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Edithvale and Bonbeach Level Crossing Removal Projects Environmental Management Framework



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1 Statutory context

This document presents the EMF for the Edithvale and Bonbeach level crossing removal projects.

The design and construction of the projects is authorised and regulated by Incorporated Documents that have been incorporated into the Kingston Planning Scheme ('Edithvale Road, Edithvale Level Crossing Removal Project Incorporated Document' and 'Station Street/ Bondi Road, Bonbeach Level Crossing Removal Project Incorporated Document'), and by the approval of the controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Incorporated Documents set out the requirements for an EMF for the projects.

The EMF must be approved by the Minister for Planning prior to the commencement of buildings and works (other than preparatory works) under the Incorporated Documents. The design and construction of the projects must be carried out in accordance with the approved EMF. The EMF can be amended from time to time, to the satisfaction of the Minister for Planning. The EMF responds to the requirements of Clause 4.2.1 of the Incorporated Documents to include Environmental Performance Requirements (EPRs) applicable to the design, development and operation of the projects (Section 9).

This version of the EMF is based on the consultation version of the EMF included as Chapter 9 of the Environment Effects Statement (EES) for the Edithvale and Bonbeach level crossing removal projects. However, it has been updated to stand alone from the EES, respond to the matters set out in the Minister's Assessment (31 August 2018), the requirements of the Incorporated Documents, and EPBC Approval 2017/7906.

2 Purpose of EMF

This EMF provides a transparent and integrated governance framework to manage the environmental effects of the Edithvale and Bonbeach level crossing removal projects identified in the EES for the projects and in the Minister for Planning's assessment of the project's environmental effects.

The objectives of the EMF are to:

- establish a framework to ensure compliance with statutory requirements and minimise environmental risks
- set out the environmental outcomes to be achieved during design and construction and encourage innovation to achieve them
- ensure accountabilities are identified for managing and monitoring environmental effects and hazards associated with the design and construction phases of the projects.

The EMF outlines clear accountabilities for the delivery and monitoring of the implementation of the projects and includes a set of EPRs. The EPRs are a combination of:

- environmental outcomes that the design and construction of the Edithvale and Bonbeach projects must achieve
- commitments to ensure a particular action is undertaken to protect or enhance a specific environmental aspect.

The EPRs have been developed through the preparation of the EES and the LXRA's consideration of submissions made on the EES, the report of the Independent Advisory Committee, and the Minister for Planning's Assessment. The performance-based approach that underpins the EPRs provides for sufficient flexibility to encourage innovation by the contractor engaged to determine how the standards contained in the EPRs would be achieved.

The EMF outlines clear accountabilities for the delivery and monitoring of the EPRs so that the environmental effects of the projects are managed.

The EMF requires the contractor constructing the projects to implement an Environmental Management System (EMS) certified to *AS/NZS ISO 14001: 2015 Environmental management systems – Requirements with guidance for use* and to comply with relevant legislation, policy and guidelines, and LXRA's overarching program-wide Environmental Management Framework.

The EMS will ensure that works are planned and performed so that the adverse effects on the environment are either avoided, minimised or managed, and are carried out in accordance with the EPRs. This EMF requires the contractor to specifically apply its EMS, and modify it if required, for the delivery of the Edithvale and Bonbeach projects.

The EMF provides a structured approach for monitoring the implementation of the Construction Environment Management Plan (CEMP) and other plans required to comply with the EPRs, the Incorporated Documents and any statutory approvals.

The contractor's compliance with the EMF, CEMP and other management documents will be audited throughout the project. Refer to Sections 7 and 7.4 of this EMF for a description of the management plans and requirements for ongoing monitoring of their implementation.

3 Projects overview and description

This EMF applies to the use and development of the projects for the purposes as described in clauses 4.1 and 4.3 of the Incorporated Documents.

3.1 Edithvale Level Crossing Removal Project

The Edithvale Level Crossing Removal Project includes the following key components:

- Removal of the level crossing at Edithvale Road, Edithvale where it crosses the Frankston rail line.
- Railway construction and associated works to lower the existing Frankston rail line under Edithvale Road, including, but not limited to, bulk excavation, relocation of existing utilities and installation of new utility infrastructure, earthworks, installation of drainage and retaining walls, replacement of track infrastructure, access tracks, landscaping, vegetation removal and construction of bicycle and pedestrian shared use paths.
- Road construction and associated works including construction of a road bridge over the Frankston rail line at Edithvale Road and associated works including alterations to road access arrangements.
- Demolition of the existing railway station and development of a new train station, including decking over the trench, car parking, bicycle facilities and loading and unloading facilities.
- Provision of pedestrian access and shared bicycle use paths, including the construction of pedestrian bridges over the railway line.
- Associated rail infrastructure, including a new substation and tie stations, power upgrades and overhead infrastructure, cabling and signalling.
- Creation and alteration of access to roads in a Road Zone Category 1.
- Ancillary activities, preparatory and enabling works.

3.2 Bonbeach Level Crossing Removal Project

The Bonbeach Level Crossing Removal Project includes the following key components:

- Removal of the level crossing at Station Street/Bondi Road, Bonbeach where it crosses the Frankston rail line.
- Railway construction and associated works to lower the existing Frankston rail line under Station Street/Bondi Road, including, but not limited to, bulk excavation, relocation of existing utilities and installation of new utility infrastructure, earthworks, installation of drainage and retaining walls, replacement of track infrastructure, access tracks, landscaping, vegetation removal and construction of bicycle and pedestrian shared use paths.
- Road construction and associated works, including construction of a road bridge over the Frankston rail line at Station Street/Bondi Road and associated works including alterations to road access arrangements.
- Demolition of the existing railway station and development of a new train station, including car parking, bicycle facilities and loading and unloading facilities.
- Provision of pedestrian access and shared bicycle use paths, including the construction of pedestrian bridges over the railway line.
- Associated rail infrastructure, including power upgrades and overhead infrastructure, cabling and signalling.
- Creation and alteration of access to roads in a Road Zone Category 1.
- Ancillary activities, preparatory and enabling works.

3.3 Ancillary activities, preparatory and enabling works

Consistent with the Incorporated Documents for the projects, ancillary activities, preparatory and enabling works include, but are not necessarily limited to, the following:

- Use and development of lay down areas for construction purposes.
- Stockpiling of excavation material.
- Use and development of temporary site workshops and storage, administration and amenities buildings, access and vehicle parking.
- Removal, destruction or lopping of trees and vegetation, including native vegetation and dead native vegetation.

- Demolition and removal of buildings, structures and works.
- Relocation, modification and upgrade of services and utilities.
- Construction of fences, temporary site barriers and site security.
- Construction or carrying out works to create or alter roads, car parking areas, bunds, mounds, landscaping, excavate land, salvage artefacts and alter drainage.
- Earthworks including cutting, stockpiling and removal of spoil, and the formation of drainage works.
- Display of construction, directional or identification signs.
- Subdivision and consolidation of land.

4 Contract structure

The projects will be delivered through an Alliance contract model. Alliance contracting is a form of relationship contracting where a construction company, engineering designers, architects and other specialists, partner with the Victorian Government (represented by LXRA) to prepare the final detailed design and construct the projects. LXRA staff work within the Alliance team and LXRA provide corporate oversight of the Alliance's performance.

The procurement process includes the requirement for bidders to demonstrate certification to AS/ NZS ISO 14001, set out their environmental management approach and demonstrate their approach to achieving compliance with the EMF. LXRA reviews and assesses this information against the requirements of the EMF.

The contractor will be appointed under a Program Alliance Agreement (PAA). LXRA will administer the PAA on behalf of the Victorian Government. The PAA will detail the contractor's obligations for delivery of the works.

Following contract award and prior to construction commencing, the Alliance will be required to apply and tailor its existing EMS to the specific activities for construction of the projects and develop and implement a CEMP to meet the requirements of this EMF.

The CEMP will describe in detail how the Alliance will meet the EPRs and approval conditions and identify, manage and mitigate environmental risks arising during design and construction. Specific requirements for the Alliance documentation are outlined in Section 6.

5 Governance Framework

The projects will be delivered within the context of LXRA's Environmental Management Framework (LXRA-EMF), as well as the statutory context and contract structure. The LXRA-EMF addresses the overarching planning, environmental and heritage aspects of all projects and packages being delivered by LXRA in order to achieve a consistent baseline in the approach to environmental management across all works. It applies across the whole project lifecycle from assessment and approvals planning through to implementation and delivery, and completion.

Its key objectives are to:

- minimise project delivery, approvals, environmental and reputational risks
- increase certainty that key environmental risks are identified and meaningfully considered early in project planning and throughout project delivery
- set out the expected performance-based outcomes during design and construction and encourage innovation by delivery partners to achieve them
- ensure environmental effects and hazards are appropriately managed in a consistent manner across the Level Crossings Removal Program and good environmental outcomes are achieved.

Delivery partners (i.e. contractors) and LXRA itself are required to implement and comply with the LXRA-EMF which sets out standards, processes and expectations for:

- roles and responsibilities
- environmental management plans and documentation
- contingency measures
- evaluating environmental performance including monitoring, auditing and reporting.

For implementation and delivery, the LXRA-EMF requirements are principally delivered through the PAA. The PAA will include a requirement to implement and comply with the EMF and the EPRs.

The PAA will:

• require the construction company engaged to deliver the project to be certified to the international environmental management systems standard AS/NZS ISO 14001

- require the Alliance to conduct its activities under the construction company's certified environmental management system and the appropriate elements of the LXRA-EMF
- specify the obligations on all Alliance partners for project design and delivery, specifically requiring the Alliance to comply with this EMF (including the EPRs), as well as legislation and conditions associated with project approvals
- prepare and implement project-specific environmental management documentation as set out within this EMF and as appropriate for the design and construction of the projects.

The Alliance will be responsible for preparing the CEMP and other environmental management documentation, which is subject to the approval requirements set out in Table 4. This documentation will govern the management of all project activities to ensure that all applicable requirements are met. It will apply to the projects regardless of the detailed designs and construction methods. It will establish how the environmental outcomes defined by the EPRs will be achieved and will be subject to compliance audits.

The governance framework is shown in Figure 1.

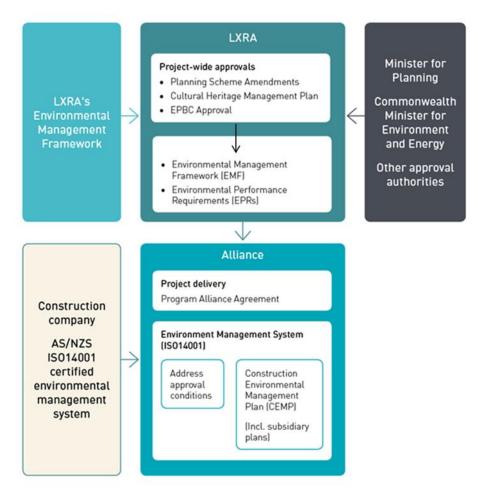


Figure 1Governance Framework

6 Roles and Responsibilities

This section outlines the roles and responsibilities for environmental management in the design and construction of the projects. Roles and responsibilities for preparing and approving specific management plans required under the Incorporated Documents are set out in Section 7 of this EMF.

LXRA, on behalf of the Victorian Government, is responsible for delivering the projects in line with the requirements and objectives of the Level Crossings Removal Program and the Victorian Government.

LXRA is an Administrative Office in relation to the Department of Economic Development, Jobs, Transport (DEDJTR) (established under the Office of the Coordinator General) and is one of several agencies assisting the Victorian Government to achieve its integrated transport policy objectives. The LXRA Chief Executive Officer is accountable to the Minister for Public Transport, reporting to the Secretary of DEDJTR.

LXRA is responsible for overseeing and engaging contractors and consultants for all aspects of the projects. This includes site investigations, stakeholder engagement, obtaining key planning approvals and procurement, through to construction delivery and project commissioning. LXRA also supports the Secretary of DEDJTR in his capacity as project authority, charged with statutory responsibility for delivering the projects, under the *Major Transport Projects Facilitation Act 2009*.

Fulfilling the responsibilities and accountabilities across all elements of the EMF involves LXRA, the Alliance (including the construction contractor) and regulators. The contractor's responsibilities will be included as contractual requirements in the PAA. The Alliance will be responsible for activities conducted by its subcontractors.

At the completion of construction and project commissioning, VicTrack will own infrastructure delivered by the projects. The groundwater management system, associated with the Edithvale Road level crossing removal project (the Edithvale Project), will be owned and managed in accordance with the Operational Groundwater Management Strategy required by EPR EMF4.

The key roles and responsibilities for environmental management are shown in Table 1.

Organisation	Responsibilities
Minister for Planning	• Approve the EMF and EPRs, and any amendments to these.
Commonwealth Minister for the Environment	Review conformance with EPBC Approval 2017/7906.
Regulators and Agencies, including: Aboriginal Victoria EPA DELWP Kingston City Council Melbourne Water Southern rural Water VicRoads DEDJTR	 Administer and determine compliance with project approvals and provide advice when consulted on the development of management and mitigation plans, as required by the EPRs.

Table 1 Organisational roles and responsibilities for environmental management

Organisation	Responsibilities
LXRA	 Obtain applicable project-wide statutory approvals, as required, generally including the Planning Scheme Amendments and Cultural Heritage Management Plan, where it is appropriate for LXRA to obtain such approvals outside of the Alliance. Establish the EMF for approval by the Minister for Planning as required by the Incorporated Documents. Implement its responsibilities under the EMF. Establish the Urban Design Guidelines for the projects. Monitor compliance with the EPRs. As an Alliance member, develop and submit the required plans to comply with the requirements of the Incorporated Documents and this EMF. Review and approve contract documentation required by the PAA for both projects in accordance with this EMF, including the CEMP and associated sub-plans. Prior to and during construction, verify that the Alliance has complied with the relevant EPRs and other legal requirements relevant to environmental management. Ensure audits are conducted of the Alliance's environmental performance, consistent with the requirements of the LXRA-EMF. Review the Alliance's performance against the approved EPRs and take corrective action as necessary
VicTrack	Own the rail infrastructure.
Alliance	 Comply with its responsibilities under this EMF (including the EPRs) and legislative and approval requirements (i.e. conditions associated with project approvals). Obtain any additional permits, consents or approvals required to design and construct the projects from regulatory authorities (other than the approvals that would be obtained by or jointly with LXRA). Apply the Alliance construction partner's EMS to the specific activities for the projects, in accordance with AS/NZS ISO 14001: 2015. Prepare a CEMP and other plans set out in this EMF, including any specific plans required by the Incorporated Documents and the EPRs. Provide adequate resources to establish, implement, maintain and improve the EMS, CEMP, and other plans as required by statutory approvals, EPRs and PAA. Implement and maintain compliance with the EPRs applicable to the Alliance. Undertake environmental audits to confirm compliance with the EMF, EPRs and plans required by the Incorporated Documents. Prior to and during construction, ensure that the Alliance and its subcontractors have complied with the relevant EPRs, CEMP and other plans as required by the Incorporated Documents. Review subcontractors' performance against the EPRs and CEMP, and take corrective action as necessary.

7 Environmental management plans and documentation

7.1 Overview

The EMF will be implemented through an environmental management system, a CEMP and other plans that will be documented and prepared by LXRA (on behalf of the Victorian Government) and by the Alliance (including the construction contractor). These plans will also be designed to implement and achieve compliance with the LXRA-EMF and with relevant legislation and the other requirements of the Incorporated Documents (refer to Figure 1).

The LXRA-EMF (aligned to AS/NZS ISO 14001: 2015 *Environmental management systems –requirements with guidance for use*) sets out environmental management responsibilities and compliance for all parties, including the contractor.

Additional project-specific strategies and plans include the Cultural Heritage Management Plan (CHMP) and the Urban Design Guidelines (UDGs).

At the state level, LXRA will be accountable for implementing the EPRs and compliance with statutory decisions and approvals. LXRA will also be responsible for administering the PAA on behalf of the Victorian Government in accordance with its corporate procedures.

The Alliance will be required to apply the construction contractor's existing EMS to the specific activities for construction of the projects. The contractor must have an EMS that is certified to AS/NZS ISO 14001: 2015. The purpose of the EMS will be to establish a system whereby environmental risks and impacts are managed and ensure there is a process for identifying opportunities of continual improvement across the projects.

The Alliance will prepare plans to comply with the approval requirements of the planning controls applied under the Incorporated Documents. The Alliance will also be required to prepare a CEMP and other plans required by the EPRs for the construction phase.

For the operations phase, any ongoing responsibility for any residual monitoring or maintenance requirements relevant to environmental management will be in accordance with the roles and responsibilities identified within the plans and strategies required by EPRs EMF4, GW2, CL5 and FF7.

LXRA and the contractors will develop and implement environmental management plans and programs generally in accordance with the processes in Section 7.2, and the approval and timing requirements in Section 7.3. A detailed description of the key documentation elements of the EMF is provided in Section 7.2.

The hierarchy of environmental management, monitoring and mitigation documentation is presented in Table 2.

Description	Plans
Strategic framework Plans that set the strategic direction and governance of the projects.	 Environmental Management Framework with EPRs (this document). Urban Design Guidelines.
Management of broad impacts Overarching plans to guide specific programs or works to manage potential impacts on the environment or community broadly.	 Construction Environmental Management Plan (EPR EMF2). Community and Stakeholder Engagement Management Plan (EPR SC1). Cultural Heritage Management Plan (EPR AH1).
Technical plans Specific plans required by the EMF and EPRs and may be subordinate to, or separate from, the Construction Environmental Management Plan.	 Construction Noise and Vibration Management Plan (EPR NV2). Transport Management Plan (EPR T1). Acid Sulfate Soil Management Plan (EPR CL2) Spoil Management Plan (EPR B2) Public Transport Disruption Management Plan (EPR T2) Business Disruption Plan (EPR B1) All other plans required by EPRs. These plans will describe the Alliance's methods of implementing the EMF and other regulatory requirements rather than the strategic direction and governing requirements for the projects, or matters of less broad community impact. They will also define the roles and responsibilities for their implementation.
Management of groundwater impacts Plan that sets out the requirements for monitoring groundwater level and quality, and sets of criteria for when Groundwater Mitigation Plans should be implemented.	• Groundwater Monitoring and Management Plan (EPR GW2).

Table 2 Hierarchy of environmental management, monitoring and mitigation documentation

Mitigation plans

Specific plans to be implemented if the criteria for changes to groundwater level and quality are met. Each plan deals with a specific aspect of the environment.

- Edithvale Wetlands Monitoring and Mitigation Plan (EPR FF7).
- Groundwater Quality Plan (EPR CL5).

7.1.1 Managing groundwater impacts

This EMF provides a tiered approach to managing impacts that result from potential changes to groundwater quality and levels, as a result of the projects.

The tiered approach recognises that changes to groundwater quality and levels are likely to have different impacts on different aspects of the environment.

To manage this, an overarching Groundwater Monitoring and Management Plan would be prepared prior to commencement of construction of relevant works. The Groundwater Monitoring and Management Plan would include specific triggers, based on observed changes to groundwater level and quality, for specific mitigation measures to be implemented.

The mitigation measures would be documented in separate and specific mitigation plans to be prepared prior to the completion of the projects for the management of specific aspects of the environment. The separate mitigation plans recognise that ecological impacts are different from groundwater quality impacts and that the stakeholders concerned have different interests. These plans would be prepared in consultation with the agencies with jurisdiction over those aspects of the environment and would be implemented if the specific triggers in the Groundwater Monitoring and Management Plan are met. While the environmental assessment of the projects indicates that there is a low potential for any further mitigations to be required, LXRA has adopted a conservative approach in proposing that these contingency plans be prepared.

The tiered approach is set out in Figure 2.

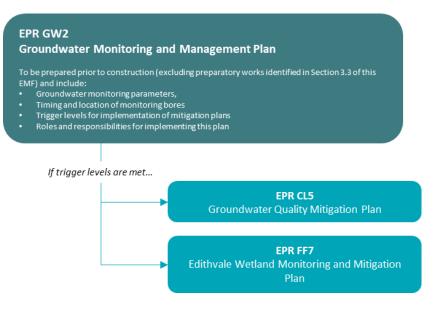


Figure 2 Managing groundwater impacts

7.1.2 Managing groundwater dependent ecosystems

Groundwater dependent ecosystems (GDEs) are ecosystems that:

- rely on the surface expression of groundwater, such as wetlands and rivers in which groundwater provides at least seasonal waterlogging or inundation,
- rely on the availability of water within the soil.

The Edithvale Wetland is the most significant GDE in the region and is recognised under the Ramsar Convention on Wetlands of International Importance. Given this significance, and as shown in Figure 2 above, the Edithvale Wetland Monitoring and Mitigation Plan will be implemented to monitor and mitigate project-induced impacts if defined trigger levels are met while implementing the Groundwater Monitoring and Management Plan. This will ensure that the significant ecological values of the Edithvale Wetland are protected. While the Wannarkladdin Wetlands contain similar habitat values and adjoin the Edithvale Wetlands, the independent Inquiry and Assessment

Committee (IAC) appointed to consider the projects agreed with the findings of the EES that the risk of impact to these wetlands is negligible as the distance between the projects and the wetlands is too great to be affected by changes to groundwater. Similarly, the risk of the projects to other GDEs through the area is negligible. Therefore, mitigation plans will not be produced for the Wannarkladdin Wetlands or other GDEs in the area.

However, one other notable GDE in the region considered in detail through the EES and the public IAC hearings is foreshore vegetation within the Aspendale to Chelsea Foreshore Reserve. The risk to the foreshore vegetation at Edithvale was accepted as negligible following the introduction of the groundwater management system which must address the requirements of EPR GW1.

Both the EES and expert evidence presented at the hearings highlighted the considerable uncertainty regarding the extent to which the foreshore vegetation at Bonbeach is dependent on groundwater, and the extent to which it may be affected by and/or adapt to fluctuations in groundwater levels. Expert presentations and discussions during the hearings confirmed a monitoring program would not conclusively resolve that uncertainty. Vegetation health can be influenced by other known factors such as climate change, disease, human interference and natural causes. Monitoring the foreshore vegetation would therefore not confirm any relationship between vegetation health and any project-induced changes to groundwater.

During the hearings, experts suggested that, in lieu of monitoring, improvement works within the foreshore reserve would aid the resilience of the foreshore vegetation to withstand impacts from all sources. In response to this, LXRA and Kingston City Council agreed that an upfront financial contribution to Council to undertake resilience works would be an appropriate response to ensure the longevity of the foreshore vegetation. This commitment is presented as EPR FF8.

7.2 Process for developing key plans

The key environmental management documents and the process for developing plans are outlined in Table 3.

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Table 3 Key environmental management documentation
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Documentation	Description
State of Victoria (LXRA)	
Decisions and approvals that LXRA is responsible for obtaining	 Approval of two planning scheme amendments to implement specific planning controls for the projects, including an Incorporated Document for each project. EPBC Act decision (controlled action) under the EPBC Act. Cultural Heritage Management Plan.
Environmental Management Framework	This document provides the governance framework to manage environmental aspects as identified in the EPBC Approval and the Incorporated Documents.
Environmental Performance Requirements (part of the EMF)	EPRs (Table 6) were initially developed through the Environment Effects Statement and refined following assessments by the Inquiry and Assessment Committee and the Minister for Planning. EPRs define the project-wide environmental outcomes that must be achieved during design and construction and operation of the projects (regardless of the solutions adopted).
Groundwater Monitoring and Management Plan	Plan that sets out the requirements for monitoring groundwater level and quality.
Monitoring and mitigation plans	Plans setting out specific mitigation measures if trigger criteria for impact set out in the Groundwater Monitoring and Management Plan are met.
Urban Design Guidelines	The project-specific Urban Design Guidelines provide urban design guidance relating to the design and implementation of the projects.
Alliance (including constru	ction contractor)
Environmental Management System	Consistent with EPR_EMF1, the contractor's EMS will be required to be certified to AS/NZS ISO 14001: 2015 Environmental management systems – requirements with guidance for use. The contractor's existing EMS will be specifically applied to the projects.

Documentation	Description
Documentation	 Description Consistent with EPR_EMF2, the Alliance (including the construction contractor) must prepare a CEMP, in accordance with applicable EPRs. The CEMP will reflect the requirements of the EMF and EPA Victoria Publication No. 480 Environmental Guidelines for Major Construction Sites. The CEMP will be developed to take into account: each construction site's environmental features the nature of the works to be undertaken potential environmental impacts as identified in the EES and activity-specific environmental risks (the CEMP will include a risk assessment) permits and/or approvals and related approval requirements the findings of environmental investigations undertaken by or on behalf of LXRA the findings of any environmental investigations undertaken by the Alliance. The Alliance may choose to develop one CEMP for its entire package of works or individual CEMPs for each component of the works. Similarly, the Alliance may choose to address the above environmental impacts within one CEMP or a series of sub-plans for each environmental value. The exception to this is where an EPR requires the developed once the detailed design and refined construction methodology is prepared by the Alliance. A CEMP will be prepared in consultation with relevant agencies including Kingston City Council, Heritage Victoria, VicRoads, Melbourne Water, Public Transport Victoria and EPA Victoria and key affected stakeholders, as required under the Incorporated Document and any relevant EPR. The CEMP will include a mechanism to ensure comments and complaints from the community are considered and responded to.
Community and Stakeholder Engagement Management Plan	Sub-plans to the CEINP. The structure of plans and sub-plans will be determined by the Alliance to allow for an integrated approach to addressing and managing impacts across the various plans. Sets out the principles and framework for community and stakeholder engagement for the projects and addresses the requirements set out in EPR_SC1.

Documentation	Description
Technical Plans	 A series of plans that may be subordinate to the CEMP that outline the specific actions to be implemented during construction in order to minimise the potential impacts and disruptions caused by construction activity. These plans include, but not necessarily be limited to, the following as required by the EPRs: Construction Noise and Vibration Management Plan (EPR NV2). Transport Management Plan (EPR T1). Acid Sulfate Soil Management Plan (EPR CL2) Spoil Management Plan (EPR B2) Public Transport Disruption Management Plan (EPR T2). Business Disruption Plan (EPR B1). As applicable to each plan, they will include: identification of sensitive receivers along the alignment. Details of relevant construction activities that have the potential to affect sensitive receptors Measures to be implemented to manage potential imapcts Roles and responsibilities These plans will be prepared once the detailed design and refined construction methodology is prepared in accordance with the relevant EPRs.
Controlled environmental management documentation subsidiary to the CEMP	Includes procedures, forms, registers and work method statements (describing work activities, approvals required and risk assessment and control measures).
Records and checklists	 Monitoring and inspection records. Checklists (e.g. environmental site inspection checklist). Records (e.g. training/competency records, waste transport and disposal certificates).

An outline of the review and approval requirements for the key construction phase environmental management documents of the EMF is provided in Table 4. All plans and documentation will be prepared and approved prior to the relevant works commencing.

Revisions to LXRA and Alliance documentation may be required because of changes in activities and work practices, results of monitoring, changes to legislation, risks, or as a result of findings from internal or external audits, incidents or complaints. The Alliance's EMS and CEMP (and other plans as required by the EPRs) will be controlled documents and will be developed, approved, implemented and revised in accordance with Table 4.

Document	Version	Minister for Planning	State of Victoria (LXRA)	Alliance
Environmental Management Framework with EPRs	Initial EMF and EPRs. A revision to the EMF.	Approve	Prepare	Comply with
Contractor's Environmental Management System	Current Version	-	Review and evaluate	Provide and implement
Construction Environment Management Plan (CEMP)	Initial CEMP. A revision to the CEMP.	-	Approve	Provide and implement
Implementation of approved CEMP	CEMP is to be implemented prior to carrying out substantial works and audited for compliance	-	Review and evaluate	Provide and implement
Community and Stakeholder Engagement Management Plan (CSEMP)	Initial CSEMP. A revision to the CSEMP.	-	Approve	Provide and implement
 Technical Plans Construction Noise and Vibration Management Plan Transport Management Plan Acid Sulfate Soil Management Plan Spoil Management Plan Public Transport Disruption Management Plan Business Disruption Plan All other plans required by EPRs. 	Initial Plans. Revisions to the Plans.		Approve	Provide and implement

Table 4 Key construction phase and environmental management documentation approval requirements

7.3 Timelines for development and approval of plans

Indicative timing for development of the Alliance's Environmental Management System and for the key plans for is set out in Table 5.

The timing for preparing plans for the Alliance is to be determined with the relevant project contractor, once appointed, and will be included in a future update to the EMF to be submitted to the Minister for Planning for approval.

Table 5 Indicative timing for the development of the EMS and key plans

Environmental Management Framework Plan / System	Action	Timing
Environmental Management Framework with EPRs	LXRA to finalise EMF and EPRs and provide to Minister for Planning	December 2018
Contractor's Environmental Management System	Alliance to provide to LXRA	Prior to construction
Construction Environment Management Plan (CEMP)	Alliance to provide to LXRA	Prior to construction
Community and Stakeholder Engagement Management Plan (CSEMP)	Alliance to provide to LXRA	Prior to construction
 Technical Plans Construction Noise and Vibration Management Plan Transport Management Plan Acid Sulfate Soil Management Plan Spoil Management Plan Public Transport Disruption Management Plan Business Disruption Plan All other plans required by EPRs. 	Alliance to provide to LXRA	Prior to construction
Groundwater Monitoring and Management Plan	LXRA to provide to Commonwealth Minister for the Environment	Prior to commencing the action, as defined in the Decision Notice for EPBC Approval 2017/7906
Edithvale Wetlands Monitoring and Mitigation Plan	LXRA to provide to Commonwealth Minister for the Environment	Prior to commencing the action, as defined in the Decision Notice for EPBC Approval 2017/7906.
Groundwater Quality Mitigation Plan	Alliance to provide to LXRA	Prior to project completion

7.4 Process for amending key plans

Amendments to this EMF may be made from time to time to the satisfaction of the Minister for Planning.

Amendments to other environmental management documentation listed in Table 2 to Table 5 may be revised following initial approval by a Minister or statutory authority, as applicable. LXRA or the Alliance may submit an application to revise a plan to the relevant statutory approver. If the revision is approved, the revised plan must be implemented in place of the previous plan.

LXRA or the Alliance may revise the plans listed in Table 5 without submitting them for approval by a statutory authority if the revisions would not result in actions being likely to have a new or increased impact. In particular, this applies to the Groundwater Monitoring and Management Plan and the Edithvale Wetland Mitigation Plan in accordance with Condition 20 of EPBC Approval No. 2017/7906.

7.5 Contingency measures

The CEMP and plans required to comply with the Incorporated Document and EPRs will include appropriate contingency measures to address identified environmental, social and business risks. Contingency measures may be required to take effect in the event that monitoring or auditing (or any other means) identifies:

- unforeseen issues, or
- issues which are foreseeable but not expected to occur, or
- impacts which are expected but which prove greater than anticipated.

Contingency measures will be developed to comply with relevant regulations, standards and industry best practice guidelines.

Examples of potential contingency measures include protocols for management of groundwater (EPR reference GW2), managing the discovery of previously unidentified historical archaeological sites (EPR reference HH1) and a plan to address the containment, treatment and disposal of any fuel and chemical spills (EPR reference CL3). Contingency measures will also be a key part of the Cultural Heritage Management Plan for managing the discovery of previously unidentified Aboriginal heritage sites (EPR reference AH1).

7.6 Consultation

The Alliance is required to prepare a comprehensive CSEMP to sit alongside the CEMP that will set out the specific actions, requirements and processes to engage with the community and other stakeholders (such as local businesses and community and special interest groups). This is to ensure that they are kept informed of the projects' works as they progress and that feedback is recorded. The CSEMP will reflect the requirements of LXRA's overarching Community and Stakeholder Engagement Plan and apply them to the site-specific context.

The CSEMP will include:

- procedures and requirements around notifications in advance of potentially impactful works (such as road closures or night-time noise)
- management of the closure of the railway, pedestrian and cyclist access and roads
- changes to cycling and/or pedestrian access.

The Alliance will prepare a complaints management procedure as part of the CSEMP to ensure that complaints from the community regarding environmental performance during construction are logged, assigned a priority level, communicated to the relevant personnel within the Alliance to determine and implement the appropriate response, and that feedback to the complainant is provided and recorded. The complaints management procedure will also include timeframes for responding to complaints. The procedure will integrate with the CEMP so that it includes the necessary procedures for resolving, monitoring and recording environmental complaints.

8 Evaluating environmental performance

The PAA will specify compliance requirements for the Alliance (including the construction contractor) including monitoring, reporting to LXRA and relevant government agencies, and environmental auditing.

A summary of these compliance requirements is provided in this section. The CEMP will describe the Alliance's environmental compliance system, including:

- definitions of what constitutes a non-conformance
- requirement for a non-conformance tracking register
- timeframes and responsibilities for addressing non-conformances
- detailed procedures for monitoring, auditing and reporting, including the handling of complaints in relation to non-conformances with EPRs and the Incorporated Documents.

This section identifies the requirements for monitoring, reporting and auditing of compliance with this EMF.

8.1 Monitoring

The monitoring requirements will be specified in the CEMP and any other plans required to comply with the Incorporated Document, the EPRs, and relevant planning, environmental and heritage approvals.

The parameters to be monitored and the frequency of monitoring will reflect regulatory requirements and the level of potential risk to the environment. Monitoring will include periodic inspections of construction works areas.

The CEMP and on-the-ground construction activities will be reviewed regularly to verify that:

- the monitoring frequency is sufficient to identify whether any non-conformances with the EPRs, Incorporated Documents and legislation and regulations (including conditions of planning, environmental and heritage approvals) that have occurred
- the range of parameters being monitored is adequate (this is particularly relevant if an activity has led to an incident or complaint)
- changes to programmed construction activities are adequately covered by the monitoring programs
- any proposed modifications to monitoring programs will be submitted to LXRA for approval prior to being implemented. The Alliance will be responsible for the ongoing management of baseline and monitoring data to ensure the transparency and accountability of environmental management.

8.2 Reporting

Performance against the CEMP and other plans required to comply with the Incorporated Documents and EPRs will be reported to LXRA and relevant government agencies as appropriate. The CEMP will describe the reporting and external notification requirements, including what needs to be reported and to whom, and the timeframe for reporting.

Reporting and notification requirements will include, but not be limited to:

- monthly environmental performance reports submitted to LXRA. This report will include audit findings, monitoring results and incidents and non-compliances
- notification to LXRA and third-party regulators (as appropriate) in the event of environmental incidents, non-compliances, non-conformities or the discovery of previously unknown assets (i.e. heritage artefacts), in accordance with the CEMP and requirements of relevant legislation and approvals.

8.3 Peer review

Where required by the EPRs, the design and environmental management and monitoring approach to avoiding and minimising impacts to groundwater and associated beneficial uses would be subject to independent peer review. This will provide further assurance of appropriate management of a key environmental aspect of the projects.

8.4 Auditing

Audits will be conducted by the appointed Alliance to monitor environmental performance, and to ensure continued conformance with legislative, contractual and management system obligations. The level of audit activity outlined below is considered to be appropriate for the duration, scale and complexity of the construction work associated with the projects.

LXRA will participate in the Alliance's audit program.

The scope of each audit will typically involve an evaluation of the following:

- conformance with the EMS and CEMP
- contractual requirements
- compliance with the EPRs and any plans required to comply with the EPRs
- compliance with planning, environmental and heritage approvals
- responses to non-conformances, incidents, and complaints received
- effective implementation of monitoring programs
- compliance with the Incorporated Documents.

The projects will be subject to an audit within three months of commencement of project works (i.e. site establishment activities such as set-up/mobilisation, establishing no-go-zones and laydown areas etc). As a minimum, audits will be scheduled to coincide with the commencement of key activities and the use of key equipment, and will be conducted on a quarterly basis (and more frequently where necessary) through delivery. A final audit will be undertaken upon or nearing completion to ensure all project requirements have been met, and the constructed assets can be handed over to the end asset owner.

The results of each audit will be presented in an audit report. Compliance will be assessed through observation of project activities, interviews and review of records. Records will include the following:

- environmental monitoring, process monitoring and management performance monitoring results
- inspection and audit reports
- soil and waste management records
- all monitoring records as required by the EPRs including noise, vibration, air, etc.
- surveys
- meeting minutes.

Environmental site inspections will also be conducted on a weekly basis by the appointed Alliance to monitor environmental performance. LXRA will also participate in one of the Alliance's weekly site inspections each month. The site inspections will comprise observations made during a site walkover and limited personnel interviews. Where appropriate, the focus of the site inspections will be guided by those activities and locations which represent potentially higher levels of environmental risk.

9 Environmental performance requirements

9.1 Context

This section summarises the rationale and approach adopted in preparing the EPRs for the projects, and sets out the EPRs in Table 6. The projects will be delivered in accordance with approved EPRs that define the specific commitments and project-wide environmental outcomes that must be achieved during design, construction and operation of the projects (regardless of the solutions adopted). This performance-based approach allows for a delivery model with sufficient flexibility to encourage innovation by the private sector to determine how any recommended EPRs would be achieved.

The EPRs were developed as part of the EES through a risk-based assessment of environmental effects of the projects. Potential mitigation measures were typically included in the EES as examples of how an environmental effect could be mitigated and to illustrate how an EPR could be implemented. However, the EES generally did not mandate or commit to a particular mitigation or management outcome.

In the same manner, the EPRs do not typically mandate or require a particular mitigation or management solution. Instead, the EPRs will be implemented by applying a risk-weighted assessment of the nature and extent of the relevant environmental effects, and the most practicable means of mitigating and managing those effects where required. This will ensure the management and mitigation measures are proportional to the effect they are designed to address and achieve the outcome prescribed by the EPR.

The Incorporated Documents will require the project to be constructed and operated in accordance with the EPRs approved by the Minister for Planning. The Alliance will comply with the EPRs and prepare necessary plans prior to commencement of their scope of work to document the approach to compliance with each EPR. Each Alliance will therefore have its own plans for compliance with EPRs.

Table 6 sets out the EPRs that define the environmental performance to be achieved in the design and construction of both projects.

9.2 Consultation required by the EPRs

Many EPRs require consultation to be undertaken with relevant stakeholders. The extent of consultation and outcomes will be documented to demonstrate compliance with the EPRs.

Consultation required under the EPRs may include meetings, workshops and exchange of documentation and correspondence between LXRA or its contractor and stakeholders, but would not necessarily require the submission of written documentation or draft plans for formal comment to any particular stakeholder.

Where an EPR is expressed as requiring or being subject to the agreement of a stakeholder, LXRA must use reasonable endeavours to reach agreement with that stakeholder to satisfy the EPR. If LXRA uses such reasonable endeavours but is unable to reach an agreement with the stakeholder, it may submit a request to the Minister for Planning to amend or remove the relevant EPRs (as part of the EMF) under the relevant clauses of the Incorporated Documents. Such a request must be accompanied by a written explanation of the reasonable endeavours used by LXRA in reaching an agreement on the subject matter of the EPR, and the stakeholders' responses.

9.3 Risk assessment

Environmental risks and impacts have been identified and assessed through the specialist investigations for the EES and a detailed environmental risk assessment process. The objective of the environmental risk assessment was to identify key social, environmental and business risks associated with construction and operation of the projects, and to develop management and mitigation measures to reduce these risks.

As part of the CEMP, the Alliance will develop a detailed environmental risk assessment based on the detailed design of the projects and consider the risks identified in the EES. The risk assessment will be required to be consistent with

AS/NZS ISO 31000 : 2009 *Risk management – principles and guidelines*. The Alliance will be required to maintain a current risk register which will be considered a 'live' document, adopting regular reviews and updating the register in response to changes to design, construction or operational activities, work methods, new technology, legislation and policy, or the occurrence of incidents or complaints.

The risk assessment will link risks to the relevant EPRs to define the standard of management to be achieved to manage potential impacts. If, through review of the risk assessment, additional or modified EPRs are required, the EPRs will be revised and re-submitted to the Minister for Planning for approval (as described in Table 3).

Table 6 Environmental performance requirements

ID	EPR
AH1	Cultural Heritage Management Plan Comply with and implement the Cultural Heritage Management Plan approved under the Aboriginal Heritage Act 2006 that applies to the projects.
AQ1	Air quality (construction) Manage construction activities to minimise dust, odour and other emissions in accordance with EPA Victoria Publication 480 Environmental Guidelines for Major Construction Sites.
AQ2	Air quality management Control the emission of smoke, dust, fumes and other pollution into the atmosphere during construction and operation, in accordance with the State Environment Protection Policy (Air Quality Management 2001) and State Environment Protection Policy (Ambient Air Quality) 1999.
B1	 Business Disruption Plan Minimise impacts to local business through preparation and implementation of a Business Disruption Plan. The Business Disruption Plan must document: a process for communication with traders and businesses consistent with EPR SC1 transport planning prior to road closures to minimise impacts to business access and parking consistent with EPR T1 management of potential amenity impacts during construction consistent with EPRs AQ1, AQ2, NV2, and NV3.
CL1	 Spoil Management Plan Prior to construction (excluding preparatory works), prepare and implement a Spoil Management Plan in accordance with relevant regulations, standards or best practice guidelines. The plan must be developed in consultation with EPA Victoria, and include: a) applicable regulatory requirements b) nature and extent of spoil (clean fill and known contaminated spoil) across the construction areas c) nature and extent of any known prescribed industrial waste (including asbestos) across the construction areas d) roles and responsibilities e) management measures for storage, handling and transport of spoil for the protection of health, amenity and the environment f) design and development of specific management measures for any temporary stockpile areas g) sites for management for disposal of any spoil and/or prescribed industrial waste h) monitoring and reporting requirements The Spoil Management Plan shall include an Acid Sulfate Soil Management Plan (EPR CL2).

CL2 Acid Sulfate Soil Management Plan

Prepare and implement an Acid Sulfate Soil Management Plan prior to construction of the project to the satisfaction of EPA Victoria, in accordance with the *Industrial Waste Management Policy (Waste Acid Sulfate Soils) 1999*, EPA Victoria Publication 655.1 *Acid Sulfate Soil and Rock*, and relevant EPA regulations, standards and best practice guidance in consultation with EPA Victoria. This plan will include:

- a) locations and extent of potential acid sulfate soils
- b) an assessment of potential impact for human health, odour and the environment
- c) measures to prevent oxidation of acid sulfate soils wherever possible
- d) sites for management, reuse or disposal of acid sulfate soils.

CL3 Waste management

EPR

Manage wastes during the construction of the projects by including appropriate measures in the Construction Environmental Management Plan (EPR EMF2) in accordance with EPA Victoria Publication 480 Environmental Guidelines for Major Construction Sites 1996, EPA Victoria Publication 347.1 Bunding 2015, Australian Standard AS1940 Storage and Handling of Flammable and Combustible Liquids, and relevant EPA Victoria and Victorian WorkCover Authority regulations, standards and best practice guidance that includes:

- a) application of the waste management hierarchy in assessing waste management options
- b) contamination and waste management requirements (e.g. use of waste and recycling facilities, maintenance of a clean site policy)
- c) designated vehicle refuelling area
- d) chemical management procedures, such as minimising use and storage of chemicals on site, bunded storage facilities to ensure spills, washing residues, slurries or other contaminated water can be contained, and are managed/disposed of appropriately
- e) location and type of spill kits required
- f) staff training and competence requirements
- g) use of well-maintained plant to minimise the potential for spills to occur
- h) procedures to remove, treat and/or dispose soil that becomes contaminated due to a fuel or chemical spill
- i) storage of litter in bins from which it cannot escape (temporary fencing may be used as a secondary containment measure for litter).

ID ____

CL4 Acidic and/or contaminated groundwater (construction)

Develop and implement measures within the Construction Environmental Management Plan (EPR EMF2) to manage acidic and/or contaminated groundwater, in accordance with the State Environment Protection Policy (Groundwaters of Victoria) 1997, State Environment Protection Policy (Waters of Victoria) 2004, State Environment Protection Policy (Prevention and Management of Contamination of Land) 2002, Water Industry Regulations 2006, and relevant EPA Victoria regulations, standards and best practice guidance.

Measures must include:

- a) a baseline groundwater quality assessment (taking into account site history) at least three months prior to commencement of construction works
- b) a system to manage and/or dispose of intercepted groundwater (if required) which may be a trade waste agreement with South East Water or other measures in accordance with relevant guidelines and legislation (if a trade waste agreement is not granted)
- c) procedures for collection, treatment, disposal and handling of contaminated groundwater and/or slurries, including vapours
- d) water quality monitoring of intercepted groundwater and run-off containment areas during construction
- e) contamination plume management procedures (if required)

CL5 Groundwater Quality Mitigation Plan (operation)

Prior to the completion of the Projects, prepare and fund the implementation of a Groundwater Quality Mitigation Plan in consultation with the land manager of any affected land parcels to manage and mitigate any negative impacts from changes to groundwater quality as a result of the projects.

The Plan shall be implemented following the completion of the projects if the relevant trigger level within the Groundwater Monitoring and Mitigation Plan (EPR GW2) is met. The Plan must include:

- a. measures to manage any negative impacts on the beneficial use of groundwater caused by acidification that is attributable to the project(s) so as to maintain existing beneficial use of groundwater
- b. measures to manage any negative impacts on the beneficial use of groundwater caused by contaminated groundwater transfer or plume migration that is attributable to the project(s) so as to maintain existing beneficial use of groundwater
- c measures to manage any negative impacts on the beneficial use of groundwater caused by changes to salinity that is attributable to the project(s) so as to maintain existing beneficial use of groundwater
- d. the entity or entities responsible for implementation of any management and mitigation measures.

EMF1 Environmental Management System

Implement an Environmental Management System during construction that is certified to AS/NZS ISO 14001: 2015 Environmental management systems – Requirements with guidance for use.

ID

EPR

ID	EPR
EMF2	Environmental management plans Prepare and implement a Construction Environment Management Plan(s) and other plans as required by the EPRs. The management plan(s) should be prepared in accordance with EPA Victoria Publication 480 <i>Environmental Guidelines for Major Construction Sites</i> (EPA Victoria 1996). The process for development and implementation of the management plan(s) must include consultation as specified in the Environmental Management Framework, including with the Kingston City Council, VicRoads, Melbourne Water, EPA Victoria, as relevant to their statutory responsibilities. The management plan(s) must be in place prior to commencement of construction excepting ancillary activities, preparatory and enabling works.
EMF3	 Environmental incidents Prepare and implement a process for managing environmental incidents including: a) classification and definition of environmental incidents b) notification requirements (including timing) to LXRA and relevant regulators c) incident investigation.
EMF4	Operational Groundwater Management Strategy Prior to the completion of works, prepare an Operational Groundwater Management Strategy that outlines the ongoing responsibilities for ownership and the monitoring and management requirements for the groundwater management system at Edithvale.
FF1	Native vegetation and habitat Any native vegetation removal must be avoided, minimised and managed in accordance with the Guidelines for the removal, destruction or lopping of native vegetation 2017.
FF2	Flora and Fauna Guarantee Act 1988 permits A permit to take and destroy flora species protected under the Flora and Fauna Guarantee Act 1988 is required. All permits must be obtained prior to the commencement of works which require approval under the Act.
FF3	Weeds and pathogens Develop and implement measures to avoid the spread, or introduction of weeds and pathogens during construction, including vehicle and equipment hygiene.
FF4	Fauna Minimise the removal of habitat for fauna. Where fauna habitat is identified for removal, engage a wildlife handler and recovery specialist to check for fauna occupancy and ensure compliance with the <i>Wildlife Act</i> 1975. All necessary authorisations must be obtained prior to commencement of works.

ID	EPR
FF5	Protection of retained/adjacent vegetation and habitat Minimise or avoid unintended impacts on retained and/or adjacent vegetation and habitat by including measures in the Construction Environmental Management Plan(s) and/or its subordinate documentation including tree protection zones, environmental no-go zones, fencing and signage, directional lighting, and best practice spill, sedimentation and water runoff management.
FF6	Landscaping for wildlife Incorporate native plant species into landscaping that provide wildlife habitat within level crossing removal project areas where appropriate.
FF7	Edithvale Wetlands Monitoring and Mitigation Plan
	Prior to the completion of the Projects, prepare and fund the implementation of the Edithvale Wetlands Monitoring and Mitigation Plan in consultation with the Commonwealth Department of Environment and Energy, DELWP and Melbourne Water.
	The Plan shall be implemented following the completion of the projects if the relevant trigger level within the Groundwater Monitoring and Mitigation Plan (refer EPR GW2) is met.
	The plan must:
	a. identify a relevant entity or entities and the roles and responsibilities for monitoring and mitigation.
	 b. the plan must be made publicly available on a clearly identifiable website. c. include a process to review monitoring data for groundwater levels at the Wetlands to determine if there is a change in water levels corresponding to the relevant trigger level (EPR GW2)
	d. include a process to review the existing ecology and hydrology monitoring data (if groundwater levels at the Wetlands are elevated corresponding with the trigger level) to determine whether a change at the Wetlands is attributable to the project(s) and requires mitigation
	i. include a requirement to continue and/or modify existing monitoring programs, if necessary, to determine whether impacts are attributable to the projects.
	e. include monitoring criteria such as hydrology and ecology indicators, consistent with the Edithvale-Seaford Wetland Ramsar Management Plan to determine if impacts are due to the projects.
	f. include contingency measures consistent with the Edithvale-Seaford Wetland Ramsar Management Plan to mitigate potential impacts attributable to the projects. Measures may include:
	i. ecological restoration measures developed by a suitably qualified ecologist that would be implemented to mitigate the effect of impacts attributable to the project(s)
	ii. engineering measures to reinstate the Wetlands to pre-impact conditions to the extent practicable.
FF8	Bonbeach foreshore native vegetation
	Description of the Description of the Description of the Council to enhance for above notice up at the funding encount shall be excited by an effect account and

Prior to the completion of the Projects, fund Kingston City Council to enhance foreshore native vegetation. The funding amount shall be guided by an offset assessment and credit value pursuant to the *Guidelines for the removal, destruction or lopping of native vegetation 2017*.

EPR

ID

GM1 Asset condition survey

Conduct a pre-construction condition survey for buildings, structures and other assets predicted to be damaged as a result of vibration, subsidence or ground movement caused by the projects.

Develop and maintain a database of pre-construction and as-built condition information for each potentially affected building, structure and other asset identified as being in an area susceptible to damage (EPR GM2), specifically including:

- identification of buildings, structures and other assets predicted to be damaged from vibration, subsidence or ground movement from the projects a)
- b) results of pre-construction condition surveys of buildings, structures, and other assets predicted to be damaged as a result of vibration, subsidence or ground movement caused by the projects, to establish baseline conditions and potential vulnerabilities
- records of consultation with land owners in relation to the pre-construction condition surveys. c)

Conduct post-construction condition surveys, where required, to ascertain if buildings, structures or other assets have been damaged as a result of vibration, subsidence or ground movement caused by the projects

Results of pre-construction condition surveys, post-construction condition surveys and records of consultation must be shared with property owners in accordance with the Community and Stakeholder Engagement Management Plan (EPR SC1).

GM2 Repairs to properties due to vibration, subsidence or ground movement

For buildings, structures and other assets damaged as a result of vibration, subsidence or ground movement caused by the project(s), undertake required repair works or other actions as agreed with the property owner.

GW1 Groundwater performance outcomes

The tanked rail trenches at Edithvale and Bonbeach must be designed and operated to ensure that project-derived changes to groundwater do not result in:

- groundwater mounding that increases waterlogging at ground level a)
- b) groundwater drawdown that could cause damage to buildings, structures and other assets as a result of ground subsidence or an adverse impact to sub-surface structures
- degradation to groundwater quality (including as from acidification, changes to salinity, contaminant transfer or contaminant plume migration) that would have a c) negative effect on protected beneficial uses of groundwater (as defined by the State Environment Protection Policy (Groundwaters of Victoria) 1997).
- d) changes to groundwater that would have negative impacts on groundwater dependent ecosystems
- e) changes to groundwater level that would have a significant negative impact to groundwater extraction from registered bores as a beneficial use.

Further mitigation measures must be implemented if a persistent change to groundwater level or quality is observed.

ID	EPR
GW2	Groundwater Monitoring and Management Plan Prior to construction (excluding preparatory works), prepare and fund the implementation of a Groundwater Monitoring and Management Plan in consultation with Southern Rural Water, EPA Victoria, Melbourne Water, Kingston Council, DELWP to monitor and manage predicted and potential impacts to groundwater as a result of the projects. The Groundwater Monitoring and Management Plan must include: a. detailed groundwater level monitoring parameters with timing and location of monitoring bores b. parameters and timing for monitoring groundwater quality to identify any changes to contaminant transfer or plume migration (if present) caused by the projects c. duration of the groundwater monitoring program for at least 10 years, (components of the plan may cease earlier if considered appropriate following periodic reviews (refer point d) d. provision for periodic review as required, and not less than every second year, to consider the adequacy of the groundwater monitoring program and the need for future groundwater monitoring e. the entity responsible for the implementation of the plan f. the entity responsible for the implementation of the plan g. clear trigger events or levels for changes in groundwater level or quality that require one or more of the following actions: i. implementation of the Groundwater Quality Mitigation Plan (EPR CL5) ii. implementation of the Edithvale Wetlands Monitoring and Mitigation Plan (EPR FF7). The Groundwater Monitoring and Management Plan must be publicly available and results from the monitoring program must be re
GW3	 Independent peer review Prior to construction (excluding preparatory works): a) the proposed design of the Edithvale project must be peer reviewed to confirm that redundancy and contingency are included in the design to ensure the proposed works are capable of continuously achieving EPR GW1 b) the Groundwater Monitoring and Management Plan (EPR GW2) must be peer reviewed. The appointment of the peer reviewer for this plan must be to the satisfaction of EPA Victoria.
GW4	Operational maintenance The Edithvale Project must be inspected and maintained to ensure that the groundwater management system continues to perform effectively.
HH1	Unidentified historical archaeological sites Minimise impacts on any unidentified historical archaeological sites and values discovered during construction through the development and implementation of an archaeological discovery protocol. The management protocol would be consistent with the <i>Heritage Act 2017</i> and developed in consultation with Heritage Victoria and include a procedure for ceasing work if remains are discovered, notifying Heritage Victoria, obtaining consent and dealing with remains.

ID	EPR
HH2	Heritage overlay sites Avoid adverse impacts to the Chelsea Clock Tower and Chelsea Railway Station during construction through the implementation of no-go zones through the environmental management plan(s) and other plans if required. Undertake a pre-condition survey in accordance with EPR reference GM1.
ннз	Heritage values Avoid or minimise, to the extent practicable, adverse visual impacts on adjoining heritage places, and maintain landscape character and significant heritage precinct values (where relevant) by applying the urban design framework and project specific Urban Design Guidelines during the design development process.
LP1	 Land use (construction) The construction approach should: a) avoid or minimise impacts to existing land uses on private and public land (including public open space) from temporary works and permanent structures as far as practicable b) reduce the disruption, to the extent practicable, to current users of public and council land resulting from temporary occupation c) include opportunities to implement landscaping enhancement.
LV1	Landscape and visual opportunities Minimise negative landscape and visual impacts and maximise opportunities for enhancement of public amenity and facilities to the extent practicable, through the application of the Urban Design Guidelines specific to each project in consultation with relevant stakeholders, including Kingston City Council.
LV2	Lighting Design lighting used during operation of permanent structures in accordance with relevant standards to minimise light spillage and protect the amenity of adjacent land uses to the extent practicable.
LV3	Light spillage Light spillage must be minimised during construction to protect the amenity of adjacent land uses to the extent practicable. The environmental management plan(s) and other plans must include requirements and methods to minimise light spillage, to the extent practicable, during construction to protect the amenity of adjacent and surrounding residential land uses, neighbourhoods, parks, community facilities including urban environments, and any known significant

native fauna habitat, in consultation with relevant stakeholders.

NV1 Operational noise

EPR

Design must ensure airborne noise generated by train movements at sensitive receptor locations are in accordance with the Passenger Rail Infrastructure Noise Policy 2013.

Time	Type of receiver	Investigation threshold
Day (6am – 10pm)	Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks Noise-sensitive community buildings, including schools, kindergartens, libraries	65 dBL _{Aeq} and a change in 3 dB(A) or more, or 85 dBL _{Amax} and a change in 3 dB(A) or more
Night (10pm – 6am)	Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks	60 dBL _{Aeq} and a change in 3 dB(A) or more, or 85 dBL _{Amax} and a change in 3 dB(A) or more

Design fixed assets to achieve compliance with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1.

ID	EPR
NV2	Construction Noise and Vibration Management Plan
	Prior to construction (excluding preparatory works), prepare a ConstructionNoise and Vibration Management Plan for the projects in consultation with EPA Victoria and Kingston City Council.
	Manage construction noise and vibration in accordance with EPA Victoria Publication 1254 Noise Control Guidelines, 2008 unless otherwise specified in the Construction Noise and Vibration Management Plan prepared for the projects.
	The Construction Noise and Vibration Management Plan must be prepared prior to commencement of construction (excluding preparatory works) and include:
	 a) the identification of sensitive receptors along the project alignment b) details of construction activities and an indicative schedule for construction works, including the identification of noise and/or vibration generating construction activities that have the potential to impact sensitive receptors c) measures to ensure effective monitoring of noise and vibration associated with construction d) how construction noise (including truck haulage) and vibration will be minimised, including: i. the scheduling of noisy works to typical construction hours where feasible (i.e. Monday to Friday 07:00 am to 6:00 pm, and Saturday 07:00 am to 1:00 pm) ii. limiting night works outside of the main occupation periods iii. the planning of site works to limit vehicle movements to certain locations and time periods iv. the substitution of noisy plant or processes with quieter options (e.g. broadband reversing and movement alarms instead of conventional beepers) v. the substitution of noisy plant or processes with quieter options (e.g. broadband reversing and movement alarms instead of conventional beepers) v. the provision of temporary noise barriers where practicable vi. monitoring of noise and/or vibration associated with construction viii. a procedure for managing complaints. The plan must outline airborne noise management levels and mitigation measures for evening and night time works. The management level is not a noise limit or target but represents noise levels above which community reaction may be adverse and which should trigger mitigation actions to minimise the noise impact. Depending on noise levels, noise mitigation measures may include an offer of respite and relocation, in accordance with a Respite and Relocation Policy (see EPR SC2) and Community and Stakeholder Engagement Plan (EPR SC1).
NV3	Construction vibration Identify potential sensitive receptors (including heritage places) and potential impacts from vibration during the construction period. Where relevant, conduct condition

surveys and monitoring of sensitive receptors.

For human comfort, implement management actions if the Guideline Targets in Table 1 in BS6472-1:2008 for continuous, intermittent, or impulsive vibration are not achieved.

For structural damage to buildings, implement management actions if the Guideline Targets in *DIN4150-3:1999 for structural damage* to buildings are not achieved.

If impacts from vibration are anticipated, management and mitigation measures may include:

- a) substituting high vibration plant or processes with lower vibration options
- b) utilising vibration monitoring to inform management and mitigation
- c) relocation of residents (EPR SC2)
- d) communication with potentially affected residents in accordance with the Community and Stakeholder Engagement Management Plan (EPR SC1).

ID EPR SC1 **Community and Stakeholder Engagement Management Plan** Prior to construction (excluding preparatory works), prepare and implement a Community and Stakeholder Engagement Management Plan in consultation with Kingston City Council that: a) identifies all project activities that potentially impact on community and business operations, and provides for well-coordinated communication and engagement processes consults with and addresses needs of vulnerable groups that would be impacted by the project such as the elderly, socio-economically disadvantaged groups and b) children consults with and addresses needs of users of community facilities impacted by the project such as schools, child care, aged care, and caravan parks c) sets out processes and measures to provide advanced notice to key stakeholders and other potentially affected stakeholders of construction activities (including any d) staged works, early works, main works, or out of hours works), significant milestones, changed traffic conditions, interruptions to utility services, changed access and parking conditions, periods of predicted high noise and vibration activities, including contact details for enquiries/complaints provides for any interested stakeholder to register their contact details to ensure they are automatically advised of planned construction activities, project progress, e) mitigation measures and intended reinstatement measures where applicable f) documents a complaints management process (including processes and measures for registering, managing and resolving complaints) consistent with Australian Standard AS/NZS 10002: 2014 Guidelines for Complaint Management in Organisations. SC2 Respite and Relocation Policy Prior to construction (excluding preparatory works), prepare and implement a Respite and Relocation Policy to be offered to residents whose amenity is significantly affected by construction activities (e.g. out-of-hours works or sustained loss of amenity during the day for residences with special circumstances such as shift workers), or who are subject to loss of access. The Respite and Relocation Policy will only apply during the period in which residents are (or are likely to be) affected. The Policy must contain: a) the criteria that must be met for voluntary and temporary relocation to be offered to affected residents, taking into account: i. the level of noise and vibration impact ii. the duration of the noise and vibration impact iii. loss of access iv. the type and duration of out-of-hours work covered by the policy v. time of day at which the work occurs b) consideration of special circumstances such as language or cultural need, special needs related to health conditions or home businesses engagement measures and mitigation measures, for example: c) i. respite offer (e.g. pre-purchased movie tickets) ii. earplugs (recognising that some people may prefer to stay at home during the relevant works) iii. alternative accommodation.

ID	EPR
SC3	Recreational facilities Where construction works directly impact on sports clubs or passive recreation users of directly impacted sporting and recreational facilities, work with affected sporting clubs and land managers to identify appropriate management measures, including provision of alternative facilities for the period ofdisruption.
SS1	 Sustainability Achieve LXRA's sustainability policy to: a) demonstrate leadership in the commitment to a prosperous and integrated economic, social and environmentally sustainable future b) seek opportunities to enhance the value of natural systems c) pioneer innovation in sustainable design that seeks continuous improvement.
SS2	Climate change Design projects in accordance with the most up-to-date climate change assumption guidance provided in the Guidelines for Assessing the Impact of Climate Change on Water Supplies in Victoria (DELWP, 2016) and the Planning for Sea Level Rise Guidelines (Melbourne Water, 2017) in order to manage climate change uncertainty in design, construction and operation.
SW1	Stormwater management - construction Protect local waterways by applying best practice sedimentation and pollution control measures in accordance with EPA Victoria publication 480 Environmental Guidelines for Major Construction Sites through the Construction Environmental Management Plan(s) and other plans. Implement a water collection and treatment system to ensure that stormwater discharges comply with the State Environment Protection Policy (Waters of Victoria) 2004.
SW2	Water quality - operation The projects must include water collection and treatment systems and ensure that stormwater discharges comply with <i>State Environment Protection Policy (Waters of Victoria) 2004</i> and do not impact beneficial uses of receiving waters. This could include providing a contribution to Kingston City Council's stormwater quality offset scheme, or adopting water sensitive urban design and integrated urban water management principles in the stormwater management design, in accordance with the LXRA's Urban Design Framework and the specific Urban Design Guidelines for the projects, and CSIRO publication <i>Urban Stormwater Best Practice Environmental Management Guidelines 1999</i> in consultation with Melbourne Water and Kingston City Council as applicable.
SW3	Drainage network - construction The volume and quality of surface water discharge during construction must have no adverse impact to the drainage network capacities in consultation with Melbourne Water and Kingston City Council as required.

IDEPRSW4Drainage network - operation
The volume and quality of surface water discharges during operation must have no adverse impact to the drainage network capacities in consultation with Melbourne Water
and Kingston City Council as required.SW5Flood protection - construction
Maintain existing levels of flood protection associated with overland flow paths (considering flood levels, flows and velocities) during temporary construction works through
compliance with Melbourne Water and Kingston City Council requirements for flooding and overland flows.SW6Flood protection - operation
Maintain existing levels of flood protection associated with overland flow paths (considering flood levels, flows and velocities) during operation through compliance with
Melbourne Water and Kingston City Council requirements for flooding and overland flows.

T1 Transport Management Plan

EPR

ID

Prior to the commencement of construction (excluding preparatory works), develop and implement a Transport Management Plan(s) to minimise disruption (to the extent practicable) to affected local land uses, traffic, car parking, on-road public transport, pedestrian and bicycle movements and existing public facilities during all stages of construction. The plan(s) must be developed in consultation with VicRoads and Kingston City Council as the relevant road management authorities and be informed and supported by an appropriate level of transport analysis. The plan(s) must include:

- a) a monitoring program to monitor impacts of construction activities to all modes of active and passive transport. Where monitoring identifies adverse impacts, practicable mitigation measures must be developed and implemented
- b) consideration of cumulative impacts of other major projects operating concurrently in the local area
- c) identify the route options for construction vehicles (including haulage of spoil and other heavy materials to and from site) travelling to and from the project construction site, recognising sensitive receptors, and minimising the use of local streets where practicable
- d) be prepared in consultation with emergency services, develop suitable measures to ensure emergency service access is not inhibited as a result of project construction activities
- e) allow for the provision of alternative parking where practicable to replace public and commuter parking lost as a result of project construction activities and to prevent construction-related parking on local roads or use of public car parks
- f) allow for the provision of car parking or park and ride facilities for construction workers
- g) provisions for the minimisation of impacts on existing connectivity for pedestrians, cyclists, public transport and road vehicles as a result of construction (including laydown areas), including the identification of alternative routes for pedestrians and cyclists and other measures to maintain connectivity and safety for pedestrians and cyclists
- h) management of any temporary or partial closure of roads and traffic lanes, including provision for suitable routes for vehicles, cyclists and pedestrians, to maintain connectivity for road and footpath users
- i) an approach for maximising the current road capacity on Nepean Highway and Edithvale Road during peak periods
- j) restrictions to the number of local roads to be used for construction-related transportation to minimise impacts on amenity, in consultation with VicRoads and Kingston City Council, as appropriate
- k) reinstatement of access to open space, community facilities, commercial premises and dwellings if disrupted, as soon as practicable, and to an equivalent standard
- I) provision for safe access points to laydown areas and site compounds
- m) a communications strategy to advise affected users, potentially affected users, relevant stakeholders and the relevant road authorities of any changes to transport conditions in accordance with the Community and Stakeholder Engagement Management Plan (EPR SC1).

The plan must include specific measures for discrete components or stages of the works having the potential to impact on roads, shared use paths, bicycle paths, footpaths or public transport infrastructure.

T2 Public Transport Disruption Management Plan

Prior to commencement of works significantly affecting public transport services, develop and implement a plan for minimising disruption to public transport services (rail, bus) resulting from project construction activities. The plan must be developed in consultation with VicTrack, V/Line, Public Transport Victoria, the Department of Economic Development, Jobs, Transport and Resources (Transport) and Metro Trains Melbourne, as relevant.

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ID	EPR
Т3	Pedestrian and cyclist connectivity Optimise the design in accordance with the principles and objectives of LXRA's Urban Design Guidelines to maintain and enhance pedestrian and cyclist connectivity in consultation with relevant road authorities, Kingston City Council and Public Transport Victoria where appropriate.
Τ4	Intersection design and performance Intersections must be designed and constructed to provide safe vehicle movements to the satisfaction of the responsible road management authority. Undertake an intersection analysis to ensure acceptable intersection performance.
Т5	Car parking Where practicable, ensure no net loss in station car parking for rail users upon completion, and car parking must be replaced or reinstated at the earliest opportunity.
Т6	Vehicle and pedestrian access Where vehicle and pedestrian access are altered during construction, ensure that vehicle and pedestrian access is replaced, in accordance with relevant road design standards.
77	Debris on roads Minimise dirt and debris on the roads from construction activities by measures including: a) street sweeping b) covering all truck loads that have the potential to result in debris on public roads c) cleaning vehicles and tyres when leaving construction sites.
Т8	Emergency services Maintain vehicular and pedestrian access to hospital emergency departments at all times during construction and to other key health and medical facilities, where practicable.

ID	EPR
UD1	Urban Design Guidelines Design projects in accordance with the LXRA Urban Design Framework and project specific Urban Design Guidelines. The Urban Design Guidelines must consider: a) identity b) connectivity and wayfinding c) urban integration d) resilience and sustainability e) amenity f) vibrancy g) safety h) accessibility i) resilience and comfort for the community in a climate change future j) vegetation replacement as a design and development. Seek the advice of the LXRA Urban Design Advisory Panel (chaired by the Office of the Victorian Government Architect and includes officers of Kingston City Council) during
	the preparation of detailed design to ensure an appropriate response to the LXRA Urban Design Framework.
UD2	Hoardings
	Minimise visual impacts during construction (where possible) with the installation of hoardings. Hoarding must be installed to LXRA's hoarding requirements in consultation with the Kingston City Council.