Environment Effects Act 1978

SCOPING REQUIREMENTS

For

MELBOURNE METRO RAIL PROJECT

November 2015

VICTORIA
State Government

List of Abbreviations

AH Act	*Aboriginal Heritage Act 2006*
CBD	Central business district
CHMP	Cultural Heritage Management Plan
CLP Act	*Catchment and Land Protection Act 1994*
DELWP	Department of Environment, Land, Water and Planning (formerly DTPLI)
EE Act	*Environment Effects Act 1978*
EES	Environment Effects Statement
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMS	Environmental Management System
EP Act	*Environment Protection Act 1970*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
FFG Act	*Flora and Fauna Guarantee Act 1988*
IAU	Impact Assessment Unit (within DELWP)
MMRA	Melbourne Metro Rail Authority
P&E Act	*Planning and Environment Act 1987*
RM Act	*Road Management Act 2004*
TI Act	*Transport Integration Act 2010*
TRG	Technical Reference Group

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1 Introduction

In early 2015 the Victorian Government announced that it was committed to the delivery of the Melbourne Metro Rail Project (the project). Accordingly the Melbourne Metro Rail Authority (the MMRA) has been established as an administrative office of the Department of Economic Development, Jobs, Transport and Resources, and tasked with the delivery of the project.

In August 2015 the MMRA submitted to the Minister for Planning (the Minister) a project outline for consideration under the *Environment Effects Act 1978* (EE Act). The project outline describes in broad terms the nature of the project.

1.1. The project and setting

The Melbourne Metro Rail Project comprises twin nine kilometre rail tunnels between South Kensington in the inner west and South Yarra in the inner south east of Melbourne that will connect the Sunbury and Pakenham/Cranbourne lines, bypassing existing congested inner city tracks. The project will provide new inner city underground railway stations at Arden (western end of Queensberry Street in North Melbourne), Parkville (Grattan Street and Royal Parade), CBD North (Swanston Street between Victoria Street and Latrobe Street), CBD South (Swanston Street between Collins Street and Flinders Street) and Domain (St Kilda Road between Domain Road and Toorak Road), significantly increasing inner city station capacity and opening the Parkville and Domain precincts to the rail network. The alignment is shown in Figure 1.

The area which would be directly affected by the project comprises land that is currently used for railway or road purposes, urban land that is developed and used for various purposes, including land in the central business district of Melbourne, and parkland planted with non-indigenous plant species. The project alignment commences east of the Maribyrnong River and crosses the Moonee Ponds Creek near City Link and the Yarra River adjacent to Princes Bridge.

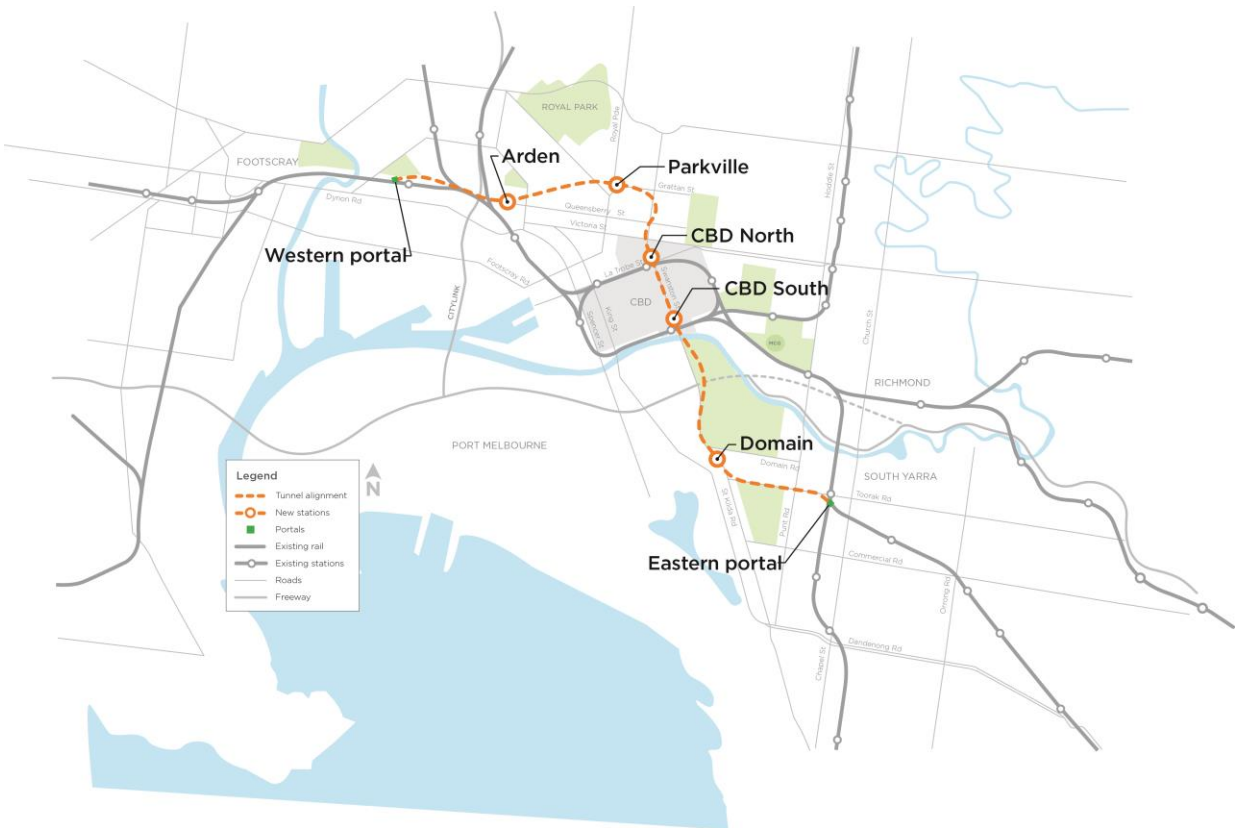

Figure 1. Location of the project

The project works have been declared to be "public works" for the purposes of the EE Act by Orders of the Minister under section 3(1) of the EE Act, published in the Government Gazette on 3 September 2015 and on 24 November 2015. Under section 4(1) of the EE Act, the MMRA as project proponent must prepare an Environment Effects Statement (EES) to be submitted to the Minister for the Minister's assessment of the environmental effects of the declared public works.

1.2. Purpose of this document

Upon declaring the project to be "public works" to which the EE Act applies, the Minister also specified under section 3(3) of the EE Act procedures and requirements that are to apply to an EES for the works. The full procedures and requirements are attached (see Appendix A).

An EES in this context is a statement of the effect of public works on the environment - being *…the physical, biological, heritage, cultural, social, health, safety and economic aspects of human surroundings, including the wider ecological and physical systems within which humans live*. (*Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Ministerial guidelines), p. 2).

The Minister's Order specifies in general terms what the EES is to document:

….. investigations of potential environmental effects of the proposed project, including the feasibility of associated environmental mitigation and management measures, in particular for:

a. *potential effects of construction and construction-related works on air quality, noise levels, hydrology and surface water quality and groundwater quality;*
b. *potential effects arising from disturbance of contaminated soils or groundwater, acid sulphate soils or geophysical conditions, including with respect to land stability;*
c. *potential effects on Indigenous and non-Indigenous cultural heritage values;*
d. *potential effects on visual, landscape, recreational and biodiversity values;*
e. *potential effects on existing land uses and community and business activities, including with respect to acquisitions, services, connectivity and social impacts;*
f. *potential temporary and permanent effects on transport systems and services, both for residents and businesses located in the vicinity of the project and related works and for the broader community; and*
g. *other effects on land uses and the community.*

The Order also provides for the preparation of draft scoping requirements which set out in more detail the matters to be investigated. As required, the draft scoping requirements were exhibited for 15 days for public comment, before the Minister endorsed the final Scoping Requirements following consideration of public comments.

This document is the *Scoping Requirements for the Melbourne Metro Rail Project* (Scoping Requirements). It sets out more detail concerning the specific matters to be investigated and documented in the EES for the project.

While these Scoping Requirements are intended to be complete in their coverage of issues and matters, the EES will also need to address any significant issues that are not identified in this document that may emerge during the EES investigations.

These Scoping Requirements have been prepared to ensure that the EES to be prepared by the MMRA:

- properly responds to the Order made by the Minister;
- identifies what the environmental effects of the works will be;
- explains how the environmental effects of the works are proposed to be managed across the different stages and aspects of the project; and
- provides sufficient and appropriate information to allow the Minister to conduct an assessment of the environmental effects of the works under the EE Act.

It is noted that an EES is often used by planning and other decision-makers. Accordingly the EES should contain sufficient information with respect to the project to provide context for the documentation of the environmental effects of the works.

2 Assessment process and required approvals

2.1. What is an EES?

An EES is a description of the project and its potential environmental effects, that is prepared by the proponent. An EES should enable stakeholders and decision-makers to understand the likely environmental effects of the proposed project and how they are proposed to be managed.

An EES has two main components:

- The EES main report – This is an integrated, plain English document which sets out an analysis of the potential impacts of the project that draws on technical studies, data and statutory requirements such as specific limits for emissions to the environment.
- The studies that inform the EES main report – These are the technical expert reports documenting investigations and analyses of the potential effects of the project that provide the basis for the EES main report. They will be exhibited in full, as technical appendices to the EES main report.

The potential environmental effects that require expert studies are set out in section 4 of this document.

2.2. The EES process

As proponent, the MMRA is responsible for preparing the EES, including preparing technical studies and undertaking stakeholder consultation, while the Department of Environment, Land, Water and Planning (DELWP) is responsible for managing the EES process. The EES process concludes with the Minister's Assessment of the environmental effects of the project, which is issued to relevant statutory decision-makers to inform decisions on the project.

Following the Minister's decision that the project works are "public works" for which an EES must be prepared, this EES process has the following steps:

- Preparation and then exhibition for public comment of the draft Scoping Requirements by DELWP on behalf of the Minister
- Finalisation and issuing of Scoping Requirements by the Minister
- Review of the proponent's EES studies and draft documentation by DELWP and a Technical Reference Group (TRG)[1] (see below)
- Completion of the EES by the proponent
- Review of the complete EES by DELWP on behalf of the Minister to establish its adequacy for public exhibition
- Exhibition of the proponent's EES for 30 business days and invitation by DELWP on behalf of the Minister for public comment
- Appointment of an Inquiry under s. 9 of the EE Act by the Minister to:
  - review the EES and any public submissions
  - conduct public hearings
  - provide a report to the Minister
- Following receipt of the Inquiry report, provision of the Assessment of the project by the Minister to decision-makers.

Further information on the EES process can be found on the department's website at www.delwp.vic.gov.au/environmental-assessment.

[1] For critical components of the EES studies, peer review by an external, independent expert engaged by the proponent may be appropriate.

2.2.1 Technical Reference Group

DELWP will convene an agency-based TRG to advise it and the proponent, as appropriate, on:

- applicable policies, strategies and statutory provisions
- the proponent's public information and stakeholder consultation program for the EES
- the Scoping Requirements for the EES
- the design and adequacy of technical studies for the EES
- responses to issues arising from the EES investigations
- the technical adequacy of draft EES documentation
- coordination of statutory processes.

The TRG will comprise invited representatives of relevant state government agencies and departments, and Councils for the three municipalities in which project works are proposed.

2.2.2 Public engagement

In addition to the prescribed opportunities for public comment on the draft Scoping Requirements and then the EES, less formal consultation also plays an important role in the preparation of the EES. The proponent is responsible for informing the public and for engaging with stakeholders to identify and respond to their concerns in conjunction with the EES studies.

Relevant stakeholders include government bodies and authorities, potentially affected parties, the community and interested organisations and individuals.

A stakeholder consultation plan is to be prepared and implemented by the proponent to ensure that the public is familiar with the EES investigations and that relevant stakeholders are consulted on pertinent issues. The proponent's 'EES Consultation Plan' will be published on the DELWP website and updated as necessary.

The plan must:

- Identify the relevant stakeholder groups
- Characterise the stakeholder groups in terms of their interests, concerns and consultation needs and potential to provide local knowledge
- Describe the consultation methods to be used and outline a schedule of consultation activities
- Outline how inputs from stakeholders will be recorded, considered and/or addressed in the preparation of the EES.

2.3. Outcome of EPBC Act referral

The proponent has also referred the project to the Australian Government under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The delegate for the Minister for the Environment determined on 22 September 2015 that the project is 'not a controlled action if undertaken in a particular manner', and hence requires neither assessment nor approval under the EPBC Act.

3 Matters to be addressed in the EES

3.1. General approach

The EES should address the effects of all components and stages of the project upon the environment – being *…the physical, biological, heritage, cultural, social, health, safety and economic aspects of human surroundings, including the wider ecological and physical systems within which humans live* (Ministerial guidelines, p. 2).

The EES should present an assessment of the potential effects of the project on the environment. It needs to address effects from both the construction and operations phases.

The investigations into the project's environmental effects and the preparation of the EES should be consistent with the principles of a systems approach and risk-based approach, as outlined in the Ministerial Guidelines (p. 14):

> *A systems approach involves the consideration of potentially affected environmental systems and interacting environmental elements and processes. This will enable potential interdependencies to be identified, helping to focus relevant investigations and identify opportunities to avid, mitigate or manage adverse effects. An inter-disciplinary approach should be adopted where appropriate.*
>
> *A risk-based approach should be adopted in the assessment of environmental effects so that suitable, intensive, best practice methods can be applied to accurately assess those matters that involve relatively high levels of risk of significant adverse effects and to guide the design of strategies to manage these risks. Simpler or less comprehensive methods of investigation may be applied to matters that can be shown to involve lower levels of risk.*

The EES should put forward a sound rationale for the level of assessment and analysis undertaken for any particular impact or combination of impacts. For example, the EES might describe the methodology used for analyzing the risk profile of particular effects. However, the proponent might also conclude that a more qualitative approach to determining priority for investigation and assessment might be preferable for certain issues.

Assessments should address direct and indirect, combined, short and long-term, beneficial and adverse effects. In the case of higher risk effects, consideration of environmental effects in the EES should be detailed enough to provide a good understanding of the nature of the effects. The assessment of environmental effects in the EES, at least for higher risks, should include:

- potential effects on individual environmental assets, including magnitude, extent and duration of change in the values of each asset, after intended avoidance and mitigation measures have been taken into account ("residual effects")
- the likelihood of adverse effects occurring
- any gaps in knowledge or other factors that make it difficult to predict the nature or extent of an adverse effect
- further management measures that are proposed for dealing with residual effects (for example, monitoring programs, engagement actions, contingency plans), including specific details of how the measures address relevant policies

Further detailed guidance on the approach to be adopted in preparing the EES is provided in section 4.

3.2. General content and style of the EES

The content of the EES and related investigations is to be guided by this document (Scoping Requirements) and the Ministerial Guidelines. The EES should also address any other significant issues that may emerge during the investigations. Ultimately it is the MMRA's responsibility as proponent to ensure that adequate studies are undertaken to support the assessment of environmental effects, focusing primarily on higher risk effects.

The EES main report should provide a clear, succinct, objective and well-integrated analysis of the potential effects of the proposed project and relevant alternatives, including proposed mitigation and management measures. Overall, the main report should include:

- An executive summary of the potential environmental effects of the project
- A description of the entire project, including its objectives, key elements, precincts, associated requirements for new infrastructure and use of and connections to existing infrastructure
- An outline of the approvals required for the project to proceed
- Descriptions of the existing environment, to the extent necessary to enable the assessment of potential effects
- Assessments of potential effects of the project (including relevant options which might as yet be undecided) on environmental assets and values, relative to the "no project" scenario
- Intended measures for avoiding, minimising, managing and monitoring effects, including a statement of commitment to implement these measures
- Responses to issues raised through public and stakeholder consultation
- An integrated analysis of the effects of the project that synthesises the range of effects identified in the EES.

The MMRA must also prepare a concise non-technical summary document (hard copy A4) for free distribution to interested parties. The EES summary document should include details of the EES exhibition and availability of the EES documentation.

Close consultation with DELWP and the TRG during the investigations and preparation of the EES will be necessary to minimise the need for revisions prior to authorisation of the EES for public exhibition and to ensure that appropriate weighting and consideration of issues is contained within the EES.

Detail on the required scope and content of the EES is covered in the following sections.

3.3. Project description and context

The EES is to contain a section which describes the project in sufficient detail both to allow an understanding of all relevant components, processes and development stages, and to enable assessment of their potential environmental effects.

The EES should describe the following aspects of the project, to the extent relevant and practicable:

- An overview of the proponent.
- Contextual information on the project, including its objectives and its relationship to relevant policies, plans and strategies.
- Description of the processes by which the preferred horizontal and vertical alignments of the rail tunnels, tunnel portal and station locations and other key components of the project were selected.
- Adequate design specification of all the project components including:
  - location
  - footprint and layout
  - technical specifications and design capacity
  - methods of construction that could be adopted, including temporary works required to enable construction
  - aspects of the operational phase of the project that could give rise to environmental effects, including with regard to possible noise, vibration, drainage and water management and greenhouse gas emissions.
- Information about the project's expected construction timetabling and staging, and anticipated operational arrangements.

- Other necessary works directly associated with the project, such as road upgrades, infrastructure and services relocation, or augmentation of existing plant and facilities.

3.4. Applicable legislation, policies and strategies

The EES will need to identify relevant legislation, policies, guidelines and standards, and assess their specific requirements or implications for the project, particularly in relation to required approvals, including but not limited to:

- *Transport Integration Act 2010* (TI Act)
- *Major Transport Projects Facilitation Act 2009* (MTPF Act)
- *Planning and Environment Act 1987* (P&E Act), and relevant provisions in the Melbourne, Port Phillip and Stonnington Planning Schemes
- *Environment Protection Act 1970* (EP Act), including the principles of environment protection and relevant State Environment Protection Policies (SEPPs)
- *Catchment and Land Protection Act 1994* (CLP Act)
- *Flora and Fauna Guarantee Act 1988* (FFG Act)
- *Wildlife Act 1975*
- *Water Act 1989*
- *Road Management Act 2004* (RM Act)
- *Heritage Act 1995*
- *Aboriginal Heritage Act 2006* (AH Act)
- *Crown Land (Reserves) Act 1978*
- *Land Act 1958.*

3.5. Consultation

As proponent, the MMRA is responsible for informing the public and consulting with stakeholders throughout the preparation of the EES in accordance with a suitable 'EES Consultation Plan' (refer to section 2.2.2 of this document).

The EES should document the process and results of the consultation undertaken during the preparation of the EES, including:

- issues raised and suggestions made by stakeholders or members of the public
- the responses then made by the proponent in the context of the EES studies or the associated consideration of mitigation measures.

The EES should also provide an outline of a program for community consultation, stakeholder engagement and communications during the construction and operation of the project, including opportunities for local stakeholders to engage with the proponent to seek responses to issues that might arise while the project is being implemented.

3.6. Draft evaluation objectives

The following draft evaluation objectives identify desired outcomes in the context of potential project effects. They provide a framework to guide an integrated assessment of environmental effects of the project, in accordance with the Ministerial Guidelines. The proponent may propose refinements to the objectives, together with specific assessment criteria, as the EES is prepared.

Table 1. Draft evaluation objectives

Draft Evaluation Objective	Key legislation
Transport connectivity *- To enable a significant increase in the capacity of the metropolitan rail network and provide multimodal connections, while adequately managing effects of the works on the broader transport network, both during and after the construction of the project.*	TI Act
Built environment – *To protect and enhance the character, form and function of the public realm and buildings within and adjacent to the project alignment, and particularly in the vicinity of project surface structures, having regard to the existing and evolving urban context.*	P&E Act
Social, community, land use and business - *To manage the effects on the social fabric of the community in the area of the project, including with regard to land use changes, community cohesion, business functionality and access to services and facilities, especially during the construction phase.*	EP Act, and SEPPs P&E Act TI Act
Amenity - *To minimise adverse air quality, noise or vibration effects on the amenity of nearby residents and local communities, as far as practicable, especially during the construction phase*.	EP Act, SEPPs, and guidelines P&E Act TI Act
Cultural Heritage - *To avoid or minimise adverse effects on Aboriginal and historic cultural heritage values*.	AH Act Heritage Act P&E Act
Land stability – *To avoid or minimise adverse effects on land stability that might arise directly or indirectly from project works.*	P&E Act
Landscape, visual and recreational values - *To avoid or minimise adverse effects on landscape, visual amenity and recreational values as far as practicable.*	P&E Act
Hydrology, water quality and waste management – *To protect waterways and waterway function and surface water and groundwater quality in accordance with statutory objectives, to identify and prevent potential adverse environmental effects resulting from the disturbance of contaminated or acid-forming material and to manage excavation spoil and other waste in accordance with relevant best practice principles.*	EP Act, SEPPs and guidelines
Biodiversity - *To avoid or minimise adverse effects on native terrestrial and aquatic flora and fauna, in the context of the project's components and urban setting.*	FFG Act Wildlife Act
Environmental Management Framework - *To provide a transparent framework with clear accountabilities for managing environmental effects and hazards associated with construction and operation phases of the project, in order to achieve acceptable environmental outcomes*.	TI Act EP Act EE Act

The draft objectives reflect the key matters to be investigated for the EES (refer to section 2), relevant legislation and policies (section 3.4), the objectives and principles of ecologically sustainable development and environmental protection, and environmental issues identified by the proponent in preliminary documentation.

4 Assessment of specific environmental effects

4.1. Approach to assessment

The following sections set out specific requirements for the assessment of effects, using a standard structure for each draft evaluation objective:

- ***Key issues.*** The EES should identify the significant issues or risks that the project poses for each draft evaluation objective.
- ***Describe the existing environment***. This section sets out baseline conditions and existing or predicted trends which are used to underpin predictive impact assessments having regard to the level of risk. Any risk assessment by the proponent could guide the necessary data gathering.
- ***Design and mitigation measures****,* in terms of design or other available measures that could substantially reduce and/or mitigate the risk of significant effects.
- ***Assessment of likely effects****,* in terms of predictive studies or estimates of effects that are reasonably likely, and evaluation of the significance of those effects, having regard to their likelihood.
- ***Approach to manage performance,*** in terms of measures that are proposed to manage those environmental effects still expected to occur and risks still likely to apply even after implementation of proposed mitigation measures ("residual effects and risks"), assuming that identified design and mitigation measures are applied, to achieve appropriate outcomes..

4.2. Transport connectivity

Draft evaluation objective - *To enable a significant increase in the capacity of the metropolitan rail network and provide multimodal connections, while adequately managing effects of the works on the broader transport network, both during and after the construction of the project.*

Key Issues

- Need to manage permanent changes to the public transport, road, cycling and pedestrian transport system.
- Need to manage disruptions and delays for residents, businesses and travellers during the construction of the project.

Priorities for characterising the existing environment

- Describe the elements of the transport system including public transport, road, cycling and pedestrian networks which might be affected by the project, in particular during the construction phase.

Design and mitigation measures

- Describe the design approach to integrating the project with the existing or modified transport network.
- Describe the network changes proposed to maintain transport system function during the construction of the project, including the proposed nature and duration of diversions, route changes and changes in car parking availability and management.
- Identify potential options and actions which could further mitigate adverse effects or optimise the transport system benefits of the project.

Assessment of likely effects

- Describe and as far as practicable quantify predicted travel time differences (relative to a 'no project' scenario) during and after the construction of the project.

Approach to manage performance

- Describe any monitoring or other program for managing disruption or delays relative to predicted effects and for identifying unexpected effects which may require remedial action.

4.3. Built environment

Draft evaluation objective - *To protect and enhance the character, form and function of the public realm and buildings within and adjacent to the project alignment, and particularly in the vicinity of project surface structures, having regard to the existing and evolving urban context.*

Key issues

- Acknowledging and respecting the existing qualities of the built environment in the immediate and broader neighbourhood of project works.
- Recognising the need for project works, both above and below ground, to reinforce, enhance or complement valued aspects of the existing and evolving built environment.

Priorities for characterising the existing environment

- Describe in appropriate detail the character of the existing and evolving built environment in the immediate and broader neighbourhood of project works.
- Describe any relevant planning strategies, policies and frameworks guiding maintenance, development or redevelopment of the built environment in the immediate and broader neighbourhood of project works, and describe their implications for anticipated project outcomes.

Design and mitigation measures

- Describe measures to be taken to create a positive relationship between the established or emerging form, function, amenity and appearance of associated public realm and buildings and the design and appearance of project buildings and structures.
- Describe the design and management approach to ensure the project protects and enhances its urban setting, including streetscapes, built form and community safety, especially for pedestrians.
- Describe measures to assure the safety and enhance the experience of people using project facilities.

Assessment of likely effects

- Analyse the effect of the project on the form, function, amenity and appearance of associated public realm and buildings during and after construction.
- Analyse risks that the project's built form may indirectly detract from the positive contribution of the project to local and neighbourhood built form character.

Approach to manage performance

- Identify management programs required to ensure that the project's built form, both internally and externally, continues to integrate with local character, presents the intended attractive appearance, enhances users' experience and ensures users' safety.
- Identify contingency measures to be implemented if required.

4.4. Social, community, land use and business

Draft evaluation objective - *To manage effects on the social fabric of the community in the area of the project, including with regard to land use changes, community cohesion, business functionality and access to services and facilities, especially during the construction phase.*

Key issues

- Maintenance of community linkages and social cohesion within both the immediate neighbourhood of proposed works and the broader area which may be affected by the project.
- Potential for changed accessibility for residents, including to community services or facilities resulting from construction works or from operation of the project.
- Potential acquisitions of private property for project purposes.

- Potential effects on individual businesses and commercial precincts resulting from changed access for customers, deliveries or other business elements.
- Maintaining amenity in the CBD and other key areas for residents, businesses and visitors during construction.

Priorities for characterising the existing environment

- Describe the communities which may be affected by the project at all relevant levels, and with regard to their exposure to the project. The description should address both physical components, such as community service facilities used by community members, and intangible elements such as values shared by particular groups, to the extent relevant to the project.
- Describe the land which may be required permanently or temporarily for the delivery of the project, including its current uses and sensitivities.
- Describe in broad terms land uses in the area neighbouring the alignment, and particularly in the neighbourhood of stations, portals and construction works compounds.
- Describe the individual businesses or business precincts (as may be appropriate) which could be affected temporarily or permanently by project activities.
- Describe the relevant infrastructure, networks and other elements that provide for connectivity within and between communities, to the extent that such features may be disrupted or additionally loaded due to project works or activities.

Design and mitigation measures

- Describe measures to be put in place to maintain community linkages or replace linkages which may be disrupted by the project.
- Describe processes to be applied to gain access to land required for the project, including the approach to compensation and managing adverse effects for landowners.
- Describe the approach to provide alternative access to properties for which customary access may be disrupted by the project.
- Describe the approach to be taken to enable or assist businesses which may be adversely affected by the project, whether temporarily or permanently, to maintain business continuity.

Assessment of likely effects

- Analyse the effects of temporary and longer-term land use changes which will result from the implementation of the project.
- Analyse the residual (mitigated) effects on communities, community cohesion and business operations, categorising the severity of residual effects and identifying further measures which may be taken to manage residual effects.
- Analyse indirect effects which might result from the project (e.g. on catchments for community facilities or other land uses) and propose measures for addressing such effects, including both temporary and permanent effects.
- Analyse effects on businesses and business precincts, especially with respect to management of routine operations and business viability.

Approach to manage performance

- Describe the principles to be adopted for any monitoring program to be implemented to track actual social and business effects relative to predicted effects, including proposed trigger levels for initiating contingency actions which might be necessary.

- Describe the principles to be adopted for contingency actions which could be implemented if foreseeable but uncertain adverse effects are detected.

4.5. Amenity

Draft evaluation objective - *To minimise adverse air quality, noise or vibration effects on the amenity of nearby residents and local communities, as far as practicable, especially during the construction phase.*

Key Issues

- Adverse effects on air quality, due to dust or other emissions from construction works and project operations including ventilation systems.
- Emissions of noise resulting from the project exceeding relevant statutory, policy or guideline levels, adversely affecting amenity of residences or other sensitive land uses.
- Generation of airborne or groundborne vibrations which could adversely affect amenity of residential or other sensitive premises.

Priorities for characterising the existing environment

- Existing air quality conditions and trends, relative to relevant SEPP standards, including known factors which may lead to local exceedances, to which project air quality management may need to be adapted or respond.
- Existing noise conditions and trends in the neighbourhood of the project alignment and works sites
- Ground conditions which may influence the transmission of vibrations resulting from construction works or railway operations.

Design and mitigation measures

- Design, management and intervention measures which may be applied to prevent or control emissions of dust or other air pollutants from construction works sites.
- Design, management and intervention measures which may be applied to control emissions of construction noise and noise from train operations within relevant SEPP, policy or guideline levels.
- Design, management and intervention measures which may be applied to control vibrations resulting from construction works and from train operations within relevant guideline levels that are appropriate for the project.

Assessment of likely effects

- Analysis of risks of exceeding relevant air quality standards resulting from project works, either in isolation or in addition to background levels of air pollutants.
- Analysis of potential for noise standards to be exceeded, with respect to timing, durations, localities, degree of potential exceedance and any relevant special noise characteristics (e.g. tonality, impulsiveness).
- Analysis of potential for vibration to cause disturbance to occupants of residential buildings or other sensitive land uses (see also 4.6 below for potential effects of vibration on cultural heritage values).

Approach to manage performance

- Describe the principles to be adopted for setting key elements of proposed monitoring programs for air quality, noise and vibration, both during construction works and for project operations, as appropriate.
- Describe the principles to be adopted for developing contingency measures to be applied if monitoring demonstrates more significant adverse effects than predicted or permitted.

4.6. Cultural heritage

Draft Evaluation Objective - *To avoid or minimise adverse effects on Aboriginal and historic cultural heritage values.*

Key Issues

- Potential adverse effects on tangible or intangible Aboriginal cultural heritage values.
- Preparation of a Cultural Heritage Management Plan (CHMP) under the *Aboriginal Heritage Act 2006*.
- Potential adverse effects on historic cultural heritage values, especially buildings and properties identified through statutory instruments (particularly the *Heritage Act 1995,* planning schemes or as protected under the EPBC Act), including potential susceptibility of historic cultural heritage properties to damage resulting from airborne or groundborne vibrations during or after construction of the project.

Priorities for characterising the existing environment

- Identification of Aboriginal cultural heritage sites and values which could be affected by the project.
- Identification of areas of Aboriginal cultural heritage sensitivity relevant to the project (if any).
- Identification of sites on the Victorian Heritage Register or identified by Heritage Overlays in relevant planning schemes or otherwise documented as being of heritage significance, including as appropriate condition of listed structures that could be affected.
- Identification of sites or precincts of archaeological sensitivity for historic cultural heritage values, including the need for investigations to supplement past studies, in the light of Heritage Victoria guidelines.

Design and mitigation measures

- Describe and evaluate proposed design, management or site protection measures which could avoid or mitigate potential adverse effects on Aboriginal cultural heritage or historic cultural heritage values, especially with regard to project construction.

Assessment of likely effects

- Assess potential effects of the project on identified sites or places of Aboriginal cultural heritage, with due regard for relative levels of significance and possible impact pathways, including vibration.
- Assess potential effects of the project on sites of historic cultural heritage significance, with due regard for relative levels of significance and possible impact pathways, including vibration.

Approach to manage performance

- Describe the principles for developing measures to mitigate and manage residual effects on Aboriginal cultural heritage, within the framework of a draft CHMP.
- Describe the principles to develop measures to mitigate and manage residual effects on sites and places of historic heritage significance, including site investigation, recording and monitoring procedures.
- Describe the approach to identify contingency measures to manage effects on sites of historic cultural heritage sensitivity if effects are discovered or found to be of greater significance during project construction.

4.7. Land stability

Draft Evaluation Objective – *To avoid or minimise adverse effects on land stability that might arise directly or indirectly from project works.*

Key issues

- Potential for project works to cause or lead to reduced ground stability, which could adversely affect properties, structures or other values.

Priorities for characterising the existing environment

- Identify and map ground conditions along and in the vicinity of the project alignment.
- Identify ground conditions which may be susceptible to instability, in particular if subjected to tunnelling, deep excavation or dewatering.

Design and mitigation measures

- Identify design and management measures to maintain ground stability where risks of potential instability have been identified.

Assessment of likely effects

- Assess potential for project works to lead to immediate or incremental reduction on ground stability.

Approach to manage performance

- Describe principles to be adopted to inform monitoring programs to identify ground instability if it occurs after project works commence, including after construction has been completed.
- Describe principles to be adopted to formulate contingency actions which may be implemented if ground instability resulting from the project is identified.

4.8. Hydrology, water quality and waste management

Draft evaluation objective - *To protect waterways and waterway function and surface water and groundwater quality in accordance with statutory objectives, to identify and prevent potential adverse environmental effects resulting from the disturbance of contaminated or acid-forming material and to manage excavation spoil and other waste in accordance with relevant best practice principles.*

Key Issues

- Potential for project works to affect waterways and hydrology, including with respect to flooding.
- Potential for contaminated run-off or other water, including groundwater, to be discharged into surface waters or groundwater.
- Potential for disturbance of anthropogenic contaminated soil or groundwater or naturally occurring potential acid sulphate soils.
- Need to manage substantial quantities of material, in particular excavation and tunnelling spoil, including temporary stockpiling and transporting material away from works sites.

Priorities for characterising the existing environment

- Identify and map the natural and constructed surface water drainage system relevant to the geographic coverage of project works.
- Identify existing surface water quality and stream condition parameters and trends, as relevant.
- Identify existing groundwater conditions and characteristics within the general area that might be affected by project works.
- Identify known contaminated sites and ground conditions which could indicate potential acid sulphate soils.
- Identify the volume and nature of project excavation spoil.

Design and mitigation measures

- Identify measures to avoid or mitigate project effects on waterways and flood behaviour and management.

- Identify proposed design, management and mitigation measures to be used to protect surface water quality, especially during the construction phase, in the light of relevant SEPP objectives and other relevant standards and guidelines.
- Identify measures to protect groundwater and aquifers, including with respect to the potential effects of constructing and operating the tunnels and underground stations.
- Identify options for treating, reusing or disposing of excavation spoil, including both contaminated material (as relevant) and clean material, and the routes and destinations for spoil material to be transported away from the project works sites.

Assessment of likely effects

- Assess potential for project works to affect waterways and hydrology, including with respect to flood behaviour and management.
- Assess potential for the project to affect water quality in receiving waters, having regard to existing water quality conditions, proposed mitigation measures and relevant SEPP standards.
- Assess potential for the project to cause short-term or longer-term changes to groundwater conditions, with particular regard to ground subsidence, tunnel drainage, groundwater quality and beneficial uses.
- Assess potential for disturbance of contaminated soil, acid sulphate soils or contaminated groundwater to affect users or environmental values.
- Assess potential for treatment of contaminated material to enable it to be reused or recycled rather than disposed of.
- Assess potential for project reuse or other economically viable reuse of project excavation spoil.

Approach to manage performance

- Describe principles to be adopted for setting programs for monitoring flooding events during construction (if they occur), surface water and groundwater quality and groundwater levels.
- Describe principles to be adopted for monitoring management of spoil and identifying previously unknown sources of contamination.
- Describe principles to be adopted for developing contingency measures to be implemented if unexpected adverse effects are identified.

4.9. Landscape, visual and recreational values

Draft Evaluation Objective - *To avoid or minimise adverse effects on landscape, visual amenity and recreational values as far as practicable.*

Key Issues

- Potential adverse effects on highly valued urban landscapes, resulting from construction phase works or inappropriate siting of permanent new works.
- Potential temporary or permanent effects on public open space and recreational areas, affecting access to or enjoyment of recreational opportunities, especially during the construction phase.

Priorities for characterising the existing environment

- Identify key visual and landscape features and values in the area or broader vicinity of proposed project works.
- Identify condition and uses of public open space and facilities which could be occupied or otherwise adversely affected by project construction works.

Design and mitigation measures

- Identify project design and construction management measures to avoid or minimise adverse effects on landscape character and visual values, especially with regard to long-term effects.
- Identify project design and management measures to avoid or minimise adverse effects on recreational values resulting from the project, including during construction, and opportunities for recreational uses to be redirected to alternative sites (if relevant).

Assessment of likely effects

- Assess likely extent and duration of residual adverse effects on landscape and visual values, including use of photo-montages or other suitable methods for depicting predicted landscape changes, and available measures to manage or offset those effects.
- Identify and assess likely residual effects on recreational activities, including with regard to public land to be used or occupied for project works.

Approach to manage performance

- Identify principles to be adopted to develop measures to monitor adverse effects on landscape and visual values and contingency measures to be implemented if required.
- Describe the approach to identifying proposed methods to monitor effects on recreational opportunities and the effectiveness of mitigation measures that have been put in place.

4.10. Biodiversity

Draft Evaluation Objective - *To avoid or minimise adverse effects on native terrestrial and aquatic flora and fauna, in the context of the project's components and urban setting.*

Key Issues

- Potential survival of remnant vegetation in areas to be affected by project works.
- Use of planted vegetation or other landscape elements as habitat by native terrestrial fauna.
- Use of waterways that might be affected by project works and activities by aquatic fauna.

Priorities for characterising the existing environment

- Identify and describe existing terrestrial flora and fauna that could be affected by project works, especially species listed as threatened under the FFG Act or listed under DELWP Advisory lists.
- Identify and describe significant aquatic fauna that could be affected by project works (if any).

Design and mitigation measures

- Describe measures proposed to protect significant terrestrial and (if relevant) aquatic flora and fauna values.
- If relevant, describe measures to offset identified adverse effects on flora and fauna values.

Assessment of likely effects

- In the context of the project's urban and highly modified setting, assess the potential adverse residual effects of the project on biodiversity values.

Approach to manage performance

- Describe principles to be adopted to develop monitoring programs to measure adverse effects on significant flora and fauna values resulting from the project.
- Describe the approach to develop contingency measures to be implemented in the event of adverse residual effects on flora and fauna values requiring further management.

4.11. Environmental Management Framework

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

Key Issues

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

Priorities for characterising the existing environment

- Outline the means by which a register of environmental risks associated with the project will be developed and maintained during project implementation (including matters identified in preceding sections in these directions and other relevant risks).

Design and mitigation measures

- Provide a proposed environmental management framework (EMF) for managing actual and potential adverse environmental effects, including:
  - the environmental management system (EMS) to be adopted, including organisational responsibilities and accountabilities
  - the context of required approvals and consents, in particular anticipated requirements for any related environmental management plans (EMPs), whether for project precincts or project phases or other relevant project elements
  - a summary of environmental management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes with regard to intervals and duration of effects and sensitivity of the potentially affected communities, built form and neighbourhood character
  - proposed objectives, indicators and monitoring requirements, including for managing:
    - built form, with respect to local character
    - social and community effects
    - effects on businesses and business precincts
    - effects on amenity, including air quality, noise and vibration effects
    - effects on structures and infrastructure resulting from construction activities or from operation of the project
    - surface water quality, groundwater quality and surface water flow and groundwater regimes
    - effects on Aboriginal and historic cultural heritage
    - effects on landscape, visual and recreational values
    - effects on biodiversity values.

Assessment of likely effects

- Evaluate the likely effectiveness of the proposed EMF in controlling adverse effects.

Approach to manage performance

- Procedures for:
  - verifying or monitoring environmental performance and compliance with requirements
  - review of the effectiveness of the EMF for compliance and continuous improvement.
- Arrangements for management of and access to baseline and monitoring data, to ensure the transparency and accountability of environmental management and to provide a legacy for the improvement of environmental knowledge.

Appendix A

Minister's procedures and requirements under section 3(3) of the *Environment Effects Act 1978*

The following procedures and requirements under the guidelines are to apply to the Environment Effects Statement (EES) for the works.

(i) The EES is to document investigations of potential environmental effects of the proposed works, including the feasibility of associated environmental mitigation and management measures, in particular for:

a. potential effects of construction and construction-related works on air quality, noise levels, hydrology and surface water quality and groundwater quality;

b. potential effects arising from disturbance of contaminated soils or groundwater, acid sulphate soils or geophysical conditions, including with respect to land stability;

c. potential effects on Indigenous and non-Indigenous cultural heritage values;

d. potential effects on visual, landscape, recreational and biodiversity values;

e. potential effects on existing land uses and community and business activities, including with respect to acquisitions, services, connectivity and social impacts;

f. potential temporary and permanent effects on transport systems and services, both for residents and businesses located in the vicinity of the project and related works and for the broader community; and

g. other effects on land uses and the community.

(ii) The matters to be investigated and documented in the EES will be set out more fully in scoping requirements. Draft scoping requirements will be exhibited for 15 business days for public comment, before final scoping requirements are endorsed by the Minister for Planning.

(iii) The proponent may prepare and submit to the Department of Environment, Land, Water and Planning (DELWP) a draft EES study program to inform the preparation of scoping requirements.

(iv) The level of detail of investigation for the EES studies should be consistent with the approach set out in the scoping requirements and be adequate to inform an assessment of the significance and acceptability of the potential environmental effects, in the context of the guidelines.

(v) DELWP will convene an inter-agency Technical Reference Group (TRG) to advise the Department and the proponent, as appropriate, during the preparation of the EES on the scoping requirements, the design and adequacy of the EES studies, and coordination with statutory approval processes.

(vi) The proponent is to prepare and implement an EES Consultation Plan for informing the public and consulting with stakeholders during the preparation of the EES, having regard to advice from DELWP and the TRG.

(vii) The proponent is also to prepare and submit to DELWP its proposed schedule for the completion of studies, preparation and exhibition of the EES, which may be amended following endorsement of the scoping requirements. This schedule is intended to facilitate the alignment of the proponent's and DELWP's timeframes, including for TRG review of technical studies for the EES and the main EES documentation.

(viii) The proponent is to apply appropriate peer review where necessary and quality management procedures to enable the completion of EES studies to a satisfactory standard.

(ix) The EES is to be exhibited for a period of 30 business days for public comment, unless the exhibition period spans the Christmas–New Year period, in which case 40 business days will apply.

(x) An inquiry will be appointed under the Environment Effects Act 1978 to consider environmental effects of the proposal.