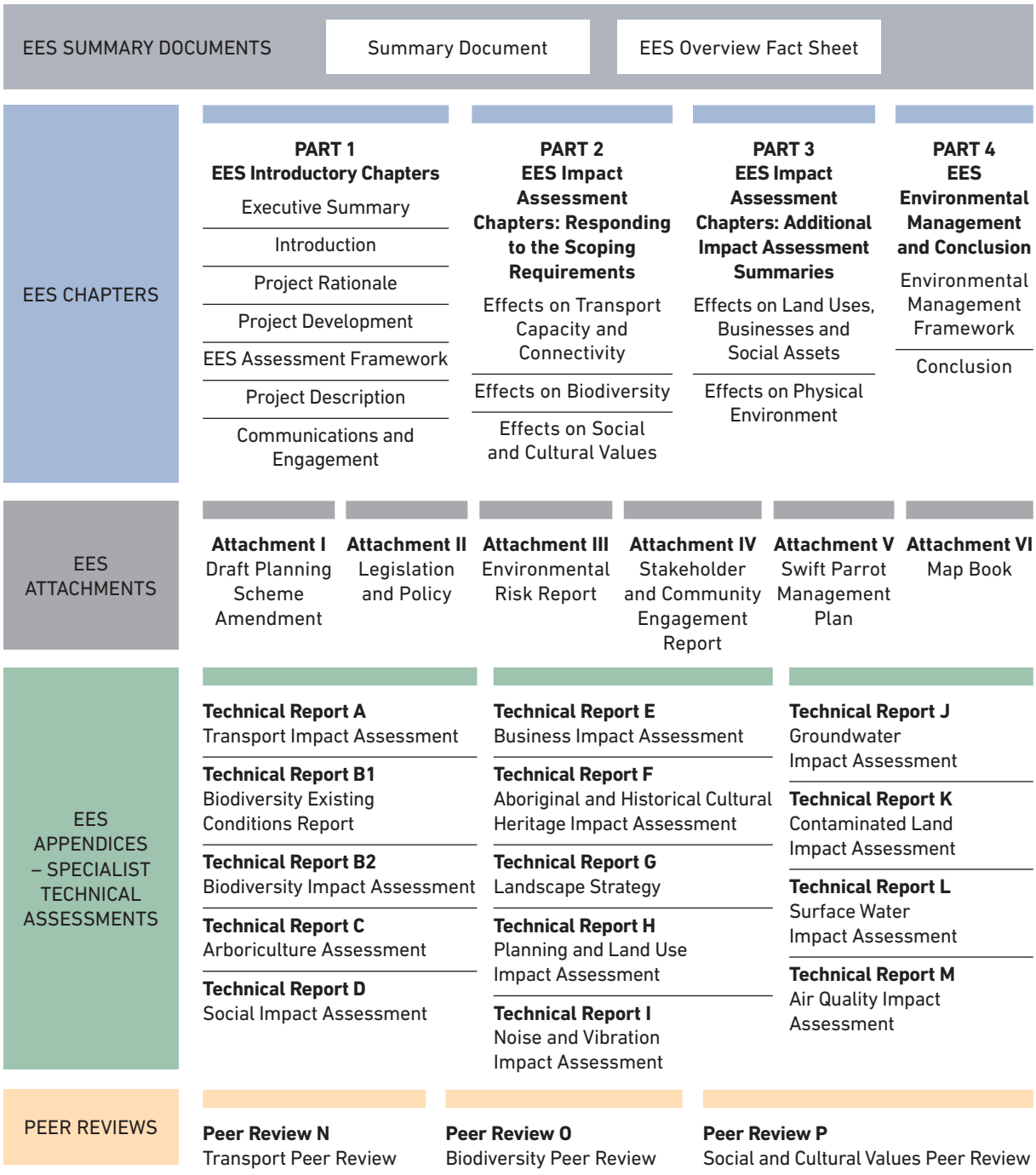
- Permit to remove listed flora and fauna from public land under the *Flora and Fauna Guarantee Act 1988*
- A Management Authorisation (Permit to take wildlife) under the *Wildlife Act 1975* is required for the purposes of capturing, handling or relocating fauna, and will be required if any trenching / pit works are proposed.

1.8 Structure of this EES

The structure and content of this EES aligns with the Evaluation Objectives set out in the Scoping Requirements (see Table 1.1).

The EES is structured in five parts: EES summary documents, EES chapters, EES attachments, EES appendices and draft approvals documentation. Figure 1.3 presents the structure of this EES.

Figure 1.3 Structure of this EES



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