

Public Environment Report

# Attachment III: EES Environmental Management Framework and Environmental Performance Requirements

September 2019



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# Chapter 27

## Environmental management framework

### 27.1 Introduction

This chapter presents the Environmental Management Framework (EMF) that has been developed for North East Link. The purpose of this EMF is to provide a transparent framework to manage the environmental effects identified in the North East Link Environment Effects Statement (EES) in order to meet statutory requirements, protect environmental values and sustain stakeholder confidence. This EMF forms one component of the overall governance framework for delivery of North East Link.

In setting out the proposed governance framework for managing the environmental effects of the project, the EMF provides clear accountabilities for the implementation of the Environmental Performance Requirements (EPRs) in the development and delivery of the project. The EPRs are a suite of performance-based environmental standards and outcomes that apply to the design, construction and operation of North East Link, and are set out in Section 27.7.

Note that where the conditional tense is used throughout the EES and this chapter (such as the use of the word ‘would’ rather than ‘will’), this reflects that North East Link proceeding is conditional on receiving the required approvals. If North East Link does proceed, the environmental management measures outlined in this section will be implemented.

The development of this EMF and the EPRs has been informed by the specialist technical reports completed as part of the EES as well as relevant legislation, policy and guidelines.

This EMF responds to the EES scoping requirements, which require the EES to include an environmental management framework that provides:

*‘a transparent framework with clear accountabilities for managing and monitoring the environmental effects and hazards associated with construction and operational phases irrespective of the final form of the ultimate design to be implemented for the project’.*

The EMF addresses this objective by specifying the proposed environmental management arrangements for project delivery including:

- Roles, and responsibilities for environmental management to provide a transparent framework for governing the implementation of the EMF and EPRs (Section 27.2)

- A summary of key approvals that would be obtained and complied with (Section 27.3)
- Requirements for identification, assessment and management of environmental risks (Section 27.4)
- Environmental management documentation to prepare to address the requirements of the North East Link Incorporated Document, EMF and EPRs and manage environmental risks and impacts through design, construction and operation (Section 27.5)
- The approach to evaluating compliance with the EMF and EPRs, including monitoring, auditing and reporting processes (Section 27.6)
- The EPRs that define the minimum environmental outcomes that must be achieved during project delivery (Section 27.7).

An incorporated document titled 'North East Link Project', would be an Incorporated Document under the Banyule, Boroondara, Manningham, Nillumbik, Whitehorse, Whittlesea and Yarra Planning Schemes. The planning scheme amendments would permit the use and development of North East Link.

The North East Link Incorporated Document requires the preparation of an EMF for approval by the Minister for Planning. North East Link Project (NELP) would update this EMF and the EPRs in response to the relevant matters and recommendations contained in the Minister for Planning's Assessment of the EES. These revised documents would then form the stand-alone EMF document and EPRs required to be approved in accordance with the North East Link Incorporated Document.

Compliance with the EMF and EPRs would be mandated and enforced through the contractual arrangements established between the Victorian Government and contractors appointed for delivery of the project. It would also be mandated by the terms of the North East Link Incorporated Document requiring the project to be developed in accordance with the EMF and EPRs approved by the Minister for Planning.

## 27.2 Roles and responsibilities

This section outlines the proposed roles, responsibilities, accountabilities and governance arrangements for implementing the EMF and the EPRs during delivery of North East Link.

NELP, on behalf of the Victorian Government, is responsible for delivering North East Link. NELP is an organisation within the Major Transport Infrastructure Authority (MTIA). The MTIA is an administrative office within the Victorian Department of Transport with responsibility for overseeing major transport projects.

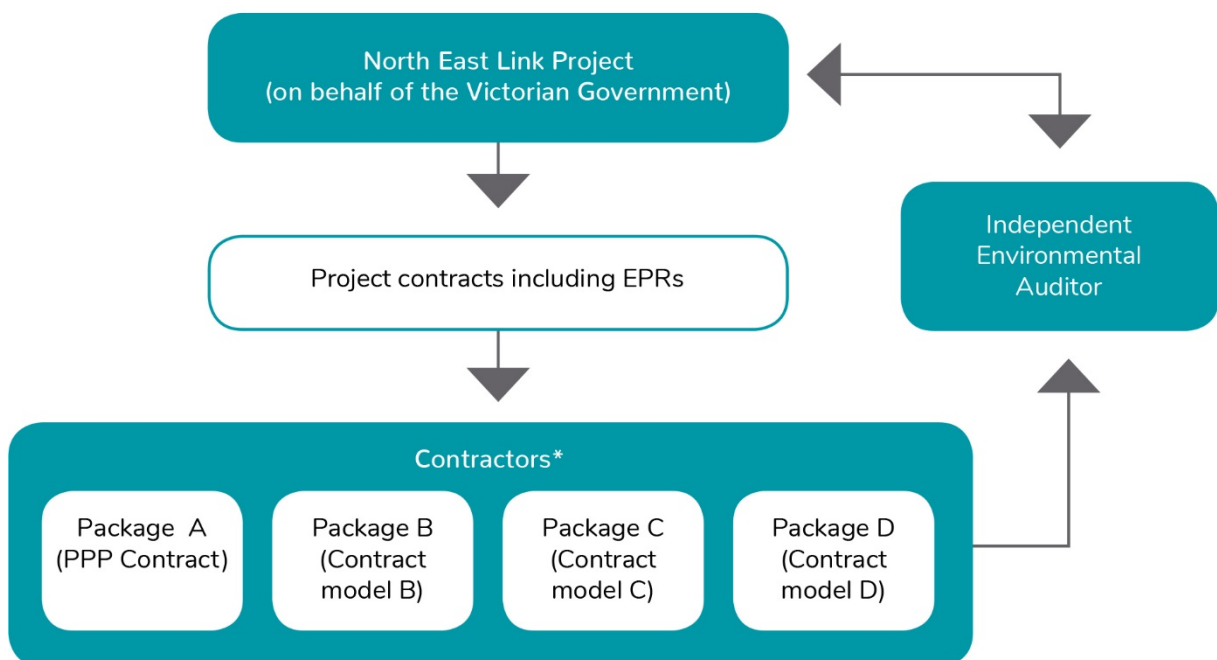
NELP is responsible for overseeing delivery of North East Link on behalf of the Victorian Government, including developing the business case, stakeholder and community engagement, project approvals, design, construction and operation.

As shown in Figure 27-1, the Victorian Government would procure a number of separate work packages to deliver North East Link including:

- A primary package as an availability Public Private Partnership (PPP) to design and construct the tunnels and operate and maintain the entire North East Link corridor
- Secondary packages to design and construct aspects of North East Link.

Requirements relating to 'contractors' within this EMF apply to the head contractor for each of these packages.

The Victorian Government would enter into a contract (project contract) with each contractor that details contractual obligations for development and delivery of project works, including for compliance with the EMF and EPRs approved by the Minister for Planning under the North East Link Incorporated Document. NELP would manage the project contracts on behalf of the Victorian Government.



*\*Packaging and procurement strategy for secondary packages is subject to confirmation by the Victorian Government*

Figure 27-1 Roles and responsibilities for project delivery

The successful tenderers would be required to prepare documentation including an Environmental Strategy, Construction Environmental Management Plan (CEMP), Worksite Environmental Management Plans (WEMPs) and, for the PPP Contract, an Operation Environmental Management Plan (OEMP). These documents would govern the management of contractor activities to meet all environmental requirements including environmental legislation, approvals, approval conditions and the requirements of this EMF and EPRs.

The Environmental Strategy, CEMP, WEMPs and OEMP would describe in detail how contractors would meet the EMF, EPRs and approval conditions and identify, manage and mitigate environmental risks and impacts during construction and operation. Specific requirements for contractor's environmental management documentation are outlined in Section 27.5. Table 27-3 describes these documents.

The Victorian Government would engage an Independent Environmental Auditor to review environmental documentation to verify compliance with and undertake environmental audits of project activities to assess compliance with the EMF, EPRs, Environmental Strategy, CEMP, OEMP, WEMPs and approval conditions. The Independent Environmental Auditor would be required to prepare audit reports and provide these to NELP and the contractors. Audits would occur during construction of North East Link and, for the PPP contract, up to two years after opening. NELP would provide summary reports, based on these audits, on compliance with the EMF and EPRs to the Minister for Planning. The summary reports would be made publicly available on a project website for the period of construction and five years after opening of North East Link.

Table 27-1 describes the key roles and responsibilities for environmental management under the EMF. Contractor responsibilities would be included as contractual conditions in the project contracts.

**Table 27-1** Roles and responsibilities for environmental management under this EMF

Organisation	Role	Responsibility
Minister for Planning	Regulation	<p>Review and approve NELP's EMF, EPRs and Urban Design Strategy.</p> <p>Review and approve the contractor's Urban Design and Landscape Plans.</p> <p>Receive six-monthly summary reports as to compliance with the EMF and EPRs based on the compliance audits carried out by the Independent Environmental Auditor during construction of North East Link and up to two years after opening or as agreed with the Minister for Planning.</p> <p>Administer and enforce the North East Link Incorporated Document.</p>
Approval Authorities	Regulation	<p>Administer and enforce statutory approvals.</p> <p>Review, comment and where necessary approve relevant plans and documents as required by the EMF and EPRs.</p> <p>Receive six-monthly summary reports (or sub-reports) as to compliance with relevant approvals.</p>

Organisation	Role	Responsibility
North East Link Project	Victorian Government representative	<p>Obtain the key approvals including:</p> <ul style="list-style-type: none"> <li>• Approval under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth)</li> <li>• A Planning Scheme Amendment</li> <li>• EPA Works Approval</li> <li>• Approved Cultural Heritage Management Plan.</li> </ul> <p>Revise and update the EMF, EPRs and Urban Design Strategy in response to the relevant matters and recommendations contained in the Minister for Planning's Assessment of the EES and submit to the Minister for Planning for approval.</p> <p>Submit the contractors' Urban Design and Landscape Plans to the Minister for Planning for approval.</p> <p>Develop and implement NELP environmental management system in accordance with AS/NZS ISO 14001.</p> <p>Implement its responsibilities under the EMF and comply with the EPRs applicable to the Victorian Government.</p> <p>Mandate compliance with the EMF, EPRs and Urban Design Strategy in project contracts.</p> <p>Engage an Independent Environmental Auditor.</p> <p>Review and accept environmental management documentation in accordance with Table 27-3, including the Environmental Strategy, CEMP, WEMPs, OEMP and other plans required by the EPRs.</p> <p>Monitor contractor compliance with the EMF, EPRs, Environmental Strategy, CEMP, OEMP, WEMPS, Urban Design Strategy, Urban Design and Landscape Plans, approvals and approval conditions, including issues raised in audits and require corrective action to be taken where necessary.</p> <p>Review Urban Design and Landscape Plans to check that they are generally in accordance with the approved Urban Design Strategy</p> <p>Review design documentation to check that it is generally in accordance with the approved Urban Design Strategy and approved Urban Design and Landscape Plans prior to implementation.</p> <p>Conduct monitoring, auditing and reporting in accordance with Section 27.6.</p> <p>Provide six-monthly summary reports as to compliance with the EMF and EPRs to the Minister for Planning.</p> <p>Liaise with regulators and other agencies as required.</p> <p>Conduct stakeholder engagement and community consultation activities as required.</p>
VicRoads	State Road Corporation	Operate and maintain the infrastructure returned to the State by NELP in accordance with the EPRs.

Organisation	Role	Responsibility
Contractors (including the PPP Contractor)	Design, construction and operation (as relevant to the scope of the respective project contract)	<p>Comply with legislative and approval requirements, including the approved EMF, EPRs and Urban Design Strategy.</p> <p>Obtain from regulatory authorities any additional permits and approvals required to design, construct and operate the project works that are the subject of the project contract (other than the approvals that would be obtained by NELP).</p> <p>Develop and implement a project-specific environmental management system, or apply an existing or adapted corporate EMS to the specific activities relevant to the project works that are the subject of the project contract, in accordance with Section 27.5.1. Contractor environmental management systems would be required to be certified to AS/NZS ISO 14001 and, to the extent relevant, consistent with NELP's environmental management system</p> <p>Prepare and obtain the Minister for Planning's approval for Urban Design and Landscape Plans for permanent above-ground buildings or structures (excluding preparatory buildings and works) in accordance with the North East Link Incorporated Document.</p> <p>Prepare an Environmental Strategy in accordance with Table 27-3.</p> <p>Prepare a CEMP, WEMPs, and other plans required by the North East Link Incorporated Document, EMF and EPRs in accordance with Table 27-3.</p> <p>Provide adequate resources to comply with all environmental requirements</p> <p>Design and deliver the project generally in accordance with the approved Urban Design Strategy and approved Urban Design and Landscape Plans.</p> <p>Implement, maintain and comply with the Environmental Strategy, CEMP, WEMPs and other plans required by the Incorporated Document, EMF and EPRs.</p> <p>Ensure that sub-contractors comply with the relevant EMF, EPRs, Environmental Strategy, CEMP, WEMPs, Urban Design and Landscape Plans and other plans.</p> <p>Undertake regular internal environmental audits to assess compliance with the EMF, EPRs, Environmental Strategy, CEMP, WEMPs and other plans required by the EPRs and take corrective action as necessary.</p> <p>Review sub-contractors' performance against the EMF, EPRs, Environmental Strategy, CEMP, WEMPs and other plans required by the EPRs, and take or require corrective action as necessary.</p>
PPP Contractor	Design, construction and operation	<p>Comply with the requirements and responsibilities outlined above for all contractors.</p> <p>Prepare and obtain acceptance for an Operation Environmental Management Plan (OEMP) in accordance with Table 27-3.</p> <p>Implement, maintain and comply with the OEMP.</p> <p>Ensure that all sub-contractors comply with the OEMP.</p> <p>Undertake regular internal environmental audits to assess compliance with the OEMP and take corrective action as necessary.</p> <p>Review sub-contractors' performance against the OEMP and take or require corrective action as necessary.</p>

Organisation	Role	Responsibility
Independent Environmental Auditor	Independent review, verification and auditing of compliance	<p>Develop an audit plan, including a schedule, and audit scopes to the satisfaction of NELP for each project contract.</p> <p>Review the adequacy of and verify that the contractors' environmental management and design documentation, Environmental Strategy, Urban Design and Landscape Plans, CEMP, WEMPs, OEMP and other documents as set out in Table 27-3 comply with the project contract including the EMF and EPRs, conditions of project approvals, and are in general accordance with the approved Urban Design Strategy. This includes verifying that engagement has been undertaken to inform the plans as required by the EMF, EPRs and Urban Design Strategy or by NELP.</p> <p>Conduct audits of contractor works to assess compliance with the EMF, relevant EPRs, Environmental Strategy, CEMP, WEMPs, OEMP, other plans as required by the EPRs and conditions of project approvals.</p> <p>Prepare audit reports containing the results of each audit and provide to NELP and the contractor.</p> <p>Prepare a six-monthly report, as per Section 27.6.3, summarising the contractors' compliance with the EMF and EPRs and provide to NELP and the contractor.</p> <p>Review environmental complaints data as part of audits to identify possible instances of non-conformance with the EMF, EPRs, Environmental Strategy, CEMP, WEMPs, OEMP, other plans required by the EPRs, conditions of project approvals and environmental requirements of the project contract.</p>

## 27.3 Statutory approvals and consents

NELP is responsible for preparing the EES for the project under the *Environment Effects Act 1978* (Vic). NELP is also responsible for seeking the following approvals:

- Approval of the project under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) for potential impacts on Matters of National Environmental Significance and on Commonwealth land
- Approval of a planning scheme amendment under the *Planning and Environment Act* which introduces the *North East Link Incorporated Document* into the relevant planning schemes to facilitate development of the project
- EPA Works Approval under the *Environment Protection Act* authorising construction and installation of the tunnel ventilation system
- An approved Cultural Heritage Management Plan under the *Aboriginal Heritage Act 2006* (Vic).

Each of the project contracts would require contractors to comply with legislation, the conditions of these key approvals and to obtain all other approvals, licences, permits and consents that may be required. Other approvals that may be required for North East Link are discussed in Chapter 3 – Legislative Framework. Contractors would be required to identify environmental approvals, licences, permits, consents and applicable legislation relevant to their package and their approach to compliance with these within their Environmental Strategy.

## 27.4 Risk assessment

An environmental risk assessment has been carried out for the reference project to inform preparation of this EES and development of the EPRs. This risk assessment and resulting risk register is described in Attachment III Risk Report.

Contractors would be required to develop a risk management process for use throughout the project delivery phase and to assess environmental risks for their activities. Contractor risk assessments would inform the development of their construction and operation environmental management plans and detailed management and mitigation measures. The risk assessment process would be required to be consistent with AS ISO 31000:2018 *Risk management – guidelines* and to take into account the risks and impacts identified during the EES process.

Contractors would establish an environmental risk register which would be regularly reviewed and updated in response to changes to design, construction or operational activities, work methods, new technology, legislation and policy, or the occurrence of incidents or complaints.

## 27.5 Environmental management documentation

The EMF requires the preparation of environmental management systems and other project specific documentation by NELP and contractors to monitor and control environmental impacts during design, construction and operation. The environmental management documentation must comply with this EMF and the EPRs and address relevant legislation, approval conditions, and contractual requirements.

The North East Link Incorporated Document also requires preparation of an Urban Design Strategy and Urban Design and Landscape Plans for approval by the Minister. The Urban Design Strategy and Urban Design and Landscape Plans guide the design of permanent above-ground buildings or structures (excluding preparatory buildings and works) including public realm, infrastructure and landscape outcomes. These documents focus on design outcomes rather than management of environmental effects and hazards during construction and operation. However, as they are required by the North East Link Incorporated Document they have been included within this EMF for completeness.

Figure 27-2 presents an overview of the key environmental management documentation and the relationship to other EMF components.

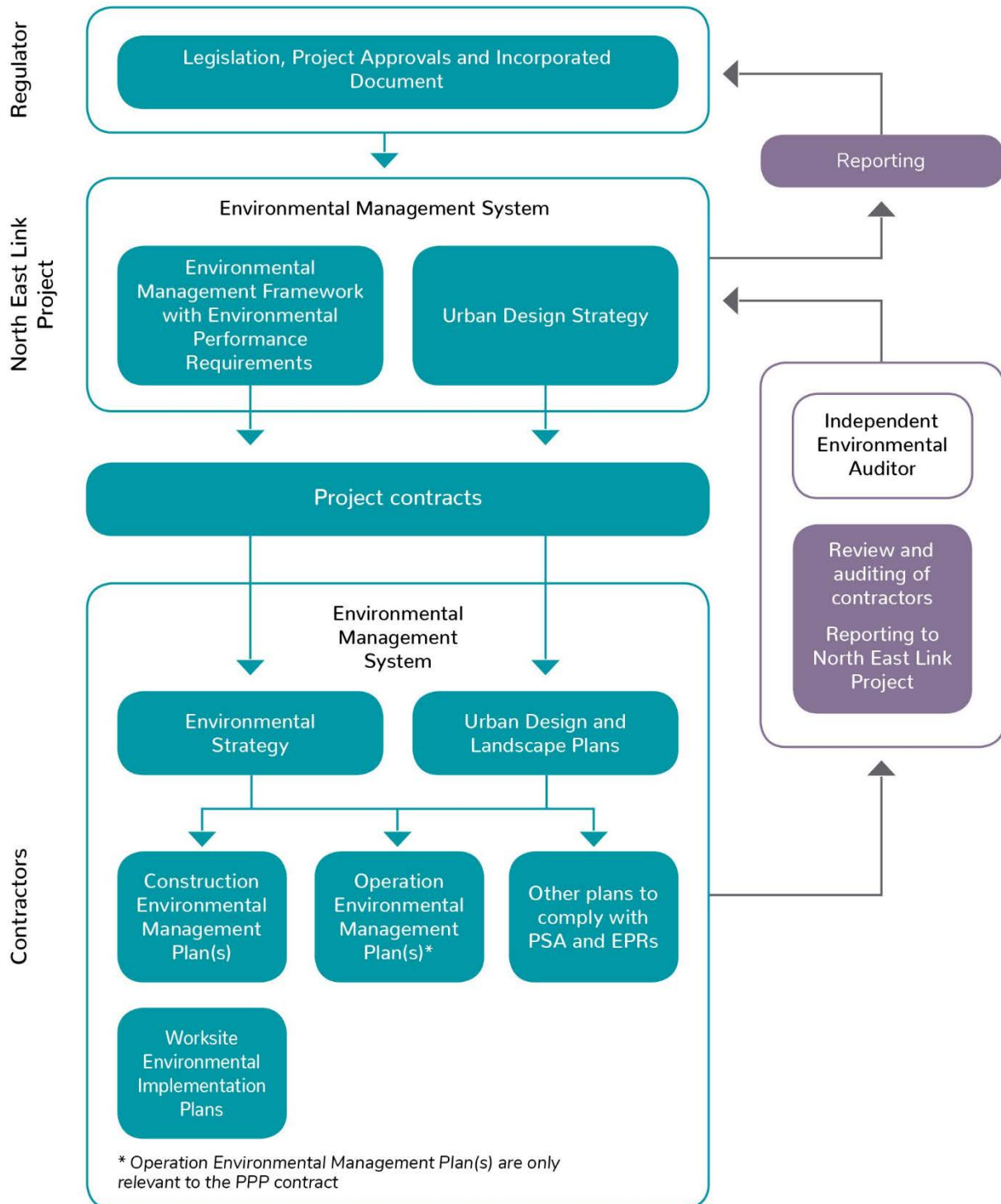


Figure 27-2 Key environmental management documentation

## 27.5.1 Environmental management systems

The construction and operation of North East Link would be in accordance with environmental management systems that are consistent with AS/NZS ISO 14001. Environmental management systems provide organisations with a framework and systematic approach to achieving their organisation level objectives for environmental management and sustainability and driving continuous improvement.

Environmental management systems would contain organisation level policies, plans, procedures and activities to provide a systematic method of managing the environmental aspects of North East Link that are within each organisation's control or influence. Key components would include:

- Leadership and commitment
- Environmental policy
- Responsibilities and authorities for environmental management
- Environmental risk and opportunity assessment and actions to address these
- Requirements for setting and achieving objectives and achieving compliance with environmental legislation, the EMF and EPRs
- Requirements for competency and awareness
- Communication and reporting
- Management of documentation and records
- Operational control including emergency preparedness and response
- Monitoring procedures and internal and external audit program
- Processes for responding to incidents and non-conformance and implementing corrective and preventative action
- Review and continuous improvement.

Requirements for NELP's and contractor environmental management systems are outlined below.

### North East Link Project

NELP would develop, implement and maintain an environmental management system that is consistent with AS/NZS ISO 14001. NELP would administer the project contracts on behalf of the Victorian Government and review the effectiveness of the EMF for continuous improvement in accordance with its environmental management system.

## Contractors

Contractors would develop and implement an environmental management system that is certified to AS/NZS ISO 14001. The environmental management system would be appropriate to the contractor's activities for North East Link and be reviewed and verified as compliant with this EMF by the Independent Environmental Auditor and reviewed and accepted by NELP.

### 27.5.2 Environmental management documents

In addition to environmental management systems, environmental management documents would be prepared to describe the specific processes, procedures, management and mitigation measures that would be implemented to manage the environmental effects of North East Link. The three levels of environmental management documents required for North East Link are described in Table 27-2.

Table 27-2 Key environmental management documents

Level	Owner	Purpose	Plans
1 Strategic framework	NELP	Set the strategic direction and overarching requirements for project delivery	Environmental Management Framework and Environmental Performance Requirements Urban Design Strategy
2 Management of project-wide impacts	Contractors	Guide specific programs or works in order to consistently manage potential impacts on the community or environment	Environmental Strategy Urban Design and Landscape Plans Construction Environmental Management Plan Operation Environmental Management Plan
3 Technical plans	Contractors	Address the requirements of the EPRs. Technical plans would include all other plans required by EPRs. These plans would reflect the contractors' methods of implementing the EMF and other regulatory requirements for specific impacts or locations.	

The environmental management documents described in this section would be controlled documents. Table 27-3 outlines the required content and approvals for these environmental management documents.

The environmental management documents required by the North East Link Incorporated Document would be approved by the Minister for Planning in accordance with Table 27-3 before the start of works covered by the document (other than preparatory works as defined in the North East Link Incorporated Document).

Other environmental management documents would be reviewed by the Independent Environmental Auditor for adequacy and compliance with the EMF, EPRs, approved Urban Design Strategy, approved Urban Design and Landscape Plans and project contract.

Documents and plans are to include a sufficient level of detail to demonstrate, to the satisfaction of NELP and the Independent Environmental Auditor, compliance with the EPRs and how this would be achieved. Where this detail is contained in subordinate documents such as work method statements, these subordinate documents would be submitted for review.

Contractors would be required to address any inadequacies or areas of non-compliance. Once environmental management documents have been verified by the Independent Environmental Auditor as adequate and compliant with the EMF, EPRs, approved Urban Design Strategy, approved Urban Design and Landscape Plans and project contract, these documents would be accepted by NELP as meeting the requirements of the relevant project contract.

Revisions to the EMF, EPRs or environmental management documents may be required from time-to-time due the stage of the project, changes in conditions, activities and work practices, results of monitoring, changes to legislation, identification of environmental risks, or because of internal or external audit findings, incidents or complaints, or to drive continuous improvement.

Revisions to the EMF and EPRs would be submitted to the Minister for Planning for approval. Information required to support the request for revision would include:

- An explanation of why the change is required
- A statement on whether the change would result in any new or altered environmental impacts or risks and, if so, a summary of how these would be managed.

Other documents would outline the process for managing, reviewing and seeking approval or acceptance of major and minor revisions, with the revision process to be to the satisfaction of the approver or accepting authority identified in Table 27-3.

**Table 27-3** Environmental management documents – required content and approval process

Documentation	Description	Prepare	Review and/or verify	Approve or accept
Environmental Management Framework Environmental Performance Requirements	This EMF and the EPRs provide the governance framework and required environmental outcomes for design, construction and operation of North East Link. The EMF and EPRs would be updated in response to the relevant matters and recommendations contained in the Minister for Planning's Assessment of the EES and be submitted to the Minister for Planning for approval.	NELP	Review: Relevant agencies, the EES Inquiry and Assessment Committee and the Minister for Planning as part of the EES process  Review: Minister for Planning for the final version for approval	Minister for Planning (approve)
Urban Design Strategy	The North East Link Urban Design Strategy provides urban design guidance relating to the design, procurement and delivery of North East Link. The Urban Design Strategy would be updated in response to the relevant matters and recommendations contained in the Minister for Planning's Assessment of the EES and be submitted to the Minister for Planning for approval.	NELP	Review: Relevant agencies, the EES Inquiry and Assessment Committee and the Minister for Planning as part of the EES process  Review: Minister for Planning for the final version for approval	Minister for Planning (approve)

Documentation	Description	Prepare	Review and/or verify	Approve or accept
Environmental Strategy	<p>Contractors would prepare and implement an Environmental Strategy for their package of work that complies with and addresses the requirements of this EMF. The Environmental Strategy would outline their approach to comply with all environmental requirements including relevant environmental laws, project approvals, approval conditions, the EPRs and the environmental requirements of the project contract.</p> <p>The Environmental Strategy would include:</p> <ul style="list-style-type: none"> <li>• A summary of relevant legislative requirements and requirements of relevant statutory authorities, including any requirements for approvals, permits, consents and licences and conditions of these. This would describe how each of these requirements would be complied with and include the approach to identifying and managing changes to legal and other requirements</li> <li>• A summary of how each EPR would be complied with, including the proposed actions, timing, proposed management plans or documents to address the EPR, consultation to be carried out, and the evidence that would be available to demonstrate compliance and where this would be documented</li> <li>• A summary of how the environmental requirements of the project contract would be complied with</li> <li>• Roles, responsibilities, competencies and authorities for adequately resourcing environmental management during delivery of North East Link and the approach to managing subcontractors and suppliers</li> <li>• Requirements for communications, reporting and responding to environmental complaints. This would include reference to the Communications and Community Engagement Plan required by EPR SC2 which would include a process for identifying community issues and the recording, management and resolution of complaints from affected stakeholders consistent with Australian Standard AS/NZS 10002:2014 Guidelines for Complaint Management in Organisations</li> <li>• An overview of how the environmental management documents required for the package of work, including the CEMP, WEMPs, OEMP and other plans required by the EPRs and North East Link Incorporated Document would be approached and structured, considering the nature of activities for the package of works and any staging of delivery or different work precincts. This overview must include for each plan a description of its purpose, required content, approval and change management processes, and how it relates to the Environmental Strategy and other plans</li> <li>• Processes for monitoring, auditing and evaluating compliance with legislative and approval requirements, the Environmental Strategy, EPRs and the environmental requirements of the project contract</li> <li>• The approach to incident and emergency response including reporting, corrective and preventative action</li> <li>• A process for managing, reviewing and approving major and minor revisions of the Environmental Strategy, including as a consequence of changes to environmental laws and standards.</li> </ul>	Contractors	<p>Review: NELP</p> <p>Review and verify: Independent Environmental Auditor</p>	NELP (accept)

Documentation	Description	Prepare	Review and/or verify	Approve or accept
Urban Design and Landscape Plans	Urban Design and Landscape Plans are required by the North East Link Incorporated Document for permanent above-ground buildings or structures (excluding preparatory buildings and works under Clause 4.9 of the Incorporated Document). Urban Design and Landscape Plans would address the requirements of the North East Link Incorporated Document.	Contractors	Review: NELP Review and verify: Independent Environmental Auditor	Minister for Planning (approve)
Construction Environmental Management Plan (CEMP)	<p>Contractors would prepare a CEMP(s) for their package of works, as required by the project contract and in accordance with the Environmental Strategy and applicable EPRs. Relevant works would not start until the Independent Environmental Auditor has reviewed the adequacy of and verified compliance with the EMF, EPRs and Environmental Strategy, and NELP has reviewed and accepted, the CEMP and all required sub-plans.</p> <p>The CEMP would be prepared in accordance with the requirements of the EMF, EPRs, Environmental Strategy, and project contract, and with reference to EPA Victoria Publication No. 480: Environmental Guidelines for Major Construction Sites. The CEMP would include details of processes and responsibilities for:</p> <ul style="list-style-type: none"> <li>• Achieving compliance with approval conditions, relevant legislation and the construction EPRs</li> <li>• Identifying, managing and monitoring environmental risks and issues during construction and implementing contingency measures</li> <li>• Preparation and implementation of WEMPs</li> <li>• Site inductions, training, competency and awareness</li> <li>• Communication and reporting</li> <li>• Environmental monitoring, reporting and auditing requirements</li> <li>• Managing complaints, incidents, non-conformances and taking corrective and preventative action</li> <li>• Emergency preparedness and response including after-hours response, arrangements for containing environmental damage and attendance on-site in the event of an emergency</li> <li>• Review and continuous improvement.</li> </ul> <p>Contractors may choose to develop one CEMP for their works or individual CEMPs for precincts or components of their works. Similarly, contractors may choose to address all of the environmental impacts within one CEMP document or to create a series of sub-plans to the CEMP for each environmental value.. Monitoring plans should be appendices to the relevant management plan.</p> <p>CEMPs would be developed to address the contractor's design and construction methodology. The CEMP(s) would be prepared in consultation with stakeholders relevant to the works covered in the plan, including the relevant land owner or manager, EPA Victoria, responsible authorities where required in relation to issues within their jurisdiction, emergency services and as required by any relevant EPR.</p> <p><i>Note – not all plans required by the EPRs would be sub-plans to the CEMP. The structure of plans and sub-plans would be determined by the contractor to allow for an integrated and logical approach to addressing and managing impacts across the various plans.</i></p>	Contractors	Review: NELP Review and verify: Independent Environmental Auditor	NELP (accept)

Documentation	Description	Prepare	Review and/or verify	Approve or accept
Operation Environmental Management Plan	<p>The PPP contractor would develop an OEMP as required by the PPP contract. The OEMP would be prepared in accordance with the requirements of the EMF, EPRs, Environmental Strategy and PPP contract and address potential environmental impacts of operation and maintenance activities.</p> <p>The OEMP would identify the nature of operational activities and environmental features of the project area and contain detailed procedures and responsibilities for:</p> <ul style="list-style-type: none"> <li>• Achieving compliance with the operational EPRs</li> <li>• Achieving compliance with approval conditions and relevant legislation</li> <li>• Identifying, managing and monitoring environmental risks and issues during operation and implementing contingency measures</li> <li>• Site inductions, training, competency and awareness</li> <li>• Communication and reporting</li> <li>• Environmental monitoring, reporting and auditing requirements</li> <li>• Managing complaints, incidents, non-conformances and taking corrective and preventative action</li> <li>• Emergency preparedness and response including arrangements for containing environmental damage and attendance on-site in the event of an emergency</li> <li>• Review and continuous improvement.</li> </ul> <p>The OEMP would be prepared in consultation with agencies relevant to the works covered in the plan including EPA Victoria, VicRoads, and as required by any relevant EPR.</p>	PPP Contractor	<p>Review: NELP</p> <p>Review and verify: Independent Environmental Auditor</p>	NELP (accept)

Documentation	Description	Prepare	Review and/or verify	Approve or accept
Worksite Environment Implementation Plans (WEMPs)	<p>Individual plans identifying site-specific environmental control measures to be implemented. WEMPs would be developed once the detailed design and refined construction methodology is prepared by the contractor.</p> <p>The WEMPs would address the requirements of the EPRs, Environmental Strategy, CEMP and other plans required by the EPRs and project contract and be developed with reference to EPA Victoria Publication No. 480: <i>Environmental Guidelines for Major Construction Sites</i>. The WEMPs would be developed to take into account:</p> <ul style="list-style-type: none"> <li>• Each construction site's environmental features</li> <li>• The nature of the works to be undertaken</li> <li>• Potential environmental impacts and activity specific environmental risks</li> <li>• Relevant EPRs</li> <li>• Relevant conditions of key approvals and any secondary approvals required</li> <li>• The findings of any environmental investigations undertaken by the contractors.</li> </ul> <p>The WEMPs would be prepared in consultation with stakeholders relevant to the works covered in the plan, including the relevant land owner or manager, responsible authorities where required in relation to issues within their jurisdiction, emergency services, and as required by any relevant EPR.</p>	Contractors	<p>Review: NELP</p> <p>Review and verify: Independent Environmental Auditor</p>	NELP (accept)
Other plans required by the EPRs	<p>The EPRs (Section 27.7) set out requirements for contractors to prepare relevant management plans to avoid, minimise and mitigate impacts.</p> <p>All assessments and plans required under these EPRs are to be prepared by suitably qualified and experienced personnel and verified as adequate and compliant with the EPRs by the Independent Environmental Auditor.</p> <p>Where appropriate, the management plans required by these EPRs may be included as part of the CEMP or OEMP rather than as stand-alone plans.</p>	Contractors	<p>Review: NELP</p> <p>Review and verify: Independent Environmental Auditor</p>	NELP (accept)

## 27.6 Evaluating compliance

This section identifies the requirements for monitoring, auditing and reporting of compliance with this EMF and EPRs. NELP, contractors and the Independent Environmental Auditor each have responsibilities for evaluating environmental compliance.

### 27.6.1 Monitoring

Specific monitoring programs would be developed and implemented as part of the CEMP and OEMP. In addition, compliance with the EMF and EPRs would be monitored by each of the contractors, NELP and the Independent Environmental Auditor. This approach is described below.

#### North East Link Project and the Independent Environmental Auditor

NELP and the Independent Environmental Auditor would monitor contractor compliance through the review of environmental documentation (as outlined in Section 27.5), audit results (as outlined in Section 27.6.2) and reports (as outlined in Section 27.6.3).

NELP's EMS would contain processes for monitoring implementation of EPRs that the Victorian Government is responsible for.

#### Contractors

Contractors would be required to specify detailed monitoring requirements in the Environmental Strategy, CEMP, OEMP and, where relevant, the WEMPS and any other plans required by the EPRs. This would include documenting parameters to be monitored, frequency of monitoring, proposed equipment, need for calibration of equipment and required competency of staff. Monitoring programs would reflect relevant guidelines for the proposed type of monitoring, regulatory requirements and the level of potential risk to the environment. Monitoring plans must be part of or appended to relevant management plans. Monitoring would include periodic inspections of construction works areas and assets constructed.

Contractors would be required to implement monitoring programs in accordance with their environmental documentation and regularly review monitoring program implementation to verify that:

- The monitoring frequency is sufficient to identify whether any significant non-compliance with the EPRs or contractual requirements, or non-compliance with the relevant legislation and regulations (including conditions on approvals), has 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 would be submitted to the Independent Environmental Auditor for review and verification and NELP for review and acceptance before the modifications were implemented. Contractors would be responsible for the ongoing management of baseline and monitoring data and would be required to provide this to the Independent Environmental Auditor and NELP upon request.

### 27.6.2 Auditing

Audits would be conducted at regular intervals to evaluate compliance with the EMF and EPRs. The proposed auditing regime is described below.

#### Independent Environmental Auditor

The Independent Environmental Auditor would develop an audit plan, including a schedule, and audit scopes to the satisfaction of NELP for each project contract. When assessing compliance the Independent Environmental Auditor would also take into account the technical adequacy and effectiveness of actions taken to comply with the EMF and EPRs. Audits would include review of documentation as well as site inspections.

The Independent Environmental Auditor would conduct regular audits of contractors' compliance with the EMF, EPRs, Environmental Strategy, CEMP, WEMPs, OEMP, any other plans required by the EPRS, conditions of project approvals, and as required by NELP. Audits would occur during construction and up to two years after opening of North East Link, or as agreed with the Minister for Planning.

Audits would be conducting using a risk-based approach where compliance with all EPRs would be audited at least once every 12 months and higher risk activities would be audited more frequently.

Audit reports would be prepared for each audit and provided to NELP and the contractor. The contractors would be required to take corrective and preventative actions to address identified non-conformances and, where required, other audit findings.

#### Contractors

Contractors would carry out regular internal audits to assess conformance with their EMS and AS/NZS ISO 14001 and the effectiveness of the EMS.

Contractors would also be required to outline an internal audit schedule within the Environmental Strategy to assess their environmental performance and effectiveness of environmental management measures and monitoring programs. This would include regular audits to evaluate:

- Compliance with the EMF, Environmental Strategy, CEMP, WEMPs, OEMP and any other plans required by the EPRs
- Compliance with the EPRs

- Legislative compliance, including with approval conditions
- Responses to non-compliances, incidents, and complaints received
- Effectiveness and implementation of management measures and monitoring programs.

## Audit process and audit reports

Audits would be conducted in accordance with AS/NZS ISO 19011 *Guidelines for auditing management systems*. Auditors would be independent of the activity being audited.

Compliance would be assessed through site-based observation of project activities, interviews and review of documents and records. Records to be reviewed would include:

- Environmental monitoring, process monitoring and management performance monitoring results
- Work method statements, site plans, and operating procedures
- Incidents and complaints
- Inspection and audit reports
- Soil and waste management records
- Surveys
- Meeting minutes
- Other documents relevant to assessing compliance and the technical adequacy and effectiveness of actions taken to comply with the EPRs.

The results of each audit, including audit evidence relied on, would be documented in an audit report. The audit report template would be agreed with NELP.

### 27.6.3 Reporting

Contractors' compliance with the EMF, EPRs, Environmental Strategy, CEMP, WEMPs, OEMP, any other plans required by the EPRs and conditions of project approvals would be reported to NELP and relevant government agencies as appropriate. Reporting requirements are summarised below.

## North East Link Project and the Independent Environmental Auditor

NELP would provide six-monthly summary reports as to compliance with the EMF and EPRs to the Minister for Planning and sub-reports to other approval authorities as appropriate. These reports would be provided during construction and up to two years after opening of North East Link, or as otherwise agreed by the Minister for Planning. The summary reports would be made publicly available on a project website for the period of construction and five years after opening of North East Link.

These six-monthly summary reports would be prepared by the Independent Environmental Auditor. The summary reports would summarise audit activities during the reporting period, audit findings, the status of actions taken to address previous audit findings and the contractors' compliance with the EMF and EPRs.

The final summary report would form a close-out report to the Minister for Planning to mark the conclusion of the auditing and summary reporting period.

As noted above, the Independent Environmental Auditor would also prepare audit reports for each individual audit and provide these to NELP and the contractors.

### Contractors

The Environmental Strategy, CEMP and OEMP would 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 would include:

- Monthly environmental compliance and project activity reports submitted to NELP. The content and format of these reports would be agreed with NELP and would include:
  - Status of current and planned works
  - Advice on any proposed changes to environmental documentation or management measures
  - Copies of applications for consents, licences and approvals and the responses from authorities
  - Summary of consultation with regulatory authorities or other stakeholders
  - A copy of environmental studies, monitoring results and analysis
  - Details of complaints, incidents and non-compliances and associated corrective and preventative actions taken
  - External and internal audit findings.
- Notification to Aboriginal Victoria or Registered Aboriginal Party (RAP) as relevant, and the Victorian Department of Environment, Land, Water and Planning (DELWP) if a potential Aboriginal cultural heritage site or artefact is identified
- Notification to Heritage Victoria and DELWP if a historical heritage artefact is discovered
- Notification to NELP, the Independent Environmental Auditor, EPA Victoria and other relevant authorities in the event of other environmental incidents or complaints.

## 27.7 Environmental performance requirements

North East Link would be developed in accordance with approved EPRs. The EPRs define the minimum environmental outcomes that must be achieved during design, construction and operation of the project. The EPRs are expressed and intended to minimise impacts and the risk of harm to human health and environment to within reasonable limits having regard to contextual factors and the practical delivery of the project.

The performance-based approach of the EPRs enables different design alternatives or construction methodologies to be considered to achieve the required outcomes. This provides a delivery model that is flexible and encourages innovation through the procurement process by allowing tenderers to determine how EPRs would be achieved while developing and optimising the project design.

The EPRs have been informed by relevant environmental legislation and policy requirements and project specific measures recommended by specialists to minimise risk and avoid, reduce or offset environmental impacts identified through the EES risk and impact assessment process. The EPRs include a requirement to develop a Sustainability Management Plan, which would include requirements to minimise energy use during construction and operation. Relevant legislation, standards, and guidelines to benchmark compliance have been referenced in the EPRs.

Chapter 4 – EES assessment framework describes the approach adopted to assess environmental risks and impacts and develop the EPRs.

### 27.7.1 Consultation required by EPRs

Many EPRs require consultation with relevant stakeholders. Relevant stakeholders are generally defined as stakeholders with a role as the responsible authority for the requirement specified, the manager or owner of an asset or land directly affected by the works or requirement, an emergency services agency, or other relevant stakeholders identified by NELP.

The purpose of consultation is to enable stakeholder views, requirements and relevant information held by the stakeholder to be considered when implementing the EPR. Consultation may include meetings, workshops and exchange of documentation and correspondence between NELP or its contractors, 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 or requirements of a stakeholder, NELP would use reasonable endeavours to reach agreement with that stakeholder. In the event that NELP uses reasonable endeavours but is unable to reach an agreement with the stakeholder, the EPR would be reviewed and where required NELP would submit a written request to the Minister for Planning to amend the EPR as per Section 27.5.2. Such a request would be accompanied by a written explanation of the reasonable endeavours used by NELP to reach an agreement on the subject matter of the EPR and the stakeholder's response.

The extent and method of consultation would be documented and communicated to relevant stakeholders for each EPR. Consultation outcomes would be documented to demonstrate compliance with the EPRs. Consultation outcomes would be shared with the relevant stakeholder and feedback provided on how matters raised during consultation have been considered and, where appropriate and reasonable, addressed by NELP.

### 27.7.2 Recommended EPRs

The recommended EPRs are presented in Table 27-4 and cover the following topics:

- Environmental management framework
- Aboriginal cultural heritage
- Air quality
- Arboriculture
- Business
- Contamination and soil
- Ecology
- Ground movement
- Groundwater
- Historic heritage
- Land use planning
- Landscape and visual
- Noise and vibration (surface and tunnel)
- Social and community
- Surface water
- Sustainability and climate change (including greenhouse gas)
- Traffic and transport.

Specific, stand-alone EPRs are not proposed for human health as relevant requirements are contained within the EPRs for air quality, contamination and soil, noise and vibration, and social.

The EPRs would be finalised in response to the relevant matters and recommendations contained in the Minister for Planning's Assessment of the EES. The EMF and final EPRs would be implemented through the project contracts between the Victorian Government and contractors and the environmental documentation outlined in Section 27.5. The project contracts would specify for each EPR whether the Victorian Government or contractor is responsible for implementation.



Table 27-4 Recommended environmental performance requirements – updated with EPRs tabled as at 12 August 2019

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<b>1. Environmental Management (EMF)</b>			
<p>Australian Standard AS/NZS ISO 14001:2015 Environmental management systems – requirements with guidance for use</p> <p>EPA Victoria Publication 480, Best Practice Environmental Management: Environmental Guidelines for Major Construction Sites (EPA Victoria 1996)</p>	EMF1	<p><a href="#">Deliver project in general accordance with an Environmental Management System</a></p> <p>Develop, implement and maintain an Environmental Management System (EMS) that conforms to Australian Standard AS/NZS ISO 14001:2015 Environmental Management Systems – requirements with guidance for use. Design, construction and operation of North East Link must be carried out in general accordance with the EMS.</p>	All
	EMF2	<p><a href="#">Deliver project in accordance with an Environmental Strategy and Management Plans</a></p> <p>Prepare and implement an Environmental Strategy, Construction Environmental Management Plan (CEMP), Worksite Environmental Management Plans (WEMPs), Operation Environmental Management Plan (OEMP) (operator only) and other plans as required by the Environmental Performance Requirements (EPRs) and in accordance with the Environmental Management Framework (EMF).</p> <p>The Environmental Strategy, CEMP, WEMPs and OEMP must be developed in consultation with relevant stakeholders as listed in the EMF and as required by NELP or under any statutory approvals.</p> <p>The CEMP must be prepared with reference to EPA Victoria Publication 480 Best Practice Environmental Management: Environmental Guidelines for Major Construction Sites.</p>	All
	EMF3	<p><a href="#">Audit and report on environmental compliance</a></p> <p>Appoint an Independent Environmental Auditor (IEA) to:</p> <ul style="list-style-type: none"> <li>Review the Environmental Strategy, CEMP, WEMPs, OEMP and other plans required by the EPRs for compliance with the EMF and the EPRs</li> <li>Undertake environmental audits of compliance with and implementation of the EPRs and the Environmental Strategy, CEMP, WEMPs, OEMP and other plans required by the EPRs.</li> </ul> <p>Audits must occur during construction and for two years after opening of North East Link, or as otherwise agreed with the Minister for Planning.</p> <p>A six monthly summary report must be provided to the Minister for Planning that summarises the findings of audits carried out during the reporting period. A close-out report must be provided to the Minister for Planning at the conclusion of the auditing and reporting period. The summary reports must be made publicly available on a project website for the period of construction and five years after opening of North East Link.</p>	Construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<b>2. Aboriginal Heritage (AH)</b>			
Aboriginal Heritage Act 2006 Aboriginal Heritage Regulations 2007	AH1	<a href="#">Comply with the Cultural Heritage Management Plan</a> Implement and comply with the Cultural Heritage Management Plan (CHMP) approved under the Aboriginal Heritage Act 2006.	Design, construction
<b>3. Air Quality (AQ)</b>			
Environment Protection Act 1970 Environment Protection (Scheduled Premises) Regulations 2017 State Environment Protection Policy (SEPP) – Ambient Air Quality State Environment Protection Policy (SEPP) – Air Quality Management (AQM)	AQ1	<a href="#">Implement a Dust and Air Quality Management and Monitoring Plan to minimise air quality impacts during construction</a> Prepare and implement a Dust and Air Quality Management and Monitoring Plan(s), in consultation with EPA, which sets out best practice measures and controls to minimise and monitor impacts on air quality during construction. The plan(s) must: <ul style="list-style-type: none"> <li>Set out how the project will monitor and control the emission of smoke, dust, fumes, odour and other pollution into the atmosphere during construction using best practice measures with reference to EPA Victoria Publication 480 Best Practice Environmental Management: Environmental Guidelines for Major Construction Sites</li> <li>Identify the main sources of dust and airborne pollutants, and the location of sensitive land uses relevant to construction areas</li> <li>Describe the monitoring requirements for construction areas, including particulate matter monitoring where deemed to be required, and with reference to sensitive receptors and utilising consistent and common monitoring across the project.</li> <li>Describe the air quality trigger levels for investigation, the mitigation measures, and the processes for implementing appropriate controls</li> </ul>	Construction
EPA Victoria Publication 480, Best Practice Environmental Management: Environmental Guidelines for Major Construction Sites (EPA 1996)	AQ2	<a href="#">Design tunnel ventilation system to meet EPA requirements for air quality</a> Design, construct and operate the permanent tunnel ventilation system to meet the requirements of the State Environment Protection Policy (Air Quality Management) and in accordance with the requirements of the EPA Victoria Works Approval and the EPA Victoria Licence.	Design, construction, operation
	AQ3	<a href="#">In-tunnel air quality performance standards</a> Design, construct and operate a tunnel ventilation system to introduce and remove air from the tunnels to meet the in tunnel air quality requirements for carbon monoxide (CO) and for NO <sub>2</sub> listed below and in accordance with the EPA Victoria Works Approval and EPA Victoria licence.  In tunnel air quality must meet the following CO standards: Maximum peak CO value of 150 ppm 15 minute average CO value of 50 ppm 2-hour average CO value of 25 ppm.  The tunnel ventilation system must also be designed and operated so that the tunnel average nitrogen dioxide (NO <sub>2</sub> ) concentration is less than 0.5 ppm as a rolling 15 minute average. Develop and implement contingency measures to manage in-tunnel air quality in the event of incidents or emergencies.  Apply best practice Australian management techniques to minimise impacts on health from in-tunnel exposure to PM <sub>2.5</sub> and PM <sub>10</sub> .	Design, construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	AQ4	<p><b>Monitor ambient air quality</b></p> <p>Develop and undertake an ambient air quality monitoring program in consultation with EPA Victoria to measure the air quality impacts of North East Link during construction and operation. The ambient air quality monitoring program must include at least one year of monitoring before operation; continue for 5 years after commencement of North East Link operation; and, for the ventilation structures, be in accordance with the EPA Victoria licence. Results of the monitoring program are to be made publicly available.</p>	Construction, operation
	AQ5	<p><b>Monitor compliance of in-tunnel air quality and ventilation structure emissions</b></p> <p>Monitor the in-tunnel air quality and ventilation structure emissions during operation of the ventilation system to demonstrate compliance with EPR AQ2, EPR AQ3 and the EPA Victoria licence to the satisfaction of EPA Victoria. Report the monitoring results publicly after validation and in accordance with the EPA Victoria licence.</p> <p>If standards outlined in EPR AQ2, EPR AQ3 and the EPA Victoria licence are not met, report to EPA Victoria and investigate the cause of the exceedance.</p>	Operation
<b>4. Arboriculture (AR)</b>			
<p>Planning and Environment Act 1987</p> <p>AS4970-2009 Protection of Trees on Development Sites</p> <p>Guidelines for the removal, destruction or lopping of native vegetation, DELWP December 2017</p>	AR1	<p><b>Develop and implement a Tree Removal Plan</b></p> <p>Develop and implement a Tree Removal Plan, as part of the CEMP, that identifies all trees within the project boundary and includes:</p> <ul style="list-style-type: none"> <li>• Trees to be removed or retained as part of the works</li> <li>• Confirmation of condition and arboricultural value of the amenity trees to be removed</li> <li>• The canopy area of all trees to be removed</li> <li>• The procedure for tree removal that addresses the requirements of EPR FF1, EPR FF2 and EPR FF5.</li> </ul> <p>Tree retention must be maximised to the extent practicable through detailed design and selection of construction methods to minimise canopy loss, and in accordance with EPR FF1, including by retaining trees where practicable and minimising potential impacts to trees.</p> <p>Arboricultural assessments are to verify existing details and inform the detailed design, Tree Removal Plan and Tree Canopy Replacement Plan (required by EPR AR3) in order to maximise tree retention and long-term viability of amenity plantings in accordance with Australian Standard AS4970:2009 Protection of Trees on Development Sites.</p> <p>The Tree Removal Plan must be informed by a pre-construction site assessment to confirm the area and number of trees and other vegetation proposed to be impacted. Trees to be retained must be protected in accordance with EPR AR2. Vegetation removal is to occur in a staged manner with removal only occurring once necessary for the current stage of works.</p> <p>The area and number of trees and other vegetation actually removed is to be confirmed through a post-construction assessment.</p>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	AR2	<p><b>Implement a Tree Protection Plan(s) to protect trees to be retained</b></p> <p>The CEMP must include a Tree Protection Plan(s), which is to be developed and implemented in accordance with Australian Standard AS4970-2009 Protection of Trees on Development Sites. The Tree Protection Plan(s) must provide details of any tree protection actions that will ensure that trees proposed to be retained are adequately protected from the impact of construction or related activities, prior to those works being undertaken.</p> <p>Tree Protection Plans must be prepared based on detailed construction drawings and surveyed tree locations.</p> <p>Trees subject to protection must be monitored for a two-year period following completion of construction works in that location to assess ongoing viability, with maintenance or replacement of stressed or damaged specimens to be undertaken.</p>	Design, construction
	AR3	<p><b>Implement a Tree Canopy Replacement Plan</b></p> <p>Develop and implement a Tree Canopy Replacement Plan to replace the canopy of native vegetation and amenity plantings removed as a result of the project achieve a net gain in tree canopy cover by 2045. The plan must:</p> <ul style="list-style-type: none"> <li>• Show the location, size and species of replacement trees, in consultation with relevant land managers. The plan must specify requirements to support the long-term viability of replacement plantings including appropriate soil requirements, establishment works and ongoing maintenance.</li> <li>• Specify requirements to support the long-term viability of all replacement plantings including appropriate soil requirements, establishment works and ongoing maintenance.</li> <li>• Adopt a ratio of 2:1 for replacement of amenity plantings</li> </ul> <p>The replacement of amenity trees should be at a ratio of 2:1 and commence as soon as possible and in stages, once tree removal extent is confirmed and suitable replacement sites have been determined in consultation with relevant councils and authorities.</p> <p>A post-construction assessment is to be undertaken to confirm extent of tree removal and that the Tree Canopy Replacement Plan will achieve the net gain target set out above.</p>	Design, construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<b>5. Business (B)</b>			
Planning and Environment Act 1987 Land Acquisition and Compensation Act 1986 Australian Standard AS/NSZ 10002:2014 Guidelines for Complaint Management in Organisations	B1	<b>Business support</b> Inform and regularly update affected businesses and commercial facilities of the planning and design progress for the project. Prior to construction, North East Link Project would work with councils to identify alternative location options for displaced businesses. Implement support programs prior to and during construction to build resilience of business located in proximity to construction. Implement a range of marketing and promotional activities to encourage awareness and patronage of businesses located in proximity to construction sites. Implement support programs for displaced businesses prior to and during construction to assist transition and relocation. Provide targeted marketing and promotional initiatives to build community and customer awareness of relocated businesses. Work directly with relevant government agencies where appropriate to identify and assist with implementation of relevant workforce support measures for employees of closing and relocating businesses.	Design, construction
	B2	<b>Minimise disruption to businesses from land acquisition and temporary occupation</b> Minimise disruption to businesses from permanent acquisition or temporary occupation of land to the extent practicable, and work with affected businesses and land owners to endeavour to reach agreement on the terms for possession of the land in accordance with relevant legislation.	Design, construction
	B3	<b>Minimise and remedy damage or impacts on third party property and infrastructure</b> Through detailed design and construction, and in consultation with relevant land owners and parties as necessary, design and construct the works to minimise, to the extent practicable, impacts to, and interference with, third party property and infrastructure and to ensure that infrastructure and property is protected during construction and operation. Any damage caused to property or infrastructure as a result of North East Link must be appropriately remedied in consultation with the property or asset owner.	Design, construction
	B4	<b>Minimise access and amenity impacts on businesses</b> Any reduction in the level of access, amenity or function of any business or commercial facility must be minimised to the extent and duration necessary to carry out the relevant construction related works. Affected business and commercial facilities must be provided with adequate notification of potential impacts and temporary access arrangements. Emergency access must be maintained at all times. Access must be maintained for customers, delivery and waste removal unless there has been a prior arrangement with affected businesses. All permanent access to business and commercial facilities affected by North East Link works is to be reinstated, or relocated as agreed with the relevant property owner, including associated landscaping and reinstatement works, and temporary access arrangements put in place for construction must be removed when relevant construction activities have ceased.	Design, construction
	B5	<b>Protect utility assets</b> Protect or, where required, relocate utility assets to the reasonable satisfaction of the service provider and/or asset owners.	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	B6	<p><b>Business liaison groups</b></p> <p>Contractors must participate in the Business Liaison Groups established and managed by the North East Link Project to facilitate business and stakeholder involvement for the construction phase of the project. Participation must include:</p> <ul style="list-style-type: none"> <li>• Attendance at meetings</li> <li>• Regular and timely reporting of design and construction activities and key project milestones</li> <li>• Provision of advance notice about changes to traffic and parking conditions and the duration of impact</li> <li>• Timely provision of relevant information, including response to issues raised by the group</li> <li>• Regular reporting and monitoring of business community feedback, impacts and discussion of mitigation measures and their effectiveness</li> <li>• Recording, managing and resolving complaints from affected businesses in accordance with the complaints management process required under EPR SC2.</li> </ul>	Design, construction
<b>6. Contamination and soil (CL)</b>			
<p>Dangerous Goods Act 1985</p> <p>Environment Protection Act 1970</p> <p>Occupational Health and Safety Act 2004</p> <p>National Environment Protection (Assessment of Site Contamination) Measures 2013 (ASC NEPM)</p> <p>PFAS National Environmental Management Plan 2018</p> <p>Environment Protection (Industrial Waste Resource) Regulations 2009</p> <p>Occupational Health and Safety Regulations 2007</p> <p>State Environment Protection Policy (SEPP) – Prevention and Management of Contamination of Land</p>	CL1	<p><b>Implement a Spoil Management Plan</b></p> <p>Prepare and implement a Spoil Management Plan (SMP) in accordance with relevant regulations, standards and best practice guidelines and with reference to the Spoil Management Strategy contained within the EES (Technical Report O). The SMP must be developed in consultation with the EPA Victoria and include processes and measures to manage spoil. The SMP must define roles and responsibilities and include requirements and methods for:</p> <ul style="list-style-type: none"> <li>• Complying with applicable regulatory requirements</li> <li>• Completing a detailed site investigation (in accordance with Australian Standard AS 4482.1:2005 Guide to the investigation and sampling of sites with potentially contaminated soil and the EPA Victoria Industrial Waste Resource Guidelines) prior to any excavation of potentially contaminated areas to identify location, types and extent of impacts and to characterise spoil to inform spoil and waste management</li> <li>• Identifying the nature and extent of spoil (clean fill and contaminated spoil)</li> <li>• Storage, handling, transport and disposal of spoil in a manner that protects human health and the environment and is consistent with the transport management plan(s) required by EPR T2. This includes requirements and methods for the appropriate treatment/remediation of any contaminated excavated spoil and contaminated residual material left on site</li> <li>• Design and management of temporary stockpile areas</li> <li>• Minimising impacts and risks from disturbance of acid sulfate soils (as per EPR CL2), odour (as per EPR CL3) and vapour and ground gas intrusion (as per EPR CL4)</li> </ul>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<p>State Environment Protection Policy (SEPP) – Air Quality Management, 2001 (odour)</p> <p>Industrial Waste Management Policy (Waste Acid Sulfate Soils) 1999</p> <p>AS1940 Storage Handling of Flammable and Combustible Liquids</p> <p>AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil</p> <p>Relevant Industrial Waste Resource Guidelines (IWRG).</p> <p>Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soil, 2003</p> <p>EPA Victoria publications:</p> <p>1698 Liquid Storage and Handling Guidelines</p> <p>480 Environmental Guidelines for Major Construction Sites</p>		<ul style="list-style-type: none"> <li>• Management of hazardous substances, including health, safety and environment procedures that address risks associated with exposure to hazardous substances for visitors and general public; contain measures to control exposure in accordance with relevant regulations, standards and best practice guidance and to the requirements of WorkSafe and EPA Victoria; and include method statements detailing monitoring and reporting requirements</li> <li>• Identifying where any contaminated or hazardous material is exposed during construction (notably through former landfills, service stations and industrial land) and how it will be made safe for the public and the environment. Beneficial uses of land and National Environment Protection (Assessment of Site Contamination) Measures 2013 guidance on criteria protective of those beneficial uses must be considered for the land uses in these areas. This must include methods for: <ul style="list-style-type: none"> <li>– Construction of appropriate cover (soil, concrete, geofabric etc) such that no contamination is left exposed at the surface or where it may be readily accessed by the public and such that it cannot generate runoff or leachate during rain events</li> <li>– Maintenance of the cover</li> <li>– Identification of the nature and depth of the contaminants</li> <li>– Mitigating impacts during sub-surface works in those areas, eg drilling and excavation</li> </ul> </li> <li>• Monitoring and reporting</li> <li>• Identifying locations and extent of any prescribed industrial waste (PIW), other waste, and the method for characterising PIW and other waste prior to excavation</li> <li>• Identifying and managing potential sites for re-use, management or disposal of any spoil in accordance with the <i>Environment Protection Act 1970</i> waste management hierarchy</li> <li>• Identifying suitable sites for disposal of any waste. This includes identifying contingency arrangements for management of waste, where required, to address any identified capacity issues associated with the licensed landfills' ability to receive PIW and other waste.</li> <li>• In areas used for temporary construction works, contamination attributable to the project must be appropriately remediated in consultation with the relevant land manager.</li> </ul>	

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
655.1 Acid Sulfate Soil and Rock EPA Publication 1624 Industrial Waste 2016	CL2	<p><b>Minimise impacts from disturbance of acid sulfate soil</b></p> <p>The SMP referenced in EPR CL1 must include requirements and methods to minimise impacts from disturbance of acid sulfate soil, including but not limited to:</p> <ul style="list-style-type: none"> <li>• Characterising acid sulfate soil and rock prior to excavation</li> <li>• Developing appropriate stockpile areas including lining, covering and runoff collection to prevent release of acid to the environment</li> <li>• Identifying suitable sites for re-use management or disposal of acid sulfate soil and rock</li> <li>• Preventing oxidation that could lead to acid formation if possible through cover and/or scheduling practices, ie ensuring acid sulfate soil and rock is not left in stockpiles for any length of time and/or addition of neutralising compounds.</li> </ul> <p>Requirements and methods must be in accordance with the Industrial Waste Management Policy (Waste Acid Sulfate Soils), EPA Victoria Publication 655.1 Acid Sulfate Soil and Rock, and the Department of Sustainability and Environment's Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soil.</p>	Construction
	CL3	<p><b>Minimise odour impacts during spoil management</b></p> <p>The SMP referenced in EPR CL1 must include requirements and methods for odour management (in accordance with EPA Victoria requirements) during the excavation, stockpiling and transportation of contaminated material including:</p> <ul style="list-style-type: none"> <li>• Identifying the areas of contamination that may pose an odour risk</li> <li>• Monitoring of the excavated material for possible odour risk</li> <li>• Management measures to minimise odour.</li> </ul>	Construction
	CL4	<p><b>Minimise risks from vapour and ground gas intrusion</b></p> <p>Relevant North East Link sections must be designed and constructed to prevent ingress of vapours and gases associated with any construction that interfaces with landfill sites or contaminated areas.</p> <p>The SMP referenced in EPR CL1 must include requirements for assessment, monitoring and management of intrusive vapour including potentially toxic, flammable or explosive conditions in enclosed spaces or other impacts on human health and the environment. The plan must address vapour risks associated with excavation of impacted soils, extraction of impacted groundwater, open excavations and stockpiles and gases associated with landfills. This must include, where relevant:</p> <ul style="list-style-type: none"> <li>• Securing of the excavation and stockpile area from the public and signage warning of open excavations</li> <li>• Monitoring of vapours and odours while excavations are open and stockpiles remain onsite</li> <li>• Mitigation measures to prevent fugitive releases of vapours and gasses during construction.</li> </ul>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	CL5	<p><b>Manage chemicals, fuels and hazardous materials</b></p> <p>The CEMP and OEMP must include requirements for management of chemicals, fuels and hazardous materials including:</p> <ul style="list-style-type: none"> <li>• Minimise chemical and fuel storage on site and store hazardous materials and dangerous goods in accordance with the relevant guidelines and requirements</li> <li>• Comply with the Victorian WorkCover Authority and Australian Standard AS1940 Storage Handling of Flammable and Combustible Liquids and EPA Victoria publications 480 Environmental Guidelines for Major Construction Sites and 1698 Liquid Storage and Handling Guidelines</li> <li>• Develop and implement management measures for hazardous materials and dangerous substances, including: <ul style="list-style-type: none"> <li>– Creating and maintaining a dangerous goods register</li> <li>– Disposing of any hazardous materials, including asbestos, in accordance with Industrial Waste Management Policies, regulations and relevant guidelines</li> <li>– Implementing requirements for the installation of bunds and precautions to reduce the risk of spills</li> </ul> </li> <li>• Contingency and emergency response procedures to handle fuel and chemical spills, including availability of on-site hydrocarbon spill kits.</li> </ul>	Design, construction, operation
	CL6	<p><b>Minimise contamination risks during operation</b></p> <p>The OEMP must include requirements and methods for minimising contamination risks during operation and maintenance of North East Link including:</p> <ul style="list-style-type: none"> <li>• Maintaining relevant controls and preventing impacts during operation from contaminated material, odour, vapour and gas</li> <li>• Maintaining controls implemented as part of North East Link to make any known areas of contamination or hazardous material that were exposed during construction (notably through former landfills) safe for the public and the environment</li> <li>• Mitigating impacts during sub-surface works in any identified areas of contamination or hazardous materials, eg drilling and excavation</li> <li>• Implementing contingency measures, where required, to address any potential contamination, odour, vapour or gas impacts or incidents.</li> </ul>	Operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<b>7. Flora and Fauna (FF)</b>			
<p>Environment Protection and Biodiversity Conservation Act 1999</p> <p>Conservation, Forests and Lands Act 1987</p> <p>Flora and Fauna Guarantee Act 1988</p> <p>Planning and Environment Act 1987</p> <p>Water Act 1989</p> <p>Wildlife Act 1975</p> <p>State Environment Protection Policy (SEPP) Waters 2018 (Vic)</p> <p>Guidelines for the removal, destruction or lopping of native vegetation, DELWP December 2017</p>	FF1	<p><b>Minimise impacts on fauna and flora</b></p> <p>The CEMP must include requirements and methods for:</p> <ul style="list-style-type: none"> <li>Managing fauna that may be displaced due to vegetation removal or encountered on site during construction works in compliance with the <i>Wildlife Act 1975</i> and in consultation with public land managers where relevant</li> <li>Complying with the <i>Fisheries Act 1995</i></li> <li>Undertaking pre-clearing surveys and inspections to confirm the on-site location of fauna immediately prior to habitat tree removal or, where relevant, works on waterways, and to assist fauna to safety as necessary</li> <li>Contingency and reporting procedures for the event that a listed threatened species is identified in order to mitigate any potential for significant impacts on the listed threatened species.</li> </ul> <p>Surveys, inspections and management actions must be undertaken by a qualified wildlife ecologist or aquatic ecologist with all necessary authorisations obtained prior to removal of fauna habitat.</p>	Construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	FF2	<p><b>Minimise and offset native vegetation removal</b></p> <p>Through detailed design, minimise the removal of native vegetation and fauna habitat and impacts on habitat connectivity, in particular in relation to <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i> or <i>Flora and Fauna Guarantee Act 1988</i> listed threatened species. This must include minimising removal of Matted Flax Lily, the locally endemic Studley Park Gum and the loss of potential foraging habitat for the Powerful Owl, Swift Parrot and Grey-headed Flying Fox. Key areas for minimisation efforts must include Simpson Barracks, Yarra Bend, Trinity Grammar wetlands and the Koonung Creek valley.</p> <p>The CEMP must include requirements for protection of native vegetation and listed species, including establishment of no-go-zones to protect vegetation to be retained and Tree Protection Plan(s) as required by EPR AR2. No-go-zones must also be established for:</p> <ul style="list-style-type: none"> <li>• The Grey-headed Flying fox Campsite within the Yarra Bend Park</li> <li>• Bolin Bolin Billabong</li> <li>• The Plains Grassy Woodland community between Enterprise Drive and the M80 Ring Road in Bundoora</li> <li>• The portion of 49 Greenaway Street, Bulleen (former Drive-in) heavily vegetated with trees along the Yarra River</li> <li>• Surface impacts in the Banyule Flats and Warringal Parklands and the Heide Museum of Modern Art.</li> </ul> <p>Every effort must be made to avoid ecological impacts in other locations that are known to provide high habitat value for significant fauna species.</p> <p>Where the removal of native vegetation is unavoidable the project must meet the offset requirements of the Guidelines for the removal, destruction or lopping of native vegetation, DELWP December 2017 except as otherwise agreed to by the Secretary to DELWP.</p> <p>Where appropriate for the landscape and project location, tree replacement (as required by EPR AR3) and landscaping is to use locally indigenous species (utilising seed collected from species within the project boundary where appropriate and practical), which are suited to the landscape profile and setting being revegetated, and seek to maximise habitat value and connectivity for native fauna. Where practicable and appropriate for the landscape and project location, best practice measures must be applied to retain and reinstate topsoil to support growing conditions for native species. Where topsoil cannot be retained or reused for North East Link, alternative opportunities for reuse must be explored.</p> <p>Where direct impacts on Studley Park Gum occur, a Studley Park Gum Management Framework should be developed and corresponding management plan must be developed and implemented.</p>	Design, construction
	FF3	<p><b>Avoid introduction or spread of weeds and pathogens</b></p> <p>The CEMP must include measures to avoid the spread or introduction of weeds and pathogens during construction, including vehicle and equipment hygiene.</p>	Construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	FF4	<p><b>Protect aquatic habitat</b></p> <p>Design, locate and construct structures to minimise short and long term adverse impacts on riparian, riverbed and aquatic habitat in waterways and wetlands, including billabongs. The CEMP must contain and require implementation of measures to minimise adverse impacts from construction activities on riparian, riverbed and aquatic habitat and aquatic fauna connectivity.</p>	Design, construction
	FF5	<p><b>Obtain Flora and Fauna Guarantee Act 1988 permits</b></p> <p>A permit must be obtained to take and destroy flora species protected under the Flora and Fauna Guarantee Act 1988.</p>	Construction
	FF6	<p><b>Implement a groundwater dependent ecosystem monitoring and mitigation plan</b></p> <p>Prepare and implement a Groundwater Dependent Ecosystem Monitoring and Mitigation Plan. The Groundwater Dependent Ecosystem Monitoring and Mitigation Plan must be informed by the groundwater modelling and groundwater monitoring required by EPR GW1 and EPR GW2, and must include (but not be limited to):</p> <ul style="list-style-type: none"> <li>• Identification of Groundwater Dependent Ecosystems (GDEs) predicted to be impacted</li> <li>• Details of the monitoring procedures and program for each relevant GDE including monitoring periods appropriate to each GDE</li> <li>• Specific procedures to monitor groundwater levels at GDE's predicted to be impacted <b>Bolin-Bolin Billabong and Banyule Billabong</b> including monitoring as close as possible to the GDE (considering ecological and access constraints) and for aquatic GDEs monitoring the surface water levels and quality as appropriate</li> <li>• Identification of relevant monitoring and management programs by Melbourne Water or other authorities and how these are referenced in the Groundwater Dependent Ecosystem Monitoring and Mitigation Plan</li> <li>• Measures to mitigate monitored changes in water levels and quality that could impact the billabongs or other GDEs, which take into account the natural variability</li> <li>• Where the survival of Groundwater Dependent Large Trees not requiring removal is predicted to be affected by groundwater drawdown during construction or operation based on groundwater modelling outputs, include measures to maintain the health of large trees.</li> <li>• In relation to any trees unlikely to survive during operation as a consequence of groundwater drawdown, processes for offsets to be obtained in accordance with EPR FF2.</li> </ul> <p>The process for review of the Plan, including how the groundwater modelling and monitoring under EPR GW1 and EPR GW2 will be considered and the GDE monitoring program and periods subsequently reviewed.</p> <p>Groundwater levels at Bolin Bolin Billabong and Banyule Billabong must be monitored as close as possible to the billabong (considering ecological and access constraints). The water levels and quality at these billabongs must also be monitored. Measures should be included in the Groundwater Dependent Ecosystems Monitoring and Mitigation plan to address changes in water levels and quality that could impact the billabongs, which take into account the seasonal variability.</p>	Construction, operation

## Environment Effects Statement

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	FF7	<p><a href="#">Implement a salvage and translocation plan for Matted Flax-lily</a></p> <p>Where direct impacts on Matted Flax-lily occur, a salvage and translocation plan must be developed and implemented to the satisfaction of the Department of Environment, Land, Water and Planning and the Commonwealth Department of Environment and Energy.</p>	Construction, operation
	FF8	<p><a href="#">Minimise intense noise and vibration impacts on Australian Grayling</a></p> <p>The CEMP must include and require implementation of reasonable measures to avoid and mitigate intense noise and vibration impacts in or near the Yarra River (eg from activities such as pile driving and similar activities). This must include, to the extent practicable:</p> <ul style="list-style-type: none"> <li>• Selection of work methods to minimise noise and vibration</li> <li>• Avoiding activities that may generate intense noise and vibration and impact on the Australian Grayling during critical migration or breeding periods (March to June, September to November) as defined within the National Recovery Plan for the Australian Grayling <i>Prototroctes maraena</i> (Backhouse, G, Jackson, J &amp; O'Connor, J 2008)</li> <li>• Management and monitoring of noise and vibration in accordance with the CNVMP (EPR NV4).</li> </ul>	Construction
	FF9	<p><a href="#">Protect fauna habitat values in existing waterbodies that are modified for drainage purposes</a></p> <p>Where existing waterbodies within or near the project boundary are to be modified for drainage purposes (for example Simpson's Lake, billabongs, and the southernmost waterbody in the Freeway golf course), the CEMP must include and require implementation of measures to minimise impacts on waterbirds that use the wetlands including:</p> <ul style="list-style-type: none"> <li>• Retain dead and alive standing trees in and surrounding the waterbody</li> <li>• As far as practicable, undertake activities outside the typical nesting period for waterbirds (typically Sept to Jan)</li> <li>• Minimise the construction period to the extent practicable and refill the wetlands post construction if they have been drained.</li> </ul>	Construction
<b>8. Ground Movement (GM)</b>			
N/A	GM1	<p><a href="#">Design and construction to be informed by a geotechnical model and assessment</a></p> <p>Develop and maintain geological and groundwater model(s) (as per EPR GW1) to inform tunnel and trench design and the construction techniques to be applied for the various geological and groundwater conditions. The model(s) are to:</p> <ul style="list-style-type: none"> <li>• Identify sensitive receptors that may be impacted by ground movement</li> <li>• Inform monitoring of ground movement and ground water levels prior to construction to identify pre-existing movement</li> <li>• Inform tunnel design and the construction techniques to be applied for the various geological and groundwater conditions</li> <li>• Assess potential drawdown and identify trigger levels for implementing additional mitigation measures to minimise potential primary consolidation settlement</li> <li>• Assess potential ground movement from excavation and identify trigger levels for implementing additional mitigation measures to minimise potential ground movement.</li> </ul>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	GM2	<p><b>Implement a Ground Movement Plan to manage ground movement impacts</b></p> <p>Develop and implement a Ground Movement Plan(s). The Ground Movement Plan must be informed by EPR GM1 and EPR GW1 (predictive model) and:</p> <ul style="list-style-type: none"> <li>• Address the location of structures/assets which may be susceptible to damage by ground movement</li> <li>• Identify baseline ground movement monitoring prior to construction. A baseline monitoring report is to be compiled summarising the results of the baseline surveys undertaken and included in the plan</li> <li>• Identify appropriate ground movement impact acceptability criteria</li> <li>• Identify appropriate mitigation measures should the geotechnical model (EPR GM1), predictive groundwater model (EPR GW1), or subsequent monitoring program indicate acceptability criteria may not be met</li> <li>• Establish ground movement monitoring requirements for the area surrounding proposed project works to measure ground movement consistency with the anticipated ground movement in the predictive model.</li> </ul>	Design, construction
	GM3	<p><b>Carry out Condition surveys for potentially affected property and infrastructure</b></p> <p>Conduct condition survey(s) of property and infrastructure predicted to be affected by ground movement based on the results of the geological and groundwater model (EPR GM1) or, where a property owner reasonably expects to be potentially affected and has requested a pre-construction condition survey. Develop and maintain a database of pre-construction and as-built condition information for each potentially affected structure identified as being in an area susceptible to damage (see EPR GM1) or where a property owner has requested a pre-construction condition survey, specifically including:</p> <ul style="list-style-type: none"> <li>• A list of identified structures/assets which may be susceptible to damage resulting from ground movement resulting from project works</li> <li>• Results of pre-construction condition surveys of structures, pavements, significant utilities and parklands to establish baseline conditions and potential vulnerabilities</li> <li>• Records of consultation with land owners in relation to the condition surveys</li> <li>• Post-construction stage condition surveys conducted, where required, to ascertain if any damage has been caused as a result of project works.</li> </ul> <p>Pre- and post-condition assessments must be proactively shared with the property owner.</p> <p>All stakeholder engagement activities must be undertaken in accordance with the Communications and Community Engagement Plan (see EPR SC2).</p>	Construction
	GM4	<p><b>Rectify damage to properties and assets impacted by ground movement or settlement</b></p> <p>For properties and assets (including natural landscapes and parklands) damaged by ground movement caused by the project, undertake required repair works or other actions as agreed with the relevant property or asset owner (or land manager). For places listed on the Victorian Heritage Register, consultation with Heritage Victoria must be undertaken.</p> <p>Establish an independent mediation process for the assessment of claims for property and asset damage that cannot be agreed between the Project and the property or asset owner.</p>	Construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<b>9. Groundwater (GW)</b>			
<p>Water Act 1989</p> <p>Water Industry Regulations 2006 (Vic)</p> <p>State Environment Protection Policy (SEPP) Waters 2018</p> <p>State Environment Protection Policy (SEPP) Prevention and Management of Contaminated Land 2002</p> <p>VicRoads Integrated Water Management Guidelines (June 2013)</p> <p>EPA Publications:</p> <ul style="list-style-type: none"> <li>480 Environmental Guidelines for Major Construction Sites</li> <li>275 (1991) Construction techniques for sediment pollution control</li> <li>668 (2006) Hydrogeological assessment groundwater quality) guidelines</li> <li>669 (2000) Groundwater Sampling Guidelines.</li> </ul>	GW1	<p><b>Design and construction to be informed by a groundwater model</b></p> <p>Develop a predictive and numerical groundwater model in consultation with EPA Victoria and with reference to the Australian Groundwater Modelling Guidelines (June 2012), informed by field investigations, to predict changes in groundwater levels and flow and quality, as they are affected by construction, and develop mitigation strategies, as per EPR GM1. The groundwater model must be updated to take account of any changes to construction techniques or operational design features, and additional monitoring data from EPR GW2.</p> <p>The groundwater model must be developed and updated consistent with the requirements above, and reviewed and verified by the Independent Environmental Auditor.</p>	Design, construction
	GW2	<p><b>Monitor groundwater</b></p> <p>Develop and implement a pre-construction, and construction groundwater monitoring program to:</p> <ul style="list-style-type: none"> <li>Establish baseline water level and quality conditions throughout the study area</li> <li>Calibrate the predictive model prior to commencement of construction, manage construction activities, and verify the model predictions</li> <li>Assess the adequacy of proposed design and construction methods, and where required, identify and implement any additional measures required to mitigate impacts from changes in groundwater levels, flow and quality.</li> </ul> <p>A post-construction groundwater monitoring program must be developed and implemented to:</p> <ul style="list-style-type: none"> <li>Confirm the acceptability of resultant water quality and water level recovery (and potential mounding) as predicted by the numerical groundwater model. Acceptability is to be assessed with consideration to the Groundwater Dependent Ecosystem Monitoring and Mitigation Plan (as required by EPR FF6) and other identified beneficial uses of groundwater</li> <li>Confirm the effectiveness of applied measures as identified in the Groundwater Management Plan (refer EPR GW4) and if required, identify and implement contingency measures to restore groundwater to an acceptable level.</li> </ul> <p>The duration of post-construction monitoring must be a minimum of two years or until acceptable restoration of groundwater has been confirmed by the Independent Environmental Auditor, in consultation with EPA Victoria and Melbourne Water. The pre-construction, construction and post-construction monitoring program(s) must be developed in consultation with EPA Victoria and Melbourne Water, and be consistent with EPA Victoria Publication 668 Hydrogeological assessment groundwater quality guidelines, EPA Victoria Publication 669 Groundwater Sampling Guidelines, and the State Environment Protection Policy (Waters).</p>	Design, construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<ul style="list-style-type: none"> <li>Ministerial Guidelines for Groundwater Licensing and the Protection of High Value Groundwater Dependent Ecosystems (2015)</li> <li>Australian groundwater modelling guidelines (Barnett et al. 2012)</li> </ul>	GW3	<p><b>Minimise changes to groundwater levels through tunnel and trench drainage design and construction methods</b></p> <p>Design long term tunnel and trench drainage and adopt construction methods which minimise changes to groundwater levels during construction and operation to manage, mitigate and/or minimise to the extent practicable:</p> <ul style="list-style-type: none"> <li>Requirements for groundwater management and disposal</li> <li>Mobilisation of contaminated groundwater</li> <li>Dewatering and potential impacts of acid sulfate soils, including both unconsolidated sediments and lithified sedimentary rock</li> <li>Potential impacts on waterways and potential groundwater dependent ecosystems, including terrestrial ecosystems</li> <li>Any other adverse impacts of groundwater level changes such as subsidence.</li> </ul> <p>Design and implement engineering control measures and/or ground treatment to limit to the extent practicable groundwater inflow and groundwater drawdown during excavation, construction and operation of tunnels and trenches, cross passages and subsurface excavations.</p> <p>The Groundwater Management Plan (as required by EPR GW4) must contain measures and/or controls to minimise groundwater inflow during construction to excavations and groundwater drawdown, including contingency measures should monitoring indicate adverse impacts are occurring. These must include measures to:</p> <ul style="list-style-type: none"> <li>Manage, mitigate and minimise to the extent practicable reduction or loss of groundwater discharge to waterways or loss of water availability for terrestrial ecosystems</li> <li>Manage, mitigate and minimise the oxidation of acid sulfate soil materials and acidification of groundwater</li> <li>Manage, mitigate and minimise any movement of contamination that is identified</li> <li>Manage, mitigate and minimise impacts on beneficial uses and risk of vapour intrusion</li> <li>Ensure that groundwater seepage is collected, treated and disposed during construction in accordance with the Environment Protection Act 1970 waste management hierarchy and EPA Victoria requirements. Obtain a trade waste agreement from the relevant water authority where disposal to sewer is required or approval from EPA and the relevant water authority (as required) if discharge to waterways is determined to be appropriate.</li> </ul>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	GW4	<p><b>Implement a Groundwater Management Plan to Protect groundwater quality and manage groundwater interception</b></p> <p>A Groundwater Management Plan must be developed in consultation with EPA Victoria and implemented to protect groundwater quality and manage interception of groundwater including documenting the measures required to achieve EPR GW2 and EPR GW3. The Groundwater Management Plan must be informed by the groundwater modelling required by EPR GW1 and updated where required in response to modelling results, new information resulting from the monitoring programs required by GW2 and assessment of the adequacy or effectiveness of controls.</p> <p>The Groundwater Management Plan must include requirements and construction methods to protect groundwater quality including where appropriate, but not limited to:</p> <ul style="list-style-type: none"> <li>• Selection and use of sealing products, caulking products, lubricating products and chemical grouts during construction that will not diminish the groundwater quality</li> <li>• Selection and use of fluids for artificial recharge activities that will not diminish the groundwater quality</li> <li>• Requirements to ensure compatibility of construction material with groundwater quality to provide long term durability for infrastructure design life</li> <li>• Design and development of drainage infrastructure that minimises clogging and maintenance risks from dissolved constituents in groundwater precipitating out of solution</li> <li>• Measures to assess, remove and dispose of contaminated groundwater and impacted soils associated with excavation and construction</li> <li>• Reinjection borefields for hydraulic control of drawdowns (or contaminated groundwater plumes)</li> <li>• Remedial grouting.</li> </ul> <p>The Groundwater Management Plan must include requirements and methods for management of groundwater interception during construction including where appropriate, but not limited to:</p> <ul style="list-style-type: none"> <li>• Identification, treatment, disposal and handling of contaminated seepage water and/or slurries including vapours in accordance with relevant legislation and guidelines</li> <li>• Assessment of barrier/damming effects</li> <li>• Subsidence management</li> <li>• Dewatering and potential impacts on acid sulfate soils, including both unconsolidated sediments and lithified sedimentary rock</li> <li>• Protection of waterways and potential groundwater dependent ecosystems</li> <li>• Management of unexpected contaminated groundwater eg using treatments, hydraulic controls, grouting and exclusion methods</li> <li>• Management of possible impact to groundwater monitoring and management by third parties of existing contamination plumes</li> <li>• Contingency actions when interventions are required.</li> </ul> <p>The Groundwater Management Plan must also include a review to confirm the status of potential use of extraction bores within the estimated construction drawdown area. Where required, measures must be developed and implemented, to the satisfaction of Southern Rural Water, to maintain water supply to identified, impacted groundwater users.</p>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	GW5	<p><b>Manage groundwater during operation</b></p> <p>Prepare as part of the OEMP and implement measures for management, monitoring, reuse where possible and disposal of groundwater inflows during operation that comply with relevant legislation and guidelines (and include provisions of EPR FF6 where relevant), including but not limited to:</p> <ul style="list-style-type: none"> <li>• State Environment Protection Policy (Waters)</li> <li>• State Environment Protection Policy (Prevention and Management of Contaminated Land)</li> <li>• Water Industry Regulations 2006</li> <li>• Occupational Health and Safety Act 2004 and Occupational Health and Safety Regulations 2017.</li> </ul> <p>The OEMP must include contingency measures and emergency response plans if unexpected groundwater contamination is encountered and requires disposal.</p> <p>A trade waste agreement from the relevant water authority must be obtained in accordance with regulatory requirements, where disposal to sewer is proposed. Approval from EPA and the relevant water authority (as required) must be obtained in accordance with regulatory requires, where discharge to waterways is proposed.</p>	Operation
<b>10. Historical Heritage (HH)</b>			
Heritage Act 2017 Guidelines for Investigating Historical Archaeological Artefacts and Sites, Heritage Victoria 2014	HH1	<p><b>Design and construct to minimise impacts on heritage</b></p> <p>Undertake detailed design of the permanent and temporary works to minimise impacts where practicable, on the cultural heritage values of heritage places in consultation with Heritage Victoria and/or local councils (as applicable).</p> <p>Prior to commencement of works that affect heritage places, structures or features, develop and implement in consultation with the relevant heritage authority:</p> <ul style="list-style-type: none"> <li>• Physical protection measures for heritage places, structures or features as appropriate</li> <li>• Where required, a methodology for any required dismantling, storage or reinstatement of heritage fabric (with reference to the ICOMOS Burra Charter 2013).</li> </ul>	Design, construction
	HH2	<p><b>Implement an Archaeological Management Plan to avoid and minimise impacts on historic archaeological sites and values</b></p> <p>Develop and implement an Archaeological Management Plan in consultation with Heritage Victoria detailing measures to avoid, minimise, mitigate and manage disturbance of archaeological sites and values affected by the project. Undertake investigations in accordance with the Guidelines for Investigating Historical Archaeological Artefacts and Sites, Heritage Victoria 2015 and to the satisfaction of the Executive Director, Heritage Victoria.</p> <p>The Archaeological Management Plan must include:</p> <ul style="list-style-type: none"> <li>• Requirements for background historical research, excavation methodology, research design, reporting and artefact management, artefact conservation, and analysis</li> <li>• Protocols for managing previously unidentified historical archaeological sites discovered during the works.</li> </ul>	Construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	HH3	<p><b>Monitor condition of heritage sites</b></p> <p>Undertake pre-construction and post construction condition survey(s) in accordance with EPR GM3 for heritage places at risk of impact from settlement and structural integrity disturbance as a result of the project. Measures to manage and monitor potential vibration impacts on heritage places during construction must be implemented in accordance with the Construction Noise and Vibration Management Plan required by EPR NV4. Report the results of monitoring for heritage places to the Executive Director, Heritage Victoria and take remedial action, if required, to the satisfaction of the Executive Director, Heritage Victoria.</p>	Construction
	HH4	<p><b>Undertake archival photographic recording</b></p> <p>Prior to construction, undertake archival photographic recording of all heritage places demolished or modified by the works in accordance with Heritage Victoria's specification for the archival photographic recording of heritage places or alternative applicable Heritage Victoria guidelines as updated, to the satisfaction of the Executive Director, Heritage Victoria.</p>	Construction
	HH5	<p><b>Minimise impacts on heritage trees</b></p> <p>Comply with any requirements of Heritage Victoria if the trees that are to be impacted by the project are listed on the Victorian Heritage Register.</p>	Construction
<b>11. Land Use Planning (LP)</b>			
Planning & Environment Act 1987	LP1	<p><b>Minimise land use impacts</b></p> <p>The project must be designed and constructed to:</p> <ul style="list-style-type: none"> <li>Minimise the design footprint and avoid, to the extent practicable, any temporary and permanent impacts on the following land uses: <ul style="list-style-type: none"> <li>Parks and reserves</li> <li>Significant landscapes around the Yarra River</li> <li>Other sensitive land uses such as educational facilities</li> <li>Recreational and community facilities</li> <li>Residential properties</li> <li>Commercial and industrial sites.</li> </ul> </li> <li>Consolidate or minimise the fragmentation of, and provide access to, residual land parcels to support future viable land use to the extent practicable.</li> <li>Adopt an integrated approach to the Manningham interchange which supports viable future land uses (such as commercial and industrial) and includes maximising the developable area at surface level to the extent practicable.</li> </ul>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	LP2	<p><b>Minimise impacts from location of new services and utilities</b></p> <p>New above ground services and utility infrastructure are to be located in a way that minimises impacts to existing residential areas, public open space and recreational facilities. This must include considering options to co-locate infrastructure where practicable.</p>	Design
	LP3	<p><b>Minimise inconsistency with strategic land use plans</b></p> <p>The project must minimise, to the extent practicable, impacts on residential, commercial, industrial, open space and community facility land uses from project development and operations which are inconsistent with strategic land use policy.</p> <p>Development of the project is to have regard to relevant strategic land use plans and consultation must occur with land managers and/or authorities responsible for the implementation of the relevant strategic land use plans and policies.</p>	Design
	LP4	<p><b>Minimise overshadowing from noise walls and elevated structures and overlooking from elevated structures</b></p> <p>Overshadowing from elevated structures and noise walls to residential properties (including existing solar panels), community facilities, open spaces, waterways and valuable natural habitats must be minimised through detailed design.</p> <p>Overlooking from elevated structures to private open space and habitable room windows of residential properties must be minimised through detailed design as far practicable.</p>	Design
<b>12. Landscape and Visual (LV)</b>			
<p>Planning &amp; Environment Act 1987</p> <p>Australian Standards AS 4282-1997 Control of the obtrusive effects of outdoor lighting</p>	LV1	<p><b>Design to be in accordance with the Urban Design Strategy</b></p> <p>Urban Design and Landscape Plans must be developed and implemented for permanent above-ground buildings or structures (excluding preparatory buildings and works) in accordance with the North East Link Project – Incorporated Document. The design response must be in accordance with the North East Link Urban Design Strategy and, to the extent practicable:</p> <ul style="list-style-type: none"> <li>• Avoid or minimise landscape and visual, overlooking, and shading (with reference to EPR LP4) impacts in extent, duration and intensity</li> <li>• Maximise opportunities for enhancement of public and private receptors including public amenity, open space and facilities, and heritage places resulting from the project.</li> </ul>	Design
	LV2	<p><b>Minimise landscape impacts during construction</b></p> <p>Temporary and construction works are to be designed and carried out in accordance with the Urban Design Strategy guidance on using design to help manage construction impacts. Areas disturbed by temporary and construction works are to be reinstated in consultation with the relevant land manager.</p> <p>Develop and implement measures to use temporary landscaping, features or structures (including viewing portals) during construction to minimise adverse visual impact of project works and provide visual appeal. Temporary landscape treatments, features or screening must be reused across the project, where appropriate.</p> <p>Implement landscaping enhancement (as part of permanent works) prior to construction works commencing, where practicable.</p>	Design, construction
	LV3	<p><b>Minimise construction lighting impacts</b></p> <p>Develop and implement measures to minimise light spillage during construction to protect the amenity of adjacent neighbourhoods, parks, community facilities and any known significant native fauna habitat to the extent practicable.</p>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase						
	LV4	<p><b>Minimise operation lighting impacts</b></p> <p>Design and install lighting used during operation of permanent structures in accordance with relevant standards, including but not limited to AS 4282-1997 Control of the obtrusive effects of outdoor lighting.</p> <p>Design and install lighting to minimise spill and disturbance to significant fauna sites (eg, Grey-headed Flying-fox colony at Yarra Bend, wetlands and waterways immediately adjacent to roadways).</p>	Design, operation						
13. Noise and Vibration (NV)									
<p>State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1)</p> <p>Australian Standards AS 2187.2, Explosives – Storage and use – Use of explosives</p> <p>Australian Standard 2436 2010 Guide to Noise Control on Construction, Maintenance and Demolition Site (reconfirmed 2016)</p> <p>VicRoads Road Design Note RDN 6-1 Interpretation and application of VicRoads traffic noise reduction policy 2005</p> <p>VicRoads Traffic Noise Measurement Requirements for Acoustic Consultants – September 2011</p> <p>EPA Publications:</p> <ul style="list-style-type: none"><li>480 Best Practice Environmental Management:</li></ul>	NV1	<p><b>Achieve traffic noise objectives</b></p> <p>Design and construct the works to meet the following LA10 traffic noise objectives.</p> <table><tr><th>Aspect</th><th>External traffic noise levels</th></tr><tr><td>External traffic noise levels</td><td><p>(a) Traffic noise from North East Link Project Roads* must be no greater than:</p><ul style="list-style-type: none"><li>63 dBA (L10,18hr) measured between 6 am and midnight at Category A buildings**</li><li>63 dBA (L10, 12hr) measured between 6 am and 6 pm at Category B buildings**.</li></ul><p>(b) For Category A and Category B buildings on non-Project Roads which:</p><ul style="list-style-type: none"><li>directly intersect with North East Link project roads, and</li><li>where total traffic noise for the design year and with Project exceeds the thresholds listed in paragraph (a).</li></ul><p>The combined noise from North East Link Project Roads and non-Project Roads must not be more than 2 dBA higher than the predicted traffic noise level under the design year ‘do nothing’ scenario. Non-Project Roads must be modelled for a distance of 100 m from the intersection with North East Link Project Roads or to the first traffic intersection (whichever is the lesser).</p></td></tr><tr><td>Applies at</td><td><p>The noise criteria in paragraphs (a) and (b) above are to apply to the lowest habitable level of Category A buildings and Category B buildings at both the year of opening and 10 years thereafter (the design year). For the purposes of this EPR, Category A buildings and Category B buildings to be considered are those that are either existing or known to have planning approval prior to exhibition of the North East Link Environment Effects Statement.</p><p>Where external traffic noise cannot be mitigated through project design solutions to meet the criteria outlined in paragraphs (a) and (b), at-property treatments may be required to ensure an equivalent internal level of attenuation is provided to the building. At-property treatments would be undertaken with reference to section 7.3 of the NSW Road and Maritime Services document ‘Noise Mitigation Guidelines 2015 – Roads and Maritime Services’, and in consultation with the owner of the relevant building.</p></td></tr></table>	Aspect	External traffic noise levels	External traffic noise levels	<p>(a) Traffic noise from North East Link Project Roads* must be no greater than:</p> <ul style="list-style-type: none"><li>63 dBA (L10,18hr) measured between 6 am and midnight at Category A buildings**</li><li>63 dBA (L10, 12hr) measured between 6 am and 6 pm at Category B buildings**.</li></ul> <p>(b) For Category A and Category B buildings on non-Project Roads which:</p> <ul style="list-style-type: none"><li>directly intersect with North East Link project roads, and</li><li>where total traffic noise for the design year and with Project exceeds the thresholds listed in paragraph (a).</li></ul> <p>The combined noise from North East Link Project Roads and non-Project Roads must not be more than 2 dBA higher than the predicted traffic noise level under the design year ‘do nothing’ scenario. Non-Project Roads must be modelled for a distance of 100 m from the intersection with North East Link Project Roads or to the first traffic intersection (whichever is the lesser).</p>	Applies at	<p>The noise criteria in paragraphs (a) and (b) above are to apply to the lowest habitable level of Category A buildings and Category B buildings at both the year of opening and 10 years thereafter (the design year). For the purposes of this EPR, Category A buildings and Category B buildings to be considered are those that are either existing or known to have planning approval prior to exhibition of the North East Link Environment Effects Statement.</p> <p>Where external traffic noise cannot be mitigated through project design solutions to meet the criteria outlined in paragraphs (a) and (b), at-property treatments may be required to ensure an equivalent internal level of attenuation is provided to the building. At-property treatments would be undertaken with reference to section 7.3 of the NSW Road and Maritime Services document ‘Noise Mitigation Guidelines 2015 – Roads and Maritime Services’, and in consultation with the owner of the relevant building.</p>	Design, operation
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Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<p>Environmental Guidelines for Major Construction Sites</p> <ul style="list-style-type: none"> <li>1254 Noise Control Guidelines</li> </ul> <p>New South Wales Interim Construction Noise Guideline (ICNG) (2009)</p> <p>New South Wales Roads and Maritime Services Construction Noise and Vibration Guideline (CNVG) (2016)</p> <p>New South Wales Roads and Maritime Services Noise Mitigation Guideline (2015)</p> <p>ASHRAE Chapter 48 Sound and Vibration Control Standards</p> <p>German Standard DIN 4150 – Part 3 – Structural Vibration in Buildings – Effects on Structures (2016)</p> <p>British Standard BS6472-1:2008 Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting.</p>		<p>*Project Roads are defined to be the M80 Ring Road (east of Plenty Road), the Greensborough Bypass (west of the Plenty River bridge and up to the M80 interchange with North East Link), the upgrade of the Eastern Freeway (between Hoddle Street and Springvale Road) and the new North East Link freeway (connecting the M80 Ring Road to the Eastern Freeway), including all access ramps.</p> <p>** Category A Buildings and Category B Buildings means:</p> <ul style="list-style-type: none"> <li>Category A Buildings – Residential dwellings, aged persons homes, hospitals, motels, caravan parks and other buildings of a residential nature</li> <li>Category B Buildings – Schools, kindergartens, libraries and other noise-sensitive community buildings.</li> </ul>	
	NV2	<p><b>Monitor traffic noise</b></p> <p>Traffic noise monitoring must be carried out for at least the following time periods:</p> <ul style="list-style-type: none"> <li>Baseline traffic noise must be re-measured after project award and prior to construction works</li> <li>Traffic noise must be re-measured within six months of project opening during normal traffic flows (outside school or public holidays). For the purpose of determining compliance, the measurements conducted after project opening must be adjusted to the 10 year traffic flows.</li> <li>Traffic noise must be re-measured 10 years after project opening</li> </ul> <p>All traffic noise monitoring must be undertaken in accordance with the VicRoads Traffic Noise Measurement Requirements for Acoustic Consultants – September 2011, to verify conformance with the external traffic noise objectives set out in EPR NV1. The adequacy of the monitoring program is to be verified by the Independent Environmental Auditor.</p> <p>Remedial action must be taken as soon as practicable in the event that the measured traffic noise levels demonstrate that the external traffic noise objectives set out in EPR NV1 are not met.</p>	Design, operation

	<div>NV3</div> <div>Minimise construction noise impacts to sensitive receptors</div> <div>Construction noise and vibration must be managed in accordance with the Construction Noise and Vibration Management Plan (CNVMP) required by EPR NV4.</div> <div>Non-residential sensitive receptors</div> <div>For sensitive land uses (based on AS/NZS 2107:2016) implement management actions as per EPR NV4 if construction noise is predicted to or does exceed the internal and external noise management levels below, and a noise sensitive receptor is adversely impacted. If construction exceeds the noise management levels below:</div> <div><ul style="list-style-type: none"><li>Consider the duration of construction noise</li><li>Consider the existing ambient noise levels</li><li>Consult with the owner or operator of the noise sensitive receptor</li><li>Consider any specific acoustic requirements of land uses listed below to determine whether a noise sensitive receptor is adversely impacted.</li></ul></div> <div><table><tr><th>Land use</th><th>Construction noise management level, <math>L_{Aeq}(15 \text{ min})</math> applies when properties are in use</th></tr><tr><td>Classrooms in schools and other educational institutions</td><td>Internal noise level 45 dB(A)</td></tr><tr><td>Hospital wards and operating theatres</td><td>Internal noise level 45 dB(A)</td></tr><tr><td>Places of worship</td><td>Internal noise level 45 dB(A)</td></tr><tr><td>Active recreation areas characterised by sporting activities and activities which generate their own noise, making them less sensitive to external noise intrusion</td><td>External noise level 65 dB(A)</td></tr><tr><td>Passive recreation areas characterised by contemplative activities that generate little noise and where benefits are compromised by external noise intrusion, for example reading, meditation</td><td>External noise level 60 dB(A)</td></tr><tr><td>Community centres</td><td>Depends on the intended use of the centre. Refer to the recommended maximum internal levels in AS/NZS 2107:2016 for specific uses</td></tr><tr><td>Industrial premises</td><td>External noise level 75 dB(A)</td></tr><tr><td>Offices, retail outlets</td><td>External noise level 70 dB(A)</td></tr><tr><td>Other noise sensitive land uses as identified in AS/NZS 2107:2016</td><td>Refer to the noise levels in AS/NZS 2107:2016</td></tr></table></div> <div>Residential receptors</div>	Land use	Construction noise management level, $L_{Aeq}(15 \text{ min})$ applies when properties are in use	Classrooms in schools and other educational institutions	Internal noise level 45 dB(A)	Hospital wards and operating theatres	Internal noise level 45 dB(A)	Places of worship	Internal noise level 45 dB(A)	Active recreation areas characterised by sporting activities and activities which generate their own noise, making them less sensitive to external noise intrusion	External noise level 65 dB(A)	Passive recreation areas characterised by contemplative activities that generate little noise and where benefits are compromised by external noise intrusion, for example reading, meditation	External noise level 60 dB(A)	Community centres	Depends on the intended use of the centre. Refer to the recommended maximum internal levels in AS/NZS 2107:2016 for specific uses	Industrial premises	External noise level 75 dB(A)	Offices, retail outlets	External noise level 70 dB(A)	Other noise sensitive land uses as identified in AS/NZS 2107:2016	Refer to the noise levels in AS/NZS 2107:2016	Construction
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Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase								
		<p>For residential dwellings, management actions must be implemented as per EPR NV4 if noise from construction works during normal working hours is predicted to or does exceed the noise management levels for normal working hours below.</p> <p>Noise from construction works during weekend/evening work hours and the night period must meet the weekend/evening and night period noise guideline targets in the table below unless they are Unavoidable Works verified by the Independent Environmental Auditor as per EPR NV4. All reasonable strategies to mitigate the impacts of such Unavoidable Works must be applied.</p> <table><thead><tr><th>Time of day</th><th>Construction noise guideline targets</th></tr></thead><tbody><tr><td>Normal working hours: 7 am – 6 pm Monday to Friday 7 am – 1 pm Saturday</td><td>Noise affected: Background <math>L_{A90}+10</math> dB Highly noise affected: 75 dB(A) Source: NSW Interim Construction Noise Guideline (ICNG) Chapter 4.1.1 Table 2 The noise affected level represents the point above which there may be some community reaction to noise The highly noise affected level represents the point above which there may be strong community reaction to noise.</td></tr><tr><td>Weekend/evening work hours: 6 pm – 10 pm Monday to Friday 1 pm – 10 pm Saturday 7 am – 10 pm Sunday and public holidays</td><td>Noise level at any residential premises not to exceed background noise (<math>L_{A90}</math>) by:<ul style="list-style-type: none"><li>10 dB(A) or more for up to 18 months</li><li>5 dB(A) or more after 18 months</li></ul>Source: EPA Publication 1254 Section 2</td></tr><tr><td>Night period: 10 pm – 7 am Monday to Sunday</td><td>Noise inaudible within a habitable room of any residential premises Source: EPA Publication 1254 Section 2 and EPA Publication 480 Section 5</td></tr></tbody></table> <p>Note: Where any reference is made to the rating background level (RBL) or background <math>L_{A90}</math>; the 'average background' over the assessment period as per Victorian noise policy practices is to be used. This applies to all receptors and all time periods.</p>	Time of day	Construction noise guideline targets	Normal working hours: 7 am – 6 pm Monday to Friday 7 am – 1 pm Saturday	Noise affected: Background $L_{A90}+10$ dB Highly noise affected: 75 dB(A) Source: NSW Interim Construction Noise Guideline (ICNG) Chapter 4.1.1 Table 2 The noise affected level represents the point above which there may be some community reaction to noise The highly noise affected level represents the point above which there may be strong community reaction to noise.	Weekend/evening work hours: 6 pm – 10 pm Monday to Friday 1 pm – 10 pm Saturday 7 am – 10 pm Sunday and public holidays	Noise level at any residential premises not to exceed background noise ( $L_{A90}$ ) by: <ul style="list-style-type: none"><li>10 dB(A) or more for up to 18 months</li><li>5 dB(A) or more after 18 months</li></ul> Source: EPA Publication 1254 Section 2	Night period: 10 pm – 7 am Monday to Sunday	Noise inaudible within a habitable room of any residential premises Source: EPA Publication 1254 Section 2 and EPA Publication 480 Section 5	
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Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
		<p><u>Unavoidable Works</u></p> <p>Unavoidable Works must be verified by the Independent Environmental Auditor for each instance they are undertaken, as per EPR NV4 and include the following</p> <ul style="list-style-type: none"> <li>• The delivery of oversized plant or structures that police or other authorities determine require special arrangements to transport along public roads</li> <li>• Emergency work to avoid the loss of life or damage to property, or to prevent environmental harm</li> <li>• Maintenance and repair of public infrastructure where disruption to essential services and/or considerations of worker safety do not allow work within standard hours</li> <li>• Tunnelling works including mined excavation elements and the activities that are required to support tunnelling works (ie spoil treatment facilities)</li> <li>• Road and rail occupations or works that would cause a major traffic hazard</li> <li>• Other works where a contractor demonstrates and justifies a need to operate outside normal working hours and exceed the noise guideline targets such as work that once started cannot practically be stopped.</li> </ul>	

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	NV4	<p><b>Implement a Construction Noise and Vibration Management Plan (CNVMP) to manage noise and vibration impacts</b></p> <p>Prepare, implement and maintain a Construction Noise and Vibration Management Plan (CNVMP) in consultation with EPA Victoria and relevant councils. The CNVMP must comply with and address the Noise and Vibration EPRs, be informed by the noise modelling and monitoring results and must include (but not be limited to):</p> <ul style="list-style-type: none"> <li>• Identification and assessment of noise and vibration sensitive receptors along the project alignment, including habitat for listed threatened fauna likely to be impacted by the project, and the Heide Museum of Modern Art.</li> <li>• Construction noise and vibration targets as per EPRs NV3, NV5, NV8, NV9, NV10, NV11 and NV12, including any details of conversions between alternative metrics</li> <li>• Details of construction activities and an indicative schedule for construction works, including the identification of key noise and/or vibration generating construction activities that have the potential to generate airborne noise and/or surface vibration impacts on surrounding sensitive receivers</li> <li>• How construction noise (including truck haulage) and vibration would be minimised (see EPR T2)</li> <li>• A requirement for preliminary tests using the actual equipment to validate modelling for vibration and regenerated noise and review, with predictions to be remodelled as necessary and confirm prevention/mitigation/remediation measures confirmed</li> <li>• Management actions and notification and mitigation measures to be implemented with reference to the Appendix B and Appendix C of the New South Wales Roads and Maritime Services Construction Noise and Vibration Guideline 2016 (CNVG)</li> <li>• Any processes and measures to be implemented as part of the Communications and Community Engagement Plan including managing matters of interest raised by key stakeholders through CCEP processes, and measures concerning complaints management (see EPR SC2)</li> <li>• Requirements to assess and manage vibration impacts to scientific or medical establishments to the higher of ambient levels or ASHRAE VC Standards (as defined in the 2015 handbook), or manufacturers equipment levels (unless by agreement with occupant)</li> <li>• Measures to ensure effective monitoring of noise and vibration associated with construction with consideration to the construction noise and vibration targets</li> <li>• Measures to minimise noise and vibration impacts from temporary traffic diversions and altered access to parking facilities</li> <li>• The Unavoidable Works (as defined in NV3) that would be undertaken, including their location, timing and duration. The CNVMP must either include a clear rationale for defining works or a list of the type of planned works that constitute Unavoidable Works and response strategies to mitigate the impacts of these Unavoidable Works, with reference to EPA Victoria Publication 1254 Noise Control Guidelines and Appendix B and Appendix C of the CNVG. The Independent Environmental Auditor must verify that the proposed Unavoidable Works meet the definition of Unavoidable Works (as defined in NV3) for each instance they are undertaken. Details of Unavoidable Works must be made publicly available. For emergency Unavoidable Work, a rationale must be provided to the satisfaction of the Independent Environmental Auditor as soon as practicable.</li> </ul> <p>The CNVMP will be reviewed and verified by the Independent Environmental Auditor.</p>	Construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase																								
	NV5	<p><b>Establish vibration guidelines to protect utility assets</b></p> <p>Prior to construction undertake condition assessments of above and below ground utility assets (EPR GM3) and consult with asset owners to establish and agree construction vibration guidelines to maintain asset integrity. In all cases the asset owner’s criteria takes precedence.</p> <p>Where construction vibration guidelines are not proposed by the asset owner, reference should be made to the relevant sections of German Standard DIN 4150 – Part 3 – Structural Vibration in Buildings – Effects on Structures (2016) for guideline assessment procedures for buried pipework or underground infrastructure. The integrity of the asset should be reviewed and assessed (by the contractor, in conjunction with the asset owner) to confirm these values are appropriate. If necessary, based on this assessment, limits must be reduced to the level necessary to maintain asset integrity.</p> <p>Monitor vibration levels during construction to demonstrate compliance with agreed vibration guidelines. Identify contingency measures to be implemented if guidelines are not met. Where necessary rectify any defects that are attributable to the project.</p> <p>An overview of the key vibration guidelines values is presented below. In all cases, the supporting documentation within the Standard which describes, clarifies and sometimes modifies the tables below must be considered.</p> <p>Table 2 Guideline values for <math>v_i</math>, max, for evaluating the effects of short-term vibration on the lining of underground cavities</p> <table><tr><th>Line</th><th>Lining material</th><th>Guideline values for <math>v_i</math>, max in mm/s perpendicular to lining surface</th></tr><tr><td>1</td><td>Reinforced or sprayed concrete, tubbing segments</td><td>80</td></tr><tr><td>2</td><td>Concrete, stone</td><td>60</td></tr><tr><td>3</td><td>Masonry</td><td>40</td></tr></table> <p>Note: The guideline values were measured during nearby mine blasting operations and apply only to the lining of underground structures, but not to any associated installations.</p> <p>Table 3 Guideline values for <math>v_i</math>, max, for evaluating the effects of short-term vibration on buried pipework</p> <table><tr><th>Line</th><th>Lining material</th><th>Guideline values for <math>v_i</math>, max in mm/s perpendicular to lining surface</th></tr><tr><td>1</td><td>Steel, welded</td><td>100</td></tr><tr><td>2</td><td>Vitrified clay, concrete, reinforced concrete, prestressed concrete, metal (with or without flange)</td><td>80</td></tr><tr><td>3</td><td>Masonry, plastics</td><td>50</td></tr></table>	Line	Lining material	Guideline values for $v_i$ , max in mm/s perpendicular to lining surface	1	Reinforced or sprayed concrete, tubbing segments	80	2	Concrete, stone	60	3	Masonry	40	Line	Lining material	Guideline values for $v_i$ , max in mm/s perpendicular to lining surface	1	Steel, welded	100	2	Vitrified clay, concrete, reinforced concrete, prestressed concrete, metal (with or without flange)	80	3	Masonry, plastics	50	Construction
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	NV6	<p><b>Design permanent tunnel ventilation system and relevant fixed infrastructure to meet EPA requirements for noise</b></p> <p>Design and implement the permanent tunnel ventilation system and relevant fixed infrastructure that is subject to State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1) to achieve compliance with SEPP N-1 and in accordance with the Works Approval. Provide detailed design of the tunnel ventilation system to the satisfaction of EPA Victoria prior to commencement of the works permitted by the Works Approval.</p>	Design, construction																													
	NV7	<p><b>Monitor noise from tunnel ventilation system and relevant fixed infrastructure</b></p> <p>Measure noise from the permanent tunnel ventilation system and relevant fixed infrastructure that is subject to State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1) on commencing road operation and monitor noise from the tunnel ventilation system post opening of the North East Link, as agreed with EPA Victoria, to verify compliance with SEPP N-1 and the EPA Victoria Licence. Identify and implement contingency measures to be implemented if noise level limits are not met.</p>	Operation																													
	NV8	<p><b>Minimise construction vibration impacts on amenity</b></p> <p>Implement management actions if the following guideline target levels for vibration from construction activity to protect human comfort of occupied buildings (including heritage buildings) are not achieved (levels are calculated from the British Standard BS6472-1:2008 Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting.).</p> <table><tr><td></td><td colspan="4">Vibration Dose Values (m/s<sup>1.75</sup>)</td></tr><tr><td></td><td colspan="2">Day (7am to 10 pm)</td><td colspan="2">Night (10 pm to 7am)</td></tr><tr><td>Type of space occupancy</td><td>Preferred Value</td><td>Maximum Value</td><td>Preferred Value</td><td>Maximum Value</td></tr><tr><td>Residential</td><td>0.2</td><td>0.4</td><td>0.1</td><td>0.2</td></tr><tr><td>Offices, schools, educational institutions, places of worship</td><td>0.4</td><td>0.8</td><td>0.4</td><td>0.8</td></tr><tr><td>Workshops</td><td>0.8</td><td>1.6</td><td>0.8</td><td>1.6</td></tr></table> <p>Notes</p> <p>1 The Guideline Targets are non-mandatory; they are goals that should be sought to be achieved through the application of practicable mitigation measures. If exceeded then management actions would be required</p> <p>2 The Vibration Dose Values may be converted to Peak Particle Velocities within a noise and vibration construction management plan.</p> <p>3 For the purpose of this EPR, the guideline target levels for ‘offices, schools, educational institutions, places of worship’ and also apply to the Heide Museum of Modern Art and the outdoor sculpture exhibition area at Heide Museum of Modern Art.</p>		Vibration Dose Values (m/s <sup>1.75</sup> )					Day (7am to 10 pm)		Night (10 pm to 7am)		Type of space occupancy	Preferred Value	Maximum Value	Preferred Value	Maximum Value	Residential	0.2	0.4	0.1	0.2	Offices, schools, educational institutions, places of worship	0.4	0.8	0.4	0.8	Workshops	0.8	1.6	0.8	1.6
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	NV9	<p>Minimise construction vibration impacts on structures</p> <p>Construction vibration targets for structures based on German Standard DIN 4150 – Part 3 – Structural Vibration in Buildings – Effects on Structures (2016) must be adopted. All sections of the German Standard DIN 4150 – Part 3 – Structural Vibration in Buildings – Effects on Structures (2016) standard apply, noting the guideline levels detailed in Section 5 and Section 6 (and any references sections).</p> <p>An overview of the key vibration guidelines values is presented below. In all cases, the supporting documentation within the Standard which describes, clarifies and sometimes modifies the tables below must be considered.</p> <p>Table 1 — Guideline values for vibration velocity, <math>v_i</math>, max, for evaluating the effects of short-term vibration on structures</p> <table><tr><th colspan="2">Type of structure</th><th colspan="5">Guideline values for <math>v_i</math>, max in mm/s</th></tr><tr><th colspan="2"></th><th colspan="3">Foundation, all directions, <math>i = x, y, z</math>, at a frequency of</th><th>Topmost floor, horizontal direction, <math>i = x, y</math></th><th>Floor slabs, vertical direction, <math>i = z</math></th></tr><tr><th colspan="2"></th><th>1 Hz to 10 Hz</th><th>10 Hz to 50 Hz</th><th>50 Hz to 100 Hz (a)</th><th>All frequencies</th><th>All frequencies</th></tr><tr><th>Column Line</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th></tr><tr><td>1</td><td>Buildings used for commercial purposes, industrial buildings, and buildings of similar design</td><td>20</td><td>20 to 40</td><td>40 to 50</td><td>40</td><td>20</td></tr><tr><td>2</td><td>Residential buildings and buildings of similar design and/or occupancy</td><td>5</td><td>5 to 15</td><td>15 to 20</td><td>15</td><td>20</td></tr><tr><td>3</td><td>Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 and are of great intrinsic value (eg listed buildings)</td><td>3</td><td>3 to 8</td><td>8 to 10</td><td>8</td><td>20 (b)</td></tr></table> <p>Note: Even if guideline values as in line 1, columns 2 to 5, are complied with, minor damage cannot be excluded.</p> <p>(a) At frequencies above 100 Hz, the guideline values for 100 Hz can be applied as minimum values.</p> <p>(b) Paragraph 2 of 5.1.2 must be observed.</p>	Type of structure		Guideline values for $v_i$ , max in mm/s							Foundation, all directions, $i = x, y, z$ , at a frequency of			Topmost floor, horizontal direction, $i = x, y$	Floor slabs, vertical direction, $i = z$			1 Hz to 10 Hz	10 Hz to 50 Hz	50 Hz to 100 Hz (a)	All frequencies	All frequencies	Column Line	1	2	3	4	5	6	1	Buildings used for commercial purposes, industrial buildings, and buildings of similar design	20	20 to 40	40 to 50	40	20	2	Residential buildings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	20	3	Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 and are of great intrinsic value (eg listed buildings)	3	3 to 8	8 to 10	8	20 (b)	
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Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase																								
		<div>Table 4 — Guideline values for <math>v_i</math>, max, for evaluating the effects of long-term vibration on buildings</div> <table><thead><tr><th colspan="2">Type of building</th><th colspan="2">Guideline values for <math>v_i</math>, max, in mm/s</th></tr><tr><th></th><th></th><th>Topmost floor, horizontal direction, all frequencies</th><th>Floor slab, vertical direction, all frequencies</th></tr></thead><tbody><tr><td>Column Line</td><td>1</td><td>2</td><td>3</td></tr><tr><td>1</td><td>Buildings used for commercial purposes, industrial buildings, and buildings of similar design</td><td>10</td><td>10</td></tr><tr><td>2</td><td>Residential buildings and buildings of similar design and/or occupancy</td><td>5</td><td>10</td></tr><tr><td>3</td><td>Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 and are of great intrinsic value (eg listed buildings)</td><td>2.5</td><td>10 (a)</td></tr></tbody></table> <div>Note: Even if guideline values as in line 1, column 2, are complied with, minor damage cannot be ruled out.</div> <div>(a) Section 6.1.2 must be observed.</div> <div>Vibration levels above apply to all works, including unavoidable works as defined in NV3.</div>	Type of building		Guideline values for $v_i$ , max, in mm/s				Topmost floor, horizontal direction, all frequencies	Floor slab, vertical direction, all frequencies	Column Line	1	2	3	1	Buildings used for commercial purposes, industrial buildings, and buildings of similar design	10	10	2	Residential buildings and buildings of similar design and/or occupancy	5	10	3	Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 and are of great intrinsic value (eg listed buildings)	2.5	10 (a)	Construction
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	NV10	<div>Minimise impacts from ground-borne (internal) noise</div> <div>Implement management actions in consultation with potentially affected land owners to protect amenity at residences where the following ground borne noise guideline targets based on Section 4.2 of the New South Wales Interim Construction Noise Guidelines are exceeded during construction.</div> <table><thead><tr><th>Time of Day</th><th>Internal noise level measured at the centre of the most affected habitable room</th></tr></thead><tbody><tr><td>Evening (6 pm to 10 pm)</td><td><math>L_{Aeq}(15 \text{ minute}) = 40 \text{ dBA}</math></td></tr><tr><td>Night (10 pm to 6 am)</td><td><math>L_{Aeq}(15 \text{ minute}) = 35 \text{ dBA}</math></td></tr></tbody></table> <div>Notes</div> <div>1 Levels are only applicable when ground borne noise levels are higher than airborne noise levels.</div> <div>2 Management actions include community consultation to determine acceptable level of disruption and provision of respite accommodation in some circumstances.</div> <div>3 Noise levels above apply to all works, including unavoidable works as defined in NV3.</div>	Time of Day	Internal noise level measured at the centre of the most affected habitable room	Evening (6 pm to 10 pm)	$L_{Aeq}(15 \text{ minute}) = 40 \text{ dBA}$	Night (10 pm to 6 am)	$L_{Aeq}(15 \text{ minute}) = 35 \text{ dBA}$	Construction																		
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Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase															
	NV11	<b>Minimise amenity impacts from blast vibration</b>  Implement management actions if the following vibration values are not achieved. Blasting activities must comply with Australian Standard AS2187.2-2006, Explosives – Storage and use Part 2 – Use of explosives for all blasting.																
		<table><thead><tr><th>Category (as defined in AS 2187.2-2006)</th><th>Type of blasting operations</th><th>Peak component particle velocity (mm/s)</th></tr></thead><tbody><tr><td>Sensitive site</td><td>More than 20 blasts</td><td>5 mm/s for 95% blasts per year 10 mm/s maximum (unless by agreement with occupier)</td></tr><tr><td>Sensitive site</td><td>Less than 20 blasts</td><td>10 mm/s maximum (unless by agreement with occupier)</td></tr><tr><td>Non-sensitive site (with occupants)</td><td>All blasting</td><td>25 mm/s maximum value (unless by agreement with occupier).</td></tr><tr><td>Scientific equipment</td><td>All blasting</td><td>Existing ambient levels or ASHRAE VC Standards (as defined in the 2015 handbook) (whichever is the higher) or manufacturers equipment levels (unless by agreement with occupier)</td></tr></tbody></table>		Category (as defined in AS 2187.2-2006)	Type of blasting operations	Peak component particle velocity (mm/s)	Sensitive site	More than 20 blasts	5 mm/s for 95% blasts per year 10 mm/s maximum (unless by agreement with occupier)	Sensitive site	Less than 20 blasts	10 mm/s maximum (unless by agreement with occupier)	Non-sensitive site (with occupants)	All blasting	25 mm/s maximum value (unless by agreement with occupier).	Scientific equipment	All blasting	Existing ambient levels or ASHRAE VC Standards (as defined in the 2015 handbook) (whichever is the higher) or manufacturers equipment levels (unless by agreement with occupier)
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	Scientific equipment	All blasting		Existing ambient levels or ASHRAE VC Standards (as defined in the 2015 handbook) (whichever is the higher) or manufacturers equipment levels (unless by agreement with occupier)														
NV12	<b>Minimise amenity impacts from blast overpressure</b>  Implement management actions if the following overpressure values are not achieved. Blasting activities must comply with Australian Standard AS2187.2-2006, Explosives – Storage and use Part 2 – Use of explosives for all blasting.	Construction																
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Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	NV13	<p><b>Noise mitigation – noise walls</b></p> <p>Construction of permanent noise attenuation must, where feasible, be installed in advance of adjacent works.</p> <p>Where the ultimate wall cannot be constructed prior to demolition of the existing wall and noise sensitive premises will be exposed to significantly increased traffic noise for an extended period, install temporary noise walls where practicable.</p>	Construction
	NV14	<p><b>Reduce impacts from engine brake noise</b></p> <p>Opportunities to encourage heavy vehicle drivers to reduce use of engine brakes must be considered, where practicable.</p>	Design, construction, operation
<b>14. Social and Community (SC)</b>			
<p>Planning and Environment Act 1987</p> <p>Australian Standard AS/NSZ 10002:2014 Guidelines for Complaint Management in Organisations.</p>	SC1	<p><b>Reduce community disruption</b></p> <p>Design and construct the project to reduce disruption to residences, community infrastructure facilities and open space from direct acquisition or temporary occupation, as far as is practicable.</p>	Design, construction
	SC NEW1	<p><b>Manage impacts of land acquisition and occupation</b></p> <p>Where private land is to be permanently acquired or temporarily occupied, the project will:</p> <ul style="list-style-type: none"> <li>• Use a case-management approach for project interactions with affected land owners and occupants</li> <li>• Endeavour to reach agreement on the terms for possession of the land</li> <li>• Consider the relative vulnerability and special needs of land owners and occupants.</li> </ul> <p>Where public land is to be permanently acquired or temporarily occupied, the project will seek to:</p> <ul style="list-style-type: none"> <li>• Limit the extent of the acquisition or the extent or duration of the occupation</li> <li>• Endeavour to reach agreement with the land manager on the terms for possession of the land</li> <li>• Return public land not required for permanent project infrastructure to its pre-existing use post-construction as soon as practicable, unless otherwise agreed with the land manager.</li> <li>• In the case of public land used for formal active recreation, ensure that the function served by the land continues, whether on that land or on other land unless otherwise agreed with the land manager.</li> </ul>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	SC2	<p><b>Implement a Communications and Community Engagement Plan</b></p> <p>Prior to construction, prepare and implement a Communications and Community Engagement Plan to engage the community and potentially affected stakeholders and communicate progress of construction activities and operation. The plan must include:</p> <ul style="list-style-type: none"> <li>• A process for identifying community issues and the recording, management and resolution of complaints from affected stakeholders consistent with Australian Standard AS/NZS 10002:2014 Guidelines for Complaint Management in Organisations</li> <li>• Approach to stakeholder identification</li> <li>• Enquiry management and record keeping approach and procedures including making available a 24 hour telephone number, postal address, and an email address and publishing these on the project website</li> <li>• Approach to communicating and engaging with the community and potentially affected stakeholders in relation to: <ul style="list-style-type: none"> <li>– Construction activities including temporary facilities and impacts that may affect the community, businesses or individual stakeholders (eg dust, noise, vibration and light) and relevant mitigation (eg relocations policy)</li> <li>– Changes to transport conditions and relevant mitigation (eg road closures, detours)</li> </ul> </li> <li>• Identifying how stakeholders can access information on environmental performance that is to be made publicly available</li> <li>• Incident and emergency communications, including notification methods and timeframes in the event of a major incident or overrun</li> <li>• Approach and processes to ensure that the workforce has appropriate community awareness and sensitivity</li> <li>• Innovative communications tools and methods to enhance the project's ability to effectively communicate and engage with the community and stakeholders</li> <li>• Approach to engaging with local schools to provide education opportunities on project activities.</li> <li>• Approach to making relevant project information available to the community with specific consideration to vulnerable groups (including culturally and linguistically diverse groups)</li> <li>• How it will evaluate the effectiveness of the communication and engagement under the Communications and Community Engagement Plan.</li> </ul> <p>The Communications and Community Engagement Plan must consider and where appropriate address matters of interest or concern to the following stakeholders, and provide for the appointment of a dedicated liaison officer (as appropriate):</p> <ul style="list-style-type: none"> <li>• Municipalities</li> <li>• Recreation, sporting and community groups</li> <li>• Schools and other educational institutions</li> <li>• Potentially affected residents and property owners</li> </ul>	Design, construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
		<ul style="list-style-type: none"> <li>• Potentially affected business</li> <li>• Other public facilities in proximity</li> <li>• Religious and worship groups</li> <li>• Vulnerable groups</li> <li>• Traditional owners</li> <li>• Public transport users.</li> </ul>	
	SC3	<p><b>Participate in the Community Liaison Group</b></p> <p>Contractors must participate in the Community Liaison Group (CLG) that has been established and managed by North East Link Project, to facilitate community and stakeholder involvement for the construction phase of the project. Participation must include:</p> <ul style="list-style-type: none"> <li>• Attendance at meetings</li> <li>• Regular reporting of design and construction activities</li> <li>• Timely provision of relevant information, including response to issues raised by the group</li> <li>• Regular reporting and monitoring of community feedback, impacts and discussion of mitigation measures and their effectiveness.</li> </ul>	Design, construction
	SC4	<p><b>Minimise impacts of displacement of formal active recreation facilities</b></p> <p>Where formal active recreation facilities are displaced by the construction or operation of the project, the project will work in collaboration with facility operators, local Councils and relevant State authorities to identify relocation opportunities with the objective of accommodating displaced facilities and maintaining the continuity of those formal active recreational activities, except where otherwise agreed with the relevant facility owner. The project will prepare and implement a relocation plan, designed to achieve replacement of displaced facilities at suitable locations within a defined timeframe, to meet this objective.</p>	Design, construction, operation
	SC NEW2	<p><b>Minimise impacts on formal active recreation and other facilities</b></p> <p>Where construction or operation activities directly impact formal active recreation facilities or community infrastructure facilities such as schools, child care centres, and aged care centres, consultation must occur with facility operators, owners and user groups of the facilities to understand and, implement any practical measures that can be taken to avoid or minimise impacts. Such measures ought to achieve the continued operation of each facility, with suitable access and reasonable protection of amenity, except where otherwise agreed with relevant facility owners.</p>	Design, construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<b>15. Surface Water (SW)</b>			
<p>Water Act 1989</p> <p>Conservation, Forests and Lands Act 1987</p> <p>Water Industry Regulations 2006 (Vic)</p> <p>State Environment Protection Policy (Waters) 2018 (Vic)</p> <p>State Environment Protection Policy Prevention and Management of Contaminated Land 2002 (Vic)</p> <p>Victorian WorkCover Authority and Australian Standard AS1940 Storage Handling of Flammable and Combustible Liquids</p> <p>DELWP Integrated Water Management Framework for Victoria (September 2017)</p> <p>VicRoads Integrated Water Management Guidelines (June 2013)</p> <p>EPA Publications:</p> <p>275 (1991) Construction techniques for sediment pollution control</p>	SW1	<p><b>Discharges and runoff to meet State Environment Protection Policy (Waters)</b></p> <p>Meet the State Environment Protection Policy (Waters) requirements for discharge and run-off from the project, including by complying with the Victorian Stormwater Committee's Best Practice Environmental Management Guidelines for Urban Stormwater (as published by CSIRO in 1999 with assistance from EPA Victoria and others).</p>	Design, construction, operation
	SW2	<p><b>Design to include spill containment</b></p> <p>Design and construct the spill containment capacity of the stormwater drainage system for all freeway pavements (including ramps) to manage the risk of hazardous spills from traffic accidents at or prior to every stormwater outlet, to meet AustRoads requirements. The design and location of spill containment must consider the risk and potential impact of a spill, as well as the effectiveness in reducing the risks associated with a spill on the environment. Develop procedures for freeway roads and ramps to be implemented in response to a hazardous spill.</p>	Design, construction, operation
	SW3	<p><b>Waste water discharges to be minimised and approved</b></p> <p>The Surface Water Management Plan (refer EPR SW5) and OEMP must include requirements and methods for minimising, handling, classifying, treating, disposing and otherwise managing waste water.</p> <p>Any proposed discharge of waste water from the site must be approved by the relevant authority prior to discharges occurring and meet the State Environment Protection Policy (Waters) requirements.</p>	Construction, operation
	SW4	<p><b>Monitor water quality</b></p> <p>Develop and implement a surface water monitoring program prior to commencement of, and during construction, to assess surface water quality in multiple locations at suitable distances upstream and downstream of works to establish baseline conditions, and enable assessment of construction impacts on receiving waters.</p> <p>The surface water quality monitoring program must be implemented for a period up to three years after commencement of North East Link operation, or a lesser period agreed with the EPA, to assess the discharges and runoff from the project against SEPP requirements and confirm the effectiveness of environmental controls.</p> <p>The monitoring program must be developed in consultation with EPA Victoria and the asset owner/manager and as appropriate with reference to applicable policies and guidelines, including SEPP (Waters of Victoria), Victorian Stormwater Committee's Victoria Best Practice Environmental Management Guidelines for Urban Stormwater (as published by CSIRO in 1999 with assistance from EPA Victoria and others), EPA Victoria Publication 596 Point source discharges to streams: protocol for in-stream monitoring and assessment and Industrial Waste Resource Guideline 701 Sampling and analysis of waters, wastewaters, soils and wastes. The surface water monitoring program is to be used to inform the development and refinement of the Surface Water Management Plan (EPR SW5).</p>	Design, construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<p>480 Best Practice Environmental Management Environmental Guidelines for Major Construction Sites</p> <p>596 (1998) Point source discharges to streams: protocol for in-stream monitoring and assessment</p> <p>960 (2004) Temporary Environmental Protection Measures for Subdivision Construction Sites</p> <p>Victorian Stormwater Committee's Best Practice Environmental Management Guidelines for Urban Stormwater (as published by CSIRO in 1999 with assistance from EPA Victoria and others)</p> <p>Industrial waste resource guidelines IWRG701 Sampling and analysis of waters, wastewaters, soils and wastes</p>	SW5	<p><b>Implement a Surface Water Management Plan during construction</b></p> <p>Develop and implement a Surface Water Management Plan, in consultation with EPA Victoria, for construction that sets out requirements and methods for:</p> <ul style="list-style-type: none"> <li>• Best practice sediment and erosion control and monitoring, in general accordance with EPA Victoria publications 275 Construction techniques for sediment pollution control, 1698 Liquid and Storage Handling Guidelines, 480 Best Practice Environmental Management Environmental Guidelines for Major Construction Sites, 960 Temporary Environmental Protection Measures for Subdivision Construction Sites, and Industrial Waste Resource Guideline 701 Sampling and analysis of waters, wastewaters, soils and wastes</li> <li>• Maintaining the key hydrologic and hydraulic functionality and reliability of existing flow paths, drainage lines and floodplain storage</li> <li>• Retain existing flow characteristics to maintain waterway stability downstream of construction</li> <li>• Location and bunding of any contaminated material (including tunnel spoil and stockpiled soil) to the 1% AEP flood level and to the requirements of EPA Victoria and the relevant drainage authority</li> <li>• Works scheduling to reduce flood related risks</li> <li>• Bunding of significant excavations including tunnel portals and interchanges to an appropriate level during the construction phase</li> <li>• Protecting against the risk of contaminated discharge to waterways when working in close proximity to potential pollutant sources (eg landfill or sewer infrastructure)</li> <li>• Documenting the existing condition of all drainage assets potentially affected by the works (including their immediate surrounds) to enable baseline conditions to be established and potential construction impacts on these assets to be assessed and managed.</li> </ul>	Construction
	SW6	<p><b>Minimise risk from changes to flood levels, flows and velocities</b></p> <p>Permanent works and associated temporary construction works must not increase overall flood risk at relevant locations or modify the flow regime of waterways without the acceptance of the relevant drainage authority or asset owner (typically Melbourne Water) and in consultation with other relevant authorities (eg Council, Department of Transport, Parks Victoria, SES, emergency services).</p> <p>Flood risk should be appropriately assessed using modelling of the design of permanent and temporary works to demonstrate the resultant flood levels and risk profile in accordance with Standards for Infrastructure in Flood-Prone Areas (2019).</p> <p>This modelling analysis is to include sufficient events (at least up to and including the 1% AEP event) and scenarios (eg with and without blockage) to support the estimation of tangible (eg average annual damages) and intangible flood damages. If significant increases in flood risk are predicted for any events analysed, an assessment of overall flood risk considering tangible and intangible flood damages must be prepared and presented with appropriate mitigation measures for the acceptance of the relevant drainage authority or asset owner prior to commencement of construction the for relevant section of the works. If there are significant design changes during construction, the model must continue to be updated, as appropriate to represent those changes.</p>	Design, construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	SW7	<p><a href="#">Develop flood emergency management plans</a></p> <p>Develop and implement flood emergency management plans for each of construction and operation. Flood emergency management plans are to include but not be limited to measures to manage flood risk to construction sites (including consideration of scheduling works), the tunnels and tunnel portals including interchanges and substations, and operation, maintenance and emergency management procedures for flood protection works.</p>	Construction, operation
	SW8	<p><a href="#">Minimise impacts from waterway modifications</a></p> <p>Where waterway or flow regime modification is necessary, modifications will be designed and undertaken in a way that mitigates to the extent practicable the effects of changes to flow and minimises, to the extent practicable, the potential for erosion, sediment plumes, impacts on bed or bank stability and exposure or mobilisation of contaminated material during construction and operation to the requirements of Melbourne Water or the relevant drainage authority.</p> <p>Waterway modifications are to be designed and undertaken in a way that supports the visual and aesthetic amenity and environmental conditions (including habitat, connectivity, refuge and hydraulic conditions) to support aquatic ecosystems of the waterways having regard to relevant strategies, policies and plans for that waterway and in consultation with Melbourne Water or the relevant drainage authority.</p>	Design, construction
	SW9	<p><a href="#">Maintain bank stability</a></p> <p>Develop and implement appropriate measures to minimise erosion and protect bank stability of waterways affected by construction or operation activities both directly or indirectly (for example as a result of site access), to the requirements of Melbourne Water or the relevant drainage authority.</p>	Design, operation
	SW10	<p><a href="#">Provide for access to Melbourne Water and other drainage assets</a></p> <p>Provide adequate clearances and access for ongoing maintenance of Melbourne Water and other drainage authority assets to the requirements of the relevant drainage authority.</p>	Design, construction
	SW11	<p><a href="#">Adopt Water Sensitive Urban and Road Design</a></p> <p>Adopt and implement water sensitive urban design and integrated water management principles in the stormwater treatment design in consultation with the relevant asset owner or land manager and in general accordance with the Urban Design Strategy, the specifications of the relevant local council as applicable, and VicRoads Integrated Water Management Guidelines (June 2013), the Victorian Stormwater Committee's Victoria Best Practice Environmental Management Guidelines for Urban Stormwater (as published by CSIRO in 1999 with assistance from EPA Victoria and others) and the DELWP Integrated Water Management Framework for Victoria (September 2017).</p>	Design
	SW12	<p><a href="#">Minimise impacts on irrigation of sporting fields</a></p> <p>Maintain existing storage and available water supply of a quality that is suitable for the irrigation of sporting fields impacted by the project as necessary in consultation with the impacted stakeholders.</p>	Design, construction, operation

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	SW13	<p><b>Consider climate change effects</b></p> <p>The flood risk assessment (as required by EPR SW6) must consider current climate conditions as well as the potential effects of climate change on pre and post work scenarios for future climate conditions (ie increased rainfall intensity and sea-level rise) as predicted at the end of the asset's design life using RCP8.5 projections from CSIRO to the requirements of Melbourne Water or the relevant drainage authority.</p>	Design
	SW14	<p><b>Meet existing water quality treatment performance</b></p> <p>Retain or replace existing water quality treatment assets to meet or exceed water quality treatment performance as originally designed for that asset. In consultation with relevant asset owner or land manager, consider climate change effects and the potential for improved treatment outcomes where practicable.</p>	Design, construction
<b>16. Sustainability and Climate Change (SCC)</b>			
Protocol for Environmental Management (Greenhouse Gas Emissions and Energy Efficiency in Industry)  Infrastructure Sustainability Council of Australia rating tool	SCC1	<p><b>Implement a Sustainability Management Plan</b></p> <p>North East Link Project must set sustainability targets and specify ratings to be achieved under the Infrastructure Sustainability Council of Australia's Infrastructure Sustainability Rating Tool. Contractors must develop and implement a Sustainability Management Plan that contains measures to meet, as a minimum, the sustainability targets and specified ratings.</p>	Design, construction, operation
	SCC2	<p><b>Minimise greenhouse gas emissions</b></p> <p>Integrate sustainable design practices into the design process and implement these to minimise, to the extent practicable, greenhouse gas emissions arising from construction, operation and maintenance of North East Link.</p>	Design, construction, operation
	SCC4	<p><b>Minimise and appropriately manage waste</b></p> <p>Develop and implement management measures for waste (excluding soils) minimisation during construction and operation in accordance with the Environment Protection Act 1970 waste management hierarchy and management options, to address:</p> <ul style="list-style-type: none"> <li>• Litter management</li> <li>• Construction and demolition wastes including, but not limited to, washing residues, slurries and contaminated water</li> <li>• Organic wastes</li> <li>• Inert solid wastes.</li> </ul>	Construction, operation
	SCC5	<p><b>Minimise potable water consumption</b></p> <p>Stormwater, recycled water and groundwater inflow to tunnels or other water sources must be used in preference to potable water for construction activities, including concrete mixing and dust control, where this is available, practicable, of suitable quality, and meets health and safety requirements.</p>	Construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
<b>17. Traffic and Transport (TT)</b>			
Planning and Environment Act 1987 Road Management Act 2004	T1	<p><b>Optimise design performance</b></p> <p>Optimise the design of the works in consultation with appropriate road management authorities, public transport authorities, relevant land managers and local councils as part of the detailed design process to:</p> <ul style="list-style-type: none"> <li>• Minimise adverse impact on travel times for all transport modes, including walking and cycling</li> <li>• Maintain, and where practicable, enhance the existing traffic movements at interchanges</li> <li>• Design the road, walking and cycling and public transport elements to meet relevant road and transport authority requirements</li> <li>• Maintain, and where practicable, enhance pedestrian movements, bicycle connectivity, and shared use paths, including access (both vehicular and pedestrian) to public open space and reserves</li> <li>• Work with relevant public transport authorities to minimise impacts on buses, trams and rail and, where practicable, enhance public transport facilities and services that cross or run parallel to the alignment of North East Link</li> <li>• Minimise loss of car parking in consultation with relevant local councils.</li> </ul>	Design

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	T2	<p><b>Transport Management Plan(s) (TMP)</b></p> <p>Prior to commencement of relevant works, develop and implement Transport Management Plan(s) (TMP) to minimise disruption to affected local land uses, traffic, car parking, public transport (rail, tram and bus), pedestrian and bicycle movements and existing public facilities during all stages of construction.</p> <p>The TMP must be informed and supported by an appropriate level of transport modelling and must include:</p> <ul style="list-style-type: none"> <li>• Requirements for maintaining transport capacity for all travel modes in the peak periods</li> <li>• Requirements for limiting the amount of construction haulage during the peak periods</li> <li>• A monitoring program to assess the effectiveness of the TMPs on all modes of transport</li> <li>• Where monitoring identifies adverse impacts, implement practicable mitigation measures</li> <li>• Consideration of construction activities for other relevant major projects occurring concurrently with construction activities for North East Link and potentially impacting modes of transport in the same area</li> <li>• Potential routes for construction haulage and construction vehicles travelling to and from the project construction site, recognising sensitive receptors and avoiding the use of local streets where practicable</li> <li>• Suitable measures, developed in consultation with emergency services, to ensure emergency service access is not inhibited as a result of project construction activities</li> <li>• Provision of alternative parking where practicable to replace public and commuter parking lost as a result of project construction activities</li> <li>• Requirements to minimise impacts on local streets, community and commercial facilities by providing parking for construction workers at construction compounds where practicable</li> <li>• Measures to ensure connectivity and safety for all transport network users during construction</li> <li>• Measures to limit the extent of road closures</li> <li>• Consultation with the Department of Transport and relevant transportation authorities.</li> </ul> <p>A TMP may be split into precincts where appropriate but must consider other precinct TMPs through the Transport Management Liaison Group as per EPR T3.</p> <p>TMPs must be submitted to the relevant authority for approval.</p>	Construction

Applicable Legislation and Policy	EPR Code	Environmental Performance Requirement	Phase
	T3	<p><a href="#">Transport Management Liaison Group</a></p> <p>A Transport Management Liaison Group (TMLG) must be established and convene prior to the commencement of any works that may impact on existing roads, paths or public transport infrastructure. The TMLG must include representatives from the State, the Department of Transport, emergency services, the project, relevant transportation authorities and relevant local councils.</p> <p>The TMLG will be a forum for exchange of information and discussion of issues associated with Transport Management Plans. This must include review of proposed haulage routes for construction sites to minimise reliance on a single haulage route between Bell Street and the M80 Ring Road and facilitate different sites using different haulage routes.</p> <p>The TMLG must be provided with the Transport Management Plans, details as to timing of implementation, information about construction traffic monitoring conducted by the project, and other reports as relevant.</p> <p>Where construction activities have the potential to significantly impact on specific stakeholder or community group facilities, the TMLG should be satisfied that there has been adequate consultation to inform the Transport Management Plans.</p> <p>The TMLG must meet at least monthly until the completion of construction.</p>	Design, Construction
	T4	<p><a href="#">Road safety design</a></p> <p>Undertake independent road safety audits after each stage of detailed design and after construction. The project design and operational activities must meet all relevant road and transport authority requirements with respect to transport network user safety.</p>	Design, construction, operation
	T5	<p><a href="#">Traffic monitoring</a></p> <p>Undertake traffic monitoring on selected roads (arterial and non-arterial) identified in consultation with the relevant transportation authorities and local council pre-construction, at six monthly intervals during construction, and up to two years after construction is complete. As part of the selection process, consideration must be given to roads that carry public transport services. Implement local area traffic management works in consultation with the local relevant councils.</p> <p>Develop and implement traffic performance management to monitor conditions during construction. Real time traffic information must be provided to drivers.</p>	Design, construction, operation