

Environment Effects Act 1978

SCOPING REQUIREMENTS

For

EDITHVALE AND BONBEACH LEVEL CROSSING
REMOVAL PROJECT

ENVIRONMENT EFFECTS STATEMENT

September 2017



List of abbreviations

AH Act	<i>Aboriginal Heritage Act 2006</i>
PASS	<i>Potential acid sulphate soils</i>
CHMP	Cultural heritage management plan
DELWP	Department of Environment, Land, Water and Planning
EE Act	<i>Environment Effects Act 1978</i>
EES	Environment effects statement
EMF	Environmental management framework
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
GDE	<i>Groundwater dependent ecosystem</i>
m	Metre
SEPP	State environment protection policy
TRG	Technical reference group

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1 Introduction

In light of the potential for significant environmental effects, on 5 May 2017 the Victorian Minister for Planning (the Minister) determined under the *Environment Effects Act 1978* (EE Act) that the Level Crossing Removal Authority (LXRA, see levelcrossings.vic.gov.au) should prepare an environment effects statement (EES) for the Edithvale and Bonbeach Level Crossing Removals (the project). The purpose of the EES is to provide a sufficiently detailed description of the proposed project and to assess its potential effects on the environment¹ and approaches to mitigation. The EES will inform the public and stakeholders and seek feedback to enable the Minister to issue an assessment of the environmental effects of the project under the EE Act at the conclusion of the process. The Minister's assessment will inform statutory decision-makers responsible for the project's approvals.

The *Scoping Requirements for the Edithvale and Bonbeach Level Crossing Removal Project* (scoping requirements) set out the specific matters to be investigated and documented in the EES.

1.1 The project and setting

LXRA proposes to remove level crossings at Edithvale Road, Edithvale and at Station Street/Bondi Road, Bonbeach as part of the Victorian Government's program to remove 50 level crossings in Melbourne. The Edithvale project area lies between Station Street and Nepean Highway within the existing rail reserve bounded by Lochiel Avenue and Elsie Grove. The Bonbeach project area lies between Station Street and Nepean Highway within the existing rail reserve bounded by Glenola Road and Mascot Avenue (Figure 1). Temporary construction laydown areas may extend the project area beyond the existing rail reserve.

The projects involve lowering the Frankston Railway line into trenches at Edithvale and at Bonbeach. The proposed rail tracks would be approximately 8m below ground level beneath new road bridges that will be built at ground level to replace the existing level crossings at both sites. New station infrastructure will also be constructed on a deck above the trenches at the existing station locations. Temporary work sites would also be required for construction purposes.

1.2 Minister's requirements for this EES

Both level crossing removals were referred together due to their potential for cumulative effects on the Ramsar-listed Edithvale-Seaford Wetlands. The Minister's decision to require an EES included the procedures and requirements set out in Appendix A, in accordance with section 8B(5) of the EE Act. These requirements focus on matters for the EES to examine:

- potential short and long term effects on the regional groundwater regime, as well as the resulting potential changes to hydrological conditions at the Ramsar listed Edithvale-Seaford Wetlands;
- potential short and long term effects on the ecological character and habitat values of the Edithvale-Seaford Wetlands, and on the dependent flora and fauna, in particular the critical components of habitat for listed waterbirds, due to alterations to the groundwater regime; and
- potential effects on other beneficial uses of groundwater, due to alterations in the groundwater regime, along with risks to human health, recreation and ecosystems due to changes in water quality from activation and excavation of potentially acid sulphate soils and from interception/movement of existing contaminated soil and groundwater.

These scoping requirements provide further detail on the specific matters to be investigated in the EES in the context of Ministerial Guidelines for Assessment of Environmental Effects under the EE Act (Ministerial Guidelines).

¹For the purpose of assessment of environmental effects under the EE Act, the meaning of 'environment' includes physical, biological, heritage, cultural, social, health, safety and economic aspects (Ministerial Guidelines, p. 2).

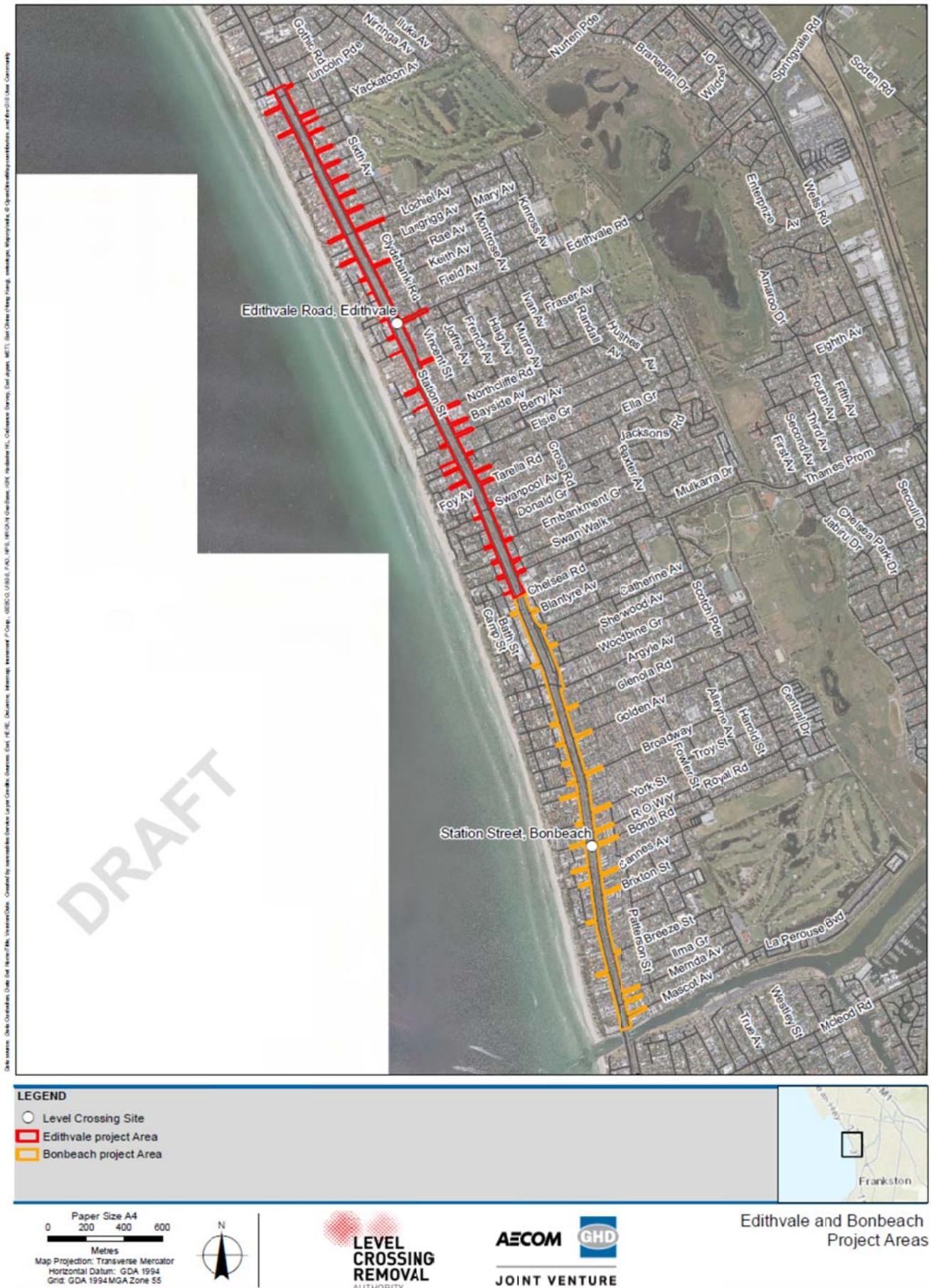


Figure 1: Location of the project (source: LXRA, EES Referral, 2016).

2 Assessment process and required approvals

2.1 What is an EES?

An EES is prepared by the project's proponent to describe the project and its potential environmental effects. An EES should enable the public, stakeholders and decision-makers to understand how the project is proposed to be implemented and the likely environmental effects of doing so. An EES has two main components.

1. The EES main report – An integrated, plain English document that sets out an analysis of the potential impacts of the project. The main report draws on technical studies, data and statutory requirements such as specific limits for waste discharge to the environment.
2. The studies that inform the EES – Technical reports on expert investigations and analysis that provide the basis for the EES main report. They will be exhibited in full, as appendices to the main report.

The potential impacts that require technical studies are set out in Section 4.

2.2 The EES process

LXRA is responsible for preparing the EES, including conducting technical studies and undertaking stakeholder consultation. The Department of Environment, Land, Water and Planning (DELWP) is responsible for managing the EES process². This EES process has the following steps:

- preparation of a draft study program and draft schedule by LXRA (completed);
- establishment of an inter-agency technical reference group (TRG) convened by DELWP (completed);
- preparation and exhibition of draft scoping requirements by DELWP on behalf of the Minister with public comments received during the advertised exhibition period (completed);
- finalisation and publication of scoping requirements by the Minister (current step);
- review of LXRA's EES studies and draft documentation by DELWP and the TRG³;
- preparation of the EES by LXRA;
- review of the complete EES by DELWP to establish its adequacy for public exhibition;
- exhibition of LXRA's EES and invitation for public comment by DELWP on behalf of the Minister;
- appointment of an inquiry by the Minister to review the EES and public submissions received and provide a report to the Minister (the form of inquiry will be determined following finalisation of the scoping requirements); and
- assessment of the environmental effects of the proposal by the Minister for Planning (Minister's assessment), following receipt of the inquiry report.

Technical reference group

DELWP has convened an agency-based TRG, comprised of representatives of state government agencies and departments and the City of Kingston. The TRG will advise DELWP and LXRA on:

- applicable policies, strategies and statutory provisions;
- the scoping requirements for the EES;
- the design and adequacy of technical studies;
- LXRA's public information and stakeholder consultation program;
- responses to issues arising from the EES investigations;
- the technical adequacy of draft EES documentation; and

²See www.planning.vic.gov.au/environmental-assessment/what-is-the-ees-process-in-victoria.

³For critical components of the EES studies, peer review by an external, independent expert may be appropriate.

- coordination of statutory processes.

Public engagement

Consultation is a key aspect of the EES process. Public and stakeholder knowledge and views will be considered and used to input to the assessment of effects. Formal opportunities for public comment occur during exhibition of the scoping requirements and the EES, itself. LXRA will continue to consult with the public and stakeholders prior to and during EES investigations, to assist in the development of a sound EES. LXRA is responsible for informing and engaging with the public and stakeholders to identify and respond to their concerns during the EES process. Besides the community at large, stakeholders might include government bodies and authorities, potentially affected parties and interested organisations or individuals.

LXRA's consultation plan will be implemented to familiarise the public and stakeholders with the project and EES investigations, as well as provide opportunities for input and engagement on specific issues. LXRA's consultation plan will be published on the DELWP website and will:

- identify 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; and
- outline how inputs from stakeholders will be recorded, considered and/or addressed in the preparation of the EES.

Approvals coordination with the EES process

The project may require a range of approvals under Victorian legislation. DELWP coordinates the EES process as closely as practicable with the approvals procedures, consultation and public notice requirements. Figure 2 outlines the steps in the EES process and the parallel coordination of statutory processes.

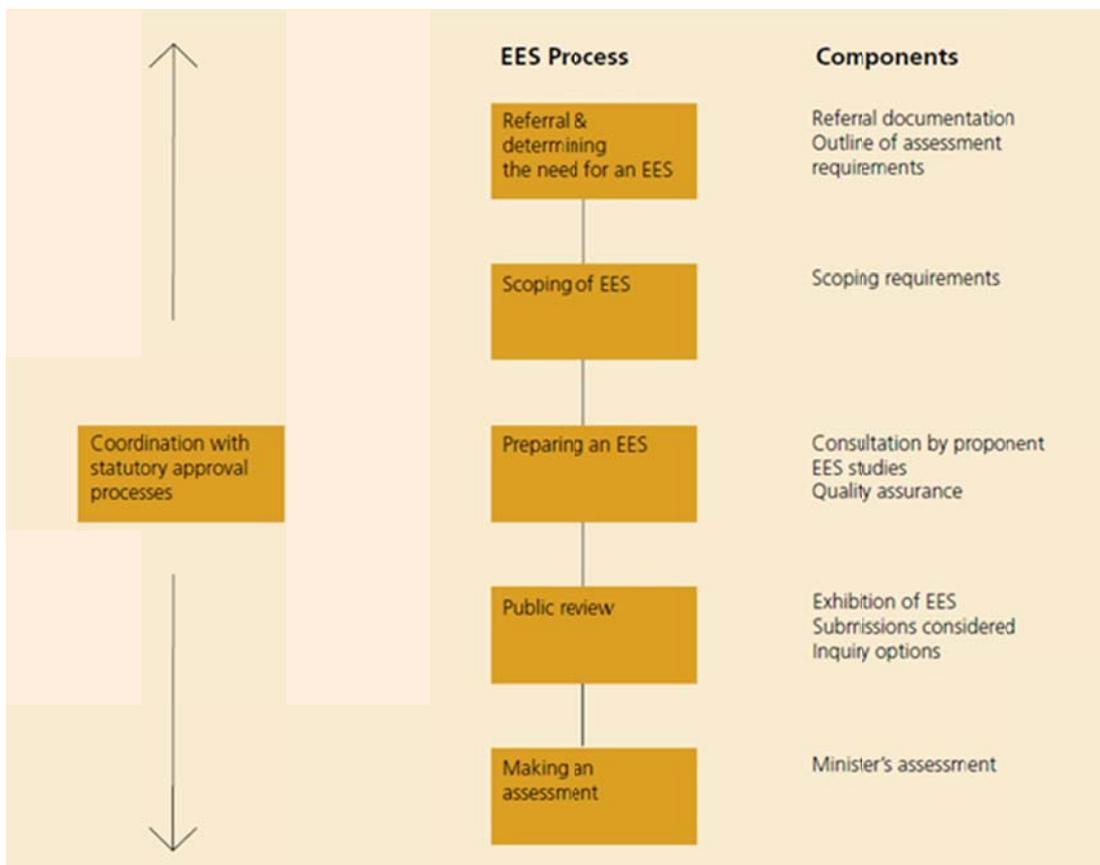


Figure 2: Coordination of statutory assessment and approvals processes.

2.3 Accreditation of the EES process under the EPBC Act

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 Minister for the Environment and Energy determined on 8 May 2017 that the project is a 'controlled action' and hence requires assessment and approval under the EPBC Act. The provisions for the Australian Government's controlled action decision under the EPBC Act are:

- Ramsar wetlands (sections 16 and 17B);
- listed threatened species and ecological communities (sections 18 and 18A); and
- listed migratory species (sections 20 and 20A).

The EES process is accredited to assess impacts on matters of national environmental significance under the EPBC Act through the Bilateral (Assessment) Agreement between the Commonwealth and the State of Victoria – refer to Schedule 1 (part 5) of the bilateral agreement. Note that what are generally termed 'effects' in the EES process correspond to 'impacts' under the EPBC Act. The EES for the project will be undertaken in accordance with the bilateral agreement; there will be no separate assessment by the Commonwealth. This helps avoid process duplication and enable alignment of mitigation and requirements under the relevant state and commonwealth legislation.

The Commonwealth Minister or delegate will receive the Minister for Planning's assessment under the EE Act at the conclusion of the EES process and use it as the basis for deciding on the approval of the project under the EPBC Act.

3 Matters to be addressed in the EES

3.1 General approach

Preparation of the EES document and the necessary investigation should be consistent with the principles of a systems approach and a risk-based approach⁴, so that a greater level of effort is directed at investigating and addressing those matters that pose relatively higher risk of adverse effects. The EES should put forward a sound rationale for the level of assessment and analysis undertaken for any particular environmental effect or combination of environmental effects⁵ arising from construction and operational stages of the project.

In the case of potentially significant effects, analyses documented within the EES should be detailed enough to provide a good understanding of the nature of the effects including:

- potential effects on individual environmental assets, including magnitude, extent and duration of change in the values of each asset, having regard to intended avoidance and mitigation measures; and
- the likelihood of adverse effects and associated uncertainty of available predictions or estimates.

Moreover, the EES should detail the proponent's approach to managing the anticipated environmental effects by documenting:

- environmental performance standards or requirements that could apply to address potential environmental effects;
- further management measures that are proposed where avoidance and mitigation measures do not adequately address effects on environmental assets, including specific details of how the measures address relevant policies;
- likely residual effects assuming the proposed measures are implemented; and
- proposed approach to managing and monitoring environmental performance and contingency planning

3.2 General content and style of the EES

It is LXRA's responsibility to ensure that adequate studies are undertaken to support the assessment of environmental effects, focusing primarily on significant effects (including those that might emerge during the investigations). The EES should demonstrate how the project will achieve a balance of economic, social and environmental outcomes that contribute to ecologically sustainable development and provide a net community benefit over the short and long-term. To facilitate decisions on required approvals, the EES should address statutory requirements associated with approvals that will be informed by the Minister's assessment. Overall, the main report should include the following:

- an executive summary;
- a description of the entire project, including its objectives, rationale and key elements;
- a description of the relationship of the project to public policies and plans;
- an outline of the primary approvals required for the project to proceed;
- descriptions of the existing environment and future climate change scenarios, where these are relevant to the assessment of potential effects;
- appropriately detailed assessments of potential effects of the project on environmental values, relative to the 'no project' scenario, together with an estimate of the uncertainty associated with predictions;
- intended measures for avoiding, minimising, managing and monitoring effects;
- any proposed offset measures where avoidance and mitigation measures will not adequately address effects on environmental values;

⁴Ministerial Guidelines (p. 14).

⁵Effects include direct, indirect, combined, short and long-term, beneficial and adverse effects.

- predictions of residual effects of the project assuming implementation of proposed environmental management measures;
- responses to issues raised through public and stakeholder consultation; and
- evaluation of the implications of the project for the implementation of applicable legislation and policy, including the principles and objectives of ecologically sustainable development and environmental protection.

LXRA must also prepare a concise, graphical-based non-technical summary document (hard copy A4, no more than 25 pages) for free distribution to interested parties. The EES summary document should include details of the EES exhibition, public submission process and availability of the EES documentation.

3.3 Project description

The EES is to describe the project in sufficient detail to allow an understanding of all components, processes and development stages, and to enable assessment of their likely potential environmental effects. The project description should canvass the following:

- an overview of LXRA's environmental performance and track record, including experience in delivering similar projects, as well as organisation health, safety and environmental policies;
- contextual information on the project, including its objectives and rationale, its relationship to statutory policies, plans and strategies, including the basis for selecting the level crossings to be removed and implications of the project not proceeding; and
- existing and planned land uses within and in the vicinity of the proposed project, supported by plans and maps.

The EES, to the extent practicable, should detail the projects components:

- location, footprint, layout and access arrangements during construction and operation;
- proposed construction techniques, temporary occupation of land, extent of areas to be disturbed during construction and infrastructure and service relocation;
- solid waste, wastewater and hazardous material generation and management during construction and operation;
- lighting, safety and security requirements during construction and operation;
- hours of construction works; and
- approach to be taken regarding reinstatement of both locations.
- approach to be taken towards urban design guidelines that would be utilised to minimise visual and landscape impacts and contribute positively to neighbourhood character.

3.4 Project development and alternatives

The EES should document the project's design development process leading to the project design presented in the EES and the consideration of relevant alternatives (project design, construction method/staging). The discussion of relevant alternatives should include:

- an explanation of selection processes;
- identification and evaluation of relevant alternatives;
- relevant environmental considerations; and
- documentation of the basis for the proposed project.

3.5 Environmental management framework

Adequate management of environmental effects during project construction and operation will meet statutory requirements, protect environmental values and sustain stakeholder confidence. Hence, the environmental

management framework (EMF) 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 phases⁶.

Legislation provides the management framework for most environmental effects of the project (Section 3.6). However, the significant effects, as outlined in the Minister's Decision, require further assessment (Chapter 4). In addition to these, there will be a number of localised impacts realised during construction and operation. Therefore, the EMF must outline how potential adverse effects on community, businesses and land uses with regard to air quality and noise, traffic, public safety, landscape and visual amenity, open space, built form and neighbourhood character will be avoided, minimised or mitigated.

The EMF should describe the baseline environmental conditions to allow evaluation of the residual environmental effects of the project, as well as the efficacy of applied environmental management and contingency measures. The framework should include:

- an environmental management system, with organisational responsibilities, accountabilities and governance arrangements;
- an environmental risk register that is maintained during project implementation; and
- environmental management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes.

The EMF should outline the environmental management plans for construction and operation phases of the project as well as the process and timing for development of these plans. The entity responsible for approval of the plans should be identified.

An important aspect of the EMF is community consultation, stakeholder engagement and communications during the construction and operation of the project. As the project proceeds it will largely be the EMF that outlines opportunities for local stakeholders to engage with LXRA to seek responses to issues that might arise during construction or operation. To this end the EMF will set out procedures for:

- complaints recording and resolution;
- auditing and reporting of performance including compliance with relevant statutory conditions and standards; and
- review of the effectiveness of the environmental management framework for continuous improvement.

Project environmental performance requirements that define project-wide environmental outcomes to be achieved and respond to the draft evaluation objectives should be clearly described in the EMF. The proposed objectives, indicators and monitoring requirements to be described, are:

- biodiversity values, particularly with respect to the Edithvale-Seaford Wetlands and its ecological character;
- groundwater levels, behaviour, quality and protected beneficial uses, particularly with respect to their potential for change in the context of climate change and the potential impacts on the Edithvale-Seaford Wetland;
- surface water catchments, drainage and behaviour, and beneficial uses;
- solid and liquid waste, including recycling and handling of potentially hazardous or contaminated waste, potential acid sulphate soils (PASS) and other excavated spoil;
- social outcomes and community engagement;
- noise, vibration, and emissions to air particularly with respect to managing impacts on amenity both during construction and operation;

⁶Ministerial Guidelines (p. 20).

- energy and greenhouse gas emissions;
- Aboriginal and historic cultural heritage values;
- transport management including managing temporary disruption and changed accessibility during construction;
- traffic during construction; and
- site reinstatement.

3.6 Applicable legislation, policies and strategies

In addition to the EE Act and the EPBC Act, 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):

- *Environment Protection Act 1970* (EP Act), including the principles of environment protection and relevant state environment protection policies (SEPPs);
- *Planning and Environment Act 1987* (PE Act), and relevant provisions in the Kingston Planning Scheme;
- *Catchment and Land Protection Act 1994* (CLP Act);
- *Water Act 1989*;
- *Coastal Management Act 1995*;
- *Transport Integration Act 2010* (TI Act);
- *Climate Change Act 2017*;
- *Crown Land (Reserves) Act 1978*;
- *Land Act 1958*;
- *Flora and Fauna Guarantee Act 1988* (FFG Act);
- *Road Management Act 2004* (RM Act);
- *Aboriginal Heritage Act 2006* (AH Act);
- *Heritage Act 1995*⁷;
- *Wildlife Act 1975*; and
- *Public Health and Wellbeing Act 2008*.

3.7 Consultation

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

- issues raised and suggestions made by stakeholders or members of the public; and
- the responses then made by LXRA in the context of the EES studies or the associated consideration of mitigation measures and the draft planning scheme amendment.

The EES should also provide an outline of a program for community consultation, stakeholder engagement and communications proposed for implementation of the project, including opportunities for local stakeholders to engage with LXRA to seek responses to issues that might arise during project implementation.

⁷The *Heritage Act 1995* is to be superseded by the *Heritage Act 2017*, effective 1 November 2017.

4 Assessment of significant environmental effects

The Minister determined an EES was required for the project due mainly to the potential alteration of groundwater conditions and risk that poses to the Ramsar listed Edithvale-Seaford Wetlands, other beneficial uses and the risk of intercepting PASS and contaminated soil and groundwater (Section 1.2). Therefore, the EES studies should focus on the investigation of these issues.

However, the EES should also identify any other potential adverse environmental effects of the project such as on community amenity and canvass an environmental management approach and performance measures to ensure any effects are identified and avoided, minimised or mitigated (see Section 3.5). The framing of the draft objectives reflects the key subject matters to be investigated, relevant legislation and policies (Section 3.6), the objectives and principles of ecologically sustainable development and environmental protection, as well as environmental issues identified by LXRA in preliminary documentation and through public exhibition of the draft scoping requirements. LXRA should consult closely with DELWP and the TRG throughout the preparation of the EES to ensure that the investigation of issues is both thorough and targeted.

- The following sections set out specific requirements for the assessment of effects referenced in the Minister's Decision (Section 1.2), using the following structure for each of the matters to be investigated. ***Draft evaluation objectives*** identify desired outcomes in the context of potential project effects and relevant legislation. They provide a suitable framework to evaluate the project's effects and outcomes.
- ***Key issues*** identify the potential issues or risks that the project poses (LXRA might undertake an appropriate environmental risk assessment to identify additional issues).
- ***Existing environment*** sets out the assessment requirements for baseline conditions and trends to characterise the significance and resilience of the environment impacted by the project.
- ***Design and mitigation measures*** consider and commit to design (or other available) measures that could substantially avoid, mitigate or manage significant effects and risks.
- ***Assessment of likely effects*** predicts or estimates potential and residual effects and risks (after design and mitigation measures have been implemented) and evaluates the significance of those effects and risks.
- ***Approach to manage performance*** describes monitoring and contingency measures that are proposed to ensure that effects are controlled if monitoring demonstrates more significant adverse effects than predicted or permitted.

4.1 Groundwater

Draft evaluation objective

To minimise effects on the regional groundwater regime and quality particularly as they might impact on the hydrology of the Edithvale-Seaford Wetlands and elsewhere on other beneficial uses.

Key issues

- The potential for adverse effects on the functions, values and beneficial uses of groundwater.
- The potential for adverse effects on beneficial uses of groundwater in particular groundwater depended ecosystems (GDEs) and the ecological character of the Edithvale-Seaford Wetlands due to changes in groundwater levels, behaviour or quality.
- The potential for adverse effects on groundwater quality and beneficial uses resulting from potential possible saline intrusion.

Existing environment

- Characterise the local and regional groundwater environments, including groundwater flow patterns and behaviour and contaminant loads.
- Characterise the interaction between groundwater and surface water within the broader area considering nearby surface water values and the context of the Edithvale-Seafood Wetlands.
- Characterise the interaction between groundwater and Port Phillip Bay within the broader area.
- Identify existing groundwater users and allocations in the broader area.

Design and mitigation measures

- Identify and evaluate aspects of project works and proposed design refinement options or measures, which could avoid or minimise significant effects on groundwater levels and on beneficial uses of groundwater (such as the Edithvale-Seafood Wetlands) during the project's construction and/or operations.
- Identify methods to manage and, if required dispose of groundwater, including contaminated groundwater during construction.

Assessment of likely effects

- Develop a numerical hydrogeological model based on a sound conceptual characterisation of the local and regional groundwater systems, to form the basis for assessment of potential effects under current and climate change scenarios. This should include interactions between surface water and groundwater.
- Identify and evaluate effects on groundwater in the vicinity of the project works and the Edithvale-Seafood Wetlands, including:
 - the likely extent, magnitude and duration (short and long term) of groundwater level or flow paths during construction;
 - the likely extent, magnitude and duration of groundwater level or flow paths during operation taking into account climate change scenarios;
 - changes to groundwater quality resulting directly or indirectly from the project, including saline bay-water intrusion into aquifers, under current and climate change scenarios; and
 - changes to availability of groundwater for beneficial uses in the vicinity of the project.

Approach to manage performance

- Describe any further methods that are proposed to manage and monitor risks of effects on groundwater, including as part of the EMF (see Section 3.5).

4.2 Biodiversity

Draft evaluation objective

To avoid, minimise and/or offset adverse effects on native vegetation, listed threatened species and ecological communities, listed migratory species, the Ramsar listed Edithvale-Seafood Wetlands, other protected flora and fauna and groundwater dependent ecosystems.

Key issues

- Loss of, or degradation to, habitat for threatened fauna species listed under the EPBC Act, FFG Act and/or DELWP Advisory List or for other protected species.
- Risk of impact to the Edithvale-Seafood Wetlands resulting directly or indirectly from changes to groundwater (e.g. levels or quality).

- Adverse impacts on any aspect of the ecological character of the Edithvale-Seafood Wetlands, in the context of the relevant Ramsar listing criteria. Including indirect impacts upon the four components⁸, processes and services that are critical to the ecological character of the wetlands (at the time of the listing) such as the critical component of physical habitat for waterbirds.
- Direct loss of native vegetation and any associated listed threatened flora and fauna species and communities known or likely to occur in the project site.
- Potential for other significant effects on biodiversity values including but not limited to effects associated with changes in hydrology or hydrogeology (under current and climate change scenarios) or threatening processes listed under the FFG Act.
- Understanding community values associated with the Edithvale-Seafood Wetlands and the potential for indirect impacts on the community brought about by the project.

Existing environment

- Characterise the distribution and quality of native vegetation and terrestrial habitat that could be impacted by the project, within the project area, associated works areas or in the broader area.
- Identify the existing or likely presence of any species listed under the EPBC Act, FFG Act and/or DELWP Advisory List, as well as declared weeds and pathogens within the project area, associated works areas or in the broader area.
- Describe the components of the ecological character of the Edithvale-Seafood Wetlands and the critical components, processes and services of the ecological character that could be impacted by the project⁹.
- Characterise the listed threatened and migratory species, other protected species, ecological communities and potentially threatening processes that are likely to be present in the Edithvale-Seafood Wetlands from the literature and available data, supported by seasonal or targeted surveys where necessary. Details of the scope, timing and method for studies or surveys used to provide information on the ecological values at the site (and in other areas that may be impacted by the project) should be outlined.
- Describe the biodiversity values that could be directly or indirectly affected by the project, including:
 - native vegetation and any ecological communities listed under the FFG Act and EPBC Act;
 - presence of, or suitable habitats for, native flora and fauna species, in particular species listed under the FFG Act, and DSE Advisory List and EPBC Act; and
 - use of the site and its environs for movement by FFG Act, and DSE Advisory List and EPBC Act listed fauna species.
- Describe the threats posed directly or indirectly by the project to biodiversity values, including:
 - direct removal or destruction of habitat;
 - direct and indirect disturbance or alteration of habitat conditions (including groundwater mounding or drawdown effects on GDEs) or other sources of increased habitat threat;
 - initiating and/or exacerbating potentially threatening processes under the EPBC Act and FFG Act;
 - threats to mortality of listed threatened fauna; and
 - the presence of any declared weeds or pathogens within and in the vicinity of project area.

⁸The four critical components are: waterbird diversity and abundance, waterbird breeding, physical habitat for waterbirds and threatened species (birds).

⁹With reference to the *Description of the ecological character of the Edithvale-Seafood Wetlands report, prepared by the Department of Sustainability and Environment, 2012.*

Design and mitigation measures

- Identify potential and proposed design options and measures that could avoid or minimise significant direct and indirect effects on native vegetation and any listed ecological communities or flora and fauna species and their habitat including the ecological character of the Edithvale-Seaford Wetlands.

Assessment of likely effects

- Identify and assess likely direct and indirect effects of the project and relevant alternatives on native vegetation, ecological communities and flora species, in particular any species listed under the FFG Act and EPBC Act.
- Identify and assess likely indirect effects of the project on the ecological character and habitat values of the Edithvale-Seaford Wetlands.
- Identify and assess likely direct and indirect effects of the project and relevant alternatives on protected fauna and their habitat, including listed (FFG Act/EPBC Act) threatened and migratory species, relative to existing hazards and risks where relevant.

Approach to manage performance

- Describe and evaluate proposed measures to further mitigate or manage residual effects of the project on biodiversity values, including an outline of an offset strategy that sets out the offsets that have been secured or are proposed to satisfy offset policy requirements and the relevant provisions of the Kingston Planning Scheme.
- Describe and evaluate the approach to monitoring and subsequent contingency measures to be implemented in the event of adverse residual effects on flora and fauna values, including on the ecological character and habitat values of the Edithvale-Seaford Wetlands requiring further management.

4.3 Contaminated/acid sulphate soils

Draft evaluation objective

To prevent adverse environmental or health effects from disturbing, storing or influencing the transport/ movement of contaminated or acid-forming material.

Key issues

- Potential for adverse environmental or health effects resulting from disturbance of or influencing the transport/ movement of contaminated soil or groundwater.
- Potential for adverse environmental or health effects resulting from handling, storage or transportation of excavated contaminated spoil or PASS.
- Potential for adverse environmental or health effects from other waste materials/streams generated from project works.

Existing environment

- Identify likely occurrence of PASS, contaminated soil, and other potential sources of contaminated materials in the project area and their approximate location.
- Identify the likely occurrence of contaminated soils and groundwater in the project area and nearby that have the potential to be altered or impacted by the project
- Identify volumes and characteristics of excavated spoil.
- Identify other key waste streams that may be generated from the project.

Design and mitigation measures

- Identify methods to manage the potential activation of PASS and contaminated soil during construction.

- Identify options for treating, reusing or disposing of excavation spoil with reference to the waste hierarchy, including for both contaminated and clean materials, and identify the routes and destinations for spoil material to be transported away from the project work sites.
- Identify suitable off-site disposal options for waste materials.
- Identify possible capacity issues that could affect either the management of waste on-site or disposal off-site, particularly given other proposed works (such as the Melbourne Metro Rail Project, or the West Gate Tunnel Project) that will also be generating spoil.
- Describe and evaluate proposed design, management or site protection measures that could avoid or mitigate potential adverse effects of the excavated spoil or other waste streams generated by the project on environmental values, or human health, especially with regard to the project construction activities.

Assessment of likely effects

- Identify and undertake a regional assessment of all potential contaminated sites that may be within the zone of change to groundwater, to determine the presence and potential migration/movement of contaminants/plumes.
- Identify and evaluate effects of PASS and contaminated soil on environmental and human health values during construction.
- Identify and evaluate effects on environmental values from project construction waste streams.

Approach to manage performance

- Describe principles to be adopted for monitoring management of spoil and other waste streams.