

**EDITHVALE AND BONBEACH LEVEL CROSSING REMOVAL PROJECT
INQUIRY AND ADVISORY COMMITTEE**

ENVIRONMENTAL PERFORMANCE REQUIREMENTS

This table is an initial response to the issues raised in the evidence and public submissions as at the date of the document and will be updated during the course of the hearing. It is made subject to the further submissions of LXRA including its formal right of reply to the IAC.

EPR		Discipline	Comment
AH1	<p>Cultural Heritage Management Plan Comply with and implement any Cultural Heritage Management Plan approved under the <i>Aboriginal Heritage Act 2006</i> that applies to the projects.</p>	Aboriginal heritage	
AQ1	<p>Air quality (construction) Manage construction activities to minimise dust, odour and other emissions in accordance with EPA Victoria Publication 480 <i>Environmental Guidelines for Major Construction Sites</i>.</p>	Air Quality	
AQ2	<p>Air quality management Control the emission of smoke, dust, fumes and other pollution into the atmosphere during construction and operation, in accordance with the State Environment Protection Policy (Air Quality Management 2001) and State Environment Protection Policy (Ambient Air Quality) 1999.</p>	Air Quality	

EPR	Discipline	Comment
<p>B1 Business Disruption Plan</p> <p>Minimise impacts to local business through preparation and implementation of a business disruption plan. The business disruption plan must be consistent with an approved Community and Stakeholder Engagement Management Plan (EPR reference SC1) and include:</p> <ul style="list-style-type: none"> a. transport planning prior to road closures to minimise impacts to business access and parking (EPR reference T1) b. a process for communication with traders and businesses c. management of potential amenity impacts during construction (EPR references AQ1, AQ2, NV2, and NV3). 	Business	
<p>CL1 Spoil Management Plan</p> <p>Prior to construction (excluding preparatory works), prepare and implement a Spoil Management Plan(s) in accordance with relevant regulations, standards or best practice guidelines. The plan must be developed in consultation with EPA Victoria. The plan shall be prepared prior to the commencement of construction (excluding preparatory works) and include:</p> <ul style="list-style-type: none"> a. applicable regulatory requirements b. identifying nature and extent of spoil (clean fill and contaminated spoil) across the construction areas c. roles and responsibilities d. identification of management measures for storage, handling and transport of spoil for the protection of health, amenity and the environment e. identification, design and development of specific management measures for temporary stockpile areas f. identifying potential sites for management for disposal of any spoil, <u>including consultation with Kingston City Council to identify nearby sites within the Kingston municipality</u> g. monitoring and reporting requirements h. identifying locations and extent of any prescribed industrial waste (including asbestos) and characterising prescribed industrial waste prior to excavation i. identifying suitable sites for disposal of prescribed industrial waste 	CASS/ Contamination/ Spoil	

EPR	Discipline	Comment
The Spoil Management Plan shall include an Acid Sulfate Soil Management Plan (refer to EPR reference CL2).		
<p>CL2 Acid Sulfate Soil Management Plan</p> <p>Prepare and implement an Acid Sulfate Soil Management Plan prior to construction of the project to the satisfaction of EPA Victoria, in accordance with the Industrial Waste Management Policy (<i>Waste Acid Sulfate Soils</i>) 1999, EPA Victoria Publication 655.1 <i>Acid Sulfate Soil and Rock</i>, and relevant EPA regulations, standards and best practice guidance in consultation with EPA Victoria. This plan will include:</p> <ol style="list-style-type: none"> identify locations and extent of potential acid sulfate soils. assess potential impact for human health, odour and the environment identify and implement measures to prevent oxidation of acid sulfate soils wherever possible identify suitable sites for management, reuse or disposal of acid sulfate soils. 	CASS/ Contamination/ Spoil	
<p>CL3 Waste management</p> <p>Manage wastes during the construction of the projects through development and implementation of a Construction Environmental Management Plan in accordance with EPA Victoria Publication 480 <i>Environmental Guidelines for Major Construction Sites 1996</i>, EPA Victoria Publication 347.1 <i>Bunding 2015</i>, Australian Standard AS1940 <i>Storage and Handling of Flammable and Combustible Liquids</i>, and relevant EPA Victoria and Victorian WorkCover Authority regulations, standards and best practice guidance that includes:</p> <ol style="list-style-type: none"> application of the waste management hierarchy in assessing waste management options contamination and waste management requirements (e.g. use of waste and recycling facilities, maintenance of a clean site policy) designated vehicle refuelling area chemical management procedures, such as minimising use and storage of chemicals on site, bunded storage facilities to ensure spills, washing residues, slurries or other contaminated water can be contained, and are managed/disposed of appropriately location and type of spill kits required staff training and competence requirements 	CASS/ Contamination/ Spoil	

EPR	Discipline	Comment
<ul style="list-style-type: none"> g. use of well-maintained plant to minimise the potential for spills to occur h. procedures to remove, treat and/or dispose soil that becomes contaminated due to a fuel or chemical spill i. storage of litter in bins from which it cannot escape (temporary fencing may be used as a secondary containment measure for litter). 		
<p>CL4 Acidic and/or contaminated groundwater (construction)</p> <p>Develop and implement measures to manage acidic and/or contaminated groundwater, in accordance with the State Environment Protection Policy (Groundwaters of Victoria) 1997, State Environment Protection Policy (Waters of Victoria) 2004, State Environment Protection Policy (Prevention and Management of Contamination of Land) 2002, Water Industry Regulations 2006, and relevant EPA Victoria regulations, standards and best practice guidance, which must include:</p> <ul style="list-style-type: none"> a. a baseline groundwater quality assessment (taking into account site history) at least three months prior to commencement of construction works, where applicable b. implementing a system to manage and/or dispose of intercepted groundwater (if required) which may be a trade waste agreement with relevant utility authority or other measures in accordance with relevant guidelines and legislation (if a trade waste agreement is not granted) c. collection, treatment, disposal and handling of contaminated groundwater and/or slurries, including vapours d. monitoring of intercepted groundwater quality monitoring during construction and water quality monitoring at run-off containment areas e. implementing contamination plume management (if required) f. treating and monitoring impacted groundwater (including vapours) prior to disposal, in accordance with licence and/or agreement. 	<p>CASS/ Contamination/ Spoil</p>	
<p>CL5 Groundwater Quality Mitigation Plan (operation)</p> <p>Prepare and fund the implementation-preparation of a Groundwater Quality Mitigation Plan in consultation with the land manager of any affected land parcels to manage and mitigate any (negative) impacts from changes to groundwater quality and/or levels as a result of the projects.</p> <p>The Groundwater Quality Mitigation Plan must include:</p> <ul style="list-style-type: none"> a. measures to manage any negative impacts to land use or on the beneficial use of groundwater caused by acidification that is attributable to the 	<p>CASS/ Contamination/ Spoil</p>	<p>In response to matters arising during the hearing and to improve drafting.</p>

EPR		Discipline	Comment
	<p>project(s) so as to maintain existing beneficial use of groundwater</p> <p>b. measures to manage any <u>negative</u> impacts <u>to land use or</u> on the beneficial use of groundwater caused by contaminated groundwater plume transfer or migration that is attributable to the project(s) so as to maintain existing beneficial use of groundwater</p> <p>c. measures to manage any <u>negative</u> impacts on <u>land use or</u> the beneficial use of groundwater caused by changes to salinity that is attributable to the project(s) so as to maintain existing beneficial use of groundwater</p> <p>ed. <u>consultation with any affected landowners</u></p> <p>ef. <u>identify the entity or entities, and the roles and responsibilities for implementation of mitigation measures identified (or relevant component thereof), in the event implementation of the Groundwater Quality Mitigation Plan is if triggered under the Groundwater Management and Monitoring Plan.</u></p> <p>The Groundwater Quality Mitigation Plan must be implemented if applicable trigger <u>events or</u> levels contained in the Groundwater Management and Monitoring Plan (EPR reference GW3) occur are met.</p>		
EMF1	<p>Environmental Management System</p> <p>Implement an Environmental Management System during construction that is certified to AS/NZS ISO 14001: 2015 <i>Environmental management systems - Requirements with guidance for use</i>.</p>	Environmental management	
EMF2	<p>Environmental management plans</p> <p>Prepare and implement a Construction Environmenta Management Plan(s) and other plans as required by the EPRs.</p> <p>The management plan(s) should be prepared in accordance with EPA Victoria Publication 480 <i>Environmental Guidelines for Major Construction Sites</i> (EPA Victoria 1996).</p> <p>The process for development and implementation of the management plan(s) must include consultation as specified in the Environmental Management Framework, including with the Kingston City Council, VicRoads, Melbourne Water, EPA Victoria, as relevant to their statutory responsibilities.</p> <p>The management plan(s) must be in place prior to commencement of construction excepting ancillary activities, preparatory and enabling works.</p>	Environmental management	
EMF3	<p>Environmental incidents</p> <p>Prepare and implement a process for managing environmental incidents including:</p>	Environmental management	

EPR		Discipline	Comment
	a. classification and definition of environmental incidents b. notification requirements (including timing) to LXRA and relevant regulators c. incident investigation.		
FF1	Native vegetation and habitat Any native vegetation removal must be avoided, minimised and managed in accordance with the <i>Guidelines for the removal, destruction or lopping of native vegetation 2017</i> .	Ecology	
FF2	Flora and Fauna Guarantee Act 1988 permits A permit to take and destroy flora species protected under the <i>Flora and Fauna Guarantee Act 1988</i> is required. All permits must be obtained prior to the commencement of works which require approval under the Act.	Ecology	
FF3	Weeds and pathogens Develop and implement measures to avoid the spread, or introduction of weeds and pathogens during construction, including vehicle and equipment hygiene.	Ecology	
FF4	Fauna Minimise the removal of habitat for fauna. Where fauna habitat is identified for removal, engage a suitably qualified wildlife handler and recovery specialist to check for fauna occupancy and ensure compliance with the <i>Wildlife Act 1975</i> . All necessary authorisations must be obtained prior to commencement of works.	Ecology	
FF5	Protection of retained/adjacent vegetation and habitat Minimise or avoid unintended impacts on retained and/or adjacent vegetation and habitat by including measures in the Construction Environmental Management Plan(s) and other plans including tree protection zones, environmental no-go zones, fencing and signage, directional lighting, and best practice spill, sedimentation and water runoff management.	Ecology	
FF6	Landscaping for wildlife Incorporate native plant species into landscaping that provide wildlife habitat within level crossing removal project areas where appropriate.	Ecology	
FF7	Foreshore Native Vegetation MeasuresMonitoring and Mitigation Plan Prepare and fund the implementation of a Foreshore Native Vegetation Monitoring and	Ecology	In response to matters arising during the hearing and improve drafting.

EPR	Discipline	Comment
<p>Mitigation Plan in consultation with the land manager.</p> <p>The Foreshore Native Vegetation Monitoring and Mitigation Plan must:</p> <ul style="list-style-type: none"> a. identify areas of foreshore native vegetation potentially impacted by a reduction of groundwater levels as a result of the project(s) b. include a process to monitor groundwater to identify a reduction of groundwater levels as a result of the project(s) that could result in degradation or a loss of foreshore native vegetation c. include a process developed by a suitably qualified ecologist for monitoring of foreshore native vegetation potentially impacted by a reduction of groundwater levels as a result of the project(s) d. include criteria for determining whether a change in the extent or condition of foreshore native vegetation is attributable to the project(s) e. include measures, such as ecological restoration measures developed by a suitably qualified ecologist, to be implemented to mitigate degradation or loss of foreshore native vegetation attributable to a reduction of groundwater levels as a result of the project(s) f. include the frequency and duration of monitoring of the foreshore native vegetation and timing for implementation of mitigation measures if required g. detail roles and responsibilities for implementation, in the event implementation of the Foreshore Native Vegetation Monitoring and Mitigation Plan is triggered under the Groundwater Management and Monitoring Plan. <p>The Foreshore Native Vegetation Monitoring and Mitigation Plan must be implemented if applicable trigger levels contained in the Groundwater Management and Monitoring Plan (EPR reference GW3) are met.</p> <p>[Potential alternative FF7—Subject to discussion with Kingston City Council</p> <p>Foreshore Native Vegetation</p> <p>Fund the Kingston City Council to enhance foreshore native vegetation. The funding will be equivalent to the cost of purchasing credits to offset:</p> <ul style="list-style-type: none"> a. 0.788 general habitat units with a minimum strategic biodiversity value score of 0.202 and 0.506 general habitat units with a minimum strategic biodiversity value score of 0.295 b. 6 Large old trees.] <p>Provide to Kingston City Council funding to be utilised to enhance foreshore</p>		

EPR	Discipline	Comment
<p><u>native vegetation. The funding amount may be guided by an offset assessment and credit value pursuant to the DELWP Guidelines and/or by agreement including as to payment timing.</u></p> <p><u>Monitoring and potential mitigation in respect of groundwater as contemplated in EPR's GW3 and CL5.</u></p>		
<p>FF8 Edithvale Wetland Monitoring and Mitigation Plan</p> <p><u>Prior to the completion of the Edithvale Project</u> prepare and fund the implementation of a Edithvale Wetland Monitoring and Mitigation Plan in consultation with the Commonwealth Department of Environment and Energy, the Victorian Department of Environment, Land, Water and Planning, <u>Melbourne Water</u> and <u>any other relevant</u> the land manager.</p> <p>The Edithvale Wetland Monitoring and Mitigation Plan must include <u>be in two parts monitoring and potential mitigation:</u></p> <p><u>In respect of monitoring:</u></p> <p>a. a process to review data collected by Melbourne Water through existing and ongoing baseline monitoring of groundwater levels, surface water levels and water quality within and around the Edithvale Wetland <u>together with a data and monitoring gap analysis comparing monitoring or any conducted and information required to assess potential impacts of the Edithvale project</u></p> <p><u>b. detailing those monitoring steps and data collection not otherwise undertaken or able to be sourced from Melbourne Water or other entity, further monitoring measures identified and (c) (d) (e) (f) and (g)</u></p> <p>b<u>c</u> monitoring of groundwater levels and water quality at representative and strategic locations within and around the Edithvale Wetland if<u>as</u> required</p> <p>c<u>d</u> the frequency and duration of monitoring of groundwater levels and water quality at representative and strategic locations within and around the Edithvale Wetland if<u>as</u> required</p> <p>d<u>e</u> monitoring of surface water quality at representative and strategic locations within the Edithvale Wetland to differentiate temporal trends from long term changes related to groundwater if<u>as</u> required</p> <p>e<u>f</u> criteria such as:</p> <ul style="list-style-type: none"> i. surface water levels ii. water quality 	<p>Ecology</p>	<p>In response to matters arising during the hearing and improve drafting.</p>

EPR	Discipline	Comment
<ul style="list-style-type: none"> iii. condition and extent of relevant vegetation communities iv. condition and extent of habitat for important birds <p>for determining whether a change at the Edithvale Wetland is attributable to the project(s) and requires mitigation</p> <p><u>g. monitoring must continue for 10 years, or any further period reasonably required if any negative impacts of the Edithvale Project on the Edithvale Wetland have been identified</u></p> <p>f. in respect of mitigation mitigation measures to be implemented in the event applicable change criteria are met, such as:</p> <ul style="list-style-type: none"> i. ecological restoration measures developed by a suitably qualified ecologist that would be implemented to mitigate the effect of impacts attributable to the project(s) ii. engineering measures to reinstate the Edithvale Wetlands to pre-impact conditions to the extent practicable <p>g. — For both monitoring and mitigation the plan must identify a relevant entity or entities and the roles and responsibilities for monitoring and mitigation implementation, in the event implementation of the Edithvale Wetland Monitoring and Mitigation Plan is triggered under the Groundwater Management and Monitoring Plan.</p> <p>The Edithvale Wetland Monitoring and Mitigation Plan <u>mitigation measures</u> must be implemented if applicable <u>events or</u> trigger levels contained in the Groundwater Management and Monitoring Plan (EPR reference GW3) are met-occur.</p>		
<p>GM1 Pre-construction condition survey</p> <p>Conduct a pre-construction condition survey(s) for buildings, structures and other assets predicted to be damaged as a result of vibration, subsidence or ground movement caused by the project(s).</p> <p>Develop and maintain a database of pre-construction and as-built condition information for each potentially affected building, structure and other asset identified as being in an area susceptible to damage (see EPR reference GM2), specifically including:</p> <ul style="list-style-type: none"> a. identification of buildings, structures and other assets predicted to be damaged resulting from vibration, subsidence or ground movement caused by the project(s) b. results of pre-construction condition surveys of buildings, structures, and other assets predicted to be damaged as a result of vibration, subsidence or ground movement caused by the project(s), to establish baseline conditions and potential vulnerabilities 	Land stability	In response to matters arising during the hearing and improve drafting.

EPR	Discipline	Comment
<ul style="list-style-type: none"> c. records of consultation with land owners in relation to the pre-construction condition surveys d. post-construction stage condition surveys conducted, where required, to ascertain if any damage has been caused to any building, structure or other asset as a result of vibration, subsidence or ground movement caused by the project(s) e. proactively share with the land owner the results of pre-construction condition surveys, post-construction condition surveys and records of consultation f. ensure all stakeholder engagement activities are undertaken in accordance with the Community and Stakeholder Engagement Management Plan (see EPR reference SC1). 		
<p>GM2 Repairs to properties due to vibration, subsidence or ground movement</p> <p>For buildings, structures and other assets damaged as a result of vibration, subsidence or ground movement caused by the project(s), undertake required repair works or other actions as agreed with the property owner.</p>	Land stability	In response to matters arising during the hearing and improve drafting.
<p>GW1 Rail trench design</p> <p>The projects will be designed as rail trenches to meet applicable design standards and comply with the EPRs developed for the projects.</p> <p>The Edithvale project design process and design must-will include:</p> <ul style="list-style-type: none"> a. peer review (EPR GW4) b. a groundwater management system <u>to transfer groundwater from east to west so as to minimise groundwater level changes</u> c. with-incorporate appropriate engineering redundancy/contingency to ensure the proposed design is capable of achieving the groundwater performance outcomes (EPR reference GW2) d. <u>design components including:</u> <ul style="list-style-type: none"> i. ability to inspect and maintain the constructed design solutions contemplated at paragraphs b. and c. ii. <u>monitoring the quality of groundwater diverted or transferred</u> iii. <u>measures to ensure contaminated groundwater, if transferred, is transferred to the same or similar preconstruction destination, or otherwise dealt with</u> 	Groundwater	In response to the recommendation of Tony Cauchi (expert report, sections 4.3.1 and 4.3.3).
<p>GW2 Groundwater performance outcomes</p>	Groundwater	In response to the recommendation of Tony Cauchi

EPR	Discipline	Comment
<p>The tanked rail trenches at Edithvale and Bonbeach must be designed and operate to ensure that changes to ground water levels as a result of the projects do not result in:</p> <ul style="list-style-type: none"> a. groundwater mounding that increases waterlogging at ground level b. groundwater drawdown that causes damage to buildings, structures and other assets as a result of ground subsidence or an adverse impact to subsurface structures c. degradation to groundwater quality as a result of acidification, changes to salinity, transfer of existing contamination, or groundwater plume migration that would have a negative effect on land use or preclude protected beneficial use of groundwater d. changes to groundwater that would have a negative effect significant impacts on groundwater dependent ecosystems <p>The performance of the installed rail trenches will be maintained (EPR reference GW5) and monitored (EPR reference GW3) to confirm they are not having any both monitor and mitigate impacts on groundwater levels and quality beyond those set out above. Further monitoring and mitigation measures would be implemented if a change to groundwater level or quality that is are not in accordance with this, or other relevant EPR's is are observed (EPR references FF7, FF8, CL5).</p>		<p>(expert report, sections 4.3.1 and 4.3.3), matters arising during the hearing and improve drafting.</p>
<p>GW3 Groundwater Management and Monitoring Plan</p> <p>Prior to construction (excluding preparatory works), prepare and fund the implementation of a Groundwater Management and Monitoring Plan to the satisfaction of EPA Victoria and relevant water authorities to monitor and manage predicted and potential impacts to groundwater as a result of the project(s) following construction of the piled trench walls.</p> <p>The Groundwater Management and Monitoring Plan must be prepared prior to the construction of the piled trench walls and must include:</p> <ul style="list-style-type: none"> a. detailed groundwater monitoring parameters including timing and location of monitoring bores a.b parameters and timing to monitor potential groundwater contamination diverted due to the Edithvale project b.c a groundwater monitoring program for at least 10 years c.d clear trigger event descriptions or levels for changes in groundwater level or quality that require one or more of the following plans or other actions to be implemented: <ul style="list-style-type: none"> i. Groundwater Quality Mitigation Plan (EPR reference CL5) 	<p>Groundwater</p>	<p>In response to matters arising during the hearing and improve drafting.</p>

EPR	Discipline	Comment
<ul style="list-style-type: none"> ii. Foreshore Native Vegetation Monitoring and Mitigation Plan (EPR reference FF7)actions to maintain or reinstate compliance with groundwater performance outcomes (EPR reference GW2) iii. Edithvale Wetland Monitoring and Mitigation Plan (EPR reference FF8) d. <u>identify an entity or entities and the</u> roles and responsibilities for implementation of the Groundwater Management and Monitoring Plan e. periodic review <u>as required, and not less than every second year,</u> to consider the adequacy of the groundwater monitoring program and the need for future groundwater monitoring. <p>Plans for the monitoring and <u>potential</u> mitigation of impacts to <u>infrastructure and</u> specific environmental assets must be prepared prior to handover of the constructed asset to the rail infrastructure asset manager.</p>		
<p>GW4</p> <p>Independent peer review</p> <p>Prior to construction (excluding preparatory works):</p> <ul style="list-style-type: none"> a. the proposed design of the Edithvale project must be peer reviewed by an appropriately qualified specialist to confirm that the proposed design (EPR reference GW1) is capable of achieving the groundwater performance outcomes (EPR reference GW2) b. the Groundwater Management and Monitoring Plan (EPR reference GW3) must be peer reviewed by an appropriately qualified specialist. The appointment of the peer reviewer for this plan must be to the satisfaction of EPA Victoria. 	Groundwater	In response to the submission of the EPA and the recommendation of Mark Stuckey (expert report section 7.3).
<p>GW5</p> <p>Operational maintenance</p> <p>The Edithvale project must be inspected and maintained to ensure that the groundwater management system continues to perform effectively.</p>	Groundwater	In response to matters arising during the hearing.
<p>HH1</p> <p>Unidentified historical archaeological sites</p> <p>Minimise impacts on any unidentified historical archaeological sites and values discovered during construction through the development and implementation of an archaeological discovery protocol. The management protocol would be consistent with the <i>Heritage Act 2017</i> and developed in consultation with Heritage Victoria, and include a procedure for ceasing work if remains are discovered, notifying Heritage Victoria, obtaining consent and dealing with remains.</p>	Historic heritage	

EPR		Discipline	Comment
HH2	<p>Heritage overlay sites</p> <p>Avoid adverse impacts to the Chelsea Clock Tower and Chelsea Railway Station during construction through the implementation of no-go zones through the environmental management plan(s) and other plans if required. Undertake a pre-condition survey in accordance with EPR reference GM1.</p>	Historic heritage	
HH3	<p>Heritage values</p> <p>Avoid or minimise, to the extent practicable, adverse visual impacts on adjoining heritage places, and maintain landscape character and significant heritage precinct values (where relevant) by applying the urban design framework and project specific Urban Design Guidelines during the design development process.</p>	Historic heritage	
LP1	<p>Land use (construction)</p> <p>The construction approach should:</p> <ol style="list-style-type: none"> avoid or minimise impacts to existing land uses on private and public land (including public open space) from temporary works and permanent structures as far as practicable reduce the disruption, to the extent practicable, to current users of public and council land resulting from temporary occupation include opportunities to implement landscaping enhancement. 	Land Use	
LV1	<p>Landscape and visual opportunities</p> <p>Minimise negative landscape and visual impacts, and maximise opportunities for enhancement of public amenity and facilities to the extent practicable, through the application of the Urban Design Guidelines specific to each project in consultation with relevant stakeholders, including Kingston City Council.</p>	LVIA	
LV2	<p>Lighting</p> <p>Design lighting used during operation of permanent structures in accordance with relevant standards to minimise light spillage and protect the amenity of adjacent land uses to the extent practicable.</p>	LVIA	
LV3	<p>Light spillage</p> <p>Light spillage must be minimised during construction to protect the amenity of adjacent land uses to the extent practicable.</p> <p>The environmental management plan(s) and other plans must include requirements and</p>	LVIA	

EPR	Discipline	Comment									
<p>methods to minimise light spillage, to the extent practicable, during construction to protect the amenity of adjacent and surrounding residential land uses, neighbourhoods, parks, community facilities including urban environments, and any known significant native fauna habitat, in consultation with relevant stakeholders.</p>											
<p>NV1</p> <p>Operational noise</p> <p>Design must ensure airborne noise generated by train movements at sensitive receptor locations are in accordance with the Passenger Rail Infrastructure Noise Policy 2013.</p> <table border="1" data-bbox="300 507 1176 1077"> <thead> <tr> <th>Time</th> <th>Type of receiver</th> <th>Investigation threshold</th> </tr> </thead> <tbody> <tr> <td>Day (6am – 10pm)</td> <td> <ul style="list-style-type: none"> Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks Noise-sensitive community buildings, including schools, kindergartens, libraries </td> <td> 65 dBL_{Aeq} and a change in 3 dB(A) or more or 85 dBL_{Amax} and a change in 3 dB(A) or more </td> </tr> <tr> <td>Night (10pm – 6am)</td> <td> <ul style="list-style-type: none"> Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks </td> <td> 60 dBL_{Aeq} and a change in 3 dB(A) or more or 85 dBL_{Amax} and a change in 3 dB(A) or more </td> </tr> </tbody> </table> <p>Design fixed assets to achieve compliance with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1.</p>	Time	Type of receiver	Investigation threshold	Day (6am – 10pm)	<ul style="list-style-type: none"> Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks Noise-sensitive community buildings, including schools, kindergartens, libraries 	65 dBL _{Aeq} and a change in 3 dB(A) or more or 85 dBL _{Amax} and a change in 3 dB(A) or more	Night (10pm – 6am)	<ul style="list-style-type: none"> Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks 	60 dBL _{Aeq} and a change in 3 dB(A) or more or 85 dBL _{Amax} and a change in 3 dB(A) or more	<p>Noise/Vibration</p>	
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<p>NV2</p> <p>Construction noise</p> <p>Prior to construction (excluding preparatory works), prepare a Construction Noise and Vibration Management Plan for the projects in consultation with EPA Victoria and Kingston City Council.</p> <p>Manage construction noise and vibration in accordance with EPA Victoria Publication 1254 <i>Noise Control Guidelines, 2008</i> unless otherwise specified in the Construction Noise and Vibration</p>	<p>Noise /Vibration</p>										

EPR	Discipline	Comment
<p>Management Plan prepared for the projects.</p> <p>The Construction Noise and Vibration Management Plan must be prepared prior to commencement of construction (excluding preparatory works) and include:</p> <ul style="list-style-type: none"> a. the identification of sensitive receptors along the project alignment b. details of construction activities and an indicative schedule for construction works, including the identification of noise and/or vibration generating construction activities that have the potential to impact sensitive receptors c. measures to ensure effective monitoring of noise and vibration associated with construction d. how construction noise (including truck haulage) and vibration will be minimised, including: <ul style="list-style-type: none"> i. the scheduling of noisy works to typical construction hours where feasible (i.e. Monday to Friday 07:00 am to 6:00 pm, and Saturday 07:00 am to 1:00 pm) ii. limiting night works outside of the main occupation periods iii. the planning of site works to limit vehicle movements to certain locations and time periods iv. the substitution of noisy plant or processes with quieter options (e.g. broadband reversing and movement alarms instead of conventional beepers) v. the provision of temporary noise barriers where practicable vi. monitoring of noise and/or vibration associated with construction vii. notifying residents who may be impacted by noise and/or vibration in advance of the works viii. a procedure for managing complaints. <p>The plan must outline airborne noise management levels and mitigation measures for evening and night time works. The management level is not a noise limit or target, but represents noise levels above which community reaction may be adverse and which should trigger mitigation actions to minimise the noise impact.</p> <p>Depending on noise levels, noise mitigation measures may include an offer of respite and relocation, in accordance with a Respite and Relocation Policy (see EPR reference SC2) and Community and Stakeholder Engagement Management Plan (see EPR reference SC1).</p>		

EPR		Discipline	Comment
NV3	<p>Construction vibration</p> <p>Identify potential sensitive receptors (including heritage places) and potential impacts from vibration during the construction period. Where relevant, conduct condition surveys and monitoring of sensitive receptors.</p> <p>For human comfort, implement management actions if the Guideline Targets in Table 1 in BS6472-1:2008 for continuous, intermittent, or impulsive vibration are not achieved.</p> <p>For structural damage to buildings, implement management actions if the Guideline Targets in DIN4150-3:1999 for structural damage to buildings are not achieved.</p> <p>If impacts from vibration are anticipated, management and mitigation measures may include:</p> <ol style="list-style-type: none"> substituting high vibration plant or processes with lower vibration options utilising vibration monitoring to inform management and mitigation relocation of residents (EPR reference SC2) communication with potentially affected residents in accordance with the Community and Stakeholder Engagement Management Plan (EPR reference SC1). 	Noise /Vibration	In response to the recommendation of Kym Burgemeister (expert report, page 4).
SC1	<p>Community and Stakeholder Engagement Management Plan</p> <p>Prior to construction (excluding preparatory works), prepare and implement a Community and Stakeholder Engagement Management Plan in consultation with Kingston City Council that:</p> <ol style="list-style-type: none"> identifies all project activities that potentially impact on community and business operations, and provides for well-coordinated communication and engagement processes consults with and addresses needs of vulnerable groups that would be impacted by the project such as the elderly, socio-economically disadvantaged groups and children consults with and addresses needs of users of community facilities impacted by the project such as schools, child care, aged care, and caravan parks sets out processes and measures to provide advanced notice to key stakeholders and other potentially affected stakeholders of construction activities (including any staged works, early works, main works, or out of hours works), significant milestones, changed traffic conditions, interruptions to utility services, changed access and parking conditions, periods of predicted high noise and vibration activities, including contact 	Social	

EPR	Discipline	Comment
<p>details for enquiries/complaints</p> <p>e. provides for any interested stakeholder to register their contact details to ensure they are automatically advised of planned construction activities, project progress, mitigation measures and intended reinstatement measures where applicable</p> <p>f. documents a complaints management process (including processes and measures for registering, managing and resolving complaints) consistent with Australian Standard AS/NZS 10002: 2014 <i>Guidelines for Complaint Management in Organisations</i>.</p>		
<p>SC2</p> <p>Respite and Relocation Policy</p> <p>Prior to construction (excluding preparatory works), prepare and implement a Respite and Relocation Policy to be offered to residents whose amenity is significantly affected by construction activities (e.g. out-of-hours works or sustained loss of amenity during the day for residences with special circumstances such as shift workers), or who are subject to loss of access.</p> <p>The Respite and Relocation Policy will only apply during the period in which residents are (or are likely to be) affected.</p> <p>The Policy must contain:</p> <p>a. the criteria that must be met for voluntary and temporary relocation to be offered to affected residents, taking into account:</p> <ul style="list-style-type: none"> i. the level of noise and vibration impact ii. the duration of the noise and vibration impact iii. loss of access iv. the type and duration of out-of-hours work covered by the policy v. time of day at which the work occurs <p>b. consideration of special circumstances such as language or cultural need, special needs related to health conditions or home businesses</p> <p>c. engagement measures and mitigation measures, for example:</p> <ul style="list-style-type: none"> i. respite offer (e.g. pre-purchased movie tickets) ii. earplugs (recognising that some people may prefer to stay at home during the relevant works) iii. alternative accommodation. 	<p>Social</p>	<p>In response to the recommendation of Kym Burgemeister (expert report, page 4).</p>

EPR		Discipline	Comment
SC3	<p>Recreational facilities</p> <p>Where construction works directly impact on sports clubs or passive recreation users of directly impacted sporting and recreational facilities, work with affected sporting clubs and land managers to identify appropriate management measures, including provision of alternative facilities for the period of disruption.</p>	Social	
SS1	<p>Sustainability</p> <p>Achieve LXRA's sustainability policy to:</p> <ul style="list-style-type: none"> a. demonstrate leadership in the commitment to a prosperous and integrated economic, social and environmentally sustainable future b. seek opportunities to enhance the value of natural systems c. pioneer innovation in sustainable design that seeks continuous improvement. 	Sustainability	
SS2	<p>Climate change</p> <p>Design projects in accordance with the most up-to-date climate change assumption guidance provided in the <i>Guidelines for Assessing the Impact of Climate Change on Water Supplies in Victoria</i> (DELWP, 2016) and the <i>Planning for Sea Level Rise Guidelines</i> (Melbourne Water, 2017) in order to manage climate change uncertainty in design, construction and operation.</p>	Sustainability	
SW1	<p>Stormwater management - construction</p> <p>Protect local waterways by applying best practice sedimentation and pollution control measures in accordance with EPA Victoria publication 480 <i>Environmental Guidelines for Major Construction Sites</i> through the Construction Environmental Management Plan(s) and other plans.</p> <p>Implement a water collection and treatment system to ensure that stormwater discharges comply with the State Environment Protection Policy (Waters of Victoria) 2004.</p>	Surface Water	
SW2	<p>Water quality - operation</p> <p>The design must include a water collection and treatment system to ensure that stormwater discharges comply with State Environment Protection Policy (Waters of Victoria) 2004 and do not impact beneficial uses of that waterbody.</p> <p>This would include adopting water sensitive urban design and integrated urban water</p>	Surface Water	In response to the recommendation of Peter Meyers (expert report, section 4.3).

EPR		Discipline	Comment
	management principles in the stormwater management design, in accordance with the LXRA's Urban Design Framework and the specific Urban Design Guidelines for the projects, and CSIRO publication <i>Urban Stormwater Best Practice Environmental Management Guidelines 1999</i> in consultation with Melbourne Water and Kingston City Council as applicable.		
SW3	Drainage network - construction Design surface water discharge to have no adverse impact to the drainage network capacities in consultation with Melbourne Water and Kingston City Council as required.	Surface Water	
SW4	Drainage network – operation Design surface water discharge to have no adverse impact to the drainage network capacities in consultation with Melbourne Water and Kingston City Council as required.	Surface Water	
SW5	Flood protection - construction Maintain existing levels of flood protection associated with overland flow paths (considering flood levels, flows and velocities) during temporary construction works through compliance with Melbourne Water and Kingston City Council requirements for flooding and overland flows.	Surface Water	
SW6	Flood protection - operation Design infrastructure to maintain existing levels of flood protection associated with overland flow paths (considering flood levels, flows and velocities) through compliance with Melbourne Water and Kingston City Council requirements for flooding and overland flows.	Surface Water	
T1	Transport Management Plan Prior to the commencement of construction (excluding preparatory works), develop and implement a Transport Management Plan(s) to minimise disruption (to the extent practicable) to affected local land uses, traffic, car parking, on-road public transport, pedestrian and bicycle movements and existing public facilities during all stages of construction. The plan(s) must be developed in consultation with the relevant road management authorities and be informed and supported by an appropriate level of transport analysis. The plan(s) must include: a. a monitoring program to monitor impacts of construction activities to all modes of active and passive transport. Where monitoring identifies adverse impacts, practicable mitigation measures must be developed and implemented	Traffic	

EPR	Discipline	Comment
<ul style="list-style-type: none"> b. consideration of cumulative impacts of other major projects operating concurrently in the local area c. identify the route options for construction vehicles (including haulage of spoil and other heavy materials to and from site) travelling to and from the project construction site, recognising sensitive receptors, and minimising the use of local streets where practicable d. be prepared in consultation with emergency services, develop suitable measures to ensure emergency service access is not inhibited as a result of project construction activities e. allow for the provision of alternative parking where practicable to replace public and commuter parking lost as a result of project construction activities and to prevent construction-related parking on local roads or use of public car parks f. allow for the provision of car parking or park and ride facilities for construction workers g. provisions for the minimisation of impacts on existing connectivity for pedestrians, cyclists, public transport and road vehicles as a result of construction (including laydown areas), including the identification of alternative routes for pedestrians and cyclists and other measures to maintain connectivity and safety for pedestrians and cyclists h. management of any temporary or partial closure of roads and traffic lanes, including provision for suitable routes for vehicles, cyclists and pedestrians, to maintain connectivity for road and footpath users i. an approach for maximising the current road capacity on Nepean Highway and Edithvale Road during peak periods j. restrictions to the number of local roads to be used for construction-related transportation to minimise impacts on amenity, in consultation with the relevant road authorities k. reinstatement of access to open space, community facilities, commercial premises and dwellings if disrupted, as soon as practicable, and to an equivalent standard l. provision for safe access points to laydown areas and site compounds m. a communications strategy to advise affected users, potentially affected users, relevant stakeholders and the relevant road authorities of any changes to transport conditions in accordance with the Community and Stakeholder Engagement Management Plan (EPR reference SC1). 		

EPR	Discipline	Comment
The plan may include specific measures for discrete components or stages of the works having the potential to impact on roads, shared use paths, bicycle paths, footpaths or public transport infrastructure.		
T2 Public Transport Disruption Management Plan Prior to commencement of works significantly affecting public transport services, develop and implement a plan for minimising disruption to public transport services (rail, bus) resulting from project construction activities. The plan must be developed in consultation with VicTrack, V/Line, Public Transport Victoria, the Department of Economic Development, Jobs, Transport and Resources (Transport) and Metro Trains Melbourne, as relevant.	Traffic	
T3 Pedestrian and cyclist connectivity Optimise the design in accordance with the principles and objectives of LXRA's Urban Design Guidelines to maintain and enhance pedestrian and cyclists connectivity in consultation with relevant road authorities, Kingston City Council and Public Transport Victoria where appropriate.	Traffic	
T4 Intersection design and performance Intersections must be designed and constructed to provide safe vehicle movements to the satisfaction of the responsible road management authority. Undertake an intersection analysis to ensure acceptable intersection performance.	Traffic	
T5 Car parking Where practicable, ensure no net loss in station car parking for rail users upon completion, and car parking must be replaced or reinstated at the earliest opportunity.	Traffic	
T6 Vehicle and pedestrian access Where vehicle and pedestrian access are altered during construction, ensure that vehicle and pedestrian access is replaced, in accordance with relevant road design standards.	Traffic	
T7 Debris on roads Minimise dirt and debris on the roads from construction activities by measures including: <ol style="list-style-type: none"> a. street sweeping b. covering all truck loads that have the potential to result in debris on public 	Traffic	

EPR		Discipline	Comment
	<p>roads</p> <p>c. cleaning vehicles and tyres when leaving construction sites.</p>		
T8	<p>Emergency services</p> <p>Maintain vehicular and pedestrian access to hospital emergency departments at all times during construction and to other key health and medical facilities, where practicable.</p>	Traffic	
UD1	<p>Urban Design Guidelines</p> <p>Design projects in accordance with the LXRA Urban Design Framework and project specific Urban Design Guidelines, including landscape design and plans. The Urban Design Guidelines must consider:</p> <ul style="list-style-type: none"> a. identity b. connectivity and wayfinding c. urban integration d. resilience and sustainability e. amenity f. vibrancy g. safety h. accessibility i. resilience and comfort for the community in a climate change future h.j. vegetation replacement as a design and development component <p>Seek the advice of the LXRA Urban Design Advisory Panel (chaired by the Office of the Victorian Government Architect, and includes officers of Kingston City Council) during the preparation of detailed design to ensure an appropriate response to the LXRA Urban Design Framework.</p>	Urban design	
UD2	<p>Hoardings</p> <p>Minimise visual impacts during construction (where possible) with the installation of hoardings. Hoarding must be installed to LXRA’s hoarding requirements in consultation with the Kingston City Council.</p>	Urban design	